

National Climate Bulletin and the assessment of the SEECOF-25 Climate outlook for **CYPRUS** for summer season JJA 2021

Summary

Cyprus Department of Meteorology (DoM) prepares regular seasonal climate outlooks, based on the products of SEECOF seasonal forecasts. The present outlook concerns the outlook for the three summer months of June, July and August 2021 which is based on the deviations from the means of the climatological period 1981-2010.

Generally from the climatological point of view, the area of the east Mediterranean, but specially the area of Cyprus, during summer is characterized by the high mean maximum and minimum normal (1981-2010) temperatures. Normal accumulated precipitation is reaching minimum as a result of the general synoptic situation.

The assessment is performed bearing in mind the consensus statement of SEECOF25 which was stating that:

the area of Cyprus as regarded from the suggested climate statement, issued on May 2021, for the period of Summer JJA, would have being in area 1 concerning Temperature (Fig 1) and for Precipitation in area musked as «D» (ie Dry musk) as presented in figure 2. So as shown in figure 1, Cyprus is a part of the area where the probability of temperature being lower than normal would be 20%, 30% would be normal and 50% would be above normal. As will be presented in more details below June, July and August had normal to above normal temperatures.

Regarding the accumulated precipitation and as is presented in more details for each month below it must be mentioned that during summer precipitation in Cyprus is in the form of thunderstorms, an isolated meteorological phenomenon. So for Cyprus as a part of Dry zone it can be stated that the Dry musk applies in general, but due to thundery activity accumulated precipitation during summer may be high in some places.

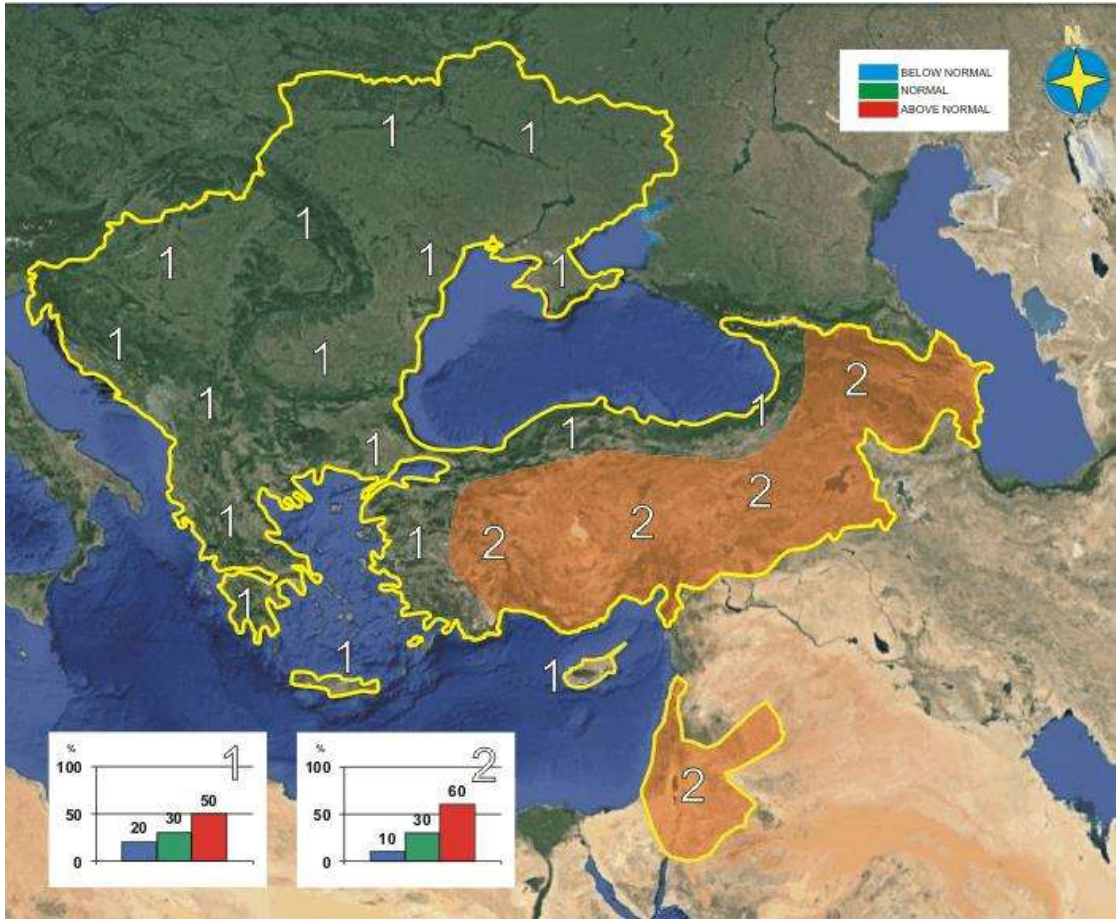


Figure 1. Graphical presentation of the 2021 summer temperature outlook

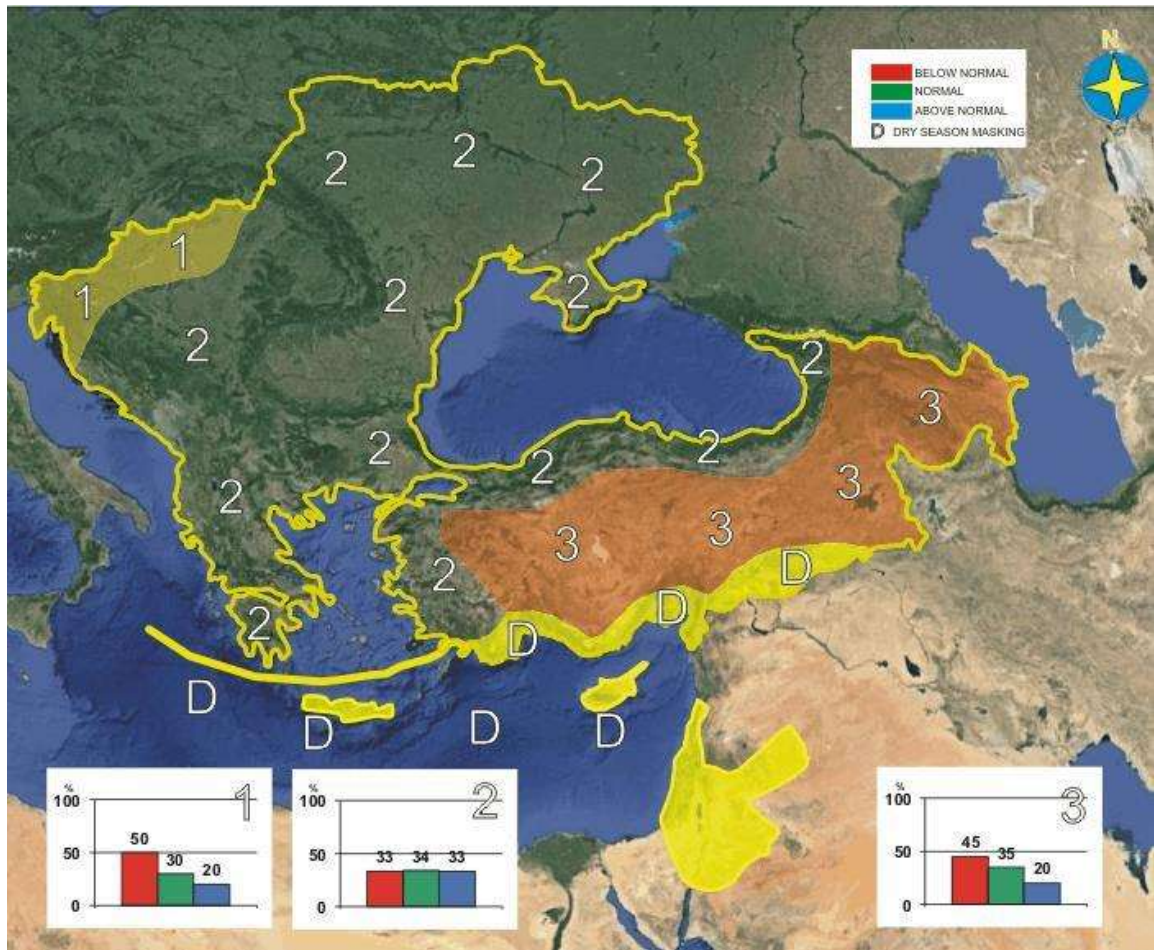


Figure 2. Graphical presentation of the 2021 summer precipitation outlook

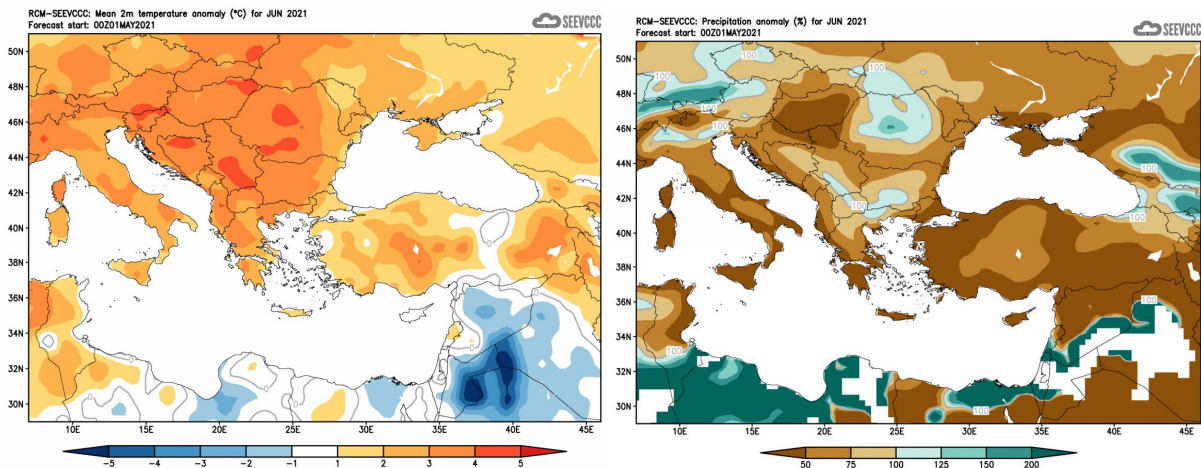
Find also below a table presenting the general anomalies of SEECOF products and extreme events of the recorded summer weather.

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)		High Impact Events
	Observed	SEECOF-25 climate outlook for temperature	Observed	SEECOF-25 climate outlook for precipitation	
CYPRUS	<p>June Normal</p> <p>July Normal to Above Normal</p> <p>August Normal to Above Normal</p>	<p>June Normal</p> <p>July Normal</p> <p>August Normal</p>	<p>June Below Normal</p> <p>July Below normal</p> <p>August Normal</p>	<p>June Below Normal</p> <p>July SWest part below Normal, NEast part above Normal</p> <p>August South and East below normal and North and West above normal</p>	<p style="text-align: center;">June</p> <p>All of the maximum temperatures were around normal. Extreme daily maximum temperatures were recorded with great positive departures, like Prodromos station where the maximum for the station was 33.1°C departing 8.1°C from the normal (25°C), and at Polis Chrysochous, where the maximum temperature of the station was 38°C was 7.7°C greater than normal of 30.3°C. Extreme daily minimum temperatures were also recorded with great positive departures, like Polis Chrysochous station where the minimum for the station was 25.9°C departing 7.4°C from the normal 18.5°C), and at Athalassa, where the minimum temperature of the station was 27.3°C was 8.2°C greater than normal of 19.1°C</p> <p>For the period 21-22 of June EMMA yellow warnings were issued, concerning rain and thunderstorms, whereas 27-29 of June EMMA yellow warnings were issued, concerning high temperature.</p> <p style="text-align: center;">July</p> <p>All the mean maximum and minimum, were above normal. Daily maximum temperatures above normal (deviating by 4°C or more from normal) were recorded, like the highest daily maximum temperature of Pafos that was 37.3°C (with a normal of 29.9°C) and the highest daily maximum temperature of Prodromos that was 34.6°C (with a normal of 27.9°C). Highest daily minimum temperatures were also recorded, with positive departures greater than 4°C, like the station of Larnaka where a minimum of 29°C was by 7°C above station's normal (22°C) and the station of Polis Chrysochous where a minimum of 26.8°C was by 5.7°C above station's normal (21.1°C).</p>

					<p>It is especially useful to be added that in Athalassa station it was recorded on July 2021, the second highest mean maximum temperature (39.5°C) since 1983.</p> <p>During July EMMA warnings with yellow awareness level were issued, concerning extreme high temperatures on for the periods 9-18 and 26-31 of July and with orange awareness level on 1st and 2nd of July. Also, EMMA warnings with yellow awareness level were issued, concerning thunderstorms on 24th and 25th of July.</p> <p>On the 10th, 23rd, 24th and 25th of July local showers and thunderstorms resulted in accumulated precipitation of 38% of normal.</p> <p style="text-align: center;">August</p> <p>Extremes were recorded with positive departures greater than 4°C, like Polis Chrysochous station where the highest daily maximum temperature (40.9°C) was 7.6°C greater than normal (33.3°C) and Prodromos station, where the highest daily maximum temperature (36.6°C) was 8.6°C greater than normal (28°C).</p> <p>Extremes were also recorded with positive departures greater than 4°C, like Athalassa station where the highest daily minimum temperature (28.1°C) was 6.2°C greater than normal (21.9°C) and Larnakas station, where the highest daily minimum temperature (28.5°C) was 6.2°C greater than normal (22.3°C).</p> <p>For the period 2-5 of August EMMA orange warnings were issued, while for the 6th of August and the periods 11-13, 15-16, 20-22 and 24-28 of August yellow warnings were issued. All the above warnings concerned high temperatures, except the warning on the 6th of August that concerned thunderstorms.</p> <p>On the 6th, 12th, 13th and 20th of August episodes of local showers and isolated thunderstorms resulted in accumulated precipitation of 2mm (100% of normal). Hail was reported on 6th of August at Troodos.</p>
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Evaluation of June's seasonal forecast for the area of Cyprus

The seasonal forecast suggested that **June's** temperature would be generally normal while the Balkans and Middle East would be warmer than normal. Regarding the accumulated precipitation Cyprus was expected to be dry without the occurrence of dynamic barometric weather systems.



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

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

Concerning the models' evaluation for **June**, a general judgment is that the model performed relatively well, concerning both the temperature and the accumulated precipitation. It must be mentioned that during summer month's precipitation is resulted mainly from thundery activity which has very localised characteristics and that judging is very difficult due to models limitations. Never the less June recorded 1.1mm of accumulated precipitation resulting to 17% of the climatological precipitation (6.6mm).

The accumulated precipitation was a result of local rain showers and thunderstorms on the 21st and 22nd of June.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR JUNE 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	31,3	30,3	1,0	38,0	26,8	20,1	18,5	1,6	16,7	25,9	0,0
82*	PAFOS (AIRPORT)	27,9	27,6	0,3	33,1	25,0	19,5	18,0	1,5	16,3	24,7	0,0	1,3	-1,3
225	PRODROMOS (C.F.C.)	26,1	25,0	1,1	33,1	18,3	13,2	15,0	-1,8	8,1	19,6	0,0	27,2	-27,2
666*	ATHALASSA (RADIOSONDE)	34,3	34,0	0,3	41,0	29,3	18,6	19,1	-0,5	13,5	27,3	26,4	11,6	14,8
731	LARNAKA (AIRPORT)	30,7	30,2	0,5	37,0	27,5	19,8	19,4	0,4	16,0	25,9	0,8	2,0	-1,2
800**	ACHNA (DASAKI)	29,9	31,0	-1,1	35,6	26,9	18,3	18,9	-0,6	14,3	24,9	0,0	1,8	-1,8

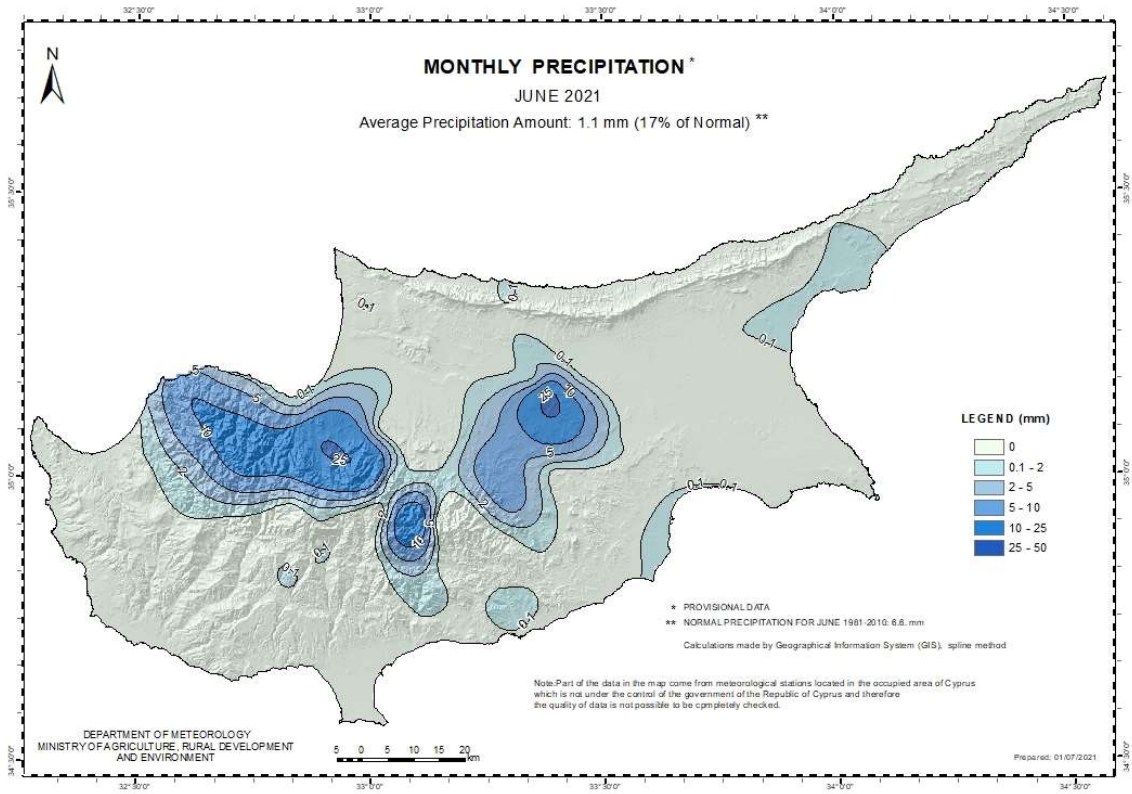
* Pafos' and Athalassa's Station Normal Values cover the period 1983-2010
 ** Achna's Temperature Normal Values cover the period 1981-2007

= VALUES FROM AUTOMATIC WEATHER STATION

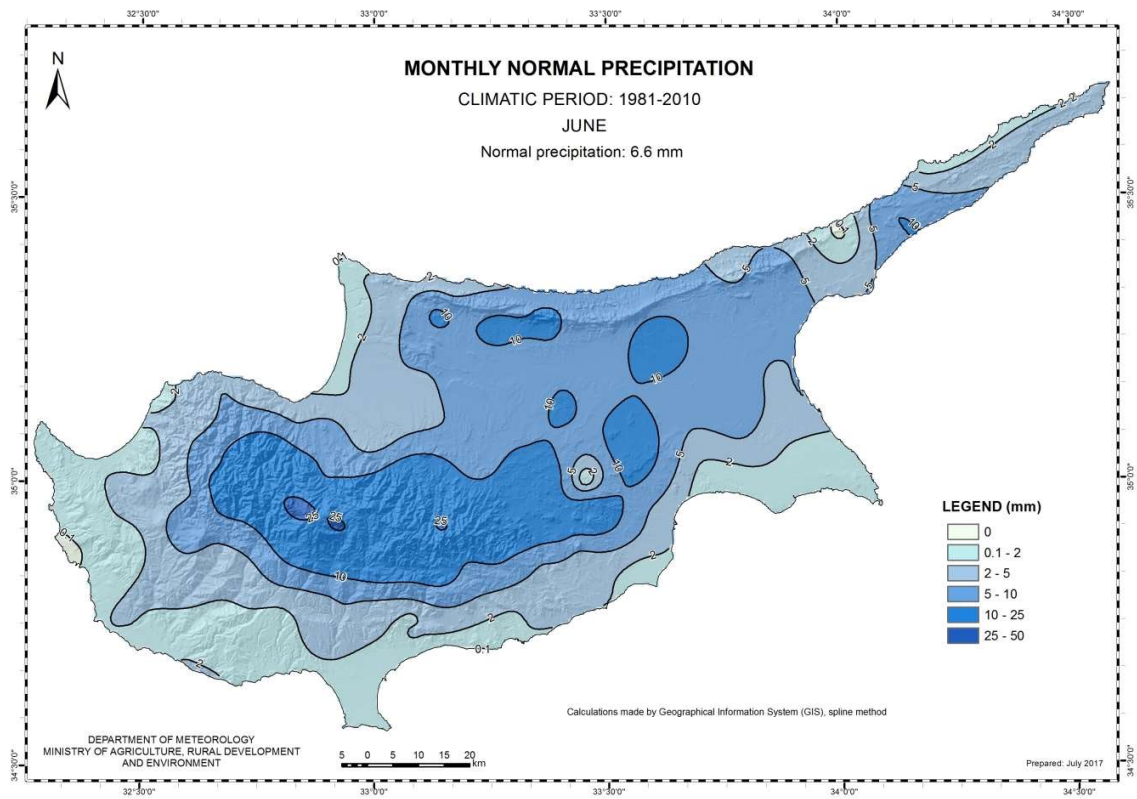
About the evaluation of the recorded temperatures all of the maximum (table above) were around normal. Extreme daily maximum temperatures were also recorded with great positive departures, like Prodromos station where the maximum for the station was 33.1°C departing 8.1°C from the normal (25°C), and at Polis Chrysochous, where the maximum temperature of the station was 38°C was 7.7°C greater than normal of 30.3°C. Extreme daily minimum temperatures were also recorded with great positive departures, like Polis Chrysochous station where the minimum for the station was 25.9°C departing 7.4°C from the normal 18.5°C), and at Athalassa, where the minimum temperature of the station was 27.3°C was 8.2°C greater than normal of 19.1°C

For the period 21-22 of **June** EMMA yellow warnings were issued, concerning rain and thunderstorms, whereas 27-29 of **June** EMMA yellow warnings were issued, concerning high temperature.

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

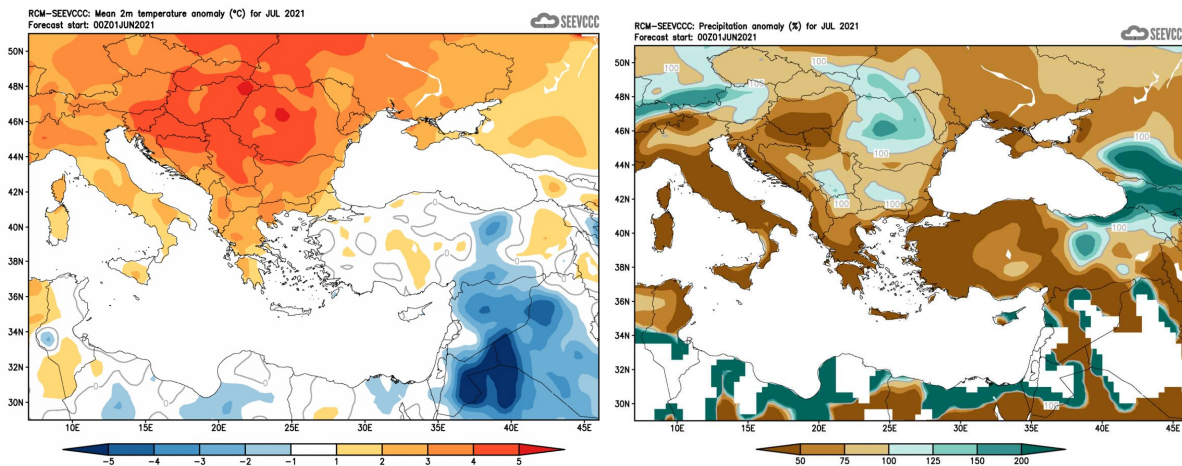


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **June** is also presented.



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

The seasonal forecast suggested that **July's** temperature would be normal alike Asia Minor. Regarding the accumulated precipitation Cyprus west part was expected to be below 50% of normal but over the east part accumulated precipitation was expected to range up to 200% of normal .



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

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

Concerning the model's evaluation for **July**, a general judgment is that the model did not perform well concerning both the temperature and the seasonal accumulated precipitation. It must be mentioned that during summer month's precipitation is resulted mainly from thundery activity which has very localised characteristics and that judging accumulated precipitation is very difficult due to models' limitations.

In a more detailed evaluation of the recorded temperatures, mean maximum and minimum (table below), were above normal. Daily maximum temperatures above normal (deviating by 4°C or more from normal) were recorded, like the highest daily maximum temperature of Pafos that was 37.3°C (with a normal of 29.9°C) and the highest daily maximum temperature of Prodromos that was 34.6°C (with a normal of 27.9°C). Highest daily minimum temperatures were also recorded, with positive departures greater than 4°C, like the station of Larnaka where a minimum of 29°C was by 7°C above station's normal (22°C) and the station of Polis Chrysochous where a minimum of 26.8°C was by 5.7°C above station's normal (21.1°C).

It is especially useful to be added that in Athalassa station it was recorded on July 2021, the second highest mean maximum temperature (39.5°C) since 1983.

During **July** EMMA warnings with yellow awareness level were issued, concerning extreme high temperatures on for the periods 9-18 and 26-31 of **July** and with orange awareness level on 1st and 2nd of **July**. Also, EMMA warnings with yellow awareness level were issued, concerning thunderstorms on 24th and 25th of **July**.

On the 10th, 23rd, 24th and 25th of **July** local showers and thunderstorms resulted in accumulated precipitation of 38% of normal.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR JULY 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	35,3	33,4	1,9	39,7	32,0	24,1	21,1	3,0	21,6	26,8	0,0	0,1	-0,1
82*	PAFOS (AIRPORT)	31,7	29,9	1,8	37,3	29,6	23,6	20,6	3,0	21,3	25,3	0,0	0,2	-0,2
225	PRODROMOS (C.F.C.)	30,9	27,9	3,0	34,6	27,8	18,6	18,2	0,4	15,9	21,5	3,7	16,4	-12,7
666*	ATHALASSA (RADIOSONDE)	39,5	37,1	2,4	43,1	35,5	23,6	22,1	1,5	18,5	27,6	0,0	4,2	-4,2
731	LARNAKA (AIRPORT)	34,9	32,5	2,4	39,0	31,6	24,2	22,0	2,2	21,3	29,0	0,4	0,5	-0,1
800**	ACHNA (DASAKI)	34,9	33,2	1,7	39,8	30,6	22,7	21,8	0,9	18,8	27,2	0,0	0,1	-0,1

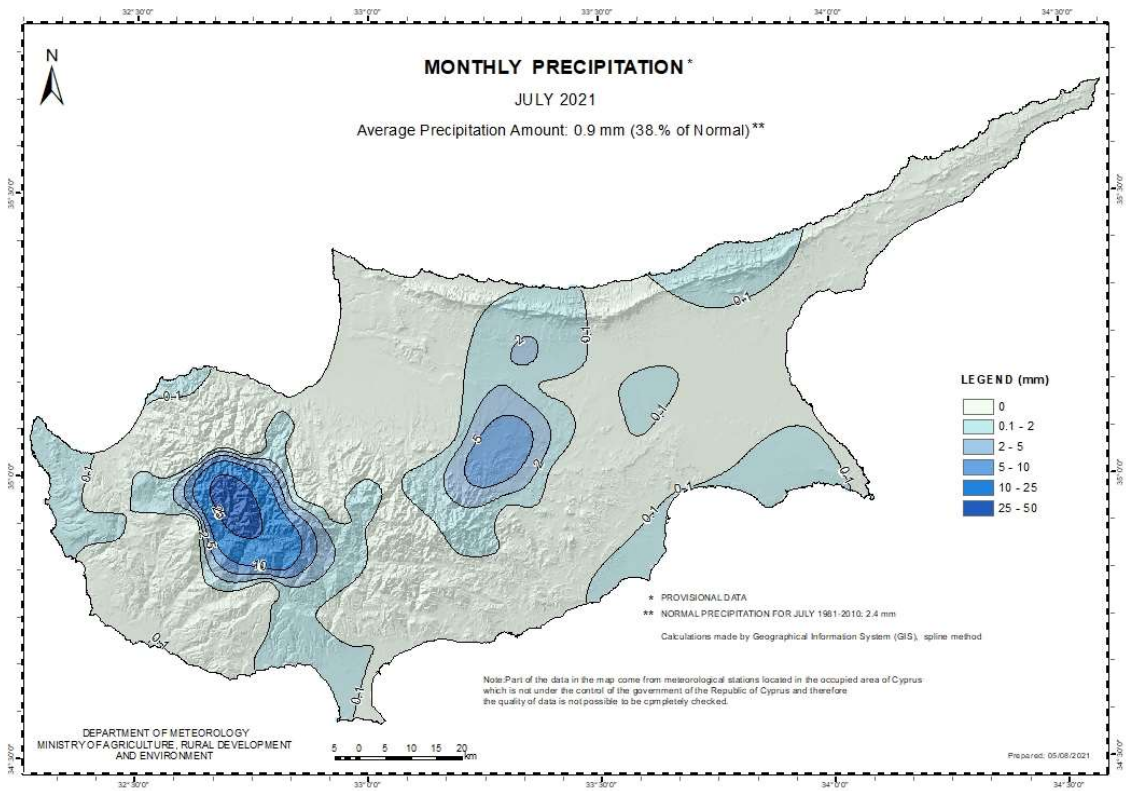
* Pafos' and Athalassa's Station Normal Values cover the period 1983-2010

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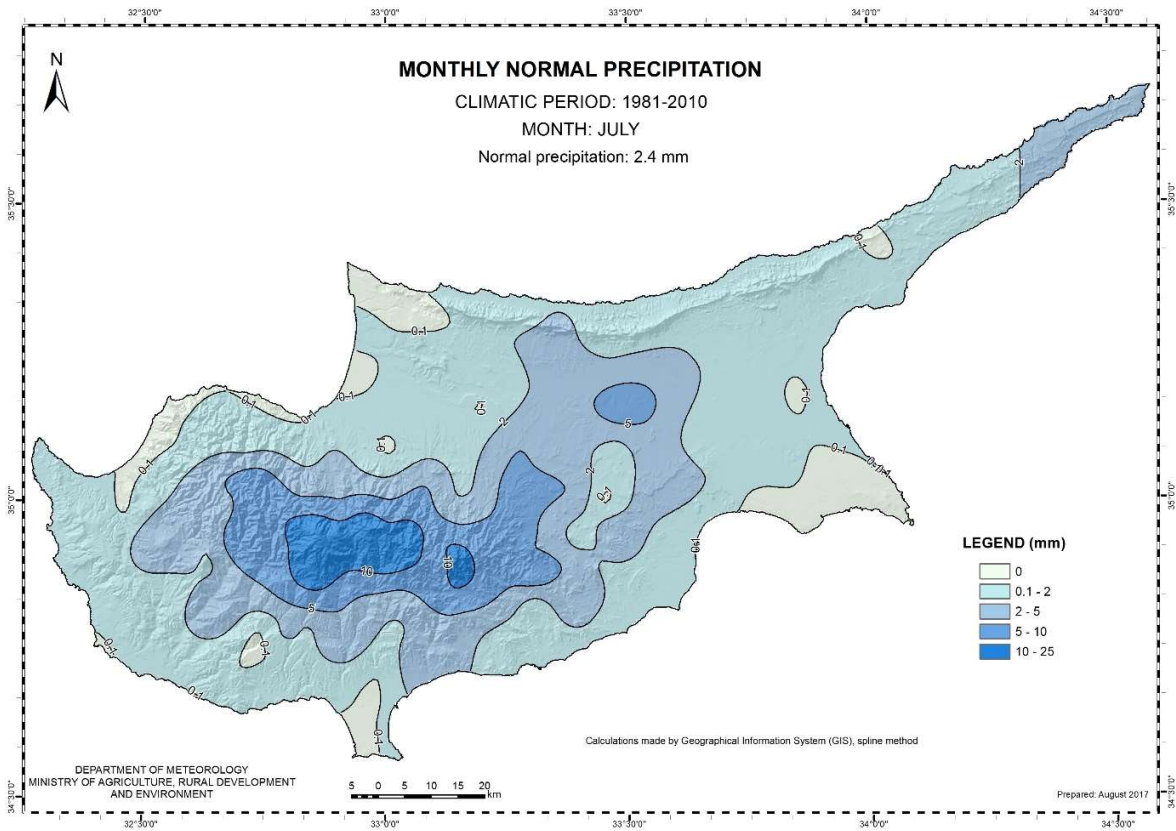
☂ Dew

= VALUES FROM AUTOMATIC WEATHER STATION

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

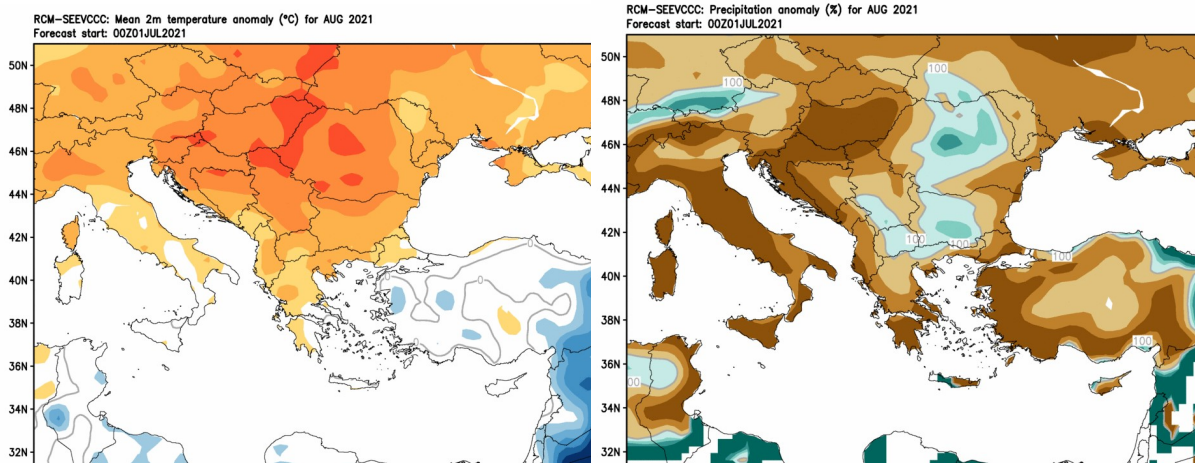


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **July** is also presented.



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

August's seasonal forecast suggested that temperature over Cyprus would be generally normal. Normal temperature characterized also Minor Asia, while Middle East would be lower than normal. The amount of the accumulated precipitation inland was expected to be around normal, while over the northern and western part was expected to range above normal and over the southern and eastern part was expected to range below normal.



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

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

Concerning the model's evaluation for **August** a general judgment is that the model did not perform well concerning the temperature. Almost all the mean daily maximum and minimum temperatures were above normal. It must be mentioned that during summer months, precipitation is resulted mainly from thundery activity which has very localised characteristics and that a quantitative judgment is very difficult due to model's limitations.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR AUGUST 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	36,7	33,3	3,4	40,9	32,5	24,2	21,5	2,7	21,3	27,3	0,0
82*	PAFOS (AIRPORT)	32,8	30,5	2,3	36,1	30,6	23,7	21,1	2,6	21,3	26,1	0,0	0,0	0,0
225	PRODROMOS (C.F.C.)	31,4	28,0	3,4	36,6	27,3	18,6	18,1	0,5	15,6	22,8	1,4	12,0	-10,6
666*	ATHALASSA (RADIOSONDE)	39,8	36,9	2,9	44,3	36,5	23,3	21,9	1,4	18,7	28,1	0,0	1,8	-1,8
731	LARNAKA (AIRPORT)	35,6	32,9	2,7	39,2	32,3	24,4	22,3	2,1	21,3	28,5	IXNH	0,3	-0,3
800**	ACHNA (DASAKI)	35,6	33,5	2,1	40,1	31,9	23,0	22,0	1,0	18,0	27,2	0,0	0,1	-0,1

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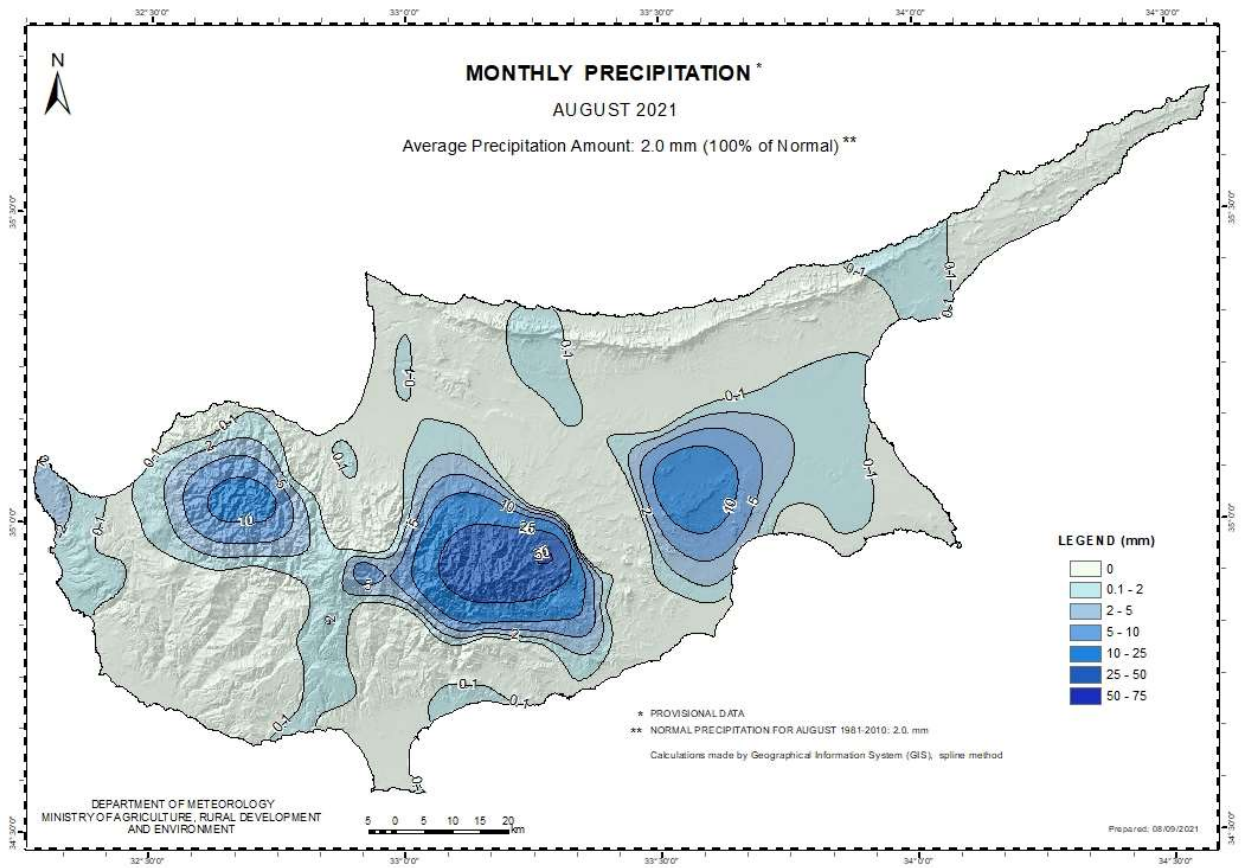
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On the 6th, 12th, 13th and 20th of **August** episodes of local showers and isolated thunderstorms resulted in accumulated precipitation of 2mm (100% of normal). Hail was reported on 6th of **August** at Troodos.

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

