

# National Climate Bulletin and the assessment of the SEECOF-28

## Climate outlook for **CYPRUS** for winter season DJF 2022-2023

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 2022, January and February 2023, 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 SEECOF28 which was stating that:

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

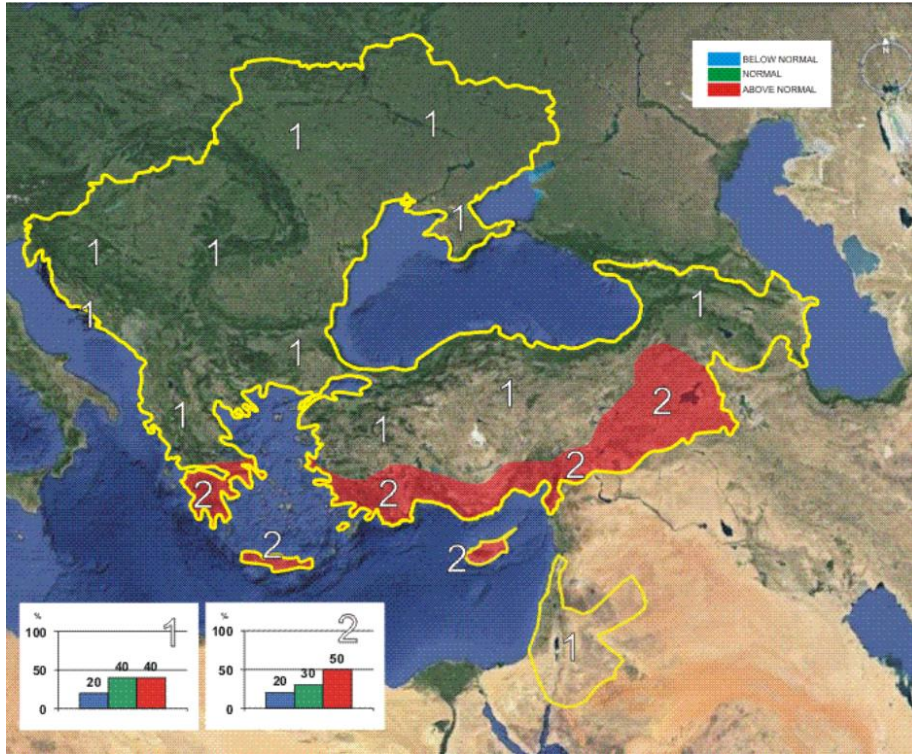


Figure1:Graphical presentation of the 2022/23 winter temperature outlook

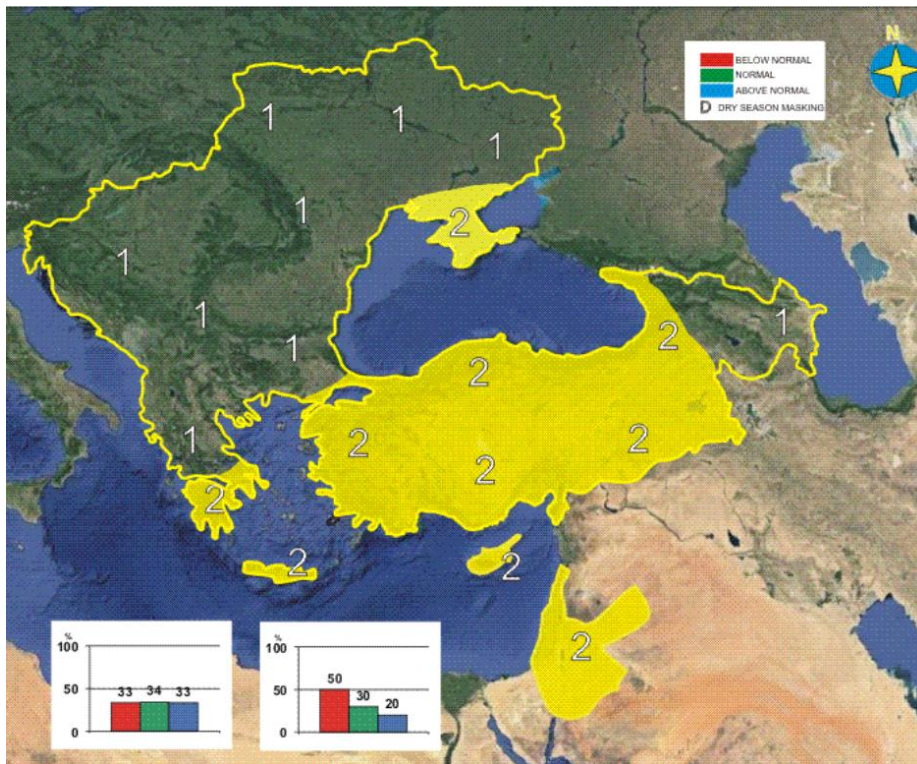


Figure2:Graphical presentation of the 2022/23 winter precipitation outlook

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

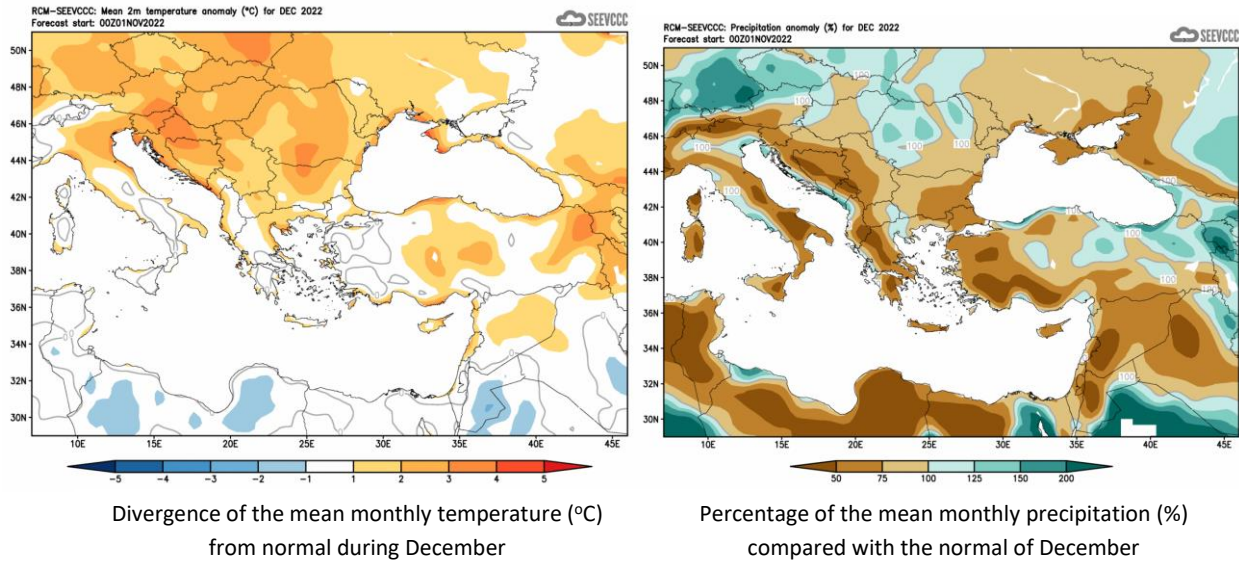
Country	Seasonal temperature (DJF)		Seasonal precipitation (DJF)		High Impact Events
	Observed	SEECOF-28 climate outlook for temperature	Observed	SEECOF-28 climate outlook for precipitation	
<b>CYPRUS</b>	<p><b>DEC</b> Well Above Normal</p> <p><b>JAN</b> Well Above Normal</p> <p><b>FEB</b> Normal</p>	<p><b>DEC</b> Above Normal mainly over coastal areas</p> <p><b>JAN</b> Above Normal</p> <p><b>FEB</b> Above Normal</p>	<p><b>DEC</b> Well Below Normal</p> <p><b>JAN</b> Well Below Normal</p> <p><b>FEB</b> Below Normal</p>	<p><b>DEC</b> Below Normal</p> <p><b>JAN</b> Normal to Above Normal</p> <p><b>FEB</b> Well Below Normal</p>	<p><b>DEC:</b> Extremes (deviating by 4°C or more from normal) were also recorded in all of the selected meteorological stations. As an example, note the recorded maximum of Prodromos that was 16.1°C (with a normal of 8.3°C) and the maximum of Polis Chrysochous that was 25.5°C (with a normal of 18°C). Concerning the mean daily minimum temperatures note the recorded minimum of Larnaca airport that was 16°C (with a normal of 9.2°C) and the minimum of Prodromos that was 9.2°C (with a normal of 2.6°C).</p> <p>From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of <b>December</b> is evident that the surface distribution was well below normal reaching 30.8mm or 33% of normal. During the dates 2, 6-8, 11-16, 20-21, 23-26 and 29 of <b>December</b> local showers and isolated thunderstorms were recorded. For the 14<sup>th</sup> of <b>December</b>, yellow EMMA warning was issued concerning showers and thunderstorms. Based on the provisional data, hail recorded on the 6<sup>th</sup> and 11<sup>th</sup> of the month. S was recorded on the 15<sup>th</sup> of the month Troodos.</p> <p><b>JAN:</b> Extreme high temperatures were recorded, as an example Prodromos recorded a highest daily maximum of 13.3°C (with the normal being 6.3°C) and Polis Chrysochous recorded a highest daily maximum of 24.5°C (with the normal being 16.3°C). Extreme low temperatures were also recorded, as an example note the highest daily minimum temperature of Polis Chrysochous that was 13.7°C (with a normal of 2.4°C) and the highest daily minimum temperature of Larnaka Airport that was 16.4°C (with a normal of 7.5°C).</p>

				<p>From the provisional data recorded by the Department of Meteorology the model performed moderately over the amount of the accumulated precipitation, as the actual accumulated precipitation was more than the expected over the entire island but below the expected over the area controlled by the government</p> <p>During the periods 6-7, 10-17 and 27-31 of <b>January</b> local showers and thunderstorms resulted in accumulated precipitation of 95.5mm or 115% of normal. It is worth mentioning that on the 11<sup>th</sup> of <b>January</b> hail was reported. Also, for the 12-13, 15-16 and 30-31 of <b>January</b>, EMMA yellow level warnings for rainfall and thunderstorms were issued.</p> <p>It is worth mentioning that based on the provisional data there were 6 days of snow during <b>January</b>, 12-14 and 29-31 of <b>January</b>.</p> <p><b>FEB:</b> Extreme high temperatures were of course recorded at all the selected meteorological stations, like Prodromos that recorded a highest daily maximum of 17.7°C (with the normal being 6.7°C) and Athalassa that recorded a highest daily maximum of 26.3°C (with the normal being 16°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 13°C (with a normal of 7.1°C) and 10.5°C (with a normal of 0.5°C) respectively.</p> <p>From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of the month is evident that the mean surface distribution was just below normal (reaching only 58.7mm or 85% of normal).</p> <p>During the periods 1-7, 10-13 and 24-25 of <b>February</b> local showers and thunderstorms were recorded.</p> <p>Based on the provisional data, hail recorded on the 6<sup>th</sup> of the month, while snow was recorded during the period 1-5 of month.</p> <p>For the dates 1 and 3-6 of <b>February</b>, yellow EMMA warning was issued concerning showers and thunderstorms, whereas for the dates 8-9 of <b>February</b>,</p>
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					yellow EMMA warning was issued concerning low temperatures over Troodos area.
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## Evaluation of Decembers seasonal forecast for the area of Cyprus

The seasonal forecast for **December 2022** 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. Low accumulations characterized all the surrounding area.



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 2022														
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	22,7	18,0	4,7	25,5	19,4	12,1	9,3	2,8	8,4	15,2	33,1	93,6	-60,5
82*	PAFOS (AIRPORT)	21,2	18,9	2,3	22,9	17,3	12,1	10,0	2,1	7,0	15,1	35,8	90,1	-54,3
225	PRODROMOS (C.F.C.)	12,0	8,3	3,7	16,1	5,5	5,7	2,6	3,1	1,8	9,2	52,5	157,3	-104,8
666*	ATHALASSA (RADIOSONDE)	21,4	17,3	4,1	24,7	16,2	8,4	7,0	1,4	3,5	11,8	17,8	57,2	-39,4
731	LARNAKA (AIRPORT)	21,2	18,6	2,6	23,0	16,0	12,2	9,2	3,0	6,2	16,0	19,8	79,0	-59,2
800**	ACHNA (DASAKI)	21,9	18,0	3,9	24,6	15,3	11,2	8,3	2,9	4,2	13,9	25,0	76,8	-51,8

\* 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, either in relation with the temperature, as all of the mean daily max and min temperatures above the suggested and neither with the precipitation. The seasonal forecast for **December** suggested that accumulated precipitation would be below normal, but from the

recorded data is shown that in all of the selected meteorological stations the precipitation was very well below normal.

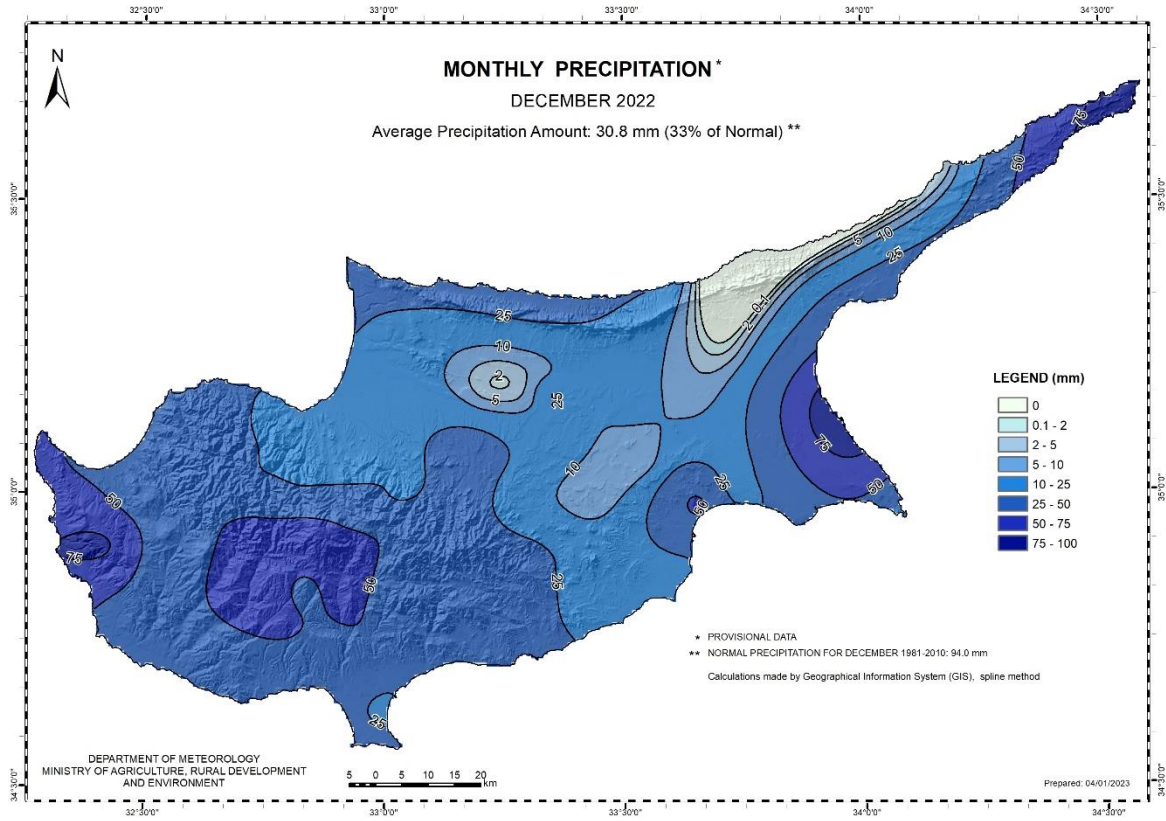
Extremes (deviating by 4°C or more from normal) were also recorded in all of the selected meteorological stations. As an example, note the recorded maximum of Prodromos that was 16.1°C (with a normal of 8.3°C) and the maximum of Polis Chrysochous that was 25.5°C (with a normal of 18°C). Concerning the mean daily minimum temperatures note the recorded minimum of Larnaca airport that was 16°C (with a normal of 9.2°C) and the minimum of Prodromos that was 9.2°C (with a normal of 2.6°C).

From the distribution (provisional accumulated precipitation chart) of the accumulated precipitation of **December** is evident that the surface distribution was well below normal reaching 30.8mm or 33% of normal. During the dates 2, 6-8, 11-16, 20-21, 23-26 and 29 of **December** local showers and isolated thunderstorms were recorded.

For the 14<sup>th</sup> of **December**, yellow EMMA warning was issued concerning showers and thunderstorms.

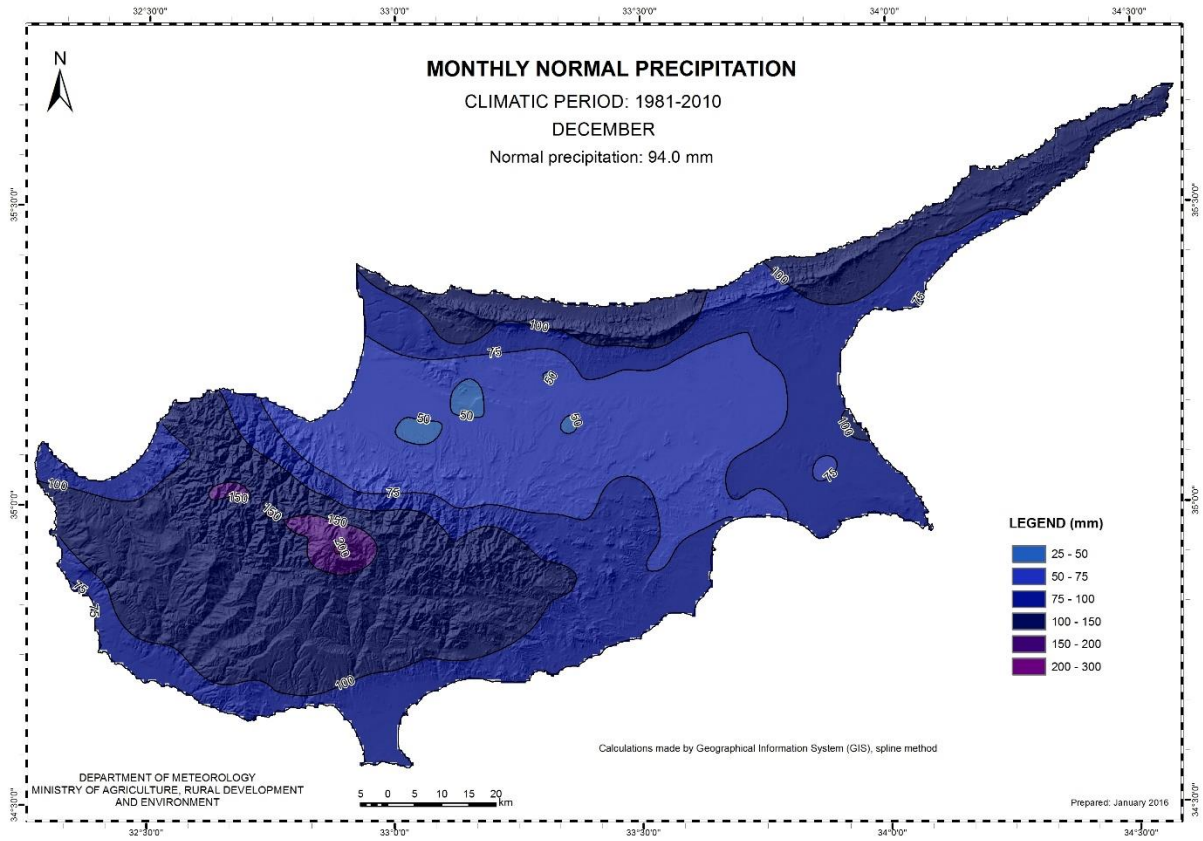
Based on the provisional data, hail was recorded on the 6<sup>th</sup> and 11<sup>th</sup> of the month. Snow was recorded on the 15<sup>th</sup> of the month at Troodos.

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



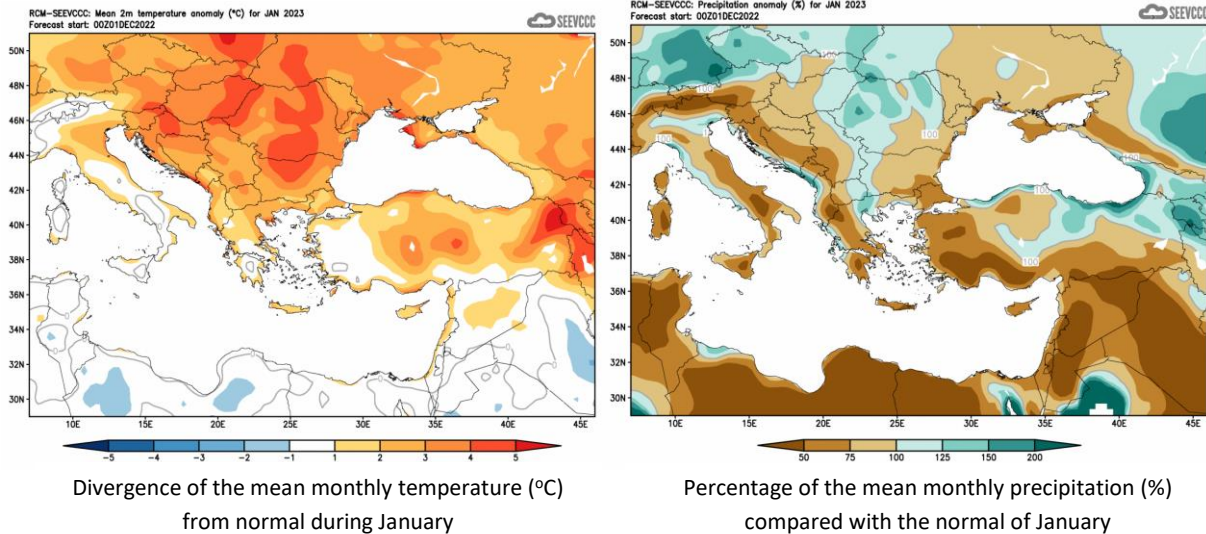


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **December** is also presented.



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

The seasonal forecast for **January** suggested that temperature would be above normal (by 1°C to 2°C). The accumulated precipitation of **January** was 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.



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 2023														
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	20,9	16,3	4,6	24,5	15,9	10,0	7,6	2,4	7,4	13,7	48,9
82*	PAFOS (AIRPORT)	19,4	17,1	2,3	21,9	14,8	9,8	8,3	1,5	8,1	13,8	83,1	78,8	4,3
225	PRODROMOS (C.F.C.)	9,1	6,3	2,8	13,3	3,2	2,7	0,7	2,0	-0,3	4,3	92,5	150,0	-57,5
666*	ATHALASSA (RADIOSONDE)	18,7	15,5	3,2	21,8	11,1	5,6	5,4	0,2	1,6	10,6	65,7	48,8	16,9
731	LARNAKA (AIRPORT)	19,5	16,8	2,7	22,5	14,6	10,1	7,5	2,6	6,1	16,4	123,2	73,7	49,5
800**	ACHNA (DASAKI)	19,6	16,3	3,3	22,0	13,0	8,9	6,6	2,3	5,1	11,6	115,9	67,3	48,6

\* 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 in the evaluation the temperature but moderately on the accumulated precipitation. From the recorded data is shown that the mean daily maximum and most of the mean daily minimum temperatures were well above normal, not only inland but also for the coastal areas.

Extreme high temperatures were recorded, as an example Prodromos recorded a highest daily maximum of 13.3°C (with the normal being 6.3°C) and Polis Chrysochous recorded a highest daily maximum of 24.5°C

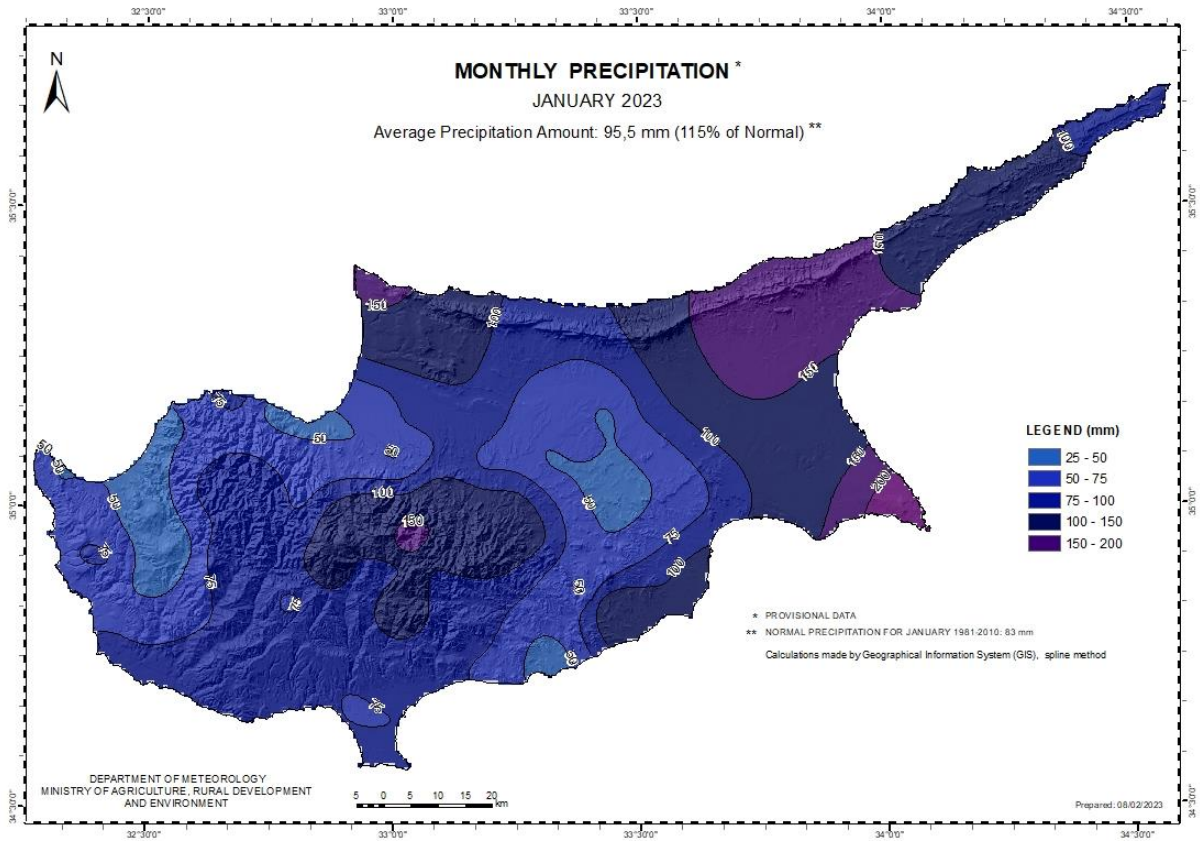
(with the normal being 16.3°C). Extreme low temperatures were also recorded, as an example note the highest daily minimum temperature of Polis Chrysochous that was 13.7°C (with a normal of 2.4°C) and the highest daily minimum temperature of Larnaka Airport that was 16.4°C (with a normal of 7.5°C).

From the provisional data recorded by the Department of Meteorology the model performed moderately over the amount of the accumulated precipitation, as the actual accumulated precipitation was more than the expected over the entire island but below the expected over the area controlled by the government

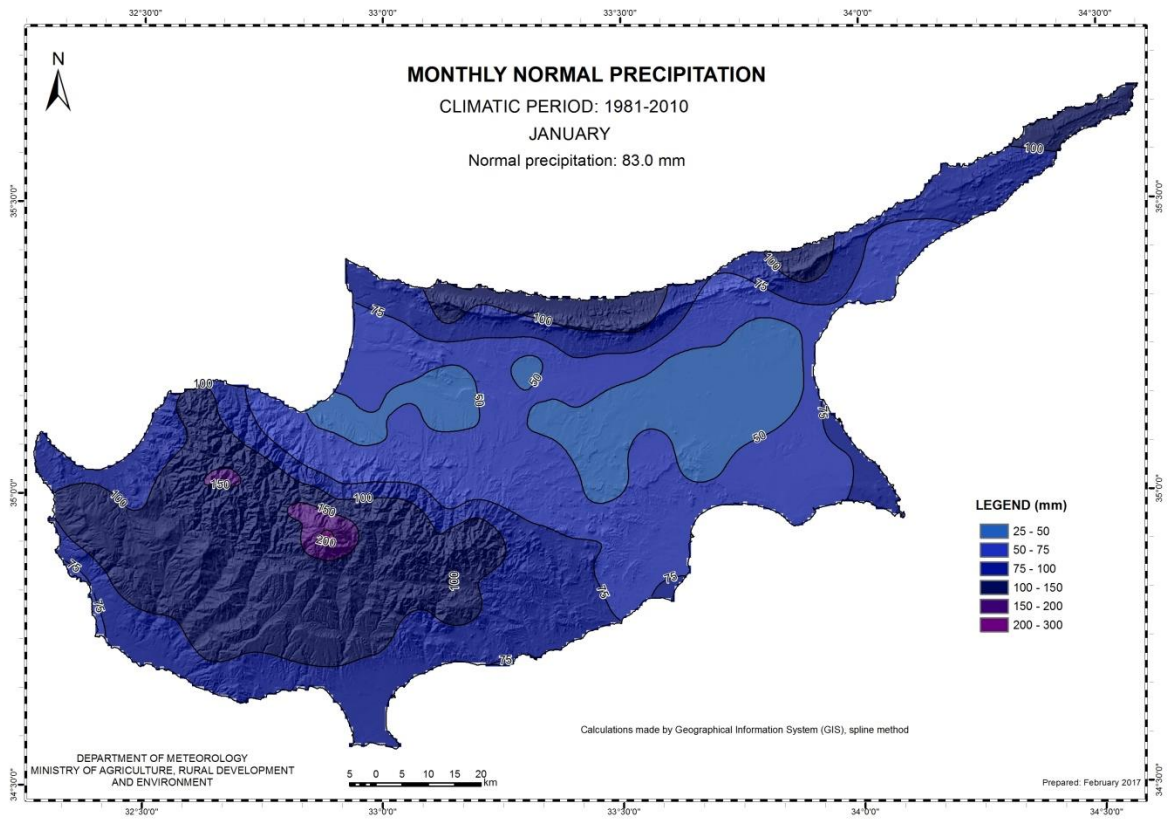
During the periods 6-7, 10-17 and 27-31 of **January** local showers and thunderstorms resulted in accumulated precipitation of 95.5mm or 115% of normal. It is worth mentioning that on the 11<sup>th</sup> of **January** hail was reported. Also, for the 12-13, 15-16 and 30-31 of **January**, EMMA yellow level warnings for rainfall and thunderstorms were issued.

It is worth mentioning that based on the provisional data there were 6 days of snow during **January**, 12-14 and 29-31 of **January**.

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

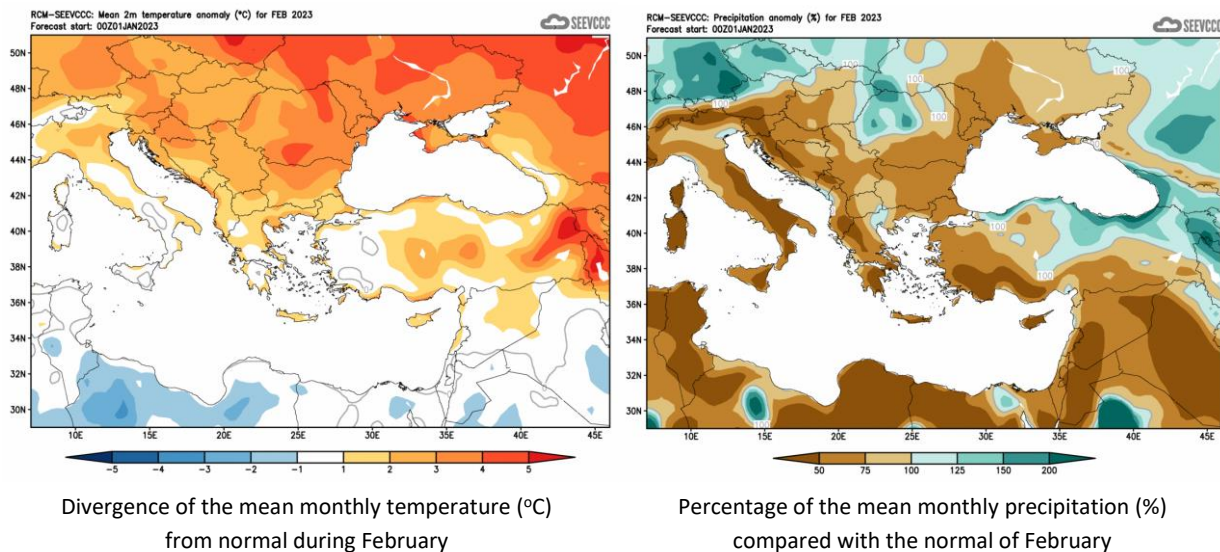


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **January** is also presented.



## Evaluation of Februarys 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 it must be added that in the first 10 days of the February 2023 a cold outbreak had been encountered over Cyprus as a result of the storm “BARBARA”. The accumulated precipitation as resulted from the seasonal forecast was again disappointing since the forecast suggested a mainly dry month with accumulation below normal, while the encountered already accumulated precipitation had been above 70% of normal. All the above regarding temperature and or accumulated precipitation characteristics applied also for the surrounding area.



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 moderately. **February** was normal concerning the temperatures.

Extreme high temperatures were of course recorded at all the selected meteorological stations, like Prodromos that recorded a highest daily maximum of 17.7°C (with the normal being 6.7°C) and Athalassa that recorded a highest daily maximum of 26.3°C (with the normal being 16°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 13°C (with a normal of 7.1°C) and 10.5°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 the mean surface distribution was just below normal (reaching only 58.7mm or 85% of normal).

During the periods 1-7, 10-13 and 24-25 of **February** local showers and thunderstorms were recorded.

Based on the provisional data, hail was recorded on the 6<sup>th</sup> of the month, while snow

was recorded during the period 1-5 of the month.

For the dates 1 and 3-6 of **February**, yellow EMMA warning was issued concerning showers and thunderstorms, whereas for the dates 8-9 of **February**, yellow EMMA warning was issued concerning low temperatures over Troodos area.

**TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR FEBRUARY 2023**

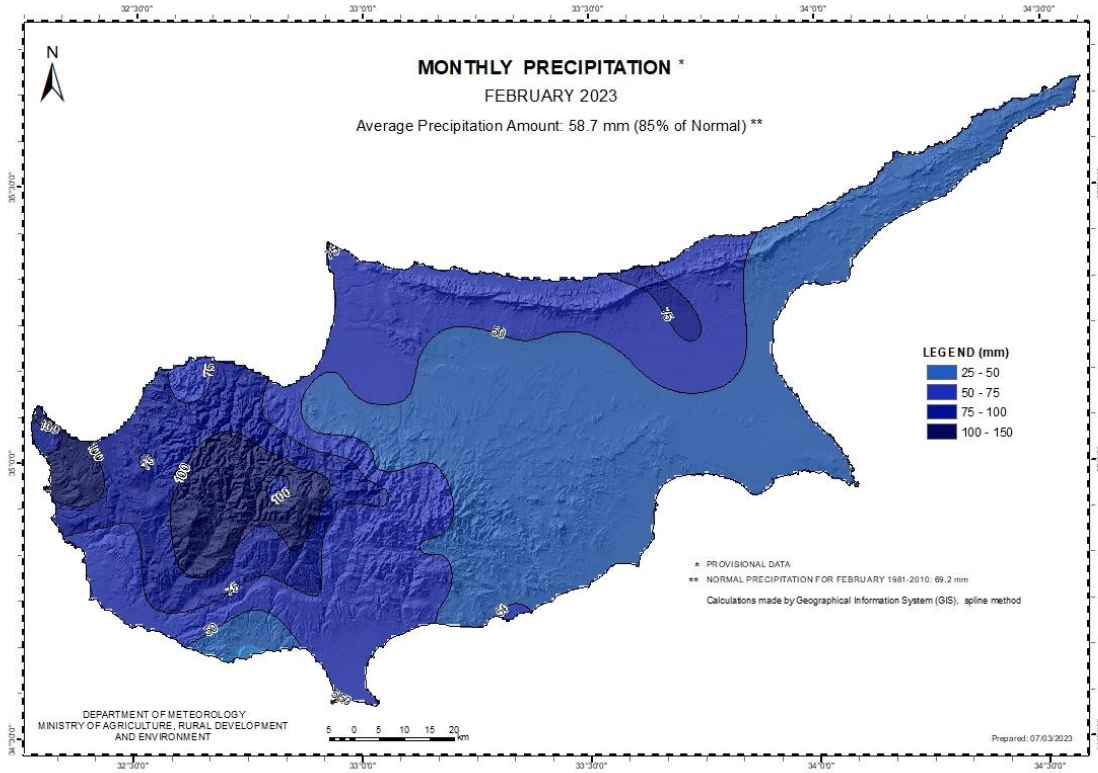
St. No.	Station Name	Mean Daily Maximum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Highest Daily Maximum Temperature (°C)	Lowest Daily Maximum Temperature (°C)	Mean Daily Minimum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Lowest Daily Minimum Temperature (°C)	Highest Daily Minimum Temperature (°C)	Monthly Total Precipitation (mm)	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	17,3	16,3	1,0	22,8	13,4	6,5	7,3	-0,8	2,1	9,8	96,3	68,5	27,8
82*	PAFOS (AIRPORT)	17,0	17,1	-0,1	25,4	13,4	7,4	8,1	-0,7	2,5	12,3	69,9	59,8	10,1
225	PRODROMOS (C.F.C.)	6,6	6,7	-0,1	17,7	-1,4	-0,7	0,5	-1,2	-6,9	10,5	96,7	128,7	-32,0
666*	ATHALASSA (RADIOSONDE)	16,5	16,0	0,5	26,3	8,3	3,3	5,3	-2,0	-1,9	7,1	44,1	44,5	-0,4
731	LARNAKA (AIRPORT)	16,8	17,0	-0,2	24,8	12,1	6,6	7,1	-0,5	1,8	13,0	37,8	50,3	-12,5
800**	ACHNA (DASAKI)	17,1	16,5	0,6	26,5	9,8	5,7	6,3	-0,6	1,2	12,0	32,4	50,7	-18,3

\* 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.

