

VERIFICATION OF THE SEECOF -33 SUMMER 2025 CLIMATE OUTLOOK FOR REPUBLIC OF NORTH MACEDONIA COMPARED TO THE 1981-2010 BASE PERIOD

Hydrometeorological Service of Republic of North Macedonia prepares regular seasonal climate analysis, based on the products of SEECOF seasonal forecasts and the forecast products from the SEVCCC. The present analysis is for the summer season 2025 (June, July and August), and it is based on the averages of the climatological period 1981-2010.

➤ **SUMMER 2025**

The mean seasonal air temperature during summer 2025 ranged between 17.4°C in Lazaropole to 27°C in Gevgelija. Spatial distribution of the mean seasonal air temperature is shown on Figure1. The mean air temperatures anomaly was from 1.4°C in Lazaropole to 2.8°C in Skopje. The anomaly is positive for the whole territory (Figure 2).

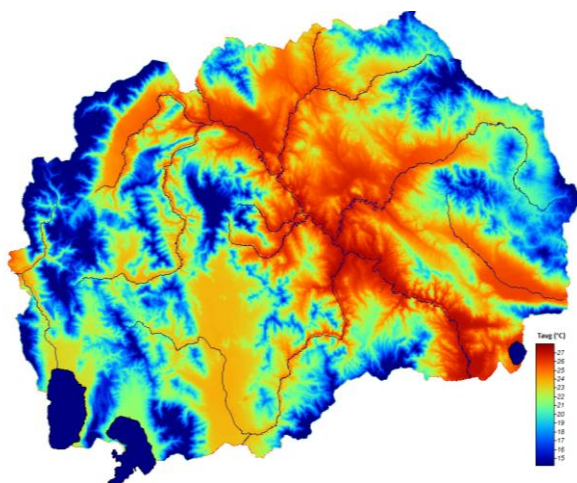


Figure 1: Spatial distribution of the mean seasonal air temperature (°C) during summer 2025

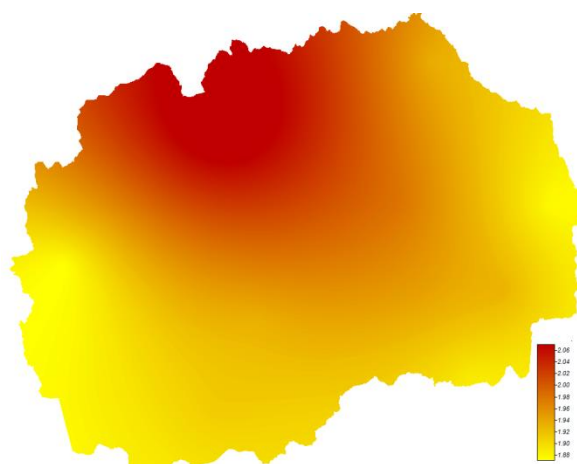


Figure 2: Spatial distribution of the mean seasonal air temperature anomaly (°C) during summer 2025

The mean maximum seasonal air temperature anomaly was from 2°C in Prilep to 3.8°C in Skopje. The mean minimum seasonal air temperature anomaly was from 0.3°C in Berovo and Lazaropole to 1.9°C in Skopje. The highest daily air temperature during summer 2025 was measured 43.7°C observed on 26th of July in Skopje. The lowest air temperature during summer 2025 was 3.7°C observed on 27th of August in Berovo.

According to percentile calculation method, the summer season 2025 was classified as extremely warm almost for the whole country (Table1).

Rainfall totals were variable for this summer season. There were a lot of spatially isolated events with stormy weather, intensive precipitation, thunderstorms, and heavy winds. The wettest day was 5th of August with 78mm measured in Kriva Palanka.

According to percentile calculation method, this summer precipitation regime was classified as extremely dry to normal (Table1).

Meteorological station	Temperature	Precipitation
Berovo	extremely warm	dry
Kriva Palanka	very warm	dry
Stip	extremely warm	extremely dry
Strumica	extremely warm	extremely dry
Demir Kapija	extremely warm	extremely dry
Gevgelija	extremely warm	normal
Skopje	extremely warm	very dry
Prilep	extremely warm	dry
Bitola	extremely warm	extremely dry
Ohrid	extremely warm	dry
Lazaropole	very warm	extremely dry
Mavrovo	extremely warm	very dry

Table1: Air temperature and precipitation classification in Republic of North Macedonia for summer 2025 using percentile method compared to 1981-2010 base period

The values of distribution of tercile for the air temperature and the precipitation sums are shown in table 2 and 3, respectively.

Air Temperature (°C)	summer 2025	1981-2010 33	67
Berovo	19.8	17.8	18.6
Kriva Palanka	21.3	19.3	20.0
Stip	25.6	23.0	24.0
Strumica	25.6	23.0	23.8
Demir Kapija	26.4	24.1	24.9
Gevgelija	27.0	25.0	26.0
Skopje	26.1	23.0	23.8
Prilep	23.4	21.3	22.1
Bitola	23.7	21.4	22.0
Ohrid	22.6	20.4	21.0
Lazaropole	17.4	15.7	16.2
Mavrovo	18.3	15.9	16.7

Table 2: Values of distribution of tercile for air temperature for period 1981-2010

Precipitation sums (mm)	summer 2025	1981-2010 33	67
Berovo	110.0	138.8	176.9
Kriva Palanka	118.2	132.4	207.3
Stip	30.6	87.6	131.9
Strumica	40.0	85.1	132.6
Demir Kapija	31.0	75.0	98.0
Gevgelija	78.8	61.9	136.0
Skopje	36.7	86.8	136.7
Prilep	53.6	75.3	135.8
Bitola	10.5	77.6	126.4
Ohrid	58.8	65.6	112.6
Lazaropole	58.7	118.5	190.4
Mavrovo	73.6	103.2	168.4

Table 3: Values of distribution of tercile for precipitation for period 1981-2010

The SEECOF-33 forecast product for the mean temperatures for summer season placed Republic of North Macedonia in a zone 1, which was likely to experience above

average summer temperatures (10; 20; 70). Forecast for the precipitation for JJA 2025 categorized our country in zone 1 below-normal conditions in (50; 30; 20).

A general verification of the model for summer season is that the model was **efficient** concerning the air temperature and precipitation.

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 (JJA)
	Observed	SEEVCCC climate outlook for temperature	Observed	SEEVCCC climate outlook for precipitation	
REPUBLIC OF NORTH MACEDONIA	Above average	Above average (10, 20, 70)	Extremely dry to normal	Below-normal (50, 30, 20)	July - Highest value of monthly Tmax_avg 27.6°C in Skopje - exceeded daily Tmax on 26 st in Skopje valley 43.7°C Ohrid 38.1°C Mavrovo 34.3°C