

National Climate Bulletin and the assessment of the SEECOF-23

Climate outlook for **CYPRUS** for summer season JJA 2020

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 2020, 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 SEECOF23 which was stating that:

the area of Cyprus as regarded from the suggested climate statement, issued on May 2020, 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 pressented 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 50%, 30% would be normal and 20% 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 pressented 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.

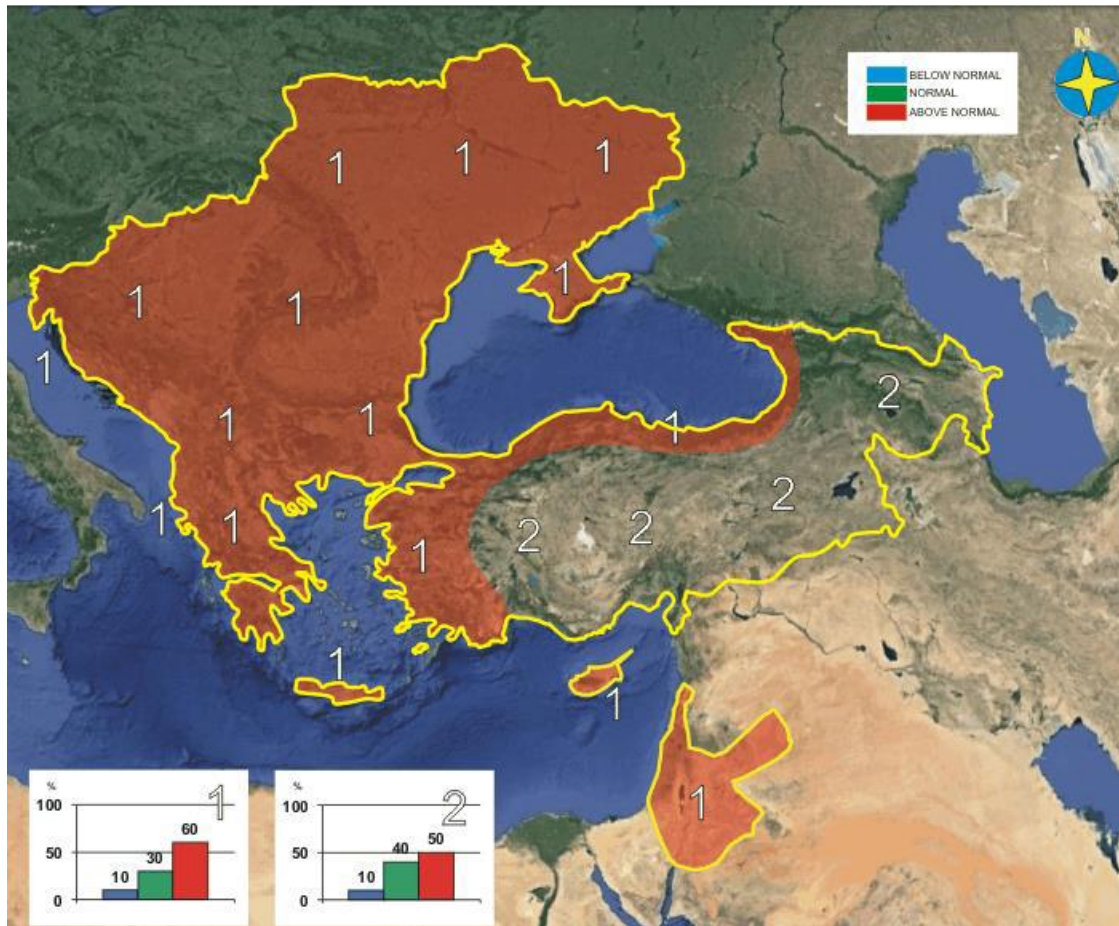


Figure 1. Graphical presentation of the 2020 summer temperature outlook

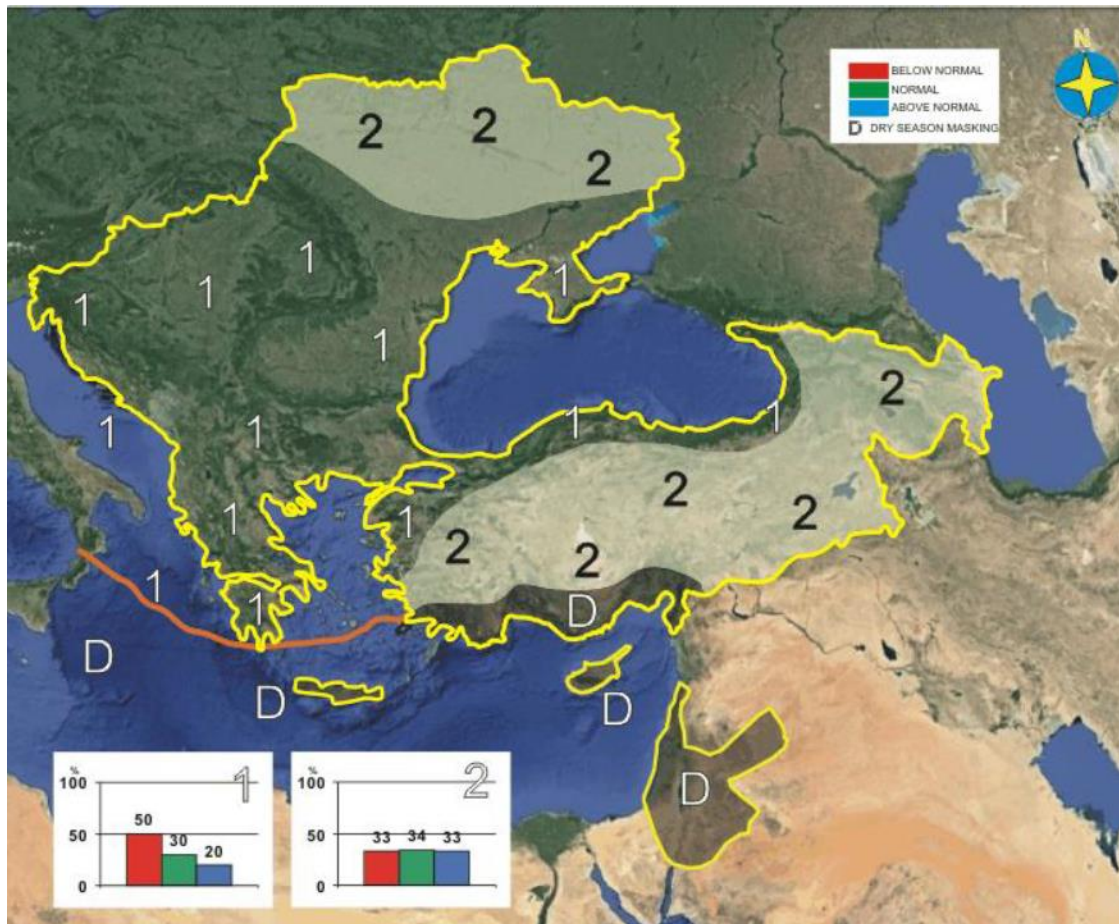


Figure 2. Graphical presentation of the 2020 summer precipitation outlook

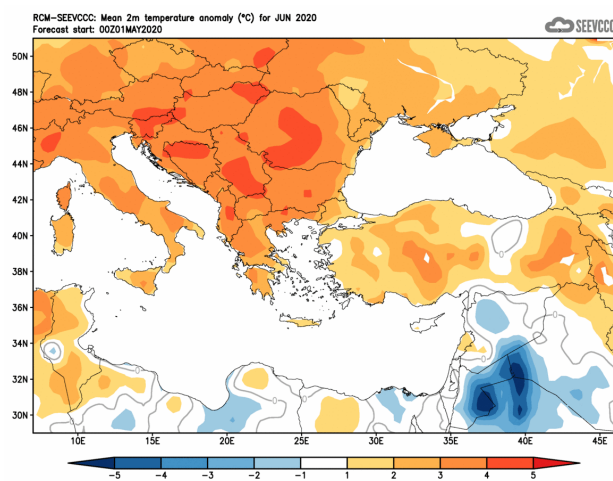
Find also below a table presenting the general anomalies of SEECOF products and extreme events of the recorded summer weather.

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)		High Impact Events
	Observed	SEECOF-23 climate outlook for temperature	Observed	SEECOF-23 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 Below Normal</p>	<p>June Below Normal</p> <p>July SWest part below Normal, NEast part above Normal</p> <p>August Below Normal but West and North part normal</p>	<p>June</p> <p>Both maximum and minimum temperatures were around normal, suggesting that June was almost a normal month. Extremes were also recorded with great positive departures, like Athalassa station where the maximum for the station was 40.5°C departing 6.5°C from the normal (36°C), and at Achna station, where the maximum temperature of the station was 36.9°C was 5.9°C greater than normal of 31°C.</p> <p>For the period 27-29 of June EMMA yellow warnings were issued, concerning high temperature.</p> <p>July</p> <p>In a more detailed evaluation of the recorded temperatures, maximum (table below), was around and above normal. Concerning the minimum (table below), was around normal. Daily maximum temperatures above normal (deviating by 4°C or more from normal) were recorded, like the highest daily maximum temperature of Prodromos that was 34.5°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 Polis Chrysochous where a minimum of 25.6°C was by 4.5°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 2020 the highest mean maximum temperature (39.7°C) since 1982. During July EMMA warnings with yellow awareness level were issued, concerning extreme high temperatures on 3, 4, 6, 11, 12, 13, 14, 15, 20, 21, 22, 24, 25, 27 and 28 of July and with orange awareness level on 5, 29, 30 and 31 of July.</p>

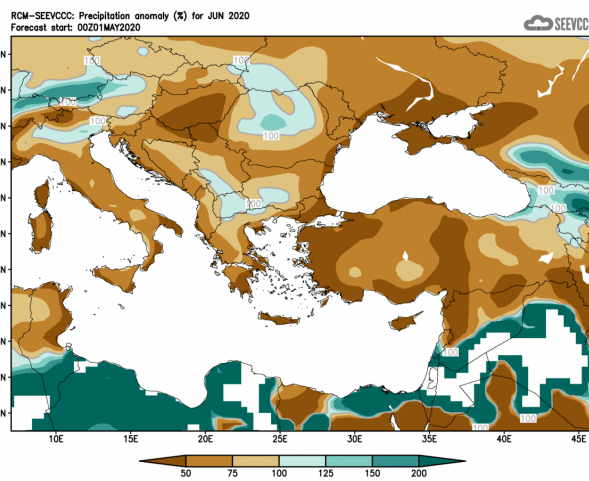
					<p>On the 10th, 12th, 13th, 14th καὶ 15th of July isolated showers resulted in accumulated precipitation of 29% of normal.</p> <p style="text-align: center;">August</p> <p>Almost all the mean daily maximum temperatures were above normal, whereas almost all of the mean daily minimum temperatures were around 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.</p> <p>Extremes were also recorded with positive departures greater than 4°C, like Athalassa station where the highest daily maximum temperature (44.5°C) was 7.6°C greater than normal (36.9°C) and Prodromos station, where the highest daily maximum temperature (37°C) was 9°C greater than normal (28°C).</p> <p>For the dates 1, 2, 4, 5, 13-19 and 29 of August EMMA yellow warnings were issued, while for the dates 6 and 30 EMMA orange warnings were issued and the 31st of August EMMA red warning was issued. All the above warnings concerned high temperatures.</p> <p>On the 3rd, 4th and 12th of August episodes of local showers resulted in accumulated precipitation of 0.3mm (15% of normal).</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 0.5mm of accumulated precipitation resulting to 8% of the climatological precipitation (6.6mm).

The accumulated precipitation was a result of local rain showers on the 3rd, 4th, 14th and 19th of June.

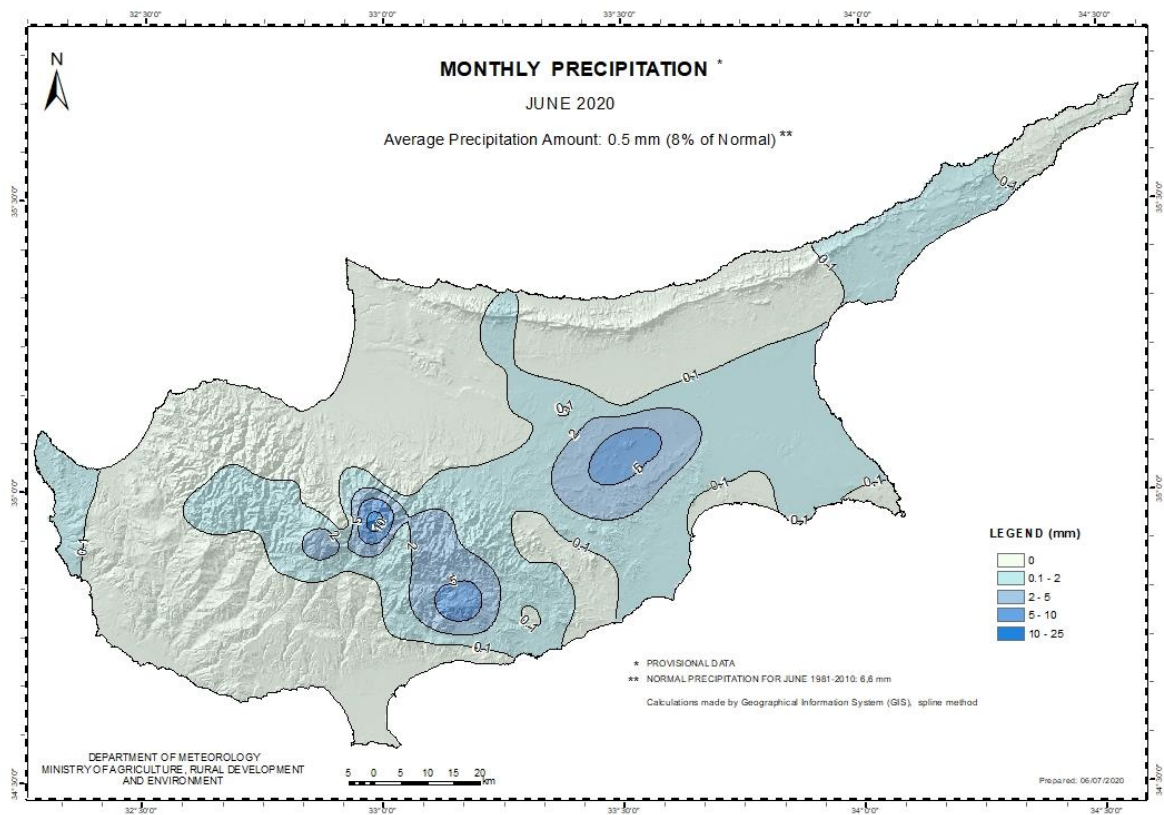
TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR JUNE 2020														
St. No.	Station Name	Mean Daily Maximum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Highest Daily Maximum Temperature (°C)	Lowest Daily Maximum Temperature (°C)	Mean Daily Minimum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Lowest Daily Minimum Temperature (°C)	Highest Daily Minimum Temperature (°C)	Monthly Total Precipitation (mm)	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	29.4	30.3	-0.9	35.5	24.1	18.1	18.5	-0.4	14.1	22.9	0.0	1.8	-1.8
82*	PAFOS (AIRPORT)	27.4	27.6	-0.2	29.7	25.0	18.0	18.0	0.0	14.1	22.4	0.0	1.3	-1.3
225	PRODROMOS (C.F.C.)	26.1	25.0	1.1	30.6	17.3	13.3	15.0	-1.7	6.6	19.0	0.7	27.2	-26.5
666*	ATHALASSA (RADIOSONDE)	34.4	34.0	0.4	40.5	29.0	18.4	19.1	-0.7	13.4	25.1	0.3	11.6	-11.3
731	LARNAKA (AIRPORT)	30.1	30.2	-0.1	33.3	26.0	19.3	19.4	-0.1	14.9	23.8	0.7	2.0	-1.3
800**	ACHNA (DASAKI)	29.6	31.0	-1.4	36.9	24.8	17.7	18.9	-1.2	13.4	22.7	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 and minimum (table above) were around normal, except the station of Achna. Extremes were also recorded with great positive departures,

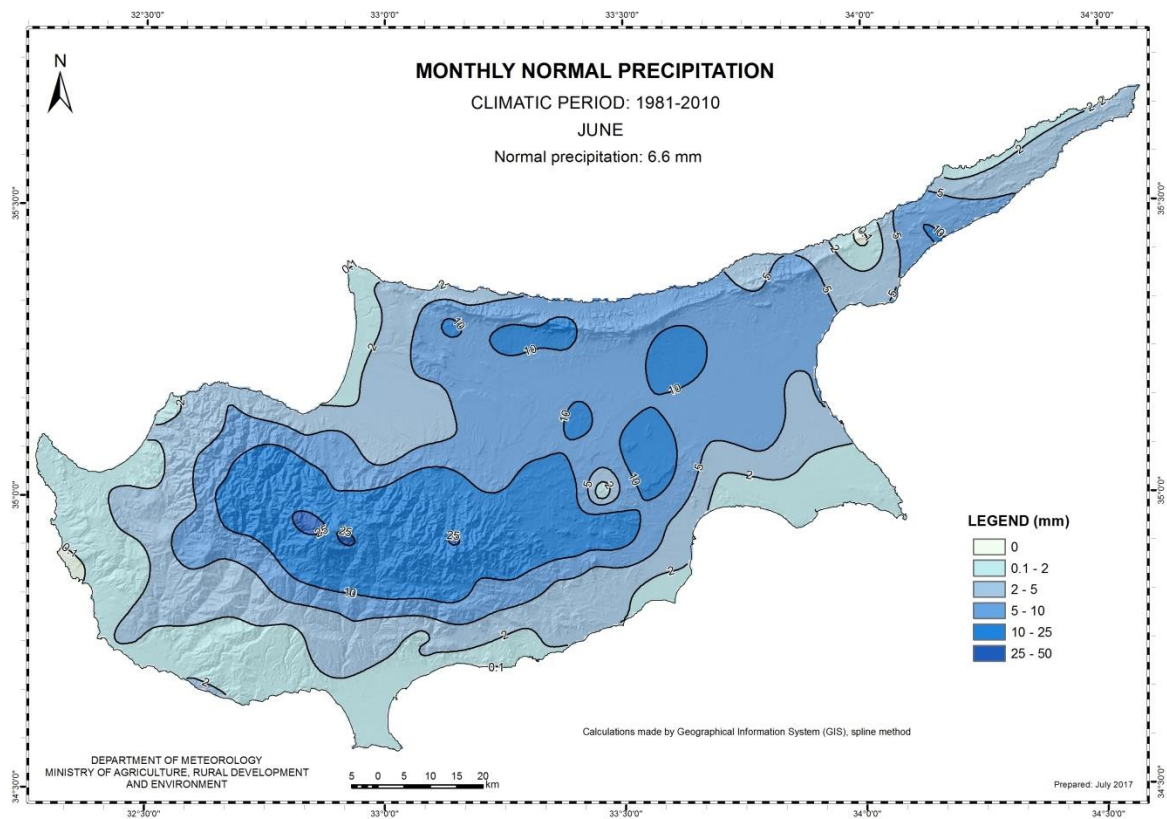
like Athalassa station where the maximum for the station was 40.5°C departing 6.5°C from the normal (36°C), and at Achna station, where the maximum temperature of the station was 36.9°C was 5.9°C greater than normal of 31°C.

For the period 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.

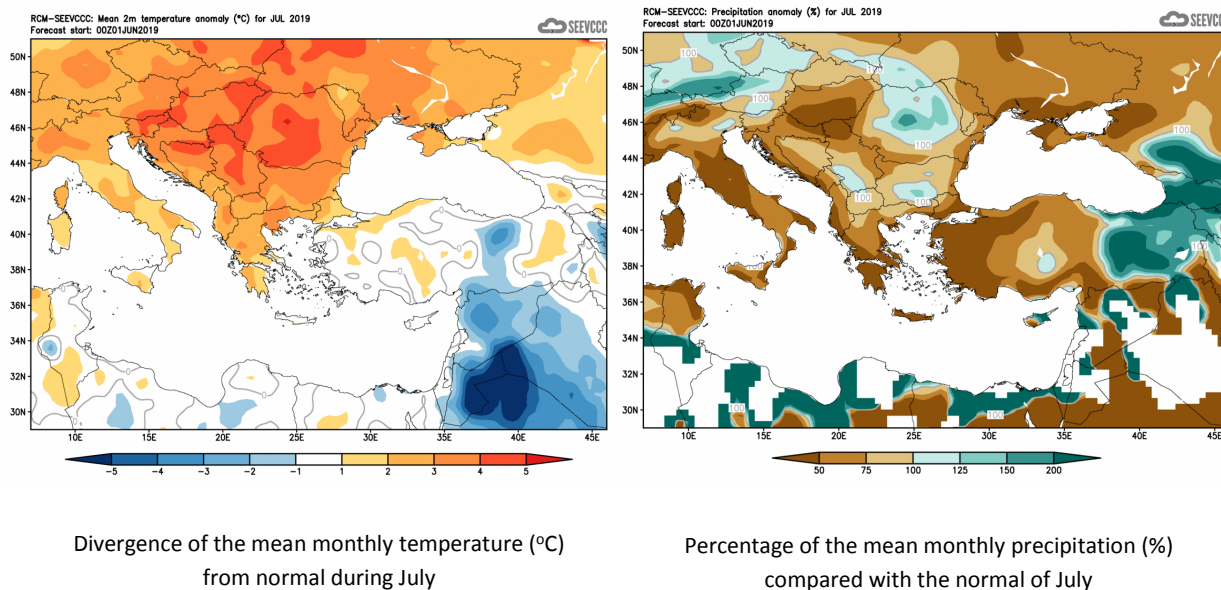


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **June** is also presented.



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.



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, maximum (table below), was around and above normal. Concerning the minimum (table below), was around normal. Daily maximum temperatures above normal (deviating by 4°C or more from normal) were recorded, like the highest daily maximum temperature of Prodromos that was 34.5°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 Polis Chrysochous where a minimum of 25.6°C was by 4.5°C above station's normal (21.1°C).

It is especially useful to be added that in Athalassa station it was recorded on July 2020 the highest mean maximum temperature (39.7°C) since 1982.

During **July** EMMA warnings with yellow awareness level were issued, concerning extreme high temperatures on 3, 4, 6, 11, 12, 13, 14, 15, 20, 21, 22, 24, 25, 27 and 28 of **July** and with orange awareness level on 5, 29, 30 and 31 of **July**.

On the 10th, 12th, 13th, 14th και 15th of **July** isolated showers resulted in accumulated precipitation of 29% of normal.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR JULY 2020

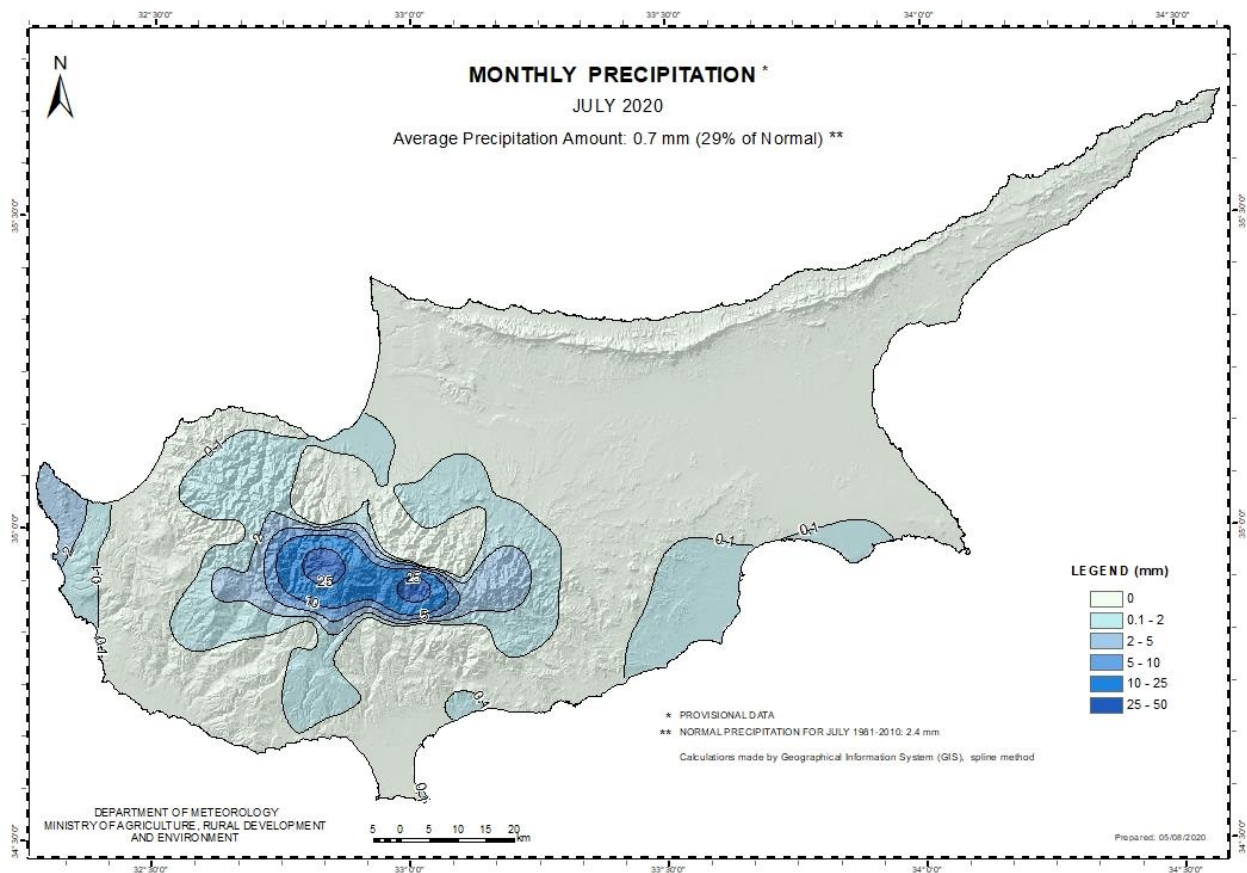
St. No.	Station Name	Mean Daily Maximum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Highest Daily Maximum Temperature (°C)	Lowest Daily Maximum Temperature (°C)	Mean Daily Minimum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Lowest Daily Minimum Temperature (°C)	Highest Daily Minimum Temperature (°C)	Monthly Total Precipitation (mm)	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	34,2	33,4	0,8	38,3	30,7	21,5	21,1	0,4	18,8	25,6	0,0	0,1	-0,1
82*	PAFOS (AIRPORT)	31,5	29,9	1,6	33,2	30,0	20,5	20,6	-0,1	17,7	22,7	0,0	0,2	-0,2
225	PRODROMOS (C.F.C.)	30,9	27,9	3,0	34,5	27,1	18,3	18,2	0,1	12,6	21,7	33,5	16,4	17,1
666*	ATHALASSA (RADIOSONDE)	39,7	37,1	2,6	43,5	34,8	22,1	22,1	0,0	19,0	25,9	0,0	4,2	-4,2
731	LARNAKA (AIRPORT)	33,6	32,5	1,1	36,9	30,9	22,8	22,0	0,8	20,8	26,7	1,0	0,5	0,5
800**	ACHNA (DASAKI)	33,1	33,2	-0,1	38,9	29,4	20,9	21,8	-0,9	18,4	22,8	0,0	0,1	-0,1

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

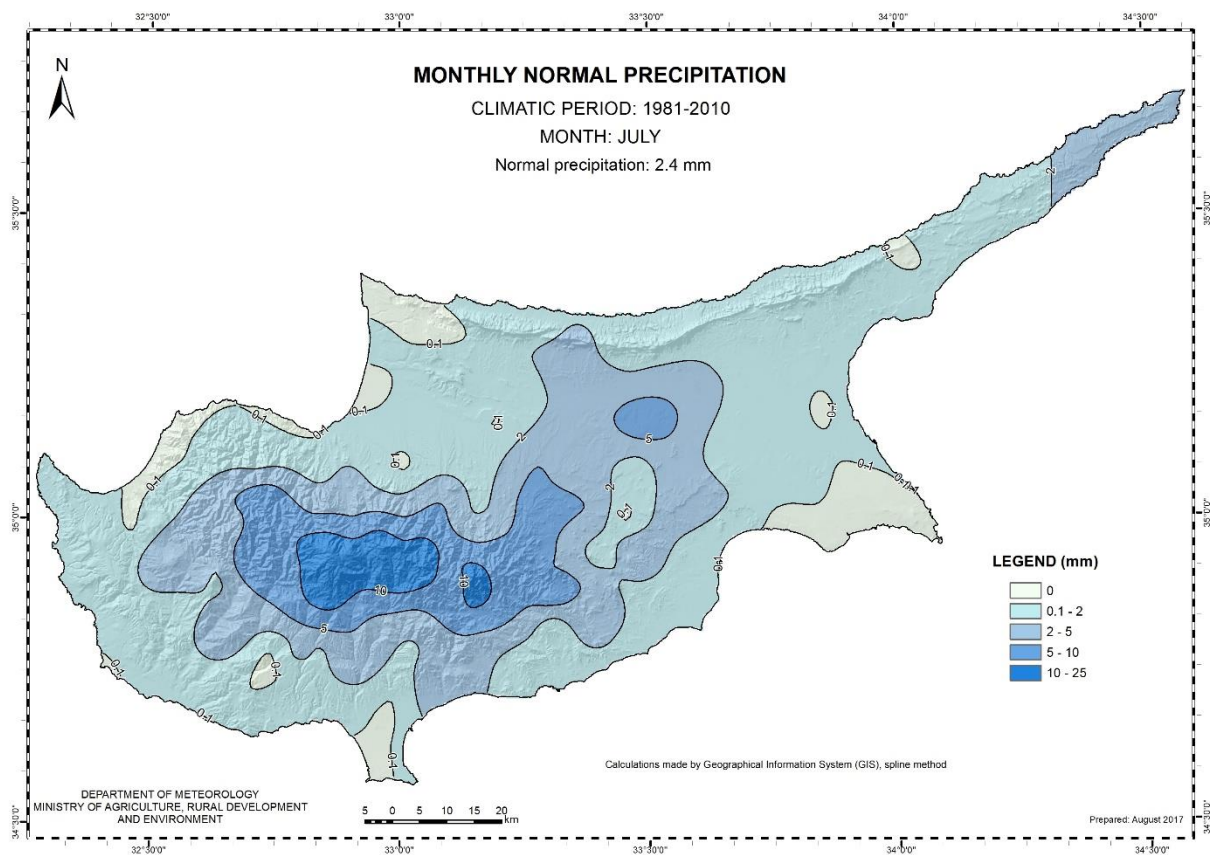
** Achna's Temperature Normal Values cover the period 1981-2007

= VALUES FROM AUTOMATIC WEATHER STATION

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

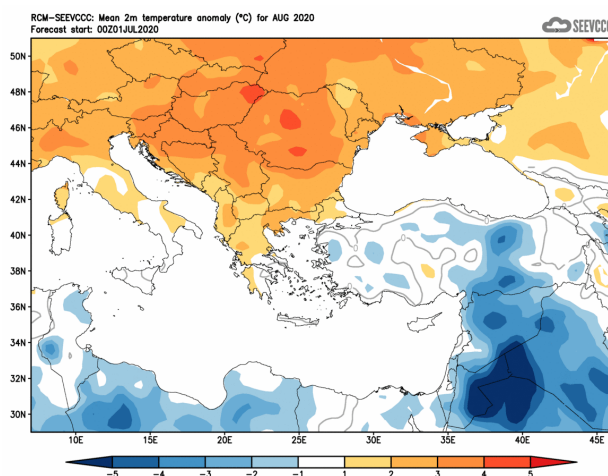


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **July** is also presented.

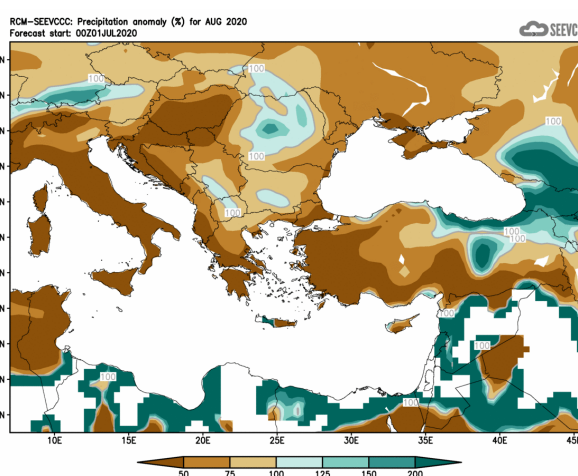


Evaluation of August's seasonal forecast for the area of Cyprus

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 so well concerning the temperature. Almost all the mean daily maximum temperatures were above normal, whereas almost all of the mean daily minimum temperatures were around 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.

Extremes were also recorded with positive departures greater than 4°C, like Athalassa station where the highest daily maximum temperature (44.5°C) was 7.6°C greater than normal (36.9°C) and Prodromos station, where the highest daily maximum temperature (37°C) was 9°C greater than normal (28°C).

For the dates 1, 2, 4, 5, 13-19 and 29 of **August** EMMA yellow warnings were issued, while for the dates 6 and 30 EMMA orange warnings were issued and the 31st of **August** EMMA red warning was issued. All the above warnings concerned high temperatures.

On the 3rd, 4th and 12th of **August** episodes of local showers resulted in accumulated precipitation of 0.3mm (15% of normal).

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR AUGUST 2020

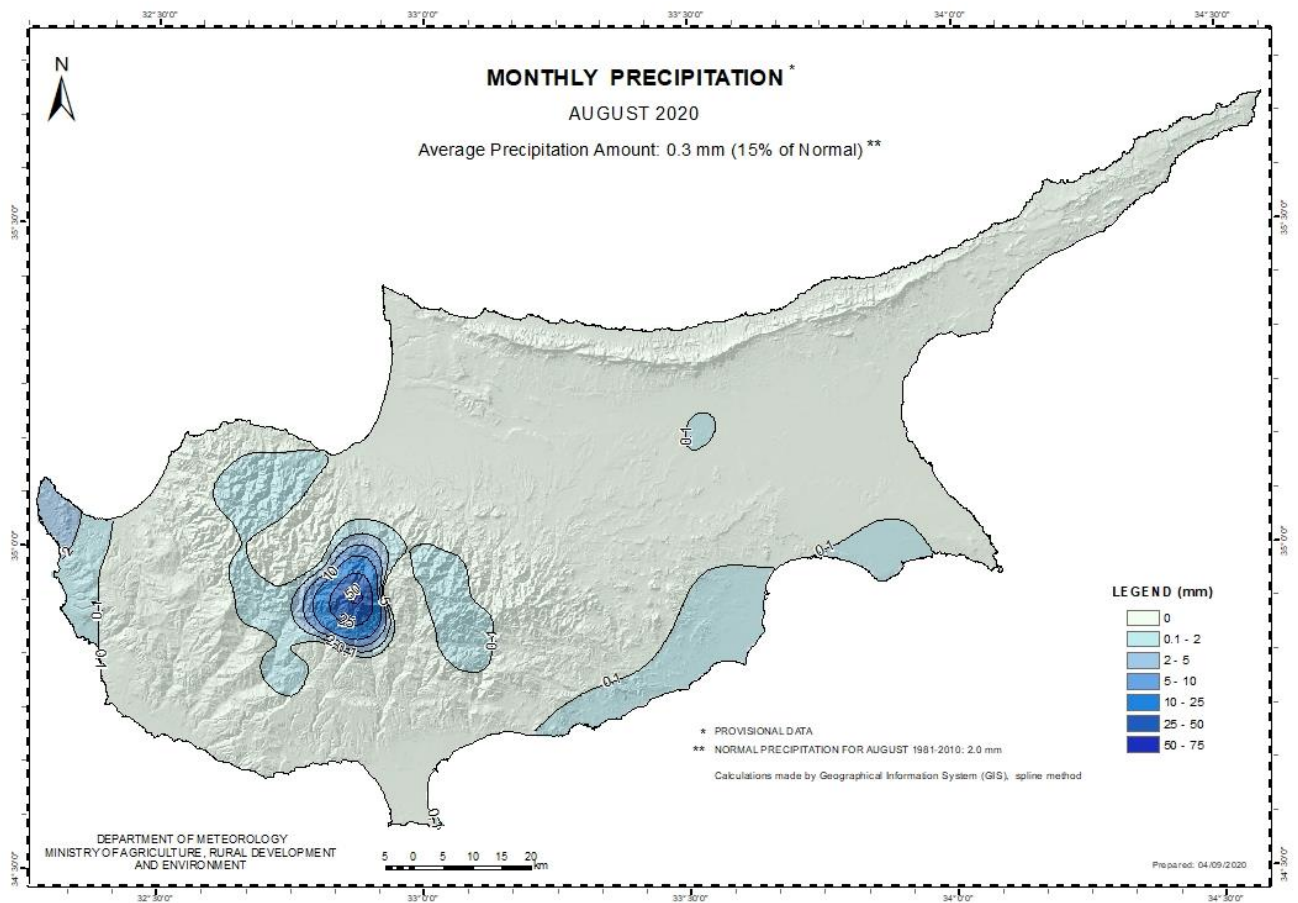
St. No.	Station Name	Mean Daily Maximum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Highest Daily Maximum Temperature (°C)	Lowest Daily Maximum Temperature (°C)	Mean Daily Minimum Temperature (°C)	Normal Value (1981-2010)	Difference from Normal Value	Lowest Daily Minimum Temperature (°C)	Highest Daily Minimum Temperature (°C)	Monthly Total Precipitation (mm)	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	34,2	33,3	0,9	37,7	31,4	22,2	21,5	0,7	19,9	24,4	0,0	0,0	0,0
82*	PAFOS (AIRPORT)	32,1	30,5	1,6	35,2	30,4	21,6	21,1	0,5	19,8	25,3	0,0	0,0	0,0
225	PRODROMOS (C.F.C.)	30,9	28,0	2,9	37,0	25,3	18,2	18,1	0,1	13,3	22,9	11,2	12,0	-0,8
666*	ATHALASSA (RADIOSONDE)	39,5	36,9	2,6	44,5	34,5	22,4	21,9	0,5	19,9	25,8	0,0	1,8	-1,8
731	LARNAKA (AIRPORT)	34,4	32,9	1,5	39,1	32,0	23,4	22,3	1,1	21,0	26,2	0,6	0,3	0,3
800**	ACHNA (DASAKI)	33,9	33,5	0,4	39,6	30,5	21,8	22,0	-0,2	19,3	25,1	0,0	0,1	-0,1

* 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 **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.

