

National Climate Bulletin and the assessment of the SEECOF-24

Climate outlook for **CYPRUS** for winter season DJF 2020-2021

Cyprus Department of Meteorology prepares regular seasonal climate outlooks, based on the products of SEECOF seasonal forecasts. The present outlook concerns the outlook for the three winter months of December 2020, January and February 2021, which is based on the means of the climatological period 1981-2010.

Generally, and based on the records of climatology, the area of the east Mediterranean, but specially the area of Cyprus, during winter is characterized by the low mean maximum and minimum normal (1981-2010) temperatures. Normal accumulated precipitation is reaching maximum as a result of the frequent barometric systems which are affecting the area.

The assessment for the area of Cyprus is performed bearing in mind the consensus statement of SEECOF24 which was stating that:

1. Temperature (the mean) was likely to range below normal with a probability of 10%, around normal with a probability of 30% and above normal with again a probability of 60% (Figure 1) and,
2. Accumulated precipitation probabilities were 50% below normal, 30% around normal and 20% above normal (Figure 2).

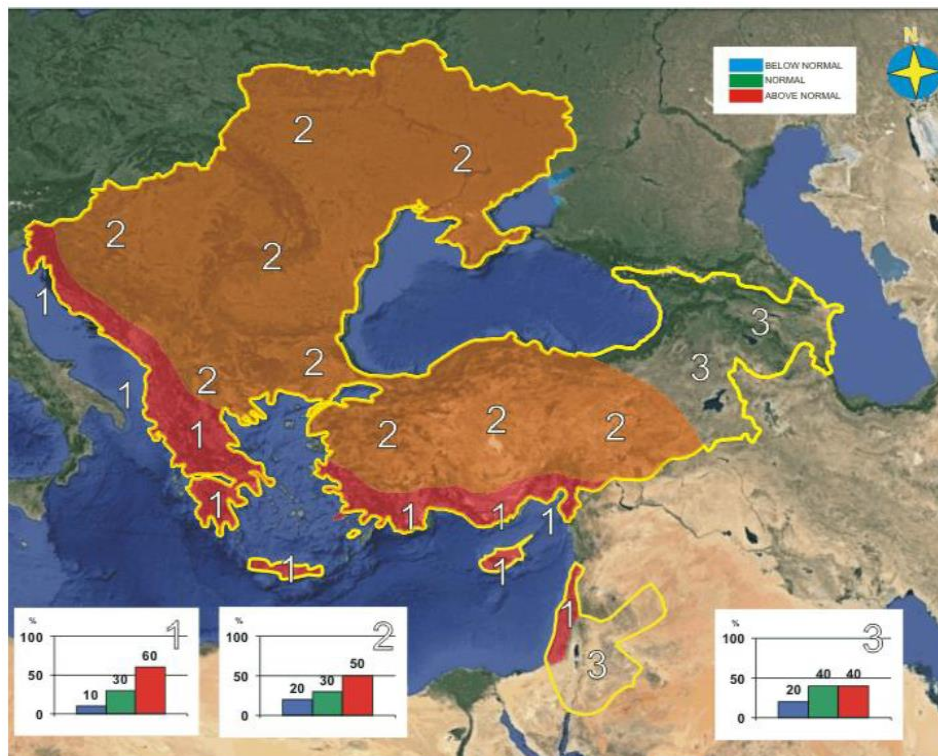


Figure 1. Graphical presentation of the 2020/21 winter temperature outlook

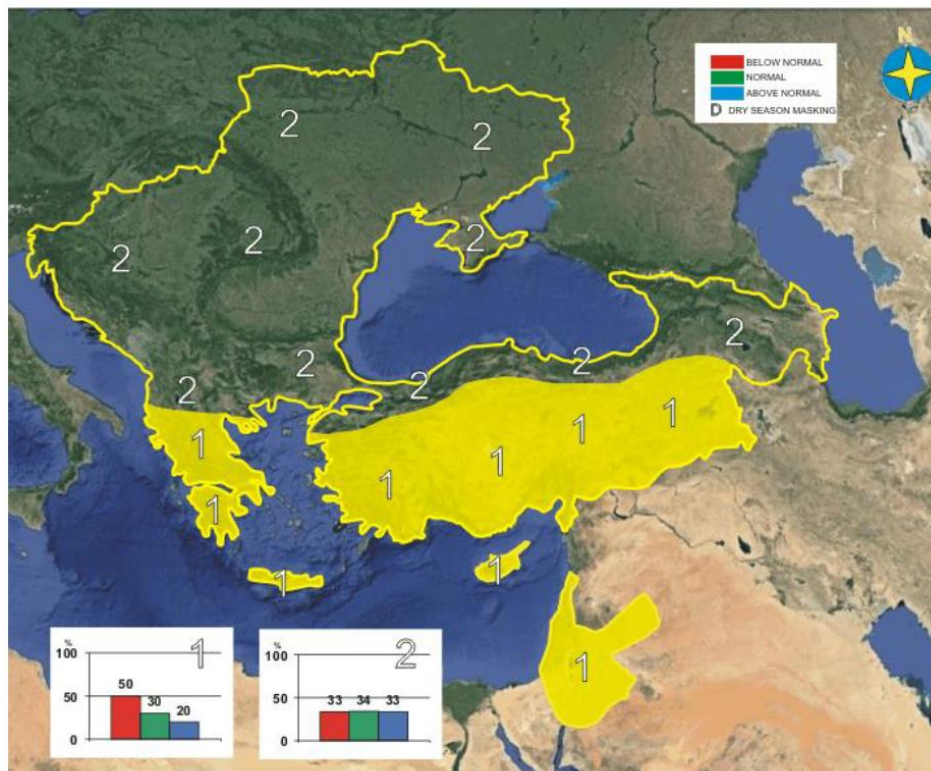


Figure 2. Graphical presentation of the 2020/21 winter precipitation outlook

Find also below a table presenting the general anomalies of SEECOF products and extreme events of the recorded winter weather.

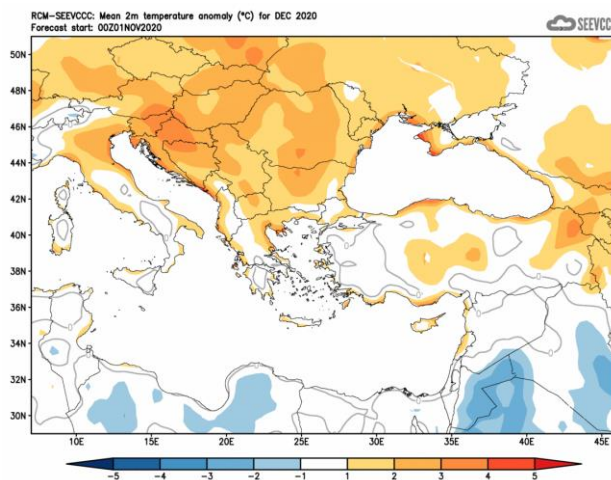
Country	Seasonal temperature (DJF)		Seasonal precipitation (DJF)		High Impact Events
	Observed	SEECOF-24 climate outlook for temperature	Observed	SEECOF-24 climate outlook for precipitation	
CYPRUS	<p>DEC Above Normal</p> <p>JAN Above Normal</p> <p>FEB Above Normal</p>	<p>DEC Above Normal mainly over coastal areas</p> <p>JAN Above Normal</p> <p>FEB Above Normal</p>	<p>DEC Slightly Below Normal</p> <p>JAN Above Normal</p> <p>FEB Below Normal</p>	<p>DEC Below Normal</p> <p>JAN Below Normal</p> <p>FEB Below Normal</p>	<p>DEC: Extremes (deviating by 4°C or more from normal) were also recorded at the most of the selected meteorological stations. As an example note the recorded maximum of Prodromos that was 14.9°C (with a normal of 8.3°C) and the maximum of Athalassa that was 23.5°C (with a normal of 17.3°C). Concerning the mean daily minimum temperatures note the recorded minimum of Pafos that was 16.4°C (with a normal of 10°C) and the minimum of Larnaka that was 14.8°C (with a normal of 9.2°C).</p> <p>From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of December is evident that the surface distribution was slightly below normal reaching 75,9mm or 71% of normal of the climatic period 1961-1990 or 81% of normal of the climatic period 1981-2010. During the periods 1-5, 7-11, 13-16 and on the 22nd of December local showers and thunderstorms were recorded.</p> <p>For the dates 1, 4, 5, 16 of December, yellow EMMA warnings were issued, whereas for the dates 14 and 15 of December orange warnings were issued. All of them were about showers, thunderstorms, and wind.</p> <p>Based on the provisional data, hail recorded on the 13th and on the 14th of month. Trace of snow was recorded on the 3rd of the month Troodos.</p> <p>JAN: Extreme high temperatures were recorded, as an example Prodromos recorded a highest daily maximum of 19.7°C (with the normal being 6.3°C) and Polis Chrysochous recorded a highest daily maximum of 23.7°C (with the normal being 16.3°C). Extremes low temperatures were also recorded, as an example note the lowest daily minimum temperature of Achna that was -0.7°C</p>

				<p>(with a normal of 6.6°C) and the lowest daily minimum temperature of Athalassa that was -0.7°C (with a normal of 5.4°C). From the provisional data recorded by the Department of Meteorology the model did not perform well over the amount of the accumulated precipitation, as the actual accumulated precipitation was more than the expected. During the periods 13-20, 25 and 27-30 of January local showers and thunderstorms resulted in accumulated precipitation of 99.3mm or 120% of normal. It is worth mentioning that on the 13th of January hail was reported. Also, for the 13, 16-19, 28-29 and 30-31 of January, EMMA yellow level warnings for rainfall, wind and thunderstorms were issued. It is worth mentioning that based on the provisional data there were 8 days of snow during January, 13-14, 17-19 and 27-29 of January.</p> <p>FEB: Extreme high temperatures were recorded at all the selected meteorological stations, like Prodromos that recorded a highest daily maximum of 17.5°C (with the normal being 6.7°C) and Polis Chrysochous that recorded a highest daily maximum of 25.6°C (with the normal being 16.3°C). Extremes low temperatures (deviating by 4°C or more from normal) were also recorded. As an example, note the highest daily minimum temperatures of Larnaka airport and Prodromos that was 15.6°C (with a normal of 7.1°C) and -7.7°C (with a normal of 0.5°C) respectively. From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of the month is evident that mainly the mountains received high accumulation score. As regarded from the same chart the mean surface distribution was well below normal (reaching only 18.9mm or 27% of normal).</p> <p>During the periods 2-3, 15-19 and on the 25th of February local showers and thunderstorms were recorded. Based on the provisional data, hail recorded on the 15th of the month, while snow was recorded during the period 15-18 of the month.</p> <p>For the dates 15-16 of February, yellow EMMA warning was issued concerning</p>
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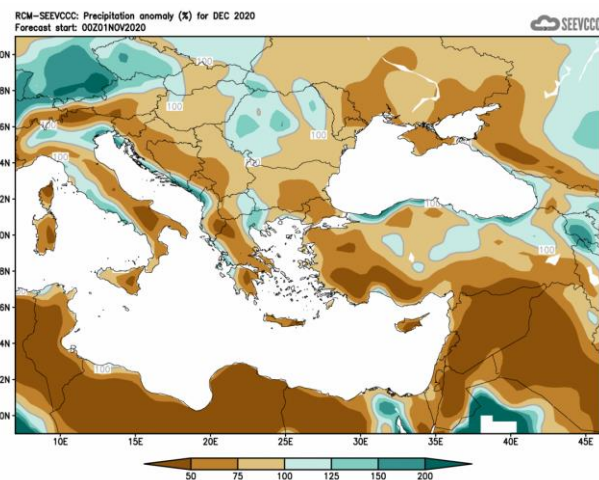
					showers and thunderstorms, whereas for dates 17-18 of February , yellow EM warning was issued concerning temperatures.
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Evaluation of December's seasonal forecast for the area of Cyprus

The seasonal forecast for **December 2020** suggested that temperature would be above normal (by 1°C to 2°C) mainly over coastal areas. The accumulated precipitation of **December** was forecasted to be disappointing since it suggested a mainly dry month with accumulation ranging only from 50% to 75% of normal, except the south eastern part where the accumulation would range below 50% of 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 2020												
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)
41	POLIS CHRYSOCHOUS	-	18,0	-	-	-	-	9,3	-	-	-	74,9
82*	PAFOS (AIRPORT)	21,4	18,9	2,5	23,3	18,7	11,9	10,0	1,9	8,6	16,4	31,8
225	PRODROMOS (C.F.C.)	11,6	8,3	3,3	14,9	7,1	3,6	2,6	1,0	0,9	5,7	96,8
666*	ATHALASSA (RADIOSONDE)	20,5	17,3	3,2	23,5	14,6	7,5	7,0	0,5	4,2	12,4	49,0
731	LARNAKA (AIRPORT)	20,9	18,6	2,3	23,7	17,7	11,7	9,2	2,5	8,4	14,8	96,5
800**	ACHNA (DASAKI)	20,0	18,0	2,0	22,2	16,3	9,9	8,3	1,6	5,8	12,7	32,0

* 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 performed relatively well in relation with 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 much above normal, not only inland but also for the coastal areas and the mountainous range.

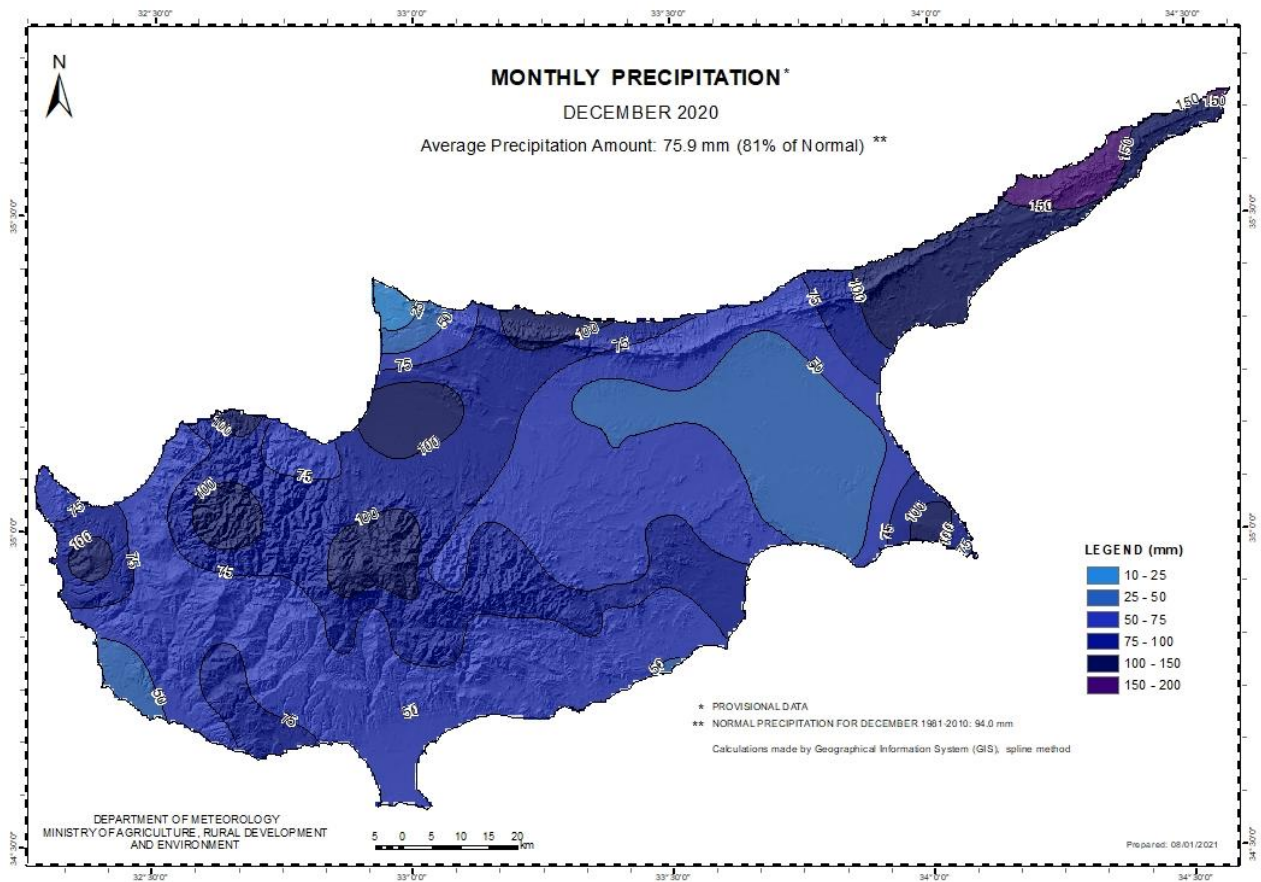
Extremes (deviating by 4°C or more from normal) were also recorded at the most of the selected meteorological stations. As an example note the recorded maximum of Prodromos that was 14.9°C (with a normal of 8.3°C) and the maximum of Athalassa that was 23.5°C (with a normal of 17.3°C). Concerning the mean daily minimum temperatures note the recorded minimum of Pafos that was 16.4°C (with a normal of 10°C) and the minimum of Larnaka that was 14.8°C (with a normal of 9.2°C).

From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of **December** is evident that the surface distribution was slightly below normal reaching 75,9mm or 71% of normal of the climatic period 1961-1990 or 81% of normal of the climatic period 1981-2010. During the periods 1-5, 7-11, 13-16 and on the 22nd of **December** local showers and thunderstorms were recorded.

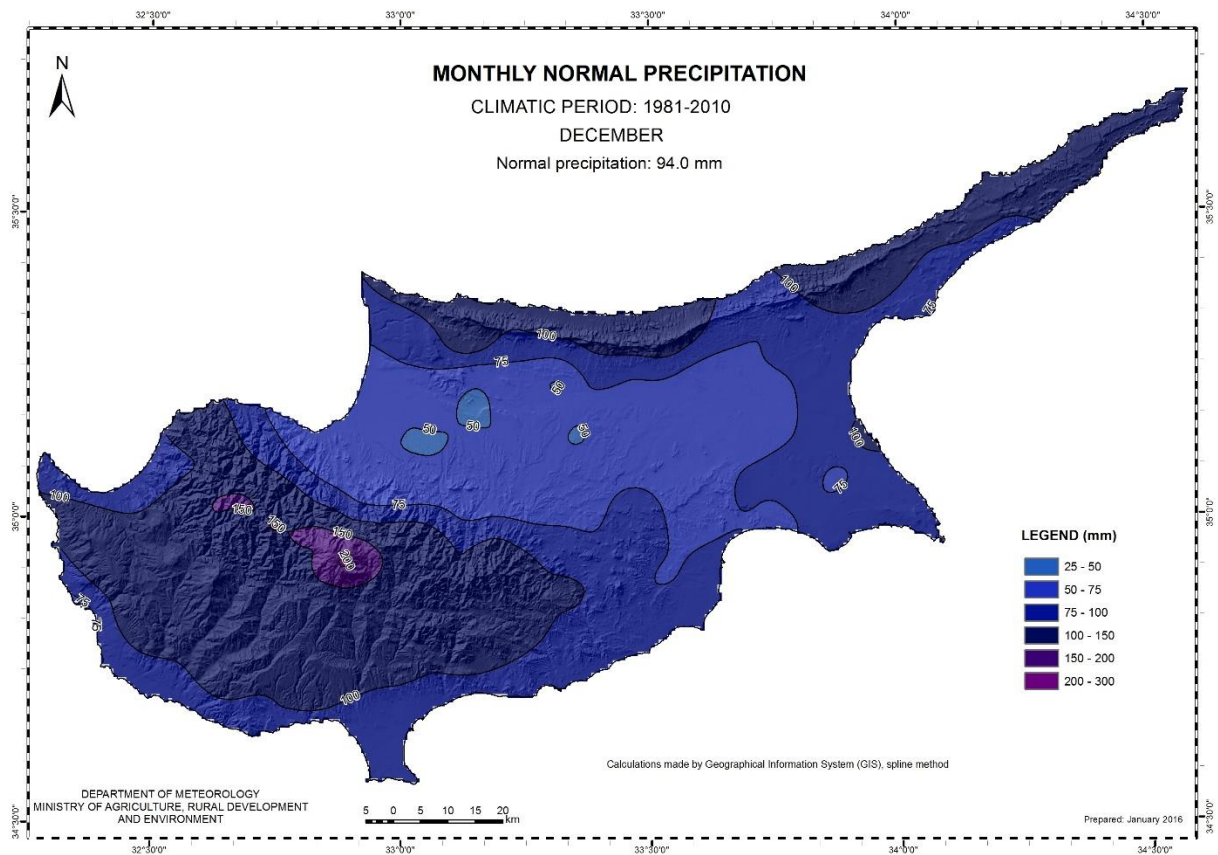
For the dates 1, 4, 5, 16 of **December**, yellow EMMA warnings were issued, whereas for the dates 14 and 15 of **December** orange warnings were issued. All of them were about showers, thunderstorms, and wind.

Based on the provisional data, hail was recorded on the 13th and on the 14th of the month. Trace of snow was recorded on the 3rd of the month at Troodos.

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

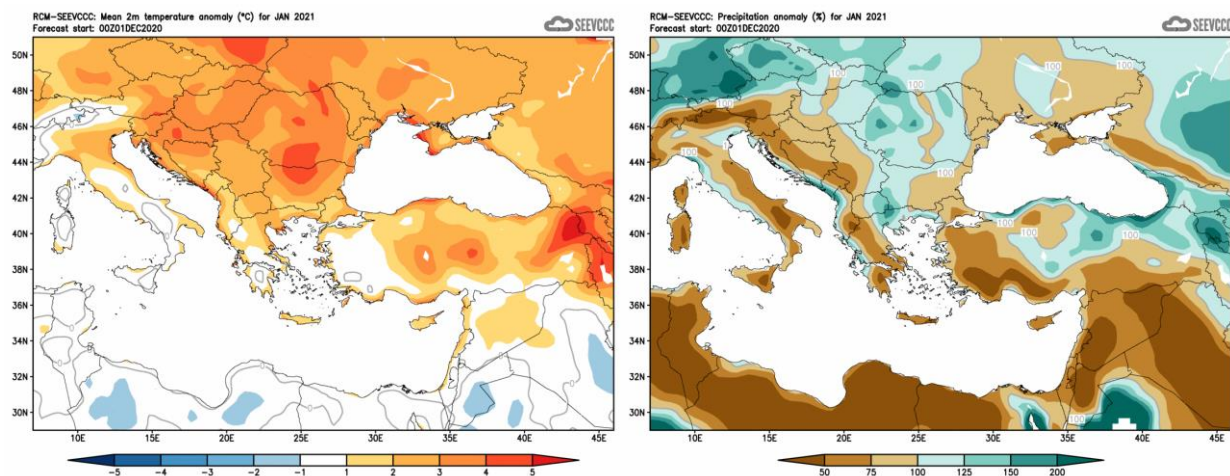


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **December** is also presented.



Evaluation of January's seasonal forecast for the area of Cyprus

The seasonal forecast for **January 2021** suggested that temperature would be above normal (by 1°C to 2°C). The accumulated precipitation of **January** was again disappointing since the forecast suggested a mainly dry month with accumulation ranging between 50% to 75% of normal. Low accumulations were characterizing all the surrounding area.



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

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

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 JANUARY 2021												
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)
41	POLIS CHRYSOCHOUS	-	16,3		23,7	13,9	-	7,6		4,5	15,0	104,9
82*	PAFOS (AIRPORT)	19,5	17,1	2,4	23,4	13,8	10,5	8,3	2,2	3,9	16,4	82,4
225	PRODROMOS (C.F.C.)	10,0	6,3	3,7	19,7	1,3	2,0	0,7	1,3	-4,7	9,8	196,7
666*	ATHALASSA (RADIOSONDE)	18,7	15,5	3,2	22,7	10,8	5,8	5,4	0,4	-0,7	11,7	46,2
731	LARNAKA (AIRPORT)	19,3	16,8	2,5	22,2	12,4	9,6	7,5	2,1	2,4	14,6	64,4
800**	ACHNA (DASAKI)	18,6	16,3	2,3	22,8	10,4	7,9	6,6	1,3	-0,7	12,5	50,6

* 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

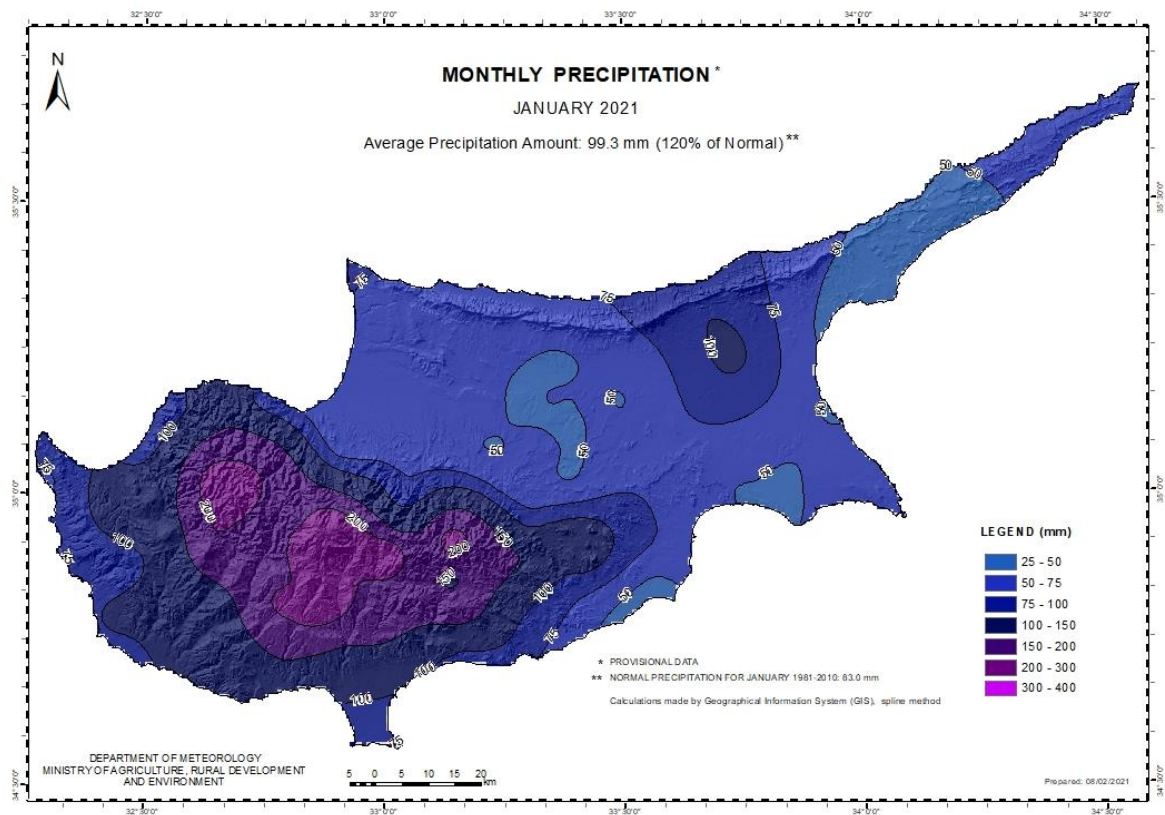
it seems that the model performed well on the evaluation of the temperature, since it forecast correct the temperature anomalies. But, the model didn't perform well in the evaluation of the accumulated precipitation, which was well above normal. **January** was warmer than it was expected. From the recorded data is shown that the mean daily maximum and the mean daily minimum temperatures were above normal, not only inland but also for the coastal areas. Extreme high temperatures were recorded, as an example Prodrornos recorded a highest daily maximum of 19.7°C (with the normal being 6.3°C) and Polis

Chrysochous recorded a highest daily maximum of 23.7°C (with the normal being 16.3°C). Extremes low temperatures were also recorded, as an example note the lowest daily minimum temperature of Achua that was -0.7°C (with a normal of 6.6°C) and the lowest daily minimum temperature of Athalassa that was -0.7°C (with a normal of 5.4°C).

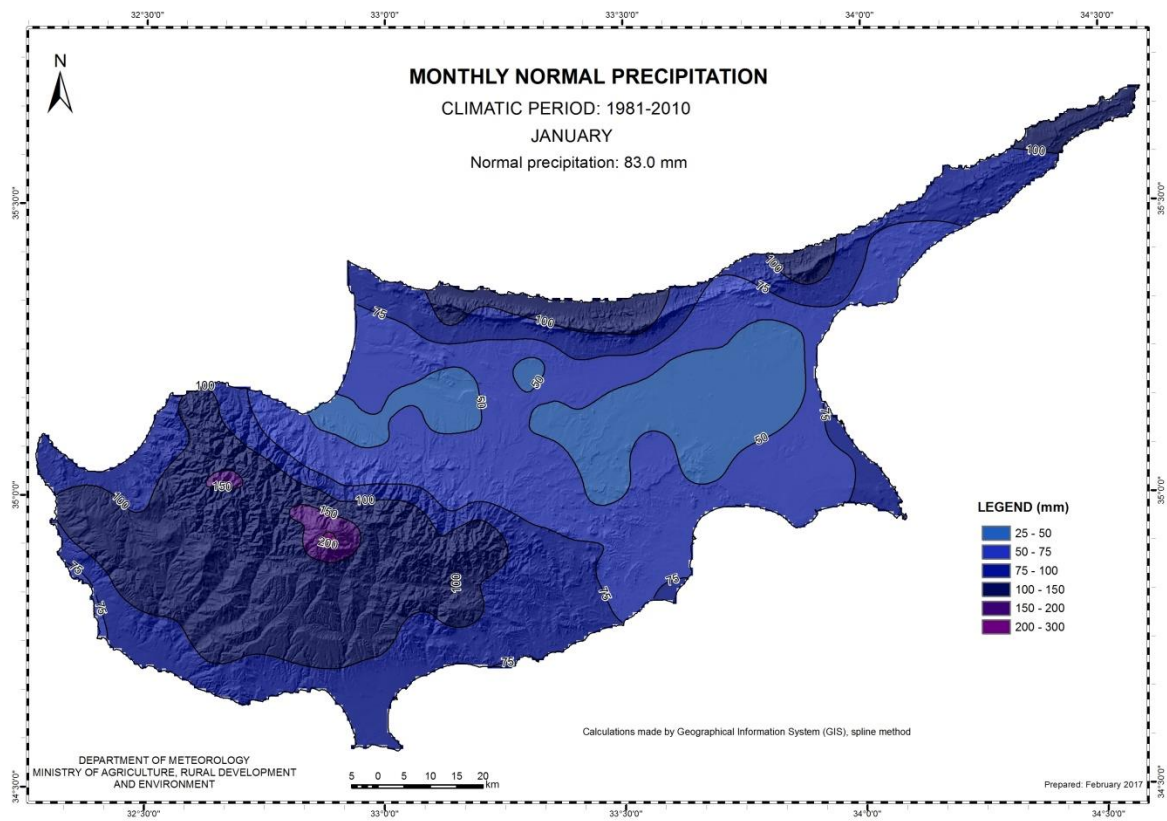
From the provisional data recorded by the Department of Meteorology the model did not perform well over the amount of the accumulated precipitation, as the actual accumulated precipitation was more than the expected. During the periods 13-20, 25 and 27-30 of **January** local showers and thunderstorms resulted in accumulated precipitation of 99.3mm or 120% of normal. It is worth mentioning that on the 13th of **January** hail was reported. Also, for the 13, 16-19, 28-29 and 30-31 of **January**, EMMA yellow level warnings for rainfall, wind and thunderstorms were issued.

It is worth mentioning that based on the provisional data there were 8 days of snow during **January**, 13-14, 17-19 and 27-29 of **January**.

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

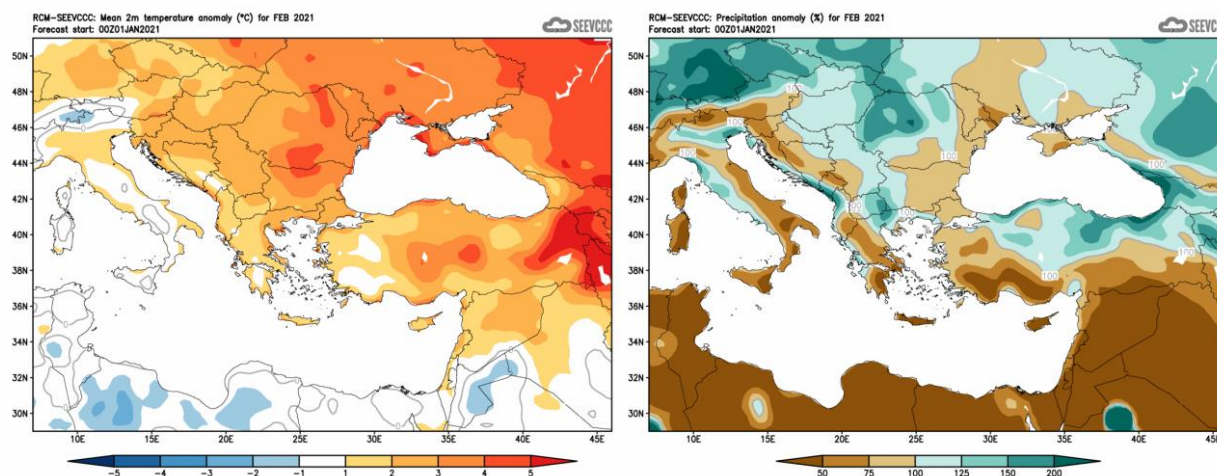


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **January** is also presented.



Evaluation of February's seasonal forecast for the area of Cyprus

The seasonal forecast for **February** suggested a warmer and drier than normal month. **February** would be warmer than normal by 1°C to 2°C, while the accumulated precipitation was again disappointing since the forecast suggested a mainly dry month with accumulation ranging in almost all over the island below 50% of normal. The above temperature and accumulated precipitation characteristics applied also for the surrounding area.



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

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

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, it seems that the model performed relatively well. **February** was warmer than normal, more than the model suggested. Extreme high temperatures were of course recorded at all the selected meteorological stations, like Prodomos that recorded a highest daily maximum of 17.5°C (with the normal being 6.7°C) and Polis Chrysochous that recorded a highest daily maximum of 25.6°C (with the normal being 16.3°C). Extremes low temperatures (deviating by 4°C or more from normal) were also recorded. As an example, note the highest daily minimum temperatures of Larnaka airport and Prodomos that was 15.6°C (with a normal of 7.1°C) and -7.7°C (with a normal of 0.5°C) respectively.

From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of the month is evident that mainly the mountains received high accumulation score. As regarded from the same chart the mean surface distribution was well below normal (reaching only 18.9mm or 27% of normal).

During the periods 2-3, 15-19 and on the 25th of **February** local showers and thunderstorms were recorded.

Based on the provisional data, hail was recorded on the 15th of the month, while snow was recorded during the period 15-18 of the month.

For the dates 15-16 of **February**, yellow EMMA warning was issued concerning showers and thunderstorms, whereas for the dates 17-18 of **February**, yellow EMMA warning was issued concerning low temperatures.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR FEBRUARY 2021

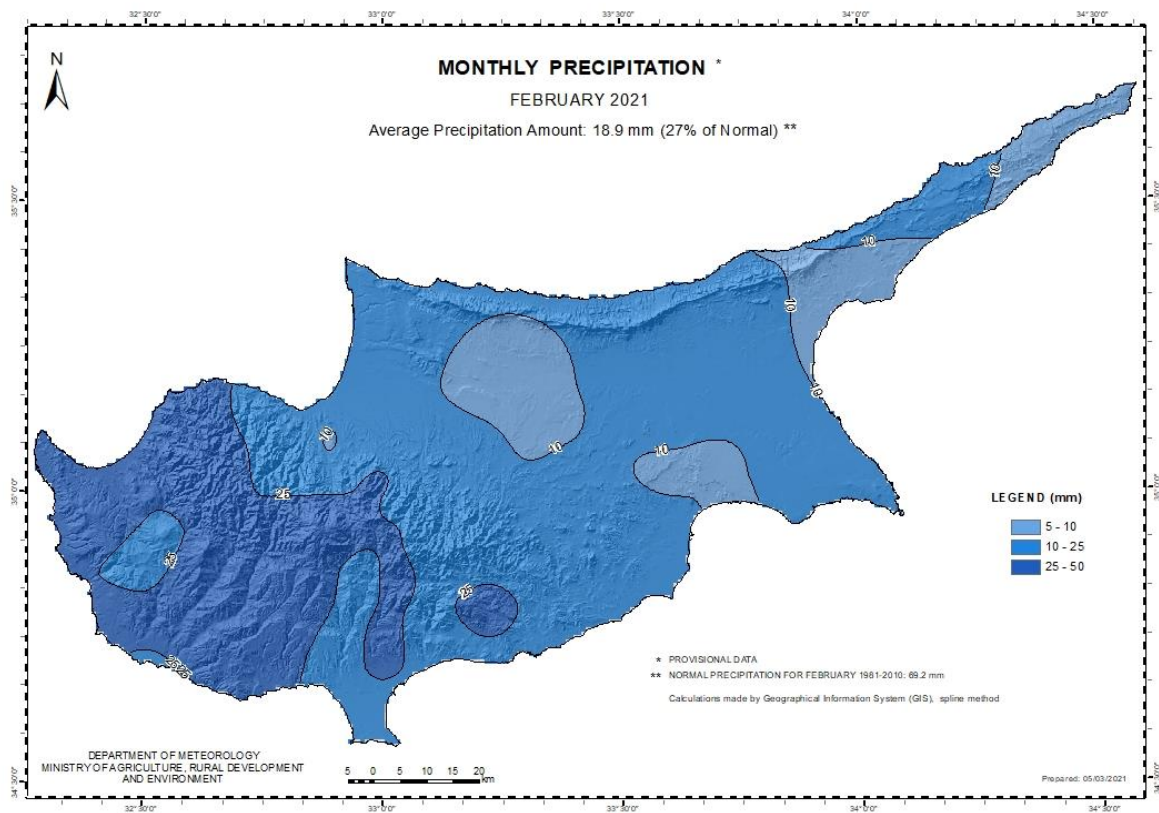
St. No.	Station Name	Mean Daily Maximum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Highest Daily Maximum Temperature (°C)	Lowest Daily Maximum Temperature (°C)	Mean Daily Minimum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Lowest Daily Minimum Temperature (°C)	Highest Daily Minimum Temperature (°C)	Monthly Total Precipitation (mm)	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	20,2	16,3	3,9	25,6	12,7	8,6	7,3	1,3	4,1	12,6	27,1	68,5	-41,4
82*	PAFOS (AIRPORT)	19,2	17,1	2,1	24,3	13,1	8,4	8,1	0,3	2,7	12,9	24,0	59,8	-35,8
225	PRODROMOS (C.F.C.)	11,8	6,7	5,1	17,5	2,0	2,1	0,5	1,6	-7,0	7,7	41,9	128,7	-86,8
666*	ATHALASSA (RADIOSONDE)	19,6	16,0	3,6	24,1	12,1	5,5	5,3	0,2	0,4	10,3	7,6	44,5	-36,9
731	LARNAKA (AIRPORT)	19,4	17,0	2,4	22,7	12,9	8,9	7,1	1,8	2,3	15,6	12,8	50,3	-37,5
800**	ACHNA (DASAKI)	18,9	16,5	2,4	22,5	10,5	7,1	6,3	0,8	-0,5	12,8	10,8	50,7	-39,9

* 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

For the purpose of better visualization of **February** 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 is also presented.

