HELLENIC NATIONAL METEOROLOGICAL SERVICE
ΕΘΝΙΚΗ ΜΕΤΕΩΡΟΛΟΓΙΚΗ ΥΠΗΡΕΣΙΑ

National Climate Bulletin and Verification of the SEECOF-32 Winter 2024/2025 forecast

DIVISION of CLIMATOLOGY – APPLICATIONS

HELLENIC NATIONAL METEOROLOGICAL SERVICE

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Part A

1. Temperature

1.1. Analysis of the 2024/25 winter air temperatures anomalies for Greece

Winter 2024/25 was warmer than normal (relative to 1991-2020) in most of Greece except northeast Macedonia region and southeast Aegean islands where normal conditions prevailed (Figure 1). The greatest positive temperature anomalies of about 1.6 ^{o}C were observed over northwest part.

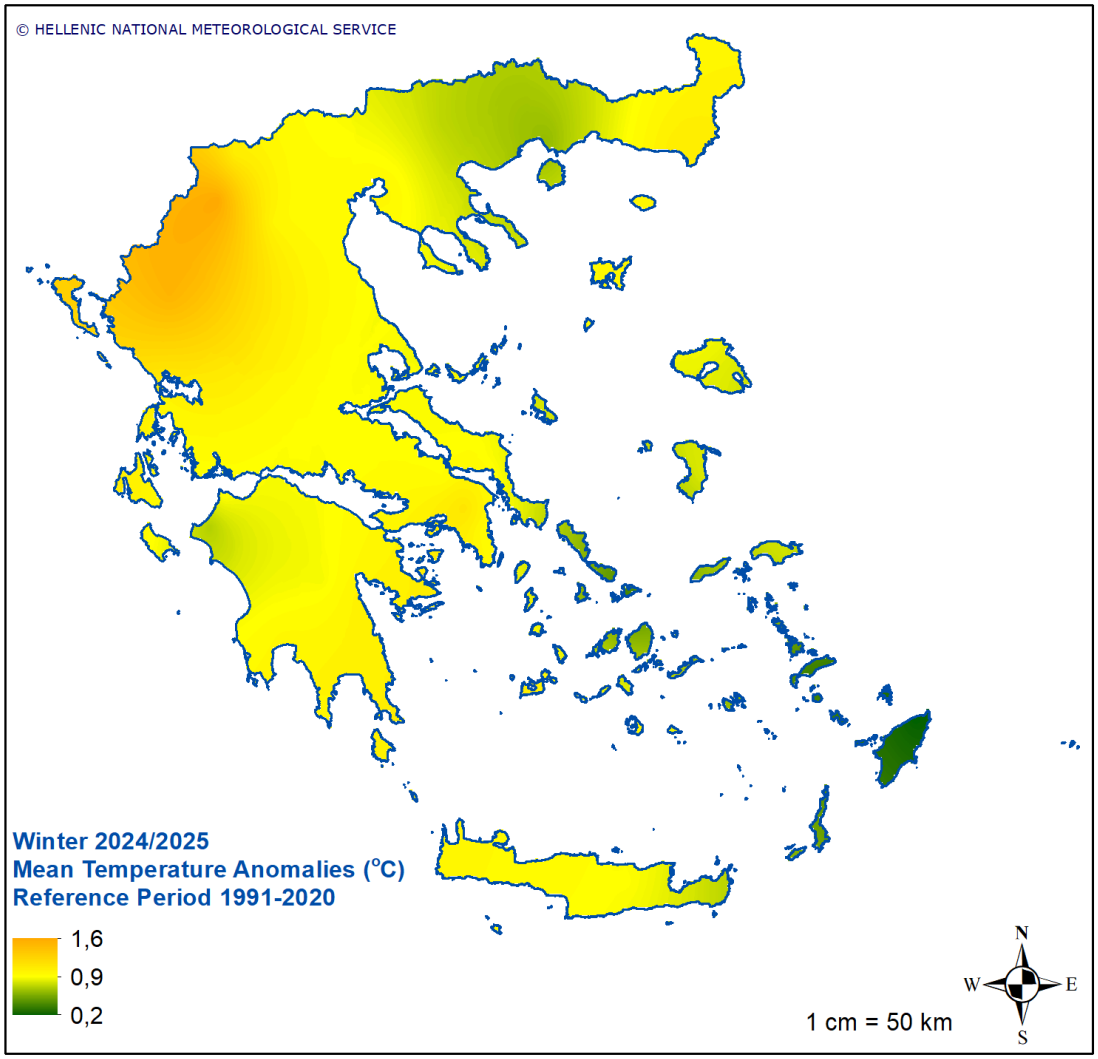

Figure 2. *Mean temperature anomalies (°C) for winter 2024/25 in Greece according to the 1991-2020 climatology.*

In order to quantify the observed seasonal temperatures in terms of cold, warm and normal, we have used the percentile method. The percentiles were calculated for

each station and are based on homogenized data for the period 1960-2022. According to percentile ranks (Figure 2):

- warm conditions prevailed (62% of stations)
- Eight stations experienced very warm conditions and only one station extremely warm conditions.
- Six stations (three of them located over north Greece and three over southeast Aegean) experienced normal conditions

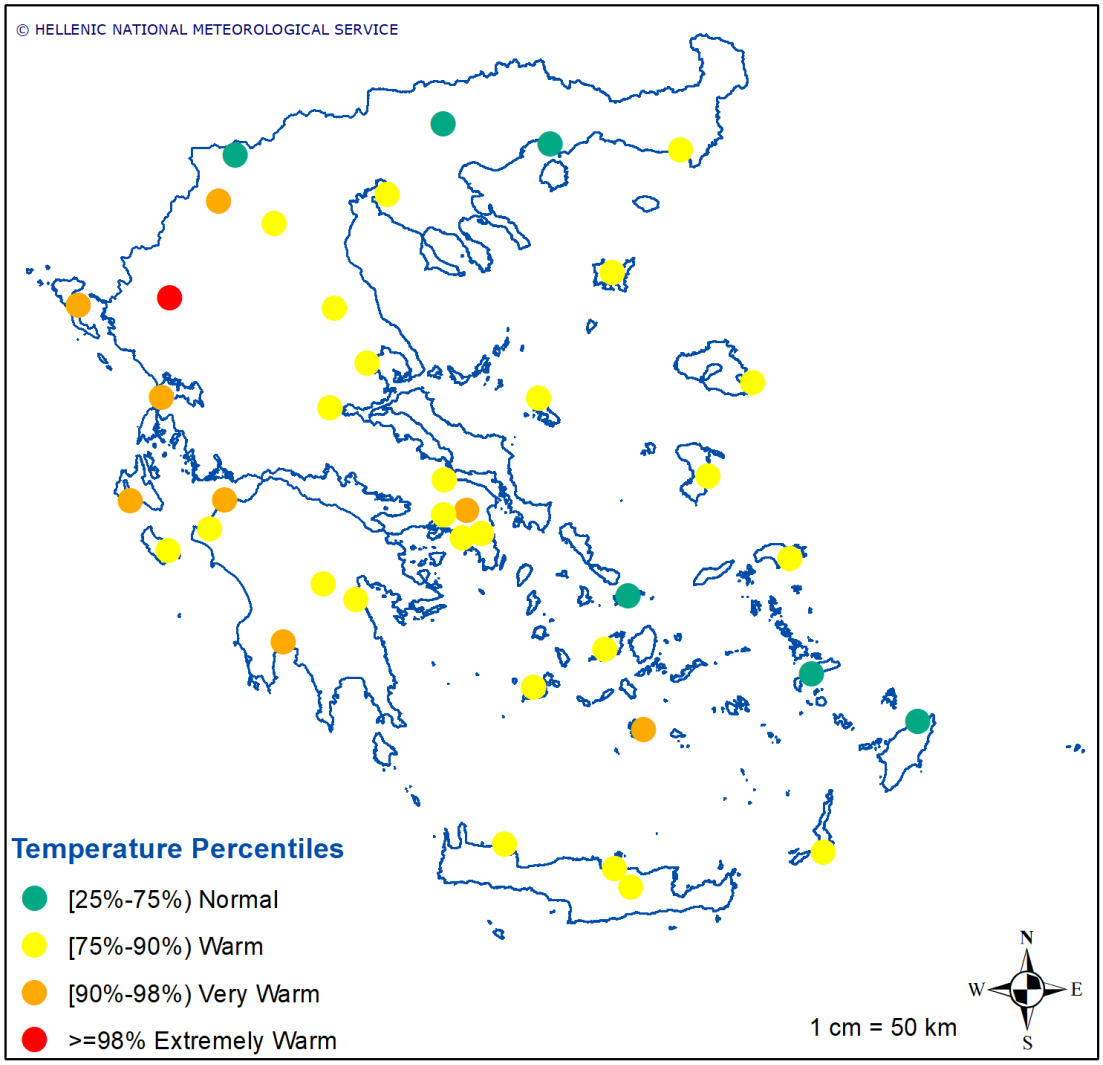

Figure 2. *Mean temperature percentiles for winter 2024/25 (based period 1960-2022).*

1.2. Verification of the SEECOF-32 winter 2024/25 temperature outlook for Greece

The seasonal forecast for winter suggested that the mean temperature would be above normal in mainland areas with the greatest temperature anomaly (2-3°C) occurring in north Greece (Figure 3). The consensus statement of SEECOF-32 mentioned that in the entire Greek region, winter temperatures were likely to be above-normal, with 50 % probability for the north and central Greece (Zone 1 in Figure 4) and 60 % for the south of Greece (Zone 2 in Figure 4). Verifying the

seasonal forecast for winter the prediction was partially successful, because warmest conditions were observed over northwest Greece.

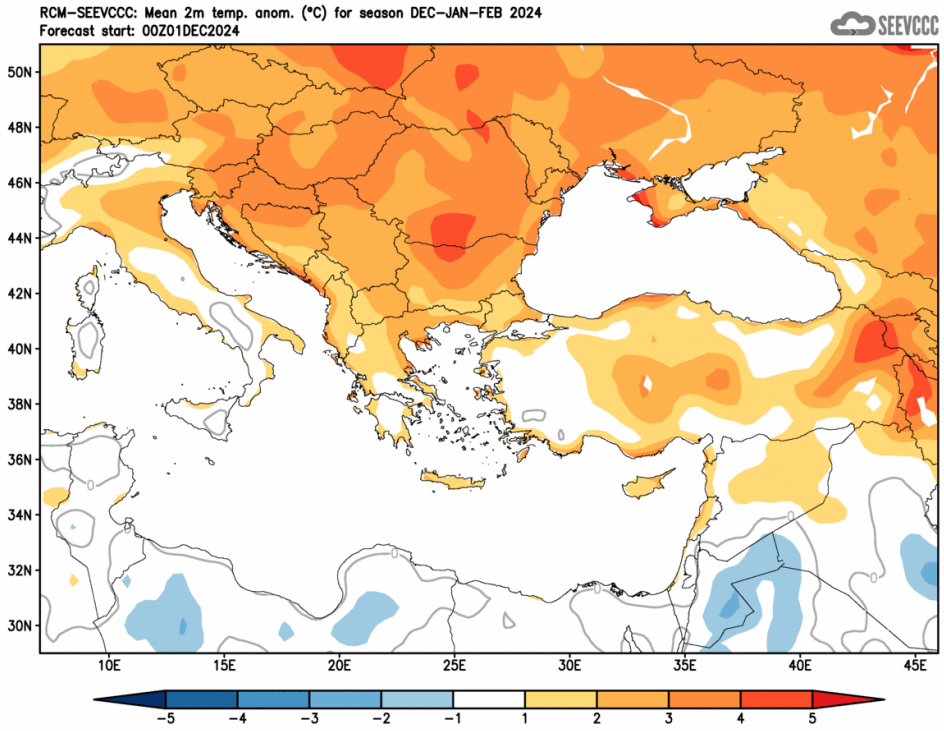

Figure 3. *Mean temperature anomaly for winter 2024/25.*

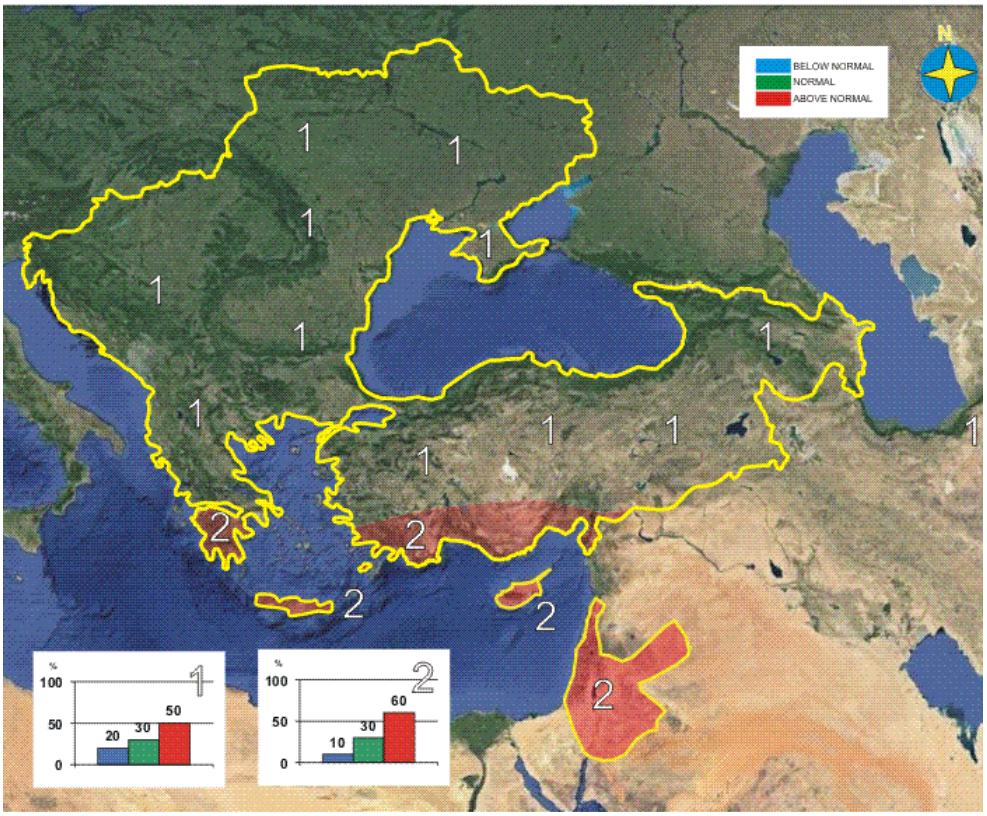

Figure 4. *Graphical presentation of the 2024/25 winter temperature outlook.*

Part B

2. Precipitation

2.1. Analysis of the 2024/25 winter precipitation anomalies in Greece

Winter 2024/25 was neither wetter nor drier than average over most of Greece. However, certain parts over north Greece and few islands had above-normal winter precipitation totals accounting for more than 150 % of 1991-2020 normal values (Figure 5). On the other hand, Crete and northwest mainland had below-normal winter precipitation totals accounting for 50-60 % of 1991-2020 normal values.

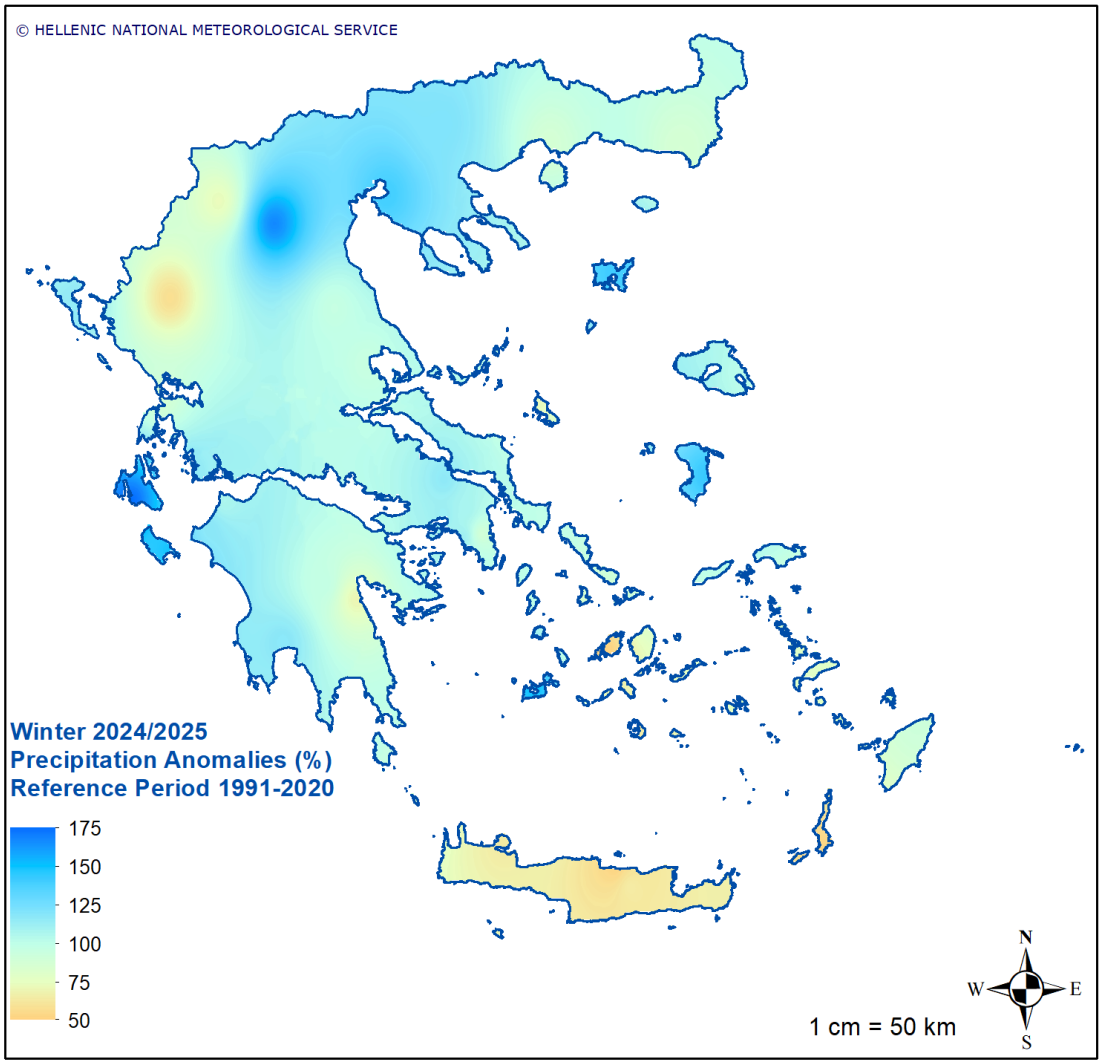

Figure 5. Winter 2024/25 precipitation anomalies (1991-2020) given in percentages.

In order to quantify the observed precipitation height in terms of wet, dry and normal we have used the percentile method. The percentiles were calculated for each station and are based on homogenized precipitation series for the period 1960-2022.

According to precipitation percentile ranks (Figure 6):

- Normal conditions prevailed in Greece (62% of the examined stations).
- Five stations experienced wet conditions and two stations very wet conditions (19 % of the examined stations).
- Dry and very dry conditions prevailed in 7 stations (19 % of the examined stations).

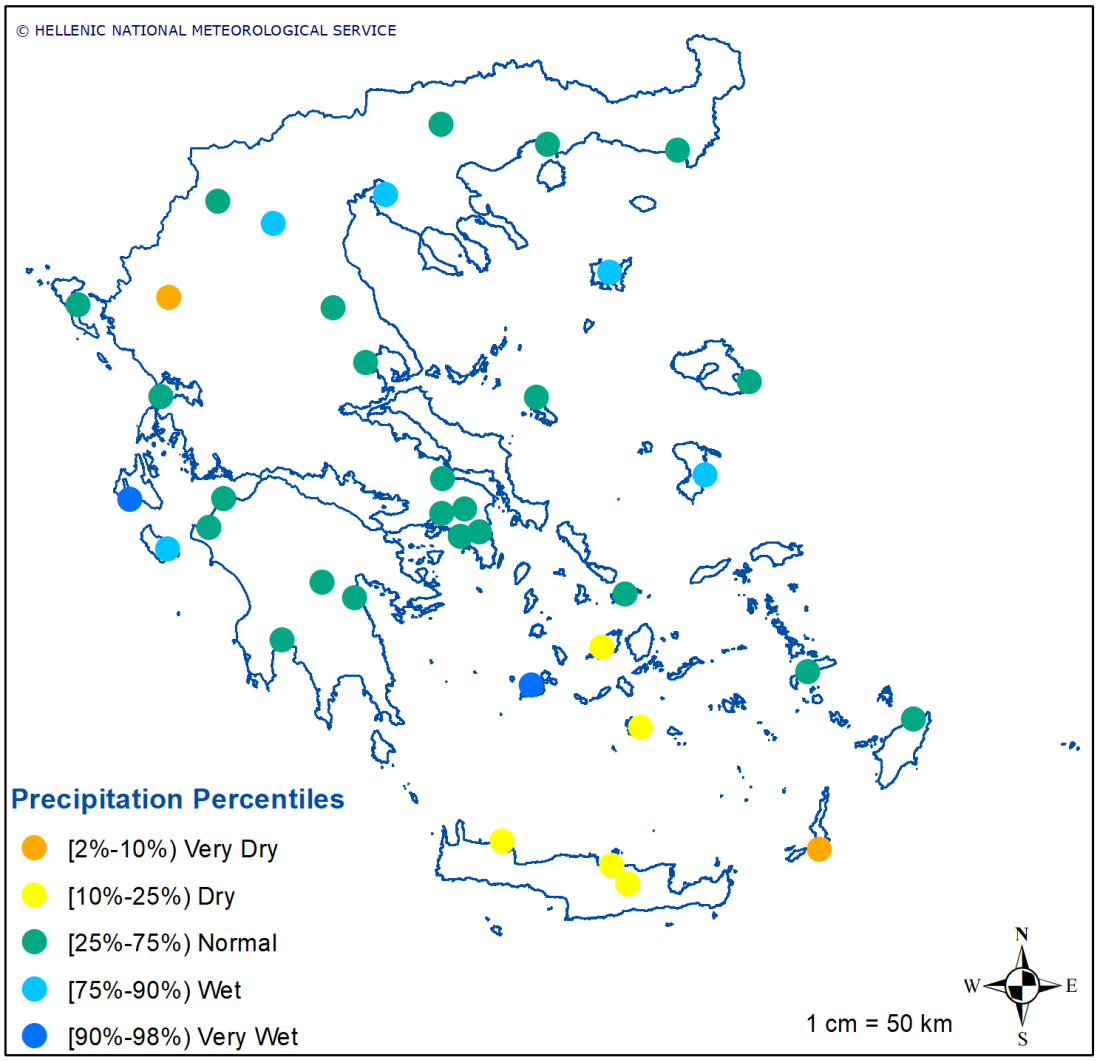

Figure 6. Precipitation percentiles for winter 2024/25 (based period 1960-2022).

2.2. Verification of the SEECOF-32 winter 2024/25 precipitation outlook for Greece

The seasonal forecast for precipitation predicted a dry winter in most of Greece, with areas in west mainland and most likely to experience severe drought (Figure 7). According to the consensus statement of SEECOF–32, in whole Greek territory, there was an equal probability for winter precipitation (Zone 1 in Figure 8). It is noteworthy that certain parts of the country, particularly mountainous regions, might observe near- or above-normal winter precipitation totals due to the episodes of enhanced convection accompanied by heavy precipitation.

Verifying the consensus statement for winter, the seasonal forecast was partially successful since normal conditions prevailed over most of Greece, however not only mountainous regions, but also few islands (e.g Kefalonia) received high precipitation amounts due to certain episodes.

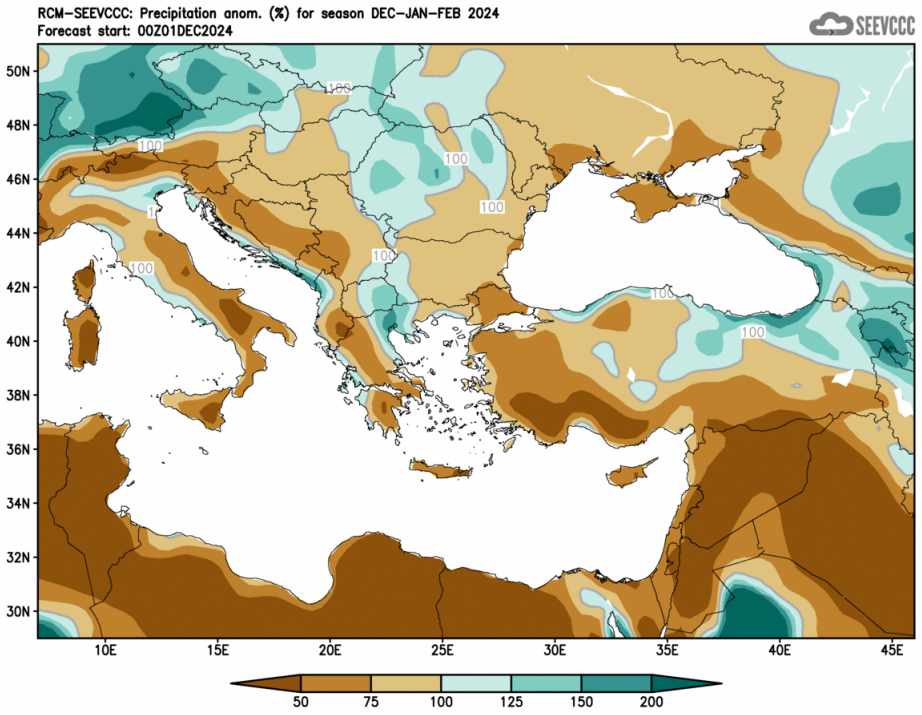

Figure 7. Precipitation anomaly for winter 2024/25.

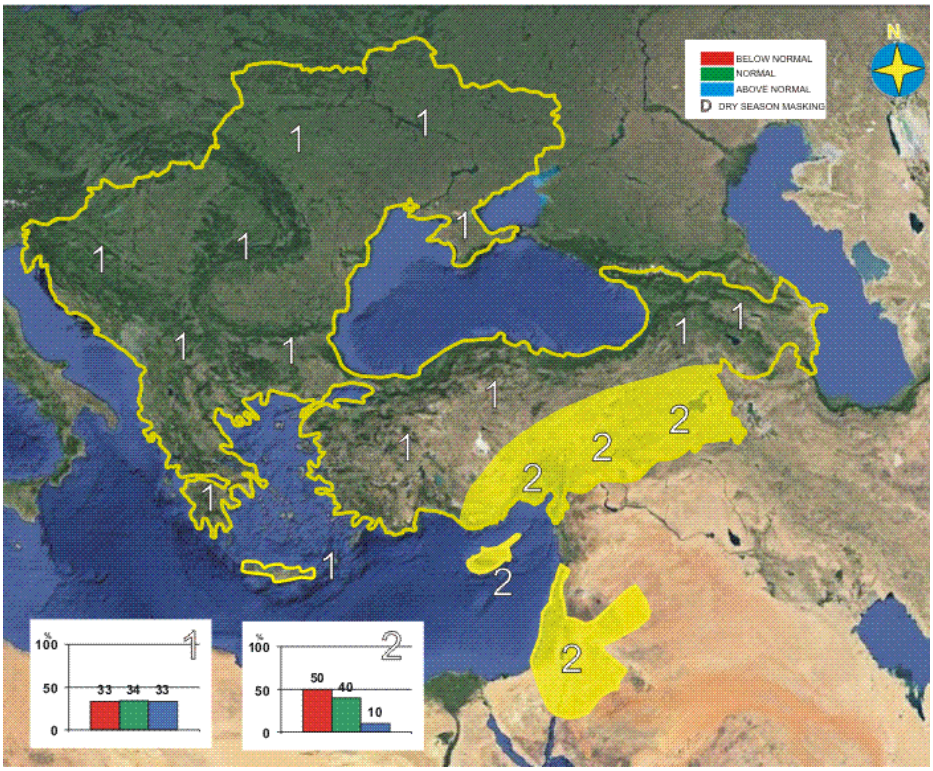

Figure 8. Graphical presentation of the 2024/25 winter precipitation outlook.

Table 1. Seasonal air temperature and precipitation sums - Ranks

Winter 2024/25		Seasonal air temperature (°C)					Seasonal precipitation sums (mm)			
Station	Rank*	33	50	67	Observed value	Rank**	33	50	67	Observed Value
Thessaloniki	8	6.5	7.2	7.7	8.2	14	92.2	124.3	140.7	172.4
Helliniko	6	10.7	11.3	11.6	12.2	29	131.7	157.8	186.1	169.2
Souda	5	11.2	11.6	11.7	12.4	52	296.0	354.2	386.4	235.6
Argostoli	5	11.6	12.0	12.3	12.9	4	328.4	400.6	449.7	658.3

*Rank: period 1960-2022 (warmest season)

**Rank: period 1960-2022 (highest seasonal precipitation)

Table 2. Verification of the SEECOF-32 Climate Outlook in Greece for Winter 2024/25.

Country	Seasonal temperature		Seasonal precipitation		High Impact Events
	Observed	SEECOF-32 climate outlook for temperature	Observed	SEECOF-32 climate outlook for precipitation	
Greece	Above normal for the whole area of the country.	Above normal (zone 1 50%, zone 2 60%)	Normal conditions prevailed over most of Greece. However certain islands received much above normal total precipitation	Equal probability entire country (zone 1, 50% below normal, 50% around normal, 50% above normal).	On 13 and 14 February 2025, heavy precipitation, totaling 171.7 mm in 25 hours, triggered severe flooding, landslides, and debris flows across the island of Kefalonia in the Ionian Sea. Multiple people, including children, ended up trapped in their vehicles.

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