

VERIFICATION OF THE SEECOF-24 WINTER 2020/2021 CLIMATE OUTLOOK FOR THE TERRITORY OF ARMENIA

Country: Republic of Armenia

Institution: Hydrometeorology and Monitoring Center

Name: Zara Petrosyan

E-mail: zpetrosyan@meteo.am

Climatological reference period: 1961-1990.

1. SEECOF-24 Climate outlook for Winter Season 2020/21 for Armenia

SEECOF-24 Climate outlook suggested warm winter with probability of 40%, 40%, and 20% for Winter Season 2020/21 on the territory of Armenia (Fig. 1). The winter season 2020/21 was warm: The average temperature was 2.4 degrees above the norm. It has been 12th (Fig 2) warmest season since 1935.

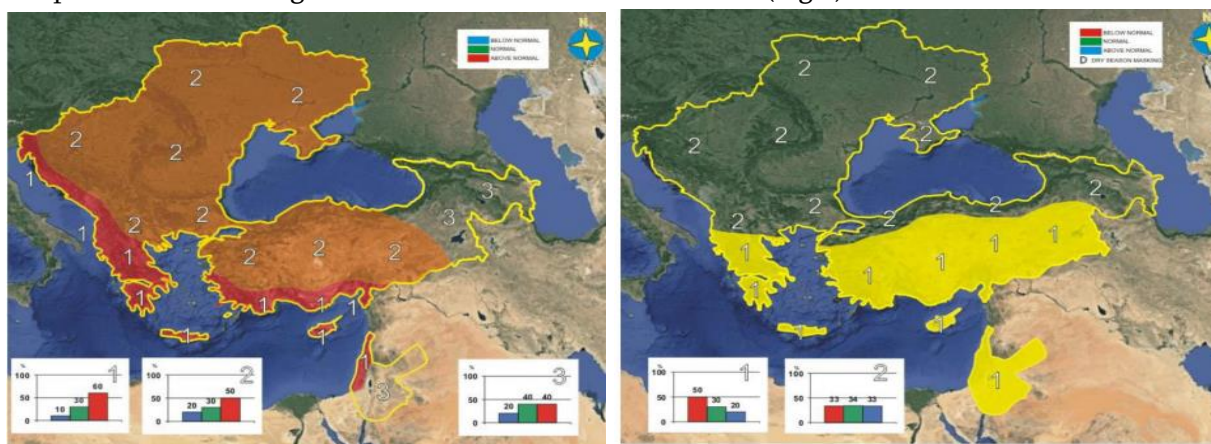


Figure 1. Graphical presentation of 2019/20 winter temperature and precipitations outlook

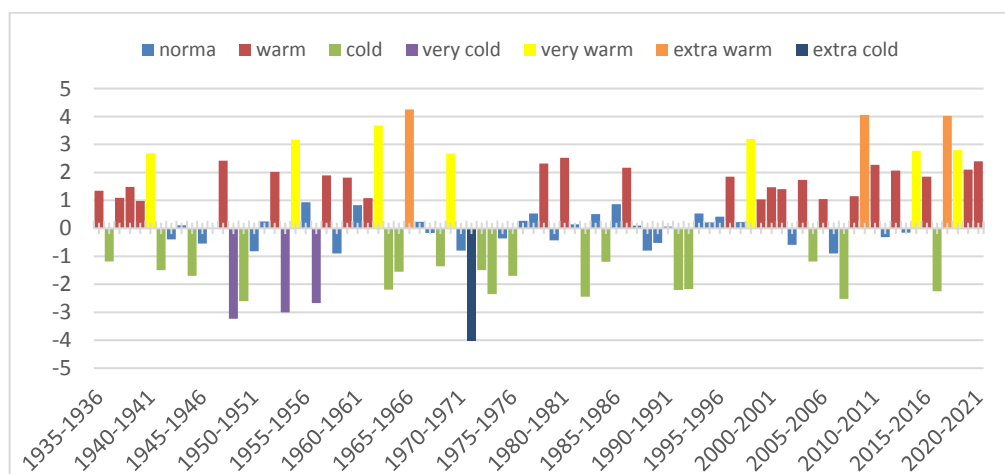


Figure 2. Anomales of winter seasonal mean temperature to the normal

Climatological monitoring showed that the winter 2020/2021 was warm in entire Armenia. The outlook for a warm winter for Armenia was correct.

Precipitations:

According to the SEECOF-24 outlook for the winter 2020/2021 approximately equal probabilities for below, near or above normal precipitation for Armenia were indicated.

Based on the climatological monitoring of precipitation, in the winter of 2020/2021 were near (90.6) the normal in Country. **The outlook for a normal winter was correct for Armenia.**

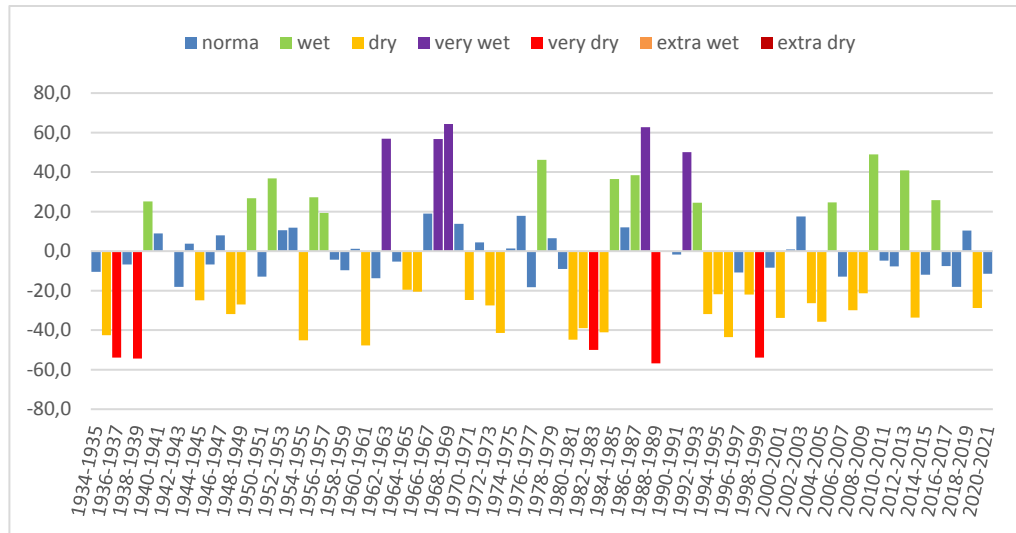


Figure 3. Anomaly of winter season mean precipitation to the normal

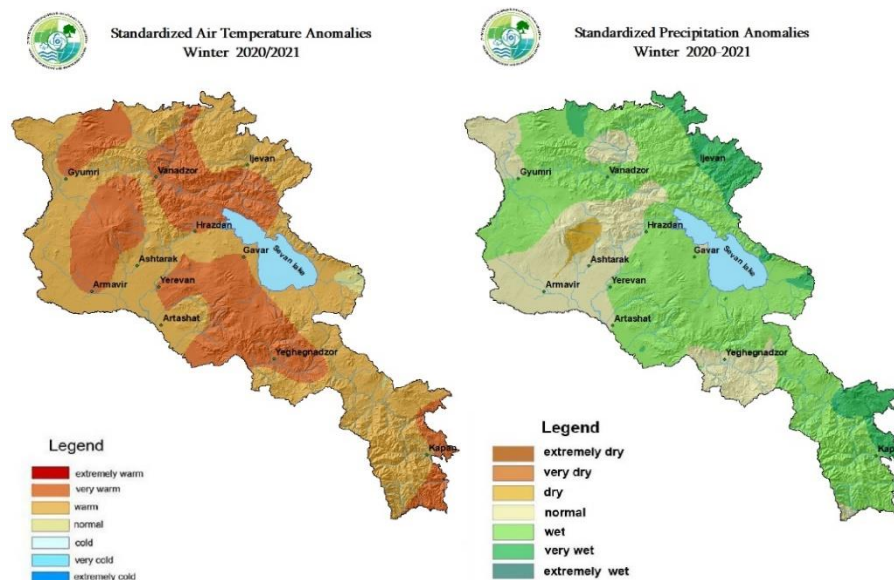
2. Assessment of the SEECOF-24 Climate Outlook for 2020/21 Winter Season

Country	Seasonal temperature (DJF)		Seasonal precipitation (DJF)		High Impact Events
	Observed	SEECOF-24 climate outlook for temperature	Observed	SEECOF-24 climate outlook for precipitation	
Armenia (1)	Above normal	Above or near normal (40, 40,20)	near the normal	No predictive signal (33, 34, 33)	<p>2020/2021 was 12th warmest winter for Armenia. Heat waves were observed: during the period of January 9-17, February 1-17</p> <p>Cold wave observed in December 14-18, January 1-10, 14-19.</p> <p>-35°C was the absolute minimum air temperature</p> <p>23 °C max observed in Kapan city, exceeding ever-registered max for that time.</p> <p>Strong wind 35 m/sec observed in Pushkin pass:</p> <p>Dense fog (visibility ≤50m) observed in Ararat and Shirak regions.</p>

3. Climate features of the Winter Season 2020/21 in Armenia

Temperature:

The average air temperature during the season in the territory was -3.1°C , being 2.4°C higher than the norm.



The warmest month was February, when the average monthly temperature exceeded the norm by 3.4°C . It was the seventh warmest February in the history of observations. January was marked by pronounced temperature deviations. Almost no near average temperature was observed.

In 2021 winter, a hot wave was observed on January 9-17 and February 1-17.

The maximum deviation from the maximum temperature was 13.2°C , the average deviation from the norm was 8.3°C .

The maximum deviation of the average temperature from the norm was 13.7°C .

A cold wave was observed in the second ten days of January, during which the maximum deviation of the minimum temperature from the norm was 17°C , the average deviation was 10.3°C .

The absolute minimum air temperature was -35°C (24.01.2021). The absolute maximum reached $+23^{\circ}\text{C}$.

The winter of 2021 was marked by prolonged fog in the valleys.

Precipitations:

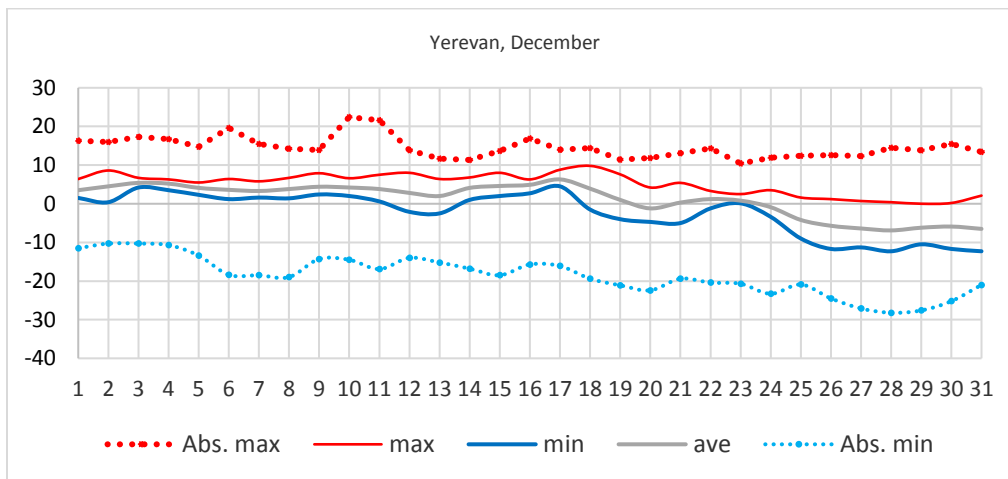
The precipitations amount (mm) in the winter 2020/2021 were near (90.6) the normal.

Snow Cover:

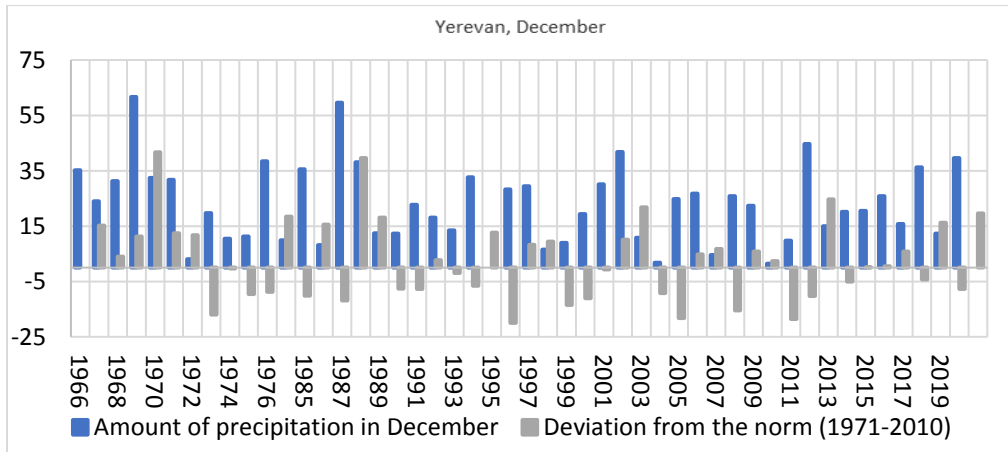
No stable snow cover was formed in the valleys and foothills. In 20% of the valleys, stable snow cover is not formed at all.

Yerevan

Average monthly temperature in December: -0.6°C . Actual temperature of the month according to observations: 1.1°C . Deviation from the norm: $+1.7^{\circ}\text{C}$. The norm of the amount of precipitation in December is 20 mm. Precipitation: 40 mm - this amount is 197% of the norm. The lowest air temperature (-12.3°) was on December 28. The highest air temperature (9.8°) was on December 18.



The mean, maximum and minimum Temperature in December in Yerevan

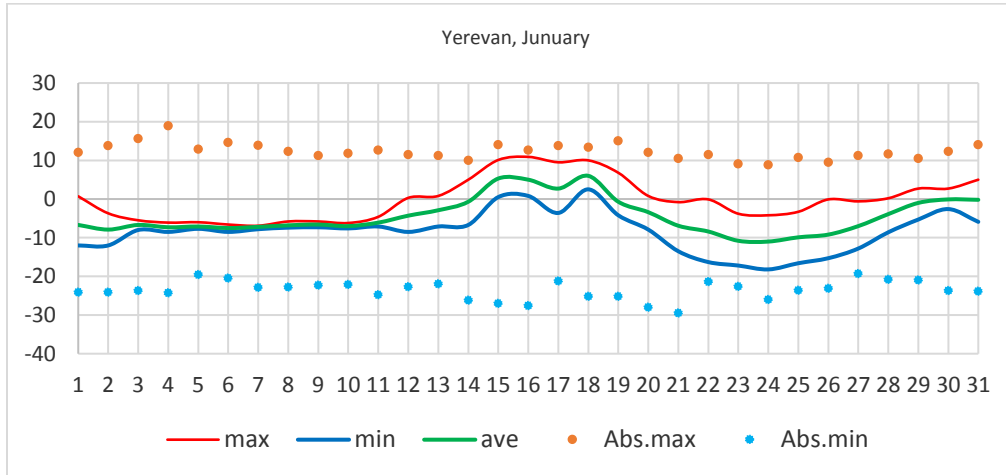


Precipitations amount in Yerevan, December

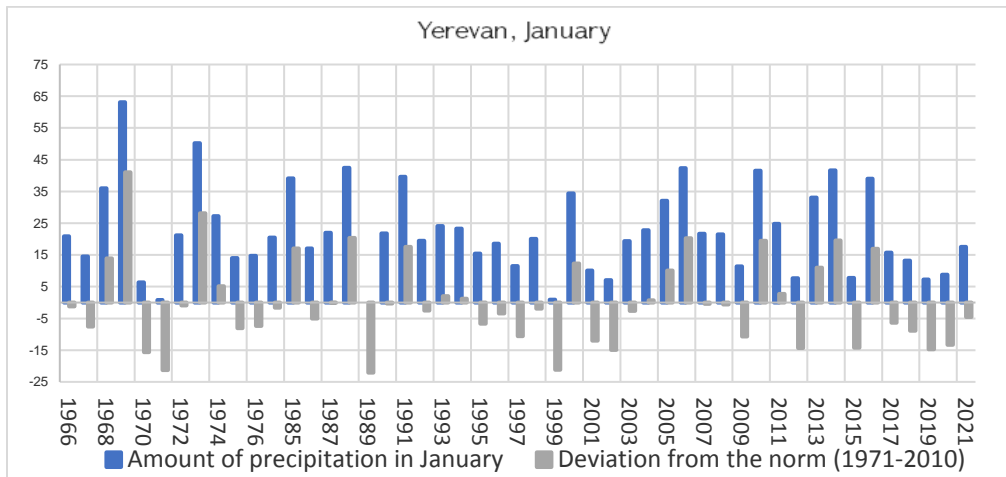
Average monthly temperature in January: -3.5°C . Actual temperature of the month according to observations: -4.5°C . Deviation from the norm: -1.0°C .

Norm of precipitation in January: 21 mm. Precipitation amount: 18 mm - this amount is 85% of the norm.

The lowest air temperature (-18.2°C) was on January 24. The highest air temperature (10.9°C) was on January 16.



The mean, maximum and minimum air temperature in January for Yerevan

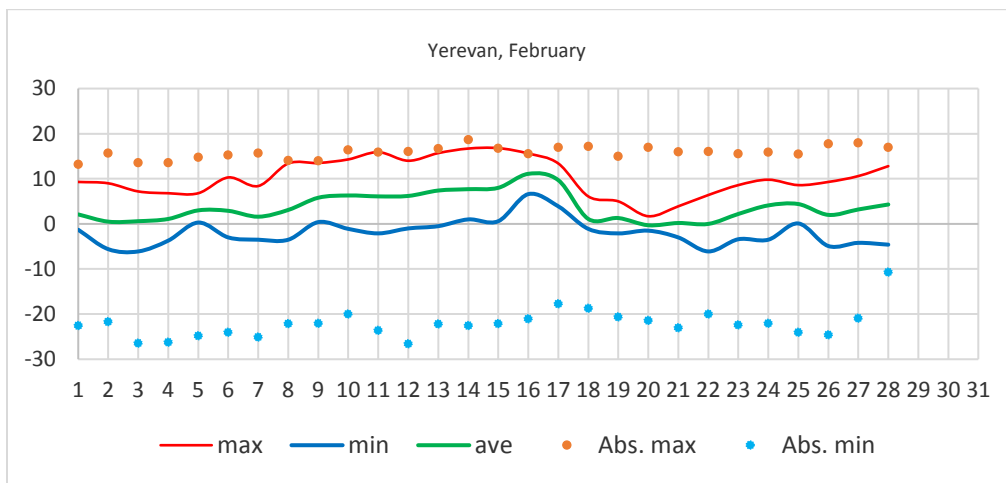


Precipitations amount in Yerevan, January

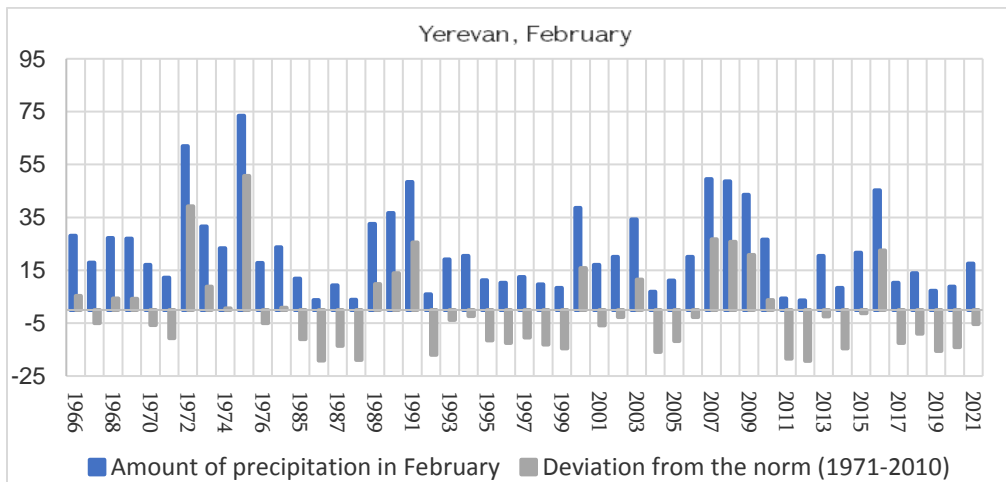
Average monthly temperature in February: 0.7 °C. Actual temperature of the month according to observations: 3.8 °C . Deviation from the norm: + 3.1 °C .

Norm of precipitation in February: 21 mm. Precipitation amount: 14 mm - this amount is 65% of the norm.

The lowest air temperature (-6.1°C) was on February 3. The highest air temperature (16.8 °C) was on 15 February.



The mean, maximum and minimum air temperature in February for Yerevan



Precipitations amount in Yerevan, February