

VERIFICATION OF THE SEECOF-22 (WINTER 2019/2020) CLIMATE OUTLOOK FOR THE TERRITORY OF ARMENIA

Country: Republic of Armenia

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Climatological reference period: 1981-2010.

SEECOF-22 Climate outlook suggested warm winter with probability of 50%, 40%, 10% for Winter Season 2019/2020 on the territory of Armenia. The winter season 2018/2019 was warm: The average temperature was 2.8 degrees above the norm. It was sixth (Fig 1) warmest season since 1936.

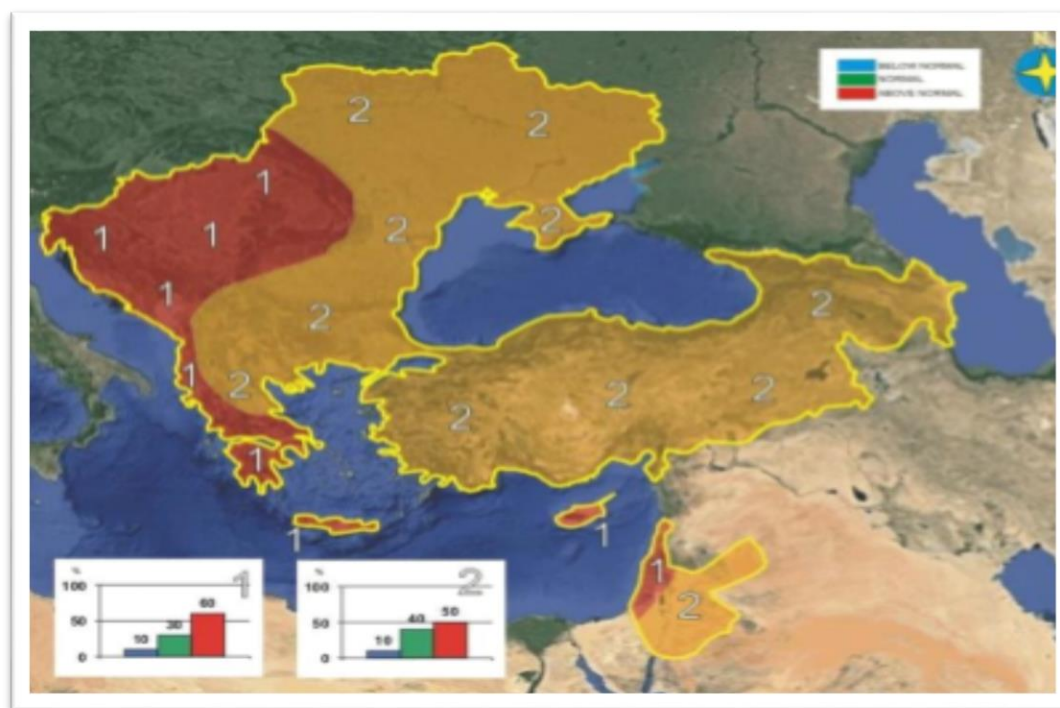


Figure 1. Graphical presentation of 2019/20 winter temperature outlook

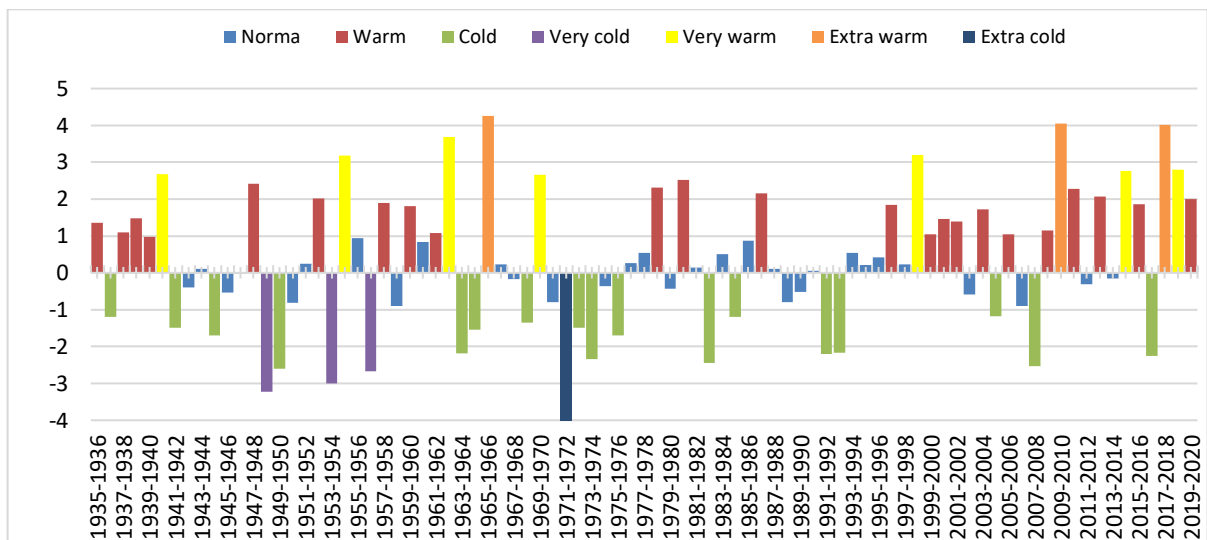


Figure 2. Anolales of annual mean temperature to the normal in Armenia

Climatological monitoring showed that the winter 2019/2020 was warm in entire Armenia. The outlook for a warm winter in Armenia was correct.

Precipitations:

According to the SEECOF-22 outlook for the winter 2019/2020 precipitations approximately equal (40%, 40%) probabilities for above and near the normal and 20% below normal probability were indicated in Armenia.



Figure 3. Graphical presentation of 2019/20 winter precipitation outlook

Based on the climatological monitoring, the winter 2019/2020 precipitation amount were below the normal in most part of the territory.

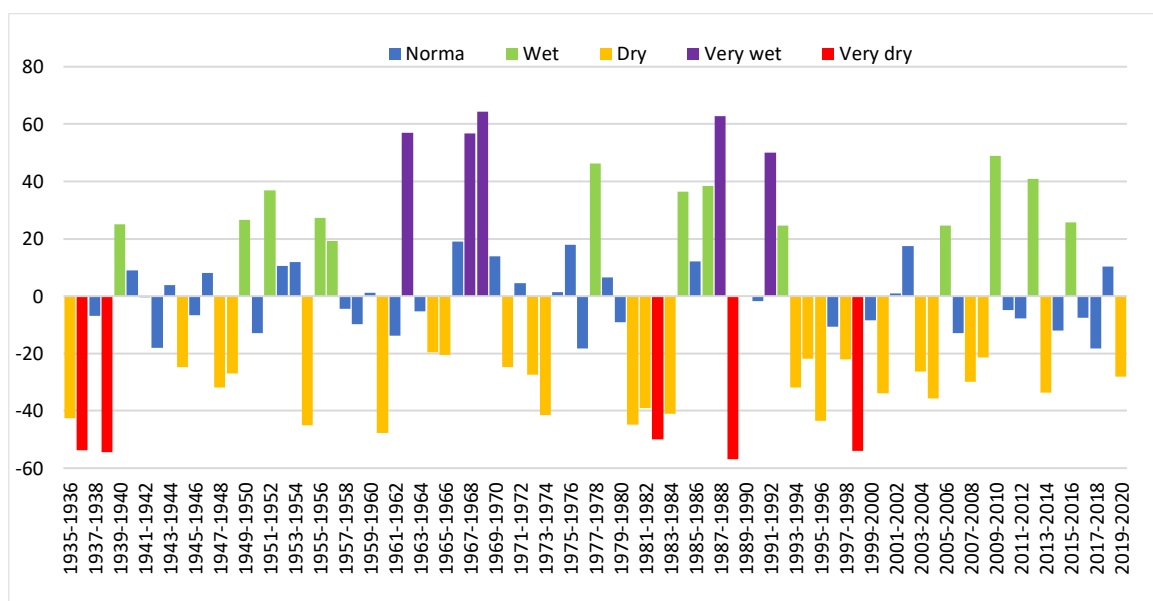


Figure 4. Anomaly of annual mean precipitation to the normal in Armenia

Climatological monitoring showed that the amount of precipitations in Armenia of the winter 2019/2020 was below the normal. The outlook for a dry winter in Armenia was correct.

Country	Seasonal temperature (DJF)		Seasonal precipitation (DJF)		High Impact Events
	Observed	SEECOF-22 climate outlook for temperature	Observed	SEECOF-22 climate outlook for precipitations (%)	
Armenia	Above normal (50,40,10)	Above normal	Below normal	below (40, 40, 20) normal	<p>2019/2020 was sixth warmest winter for Armenia.</p> <p>Heat waves were observed.</p> <p>Snow cover was not recorded in lowland areas of Armenia at all.</p> <p>01-09, 11-12, 21, 23, 24-25,27-28 of February strong wind (5-20m/sec,with the gasts of 15-28m/sec observed in: Dans fog (visibility ≤50m) observed in Ararat and Shirak regions as well as in different period of the season.</p>

Temperature:

The highest temperature of the season was $+22...+23^{\circ}\text{C}$ observed in February in valleys of Syunik and in Tavush. In the Ararat plain and in Lori it was $+14...+17^{\circ}\text{C}$, in Gegharkunik, in Kotayk, in Aragatsotn and in the foothills of Vayots Dzor: $+10...+15^{\circ}\text{C}$, in Shirak: $+9^{\circ}\text{C}$.

The lowest temperature observed was in Shirak, in Lori, in Gegharkunik and in the mountains of Aragatsotn $-25...-30^{\circ}\text{C}$, in Tavush, in Kotayk and in the foothills of Vayots Dzor $-19...-22^{\circ}\text{C}$, in the Ararat plain and in the foothills of Syunik $-13...-18^{\circ}\text{C}$.

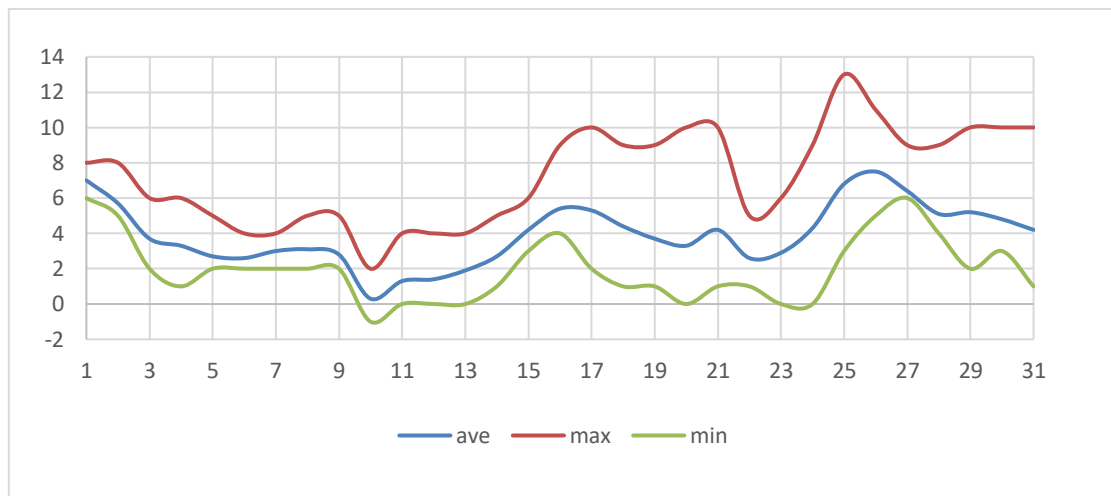


Figure 5. Course of the mean, maximum and minimum air temperature in December for Yerevan

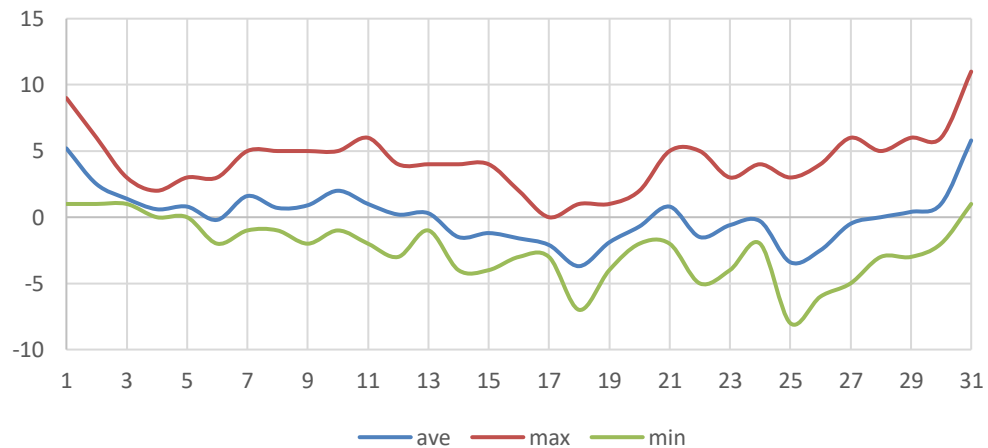


Figure 6. Course of the mean, maximum and minimum air temperature in January for Yerevan

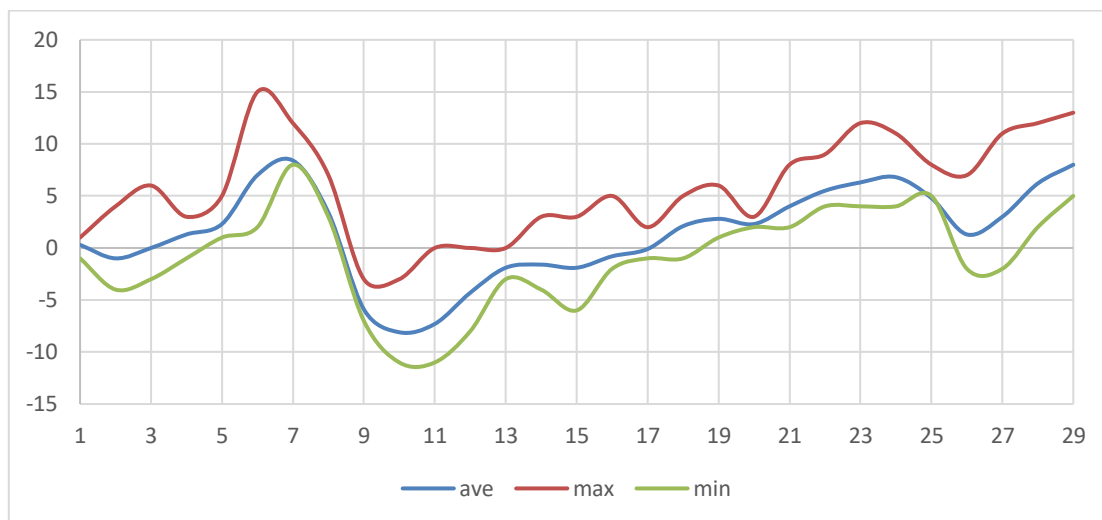


Figure 7. Course of the mean, maximum and minimum air temperature in February for Yerevan

Precipitations:

December: Monthly precipitation in the whole Republic was below the norm. In Lori it made up 10-50% of the norm (in Vanadzor 120%), in Tavush (in Bagratashen 0%), in Shirak, in Gegharkunik (in Gavar 37%), in Aragatsotn, in the Ararat plain (in Artashat 150%), in Kotayk, in Syunik, in Vayots Dzor 50-130%.

January: The monthly precipitation was within the norm. In Syunik it was 60-100% (in Meghri 25%). In other regions it was a little less making up 14-60% of the norm.

February: The monthly precipitation in most of the regions was close to the norm and above the norm. In Lori and in Tavush it was 35-88%, in the Ararat plain and in Vayots Dzor it made up 63-93% of the norm, in Kotayk, in Gegharkunik, in Aragatsotn, in Shirak and in Syunik 90-236%, in Matuni 54%.

Snow Cover:

As of December 31 the maximal snow cover in the Armenia registered at the station of Mt. Aragats (3229m) was 96sm, in Vorotan 45sm, in Amberd 33sm, in Jermuk 31sm, in Ashotsk, in Hrazdan, in Ananun mountain pass 23sm, in Aparan 18sm, in Vanadzor, in Shorja, in Eghvard, in Ijevan, in Dilijan, in Odzun, in Gyumri, in Gavar, in Goris and in Pushik mountain pass 1-8sm.

As of January 31 the maximal snow cover in the Armenia registered at the station of Mt. Aragats was 94 sm, Vorotan 49 sm, Amberd 47 sm, Jermuk 29 sm, Ananun pass 30 sm.

As of February 29 the maximal snow cover in the Armenia registered at the station of Mt. Aragats (3229m) was 130 sm, in Vorotan` 70sm, in Amberd 60 sm, in Jermuk 46 sm, in Hrazdan 41sm, in other parth 1-40 sm.

In the Lowland area of Armenia the snow cover do not formed during Whol season.

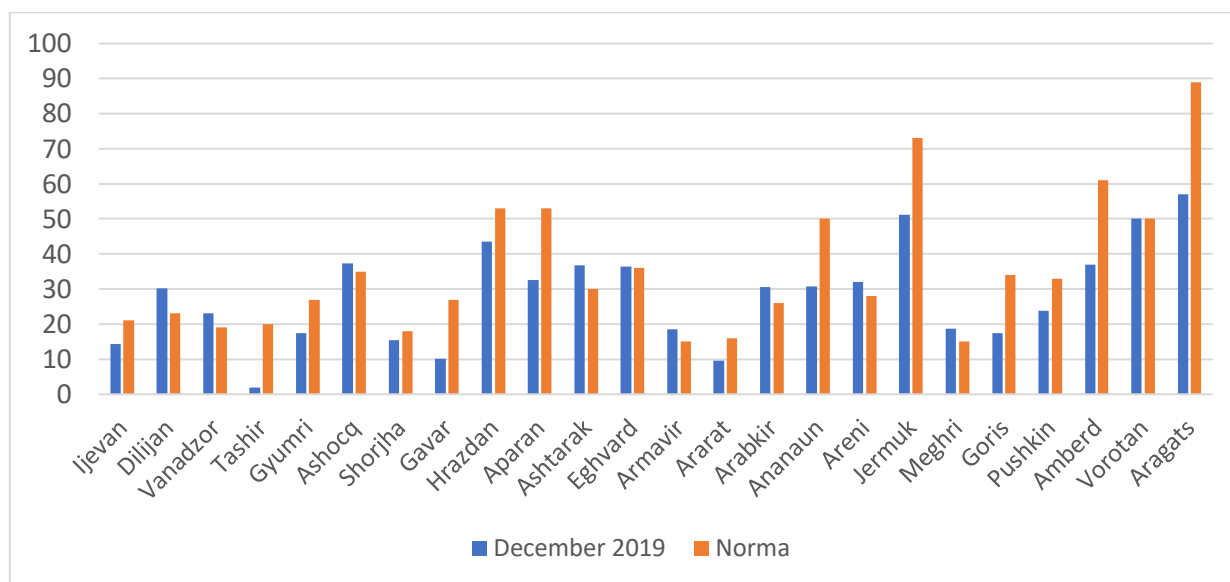


Figure 8. Course of the monthly precipitation for December 2019 and the norm, mm

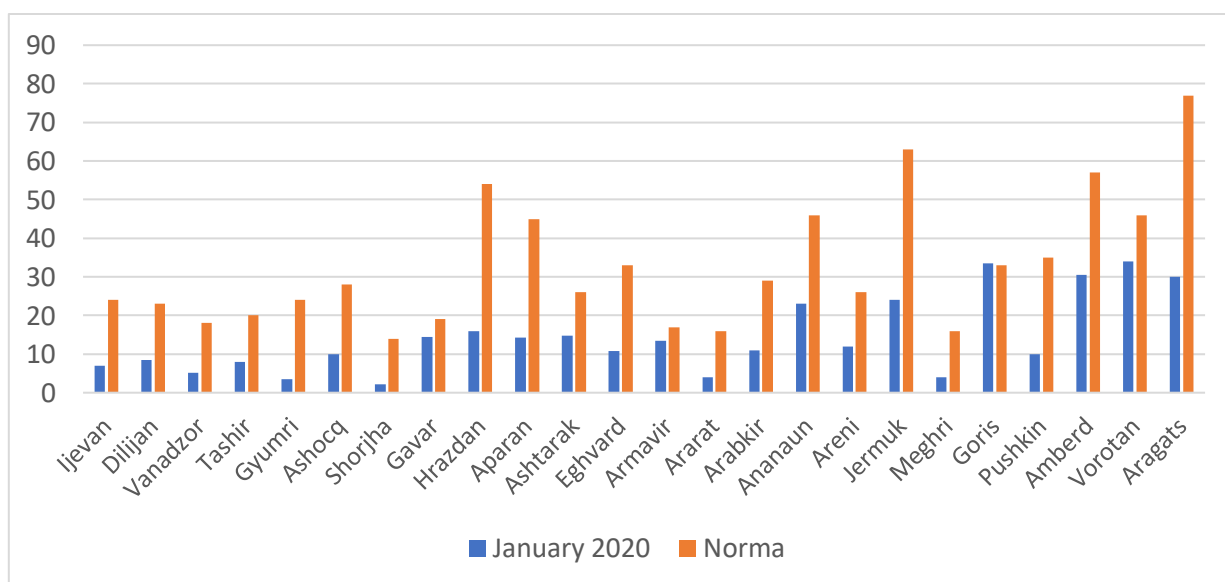


Figure 9. Course of the monthly precipitation for January 2020 and the norm, mm

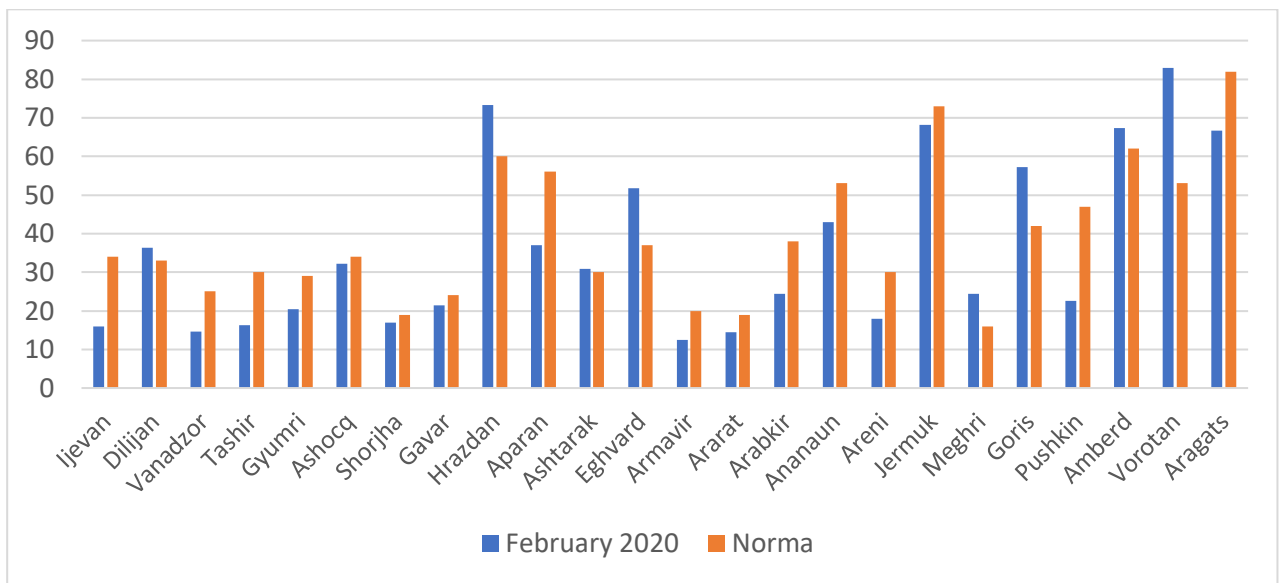


Figure 10. Course of the monthly precipitation for February 2020 and the norm, mm

Users' perceptions of the SEECOF-20 outlook

Hydromet Service has submitted SEECOF, MedCOF seasonal forecast outlook.

Seasonal forecast was shared between governmental authorities, private companies, public (via mass media)

Positive feedback was obtained from the users related to the reliability of forecasts.