

National Climate Bulletin and the assessment of the SEECOF-13 Climate outlook for **CYPRUS** for summer season JJA 2015

Summary

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 summer months of June, July and August 2015, which is based on the means of the climatological period 1981-2010.

Generally, the area of the east Mediterranean, but specially the area of Cyprus, during summer is characterized by the high mean maximum and minimum normal (1981-201) 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 SEECOF13 which was stating that:

the area of Cyprus as regarded from the suggested climate statement, issued on May 2015, 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% below periods normal, 30% wold be normal and 40% would be above nornal. As presented in more details below June was rather colder than normal, June was normal to rather normal and August was normal to rather warmer than normal.

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.

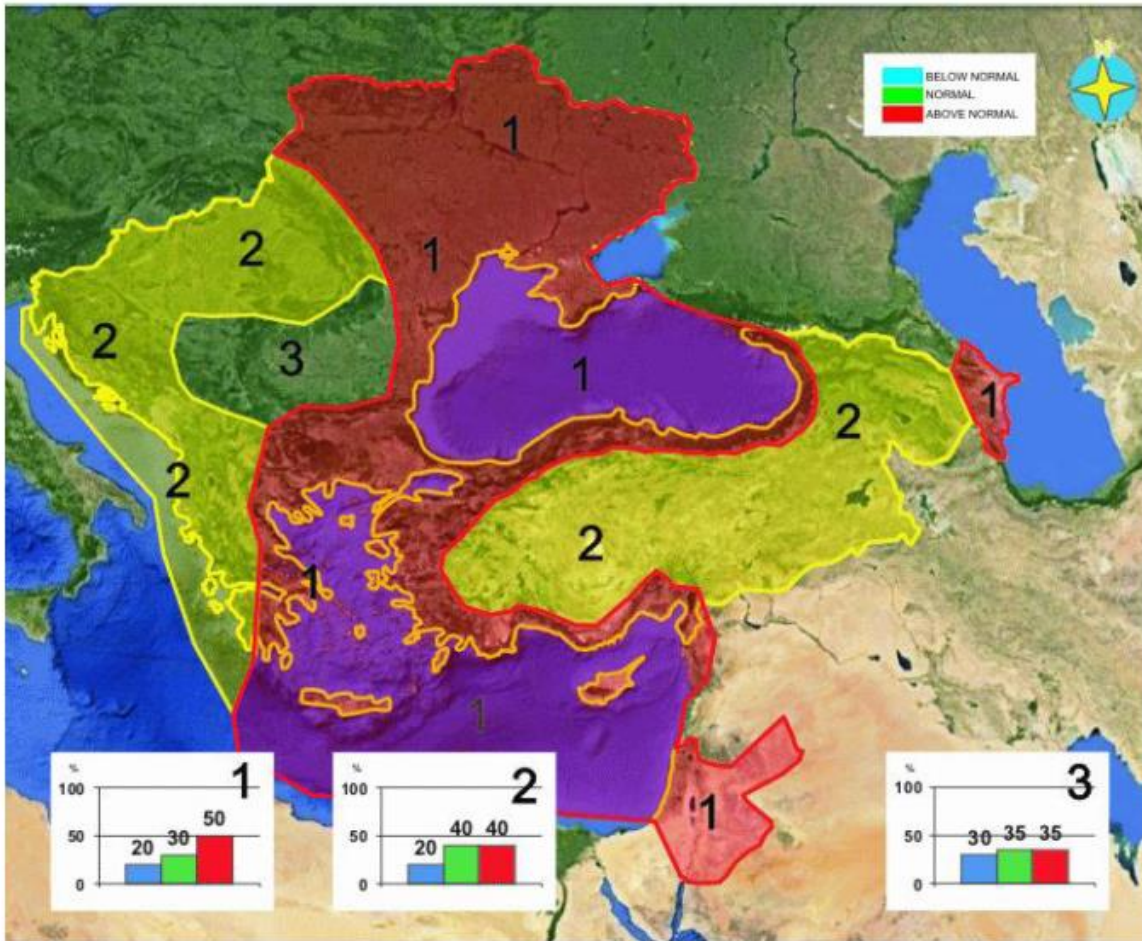


Figure 1. Graphical presentation of the 2015 summer temperature outlook

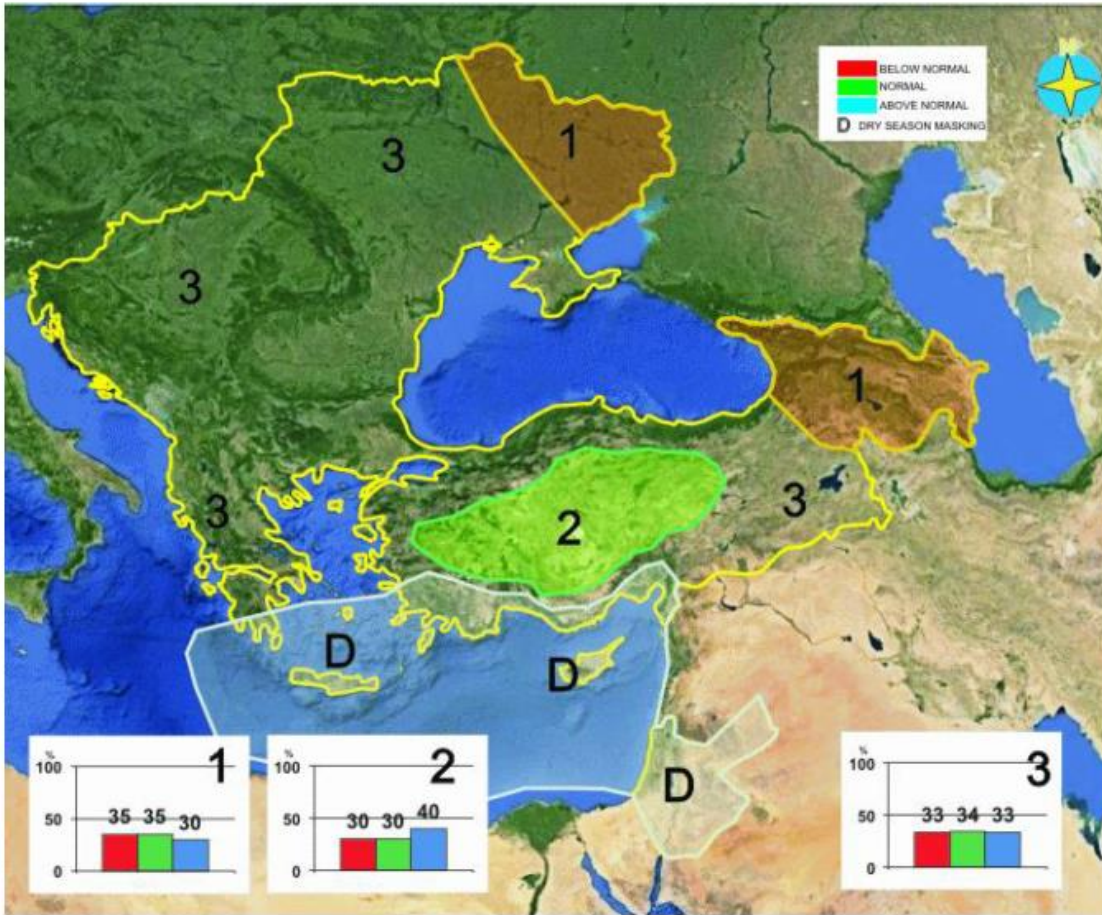


Figure 2. Graphical presentation of the 2015 summer precipitation outlook

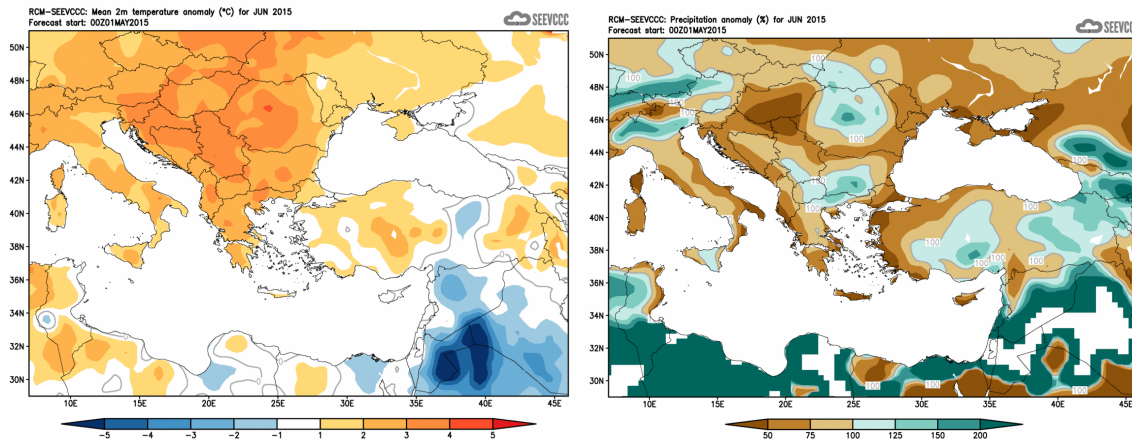
Find also below a table presenting the general anomalies of SEECOF products and extreme events of the recorded summer weather.

Country	Seasonal temperature (JJA)		Seasonal precipitation (JJA)		High Impact Events
	Observed	SEECOF-13 climate outlook for temperature	Observed	SEECOF-13 climate outlook for precipitation	
CYPRUS	June Below Normal July Normal August Above Normal	June Normal July Normal August Below Normal	June High precipitation accumulations very isolated due to Thundery activity July Generally below normal	June Below Normal July West part Below Normal East part Above Normal August West and	June Temperature extremes were recorded, over Athalassa station where a certain minimum of 14.0°C was by 5.1°C below the stations normal (19.1°C), or the mountainous station of Prodromos where an extreme minimum of 7.6°C was by 7.4°C below stations normal (15.0°C). Extremem episodes of thundery activity were recorded on the 5 th the 10 th and mainly the 19 th of June where in

			<p>August Generally below normal</p>	<p>North part above Normal South and East Part Below Normal</p>	<p>certain areas of the southeast coasts like Xilophagou and Frenaros stations the accumulated precipitation was 1341% and 454% respectively.</p> <p>July Extreme highs (both maximum and minimum departing by more than 3°C of normal) were recorded, during the second half of July. Note the 36.5°C highest maximum of Athalassa station departing by almost 4°C from normal. Extreme minimums were also recorded; note the 18.1°C minimum of Athalassa departing by more than 4°C from stations normal.</p> <p>During the period 30 and 31 of July episodes of thundery activity and isolated showers caused by thermal instability were recorded. In certain areas extreme accumulated precipitation was recorded as suggested by the accumulation of station Kellaki a semi mountainous station over the southern part of the island which recorded 11.6mm of precipitation thus something more than 800% of normal.</p> <p>August During the period from 2nd to the 5th, 16th to 17th and the 30th the temperature was diverted by 4°C higher than the normal maximum or minimum of the stations, which are characterized as extremes maximum or minimum. The highest maximum was recorded over the inland station of Athalassa and it was 42.5°C with the normal being 36.9°C. For a sequence of days EMMA warning for high temperature was issued.</p>
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Detailed 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 great parts of Asia Minor would be warmer than normal. Regarding the accumulated precipitation Cyprus was expected to be again with the accumulated precipitation ranging from 50% to 75%, as the Balkans and some parts of Asia Minor.



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 moderate both qualitatively and quantitatively concerning the temperature and relatively good in forecasting the seasonal accumulated precipitation. It must be mentioned that during summer months, precipitation is resulted mainly from thundery activity which has very localised characteristics and that judging is very difficult due to models limitations.

In a more detailed evaluation of the recorded temperatures both maximum and minimum (table below) were below normal with departures up to -3.4°C , suggesting that **June** was colder than normal. Extremes were also recorded, and greater departures were recorded in concerns of the minimum temperatures over Athalassa station where a certain minimum of 14.0°C was by 5.1°C below the stations normal (19.1°C), or the mountainous station of Prodomos where an extreme minimum of 7.6°C was by 7.4°C below stations normal (15.0°C).

During **June**, episodes of thundery activity caused by thermal instability were recorded resulting in accumulated precipitation of 85% of normal. The episodes occurred on the 5th the 10th and mainly the 19th of **June** where in certain areas of the southeast coasts like Xilophagou and Frenaros stations the accumulated precipitation was 1341% and 454% respectively.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR JUNE 2015

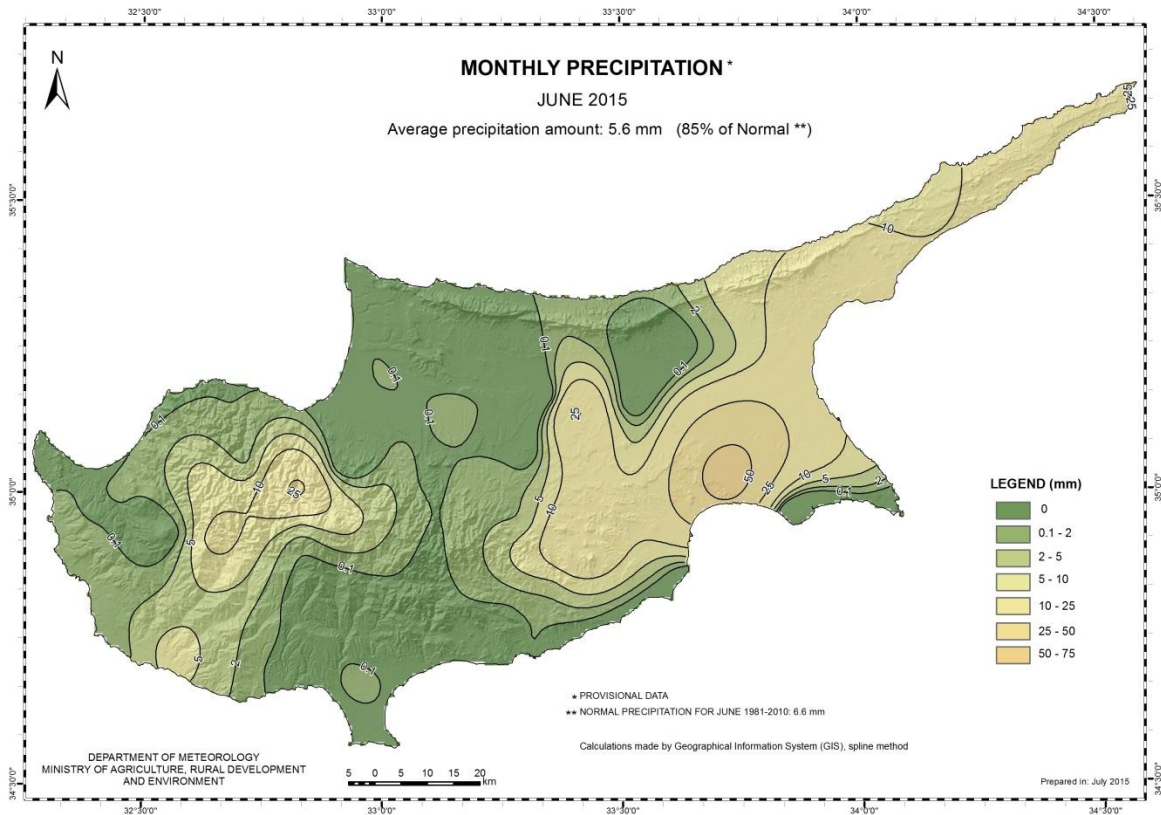
St. No.	Station Name	Temperature (°C)				Temperature (°C)				Precipitation (mm)		
		Mean Daily Maximum	Normal Value (1981-2010)	Difference from Normal Value	Highest Daily Maximum	Mean Daily Minimum	Normal Value (1981-2010)	Difference from Normal Value	Lowest Daily Minimum	Monthly Total	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	28.9	30.3	-1.4	33.5	17.6	18.5	-0.9	14.4	0.0	1.8	-1.8
82*	PAFOS (AIRPORT)	27.3	27.6	-0.3	30.5	18.4	18.0	0.4	16.0	2.2	1.3	0.9
225	PRODROMOS (C.F.C.)	22.1	25.0	-2.9	26.8	11.6	15.0	-3.4	7.6	6.8	27.2	-20.4
666*	ATHALASSA (RADIOSONDE)	32.0	34.0	-2.0	36.7	18.7	19.1	-0.4	14.0	24.1	11.6	12.5
731	LARNAKA (AIRPORT)	29.1	30.2	-1.1	34.1	19.0	19.4	-0.4	15.2	1.4	2.0	-0.6
800**	ACHNA (DASAKI)	28.3	31.0	-2.7	32.6	17.6	18.9	-1.3	14.5	61.8	1.8	60.0

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

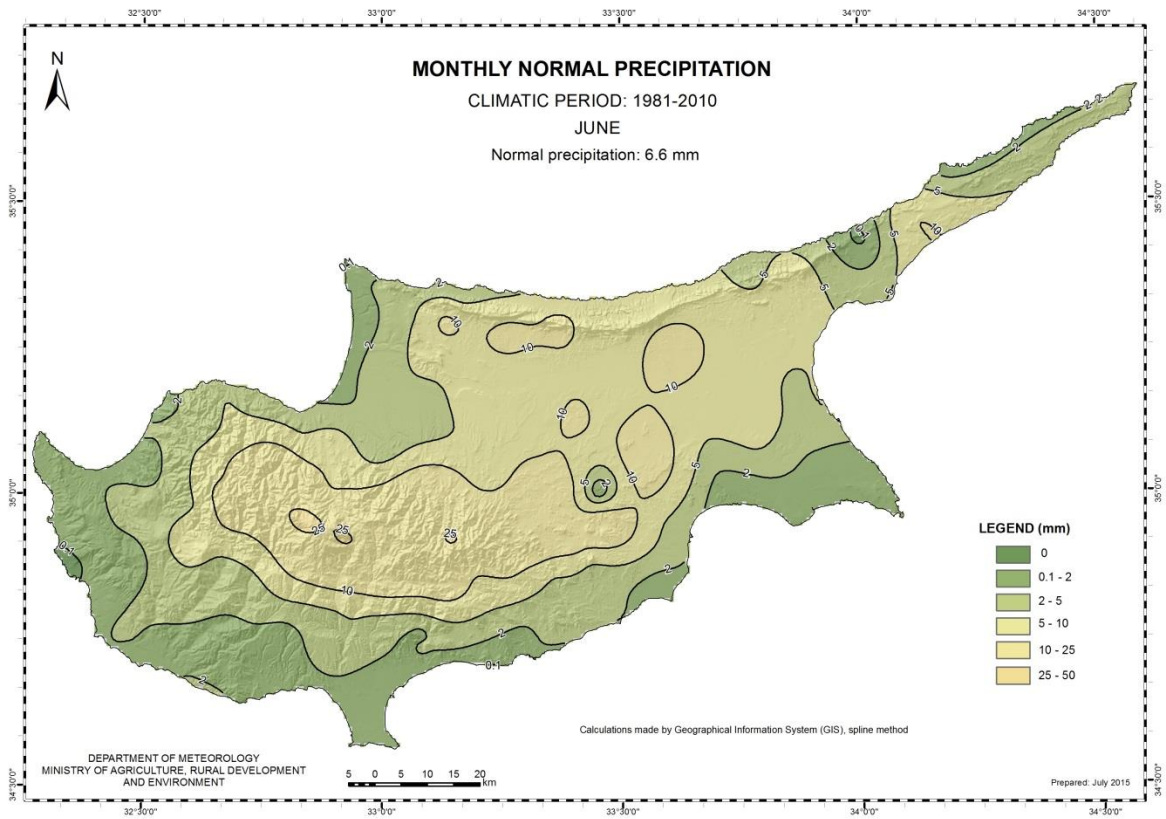
** Achna's Temperature Normal Values cover the period 1981-2007

= VALUES FROM AUTOMATIC WEATHER STATION

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

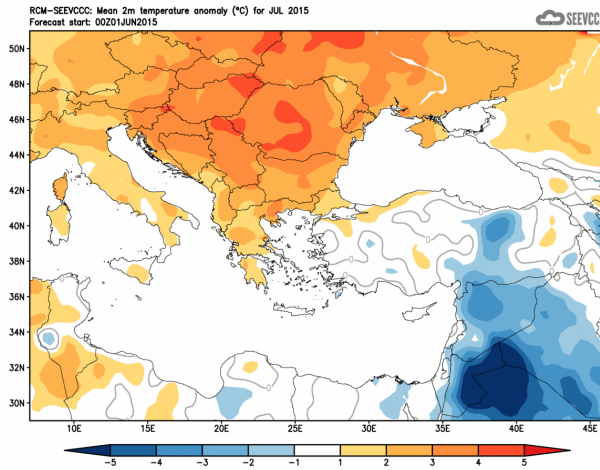


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **June** is also presented.

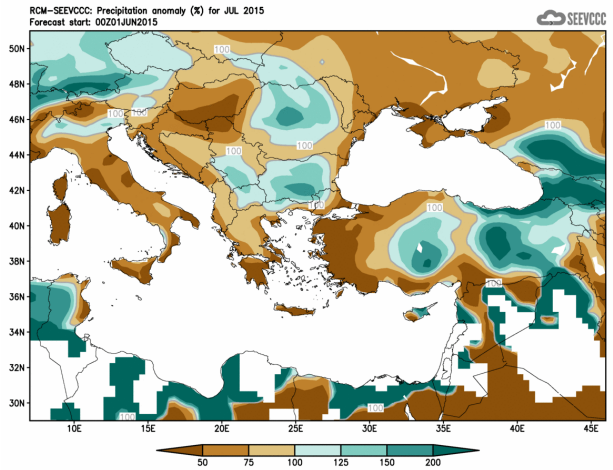


Evaluation of July's seasonal forecast for the area of Cyprus

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 again with the accumulated precipitation ranging from 50% to 75% but over the east part accumulated precipitation was expected to range up to 150%.



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 models evaluation for **July**, a general judgment is that the model performed well both qualitatively and quantitatively concerning not only the temperature but also 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 is very difficult due to models limitations.

In a more detailed evaluation of the recorded temperatures, both maximum and minimum (table below), were around normal with very small departures suggesting that **July** was normal. Extreme highs (both maximum and minimum departing by more than 3°C of normal) were of course recorded, during the second half of July. Note the 36.5°C highest maximum of Athalassa station departing by almost 4°C from normal. Extreme lows were also recorded; note the 18.1°C minimum of Athalassa departing by more than 4°C from normal.

During the period 30 and 31 of **July** episodes of thundery activity and isolated showers caused by thermal instability were recorded resulting in accumulated precipitation of 54% of normal. Areas with extreme accumulated precipitation were also recorded as suggested by Kellaki a semi mountainous station over the southern part of the island which recorded 11.6 millimeters of precipitation thus something more than 800% of normal.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR JULY 2015

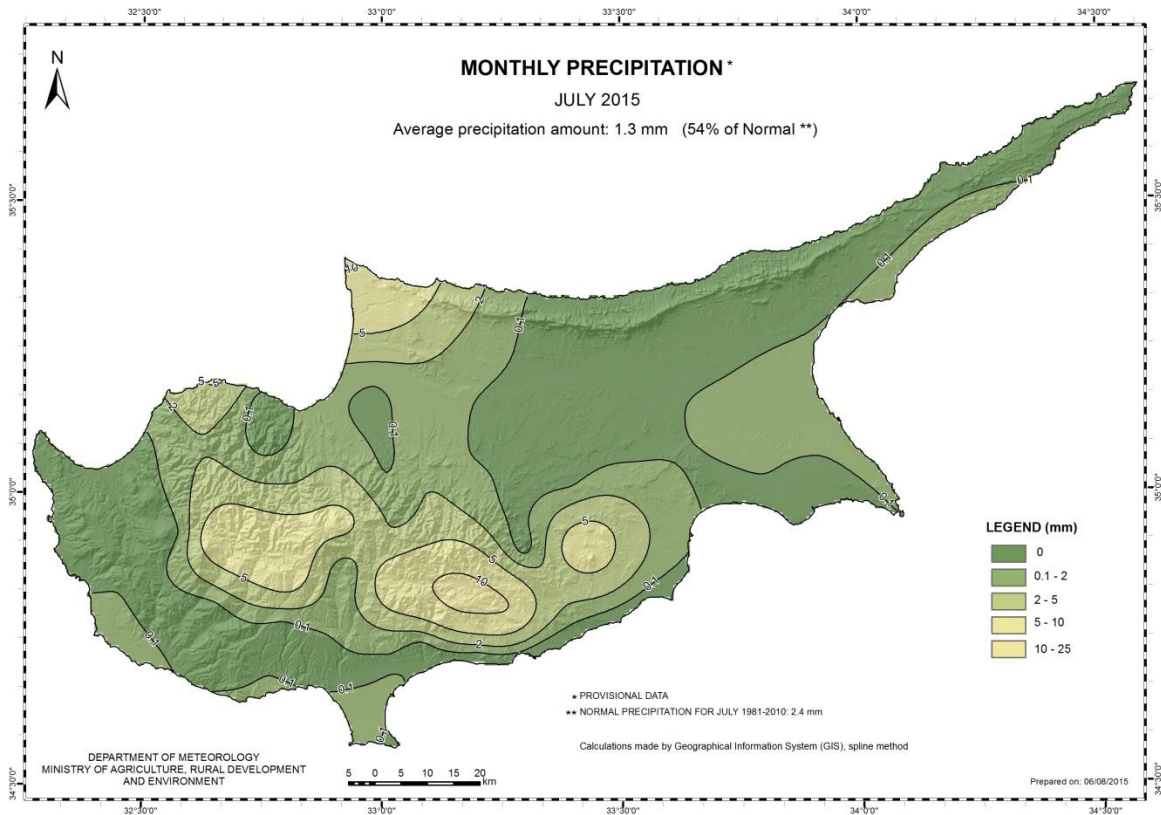
St. No.	Station Name	Temperature (°C)			Highest Daily Maximum Temperature (°C)	Temperature (°C)			Lowest Daily Minimum Temperature (°C)	Precipitation (mm)		
		Mean Daily Maximum	Normal Value (1981-2010)	Difference from Normal Value		Mean Daily Minimum	Normal Value (1981-2010)	Difference from Normal Value		Monthly Total	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	32.8	33.4	-0.6	36.5	21.0	21.1	-0.1	17.5	0.0	0.1	-0.1
82*	PAFOS (AIRPORT)	30.2	29.9	0.3	31.7	20.7	20.6	0.1	17.4	0.6	0.2	0.4
225	PRODROMOS (C.F.C.)	28.3	27.9	0.4	30.8	17.1	18.2	-1.1	12.7	5.5	16.4	-10.9
666*	ATHALASSA (RADIOSONDE)	36.8	37.1	-0.3	39.7	22.4	22.1	0.3	18.1	0.0	4.2	-4.2
731	LARNAKA (AIRPORT)	32.6	32.5	0.1	35.8	21.8	22.0	-0.2	19.0	0.8	0.5	0.3
800**	ACHNA (DASAKI)	31.9	33.2	-1.3	36.9	20.5	21.8	-1.3	17.0	0.0	0.1	-0.1

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

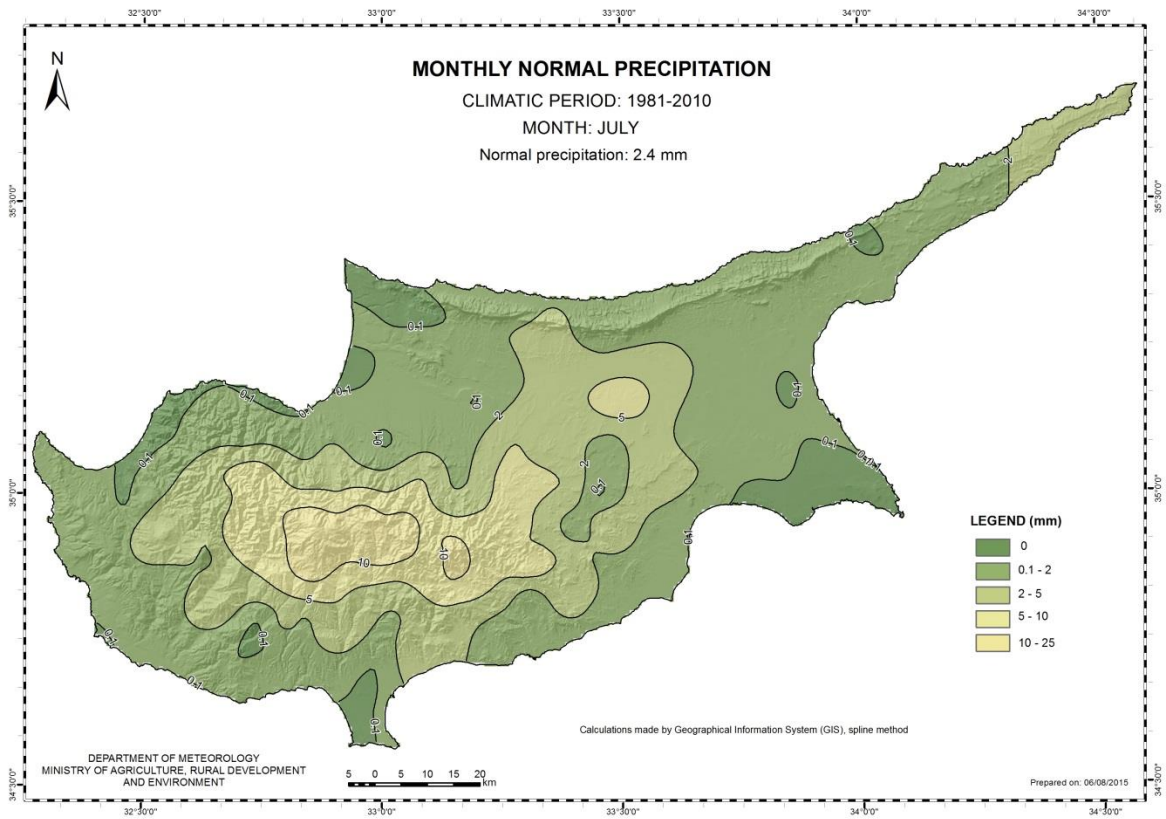
** Achna's Temperature Normal Values cover the period 1981-2007

= 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.

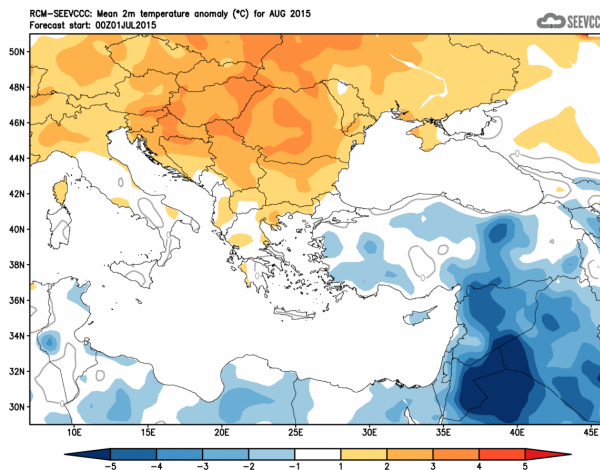


A Cyprus chart with the normal (period 1981 to 2010) accumulated precipitation for the month of **July** is also presented.

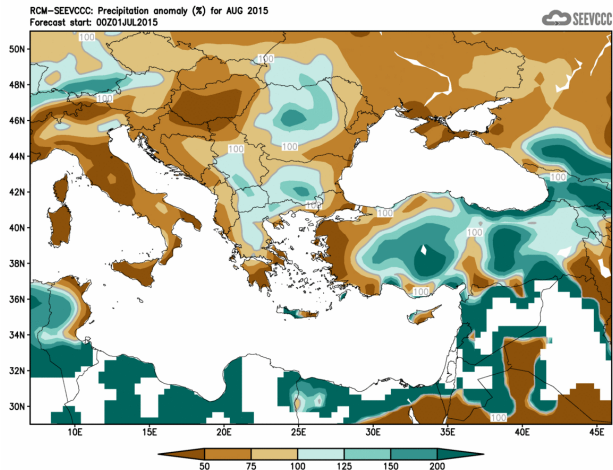


Evaluation of August's seasonal forecast for the area of Cyprus

August's seasonal forecast was suggesting that temperature over Cyprus would have being generally below normal, by 1 to 2°C, except the extreme west part where it would be normal. Regarding the accumulated precipitation over Cyprus it would have being ranging from 50% to normal over the southern and eastern part but from normal to 150% of normal over the rest of the island.



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 models evaluation for **August** a general judgment is that the model performed moderate mainly over the temperature parameter. The model is found to be unable to pick up the months temperature trend anomaly. The model, as said, was suggesting a mild August, instead, August was warm enough with outbreaks of temperature well above normal. The parameter of the accumulated precipitation is not going to be discussed, since precipitation activity results in random accumulation due to thundery activity.

From the records kept in the archives of the Department of Meteorology during the period from 2nd to the 5th, 16th to 17th and the 30th the temperature was diverted by 4°C higher than the normal maximum or minimum of the station, which are characterized as extremes maximum or minimum. The highest maximum was recorded over the inland station of Athalassa and it was 42.5°C with the normal being 36.9°C. For a sequence of days EMMA warning for high temperature was issued.

TEMPERATURE AND PRECIPITATION PROVISIONAL DATA FOR AUGUST 2015

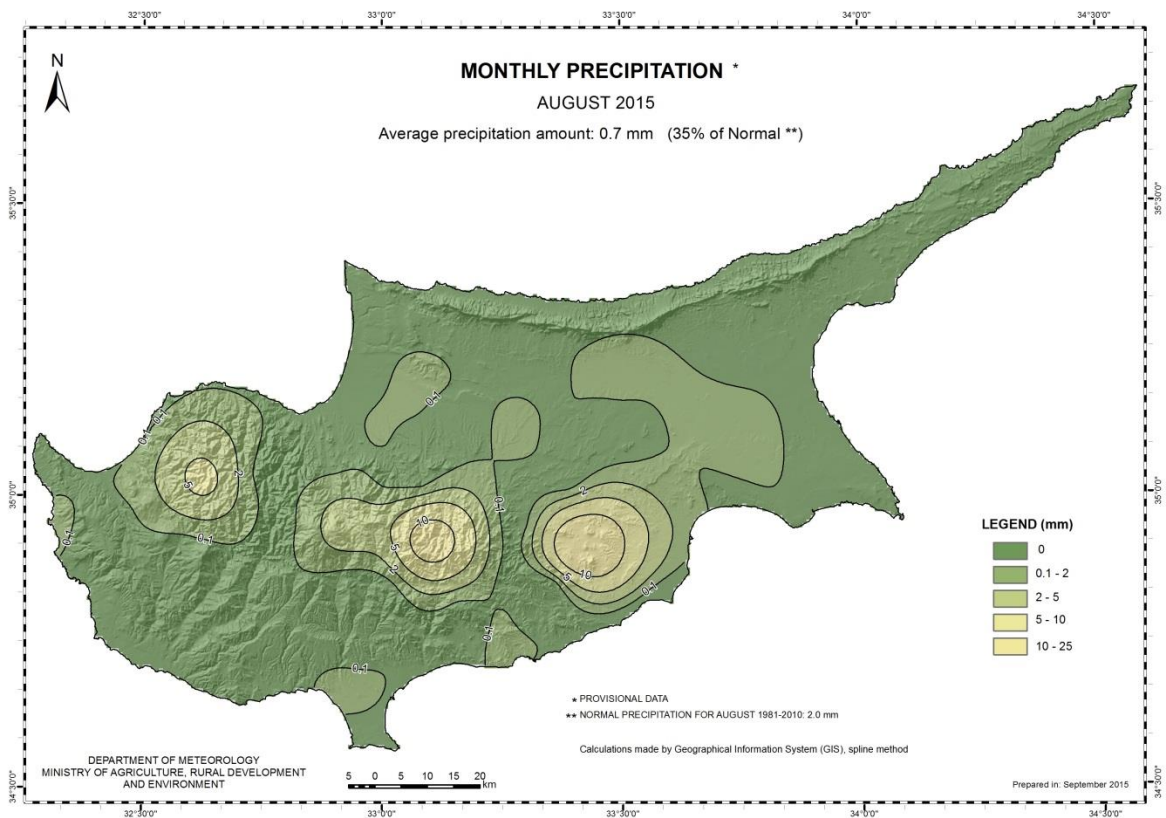
St. No.	Station Name	Temperature (°C)			Highest Daily Maximum Temperature (°C)	Temperature (°C)			Lowest Daily Minimum Temperature (°C)	Precipitation (mm)		
		Mean Daily Maximum	Normal Value (1981-2010)	Difference from Normal Value		Mean Daily Minimum	Normal Value (1981-2010)	Difference from Normal Value		Monthly Total	Normal Value (1981-2010)	Difference from Normal Value
41	POLIS CHRYSOCHOUS	33.4	33.3	0.1	38.5	22.6	21.5	1.1	20.4	0.0	0.0	0.0
82*	PAFOS (AIRPORT)	32.4	30.5	1.9	35.0	23.2	21.1	2.1	21.1	0.0	0.0	0.0
225	PRODROMOS (C.F.C.)	28.5	28.0	0.5	32.7	17.6	18.1	-0.5	14.6	0.3	12.0	-11.7
666*	ATHALASSA (RADIOSONDE)	37.5	36.9	0.6	42.5	23.9	21.9	2.0	21.3	0.3	1.8	-1.5
731	LARNAKA (AIRPORT)	34.2	32.9	1.3	39.6	24.5	22.3	2.2	21.9	0.0	0.3	-0.3
800**	ACHNA (DASAKI)	34.2	33.5	0.7	40.9	22.6	22.0	0.6	20.4	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.

