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DROUGHT MONITORING BULLETIN

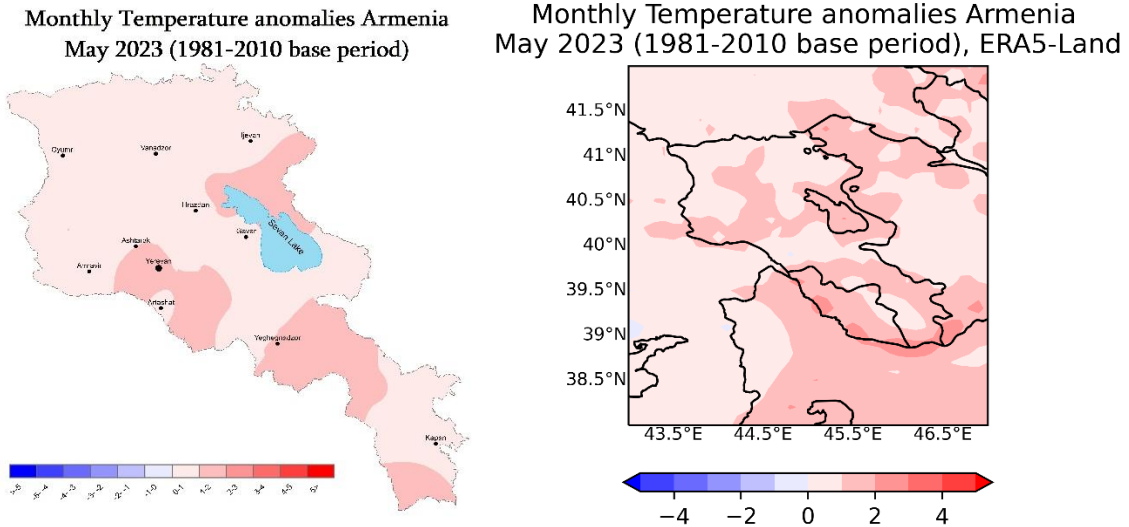
2023 May

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1. Monthly temperature anomaly

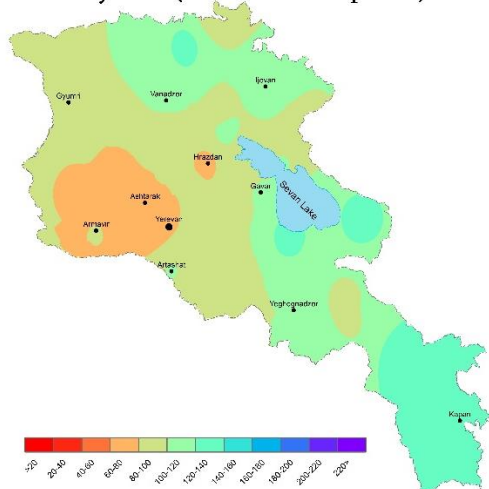
In May, the average monthly air temperatures exceeded the norm (1981-2010). According to the observations of 43 meteorological stations of Armenia. The stronger temperature anomalies were recorded in the Ararat valley, Vayots Dzor, northern part of Gegharkunik, and southern part of Syunik reached 1-2°C. At the same time, deviations of average monthly temperatures of the ERA5-Land global reanalysis successfully captured the observed positive anomalies of temperatures in the territory of Armenia in May.



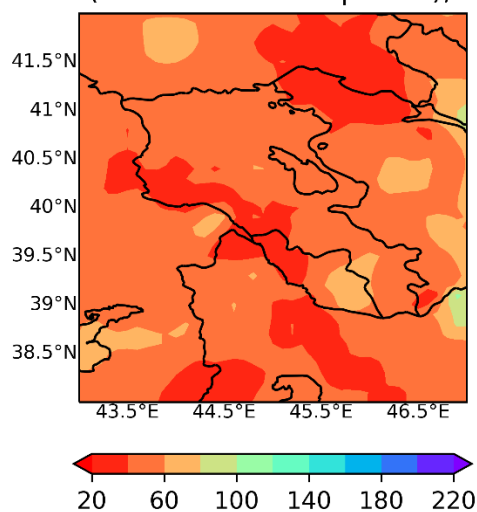
2. Monthly anomalies precipitation

May was accompanied by normal precipitation (90%). In May, northern, and southern regions of Armenia were the wettest, where the observed precipitation was higher than monthly norms by 120 % were monthly precipitation exceeded the norm. The maximum anomalies of precipitation were recorded in Syunik and Gegharkunik regions, by 130% of the norm. Observations show that due to the mountainous relief of Armenia, local precipitation was observed in some areas. In the central and western territory of Armenia, the amount of precipitation was close to the norm in May. (80-100%) In contrast to the observations, ERA5-Land global reanalysis precipitation data show that in May, precipitation was lower than normal in most regions of Armenia. Monthly precipitation consisted of 40-60 % of the norm in most regions of Armenia, in the Ararat valley, up to 20-40 %.

Monthly Precipitation anomalies (%) Armenia
May 2023 (1981-2010 base period)



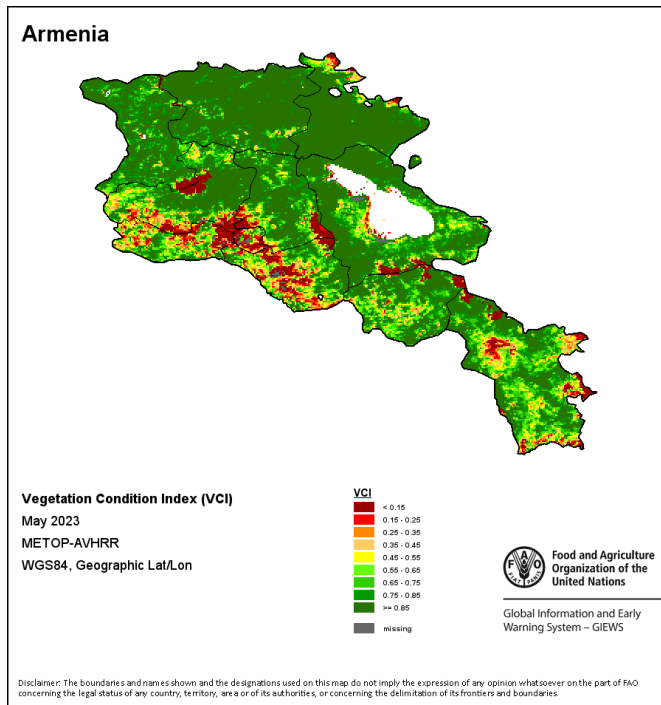
Monthly Precipitation anomalies(%) Armenia
May 2023 (1981-2010 base period), ERA5-land



3 Drought indices

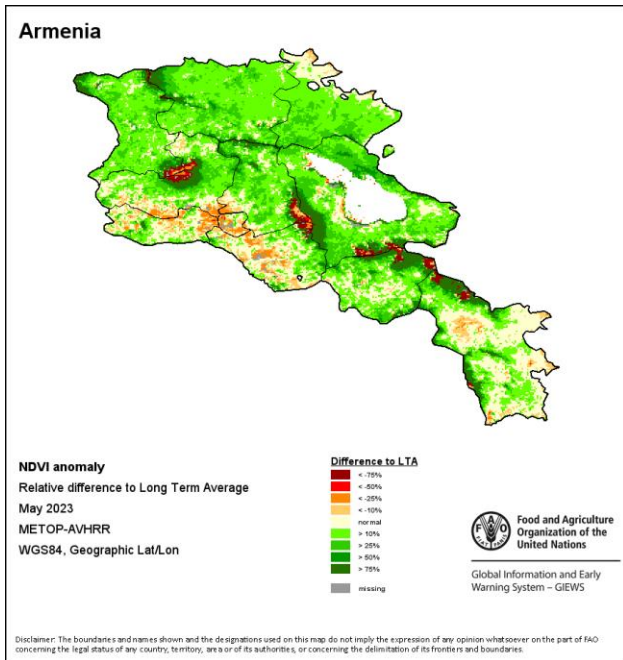
3.1 Vegetation Condition Index (VCI)

VCI shows the condition of vegetation in a given period compared to the average condition of vegetation associated with the climatic conditions of the given location. Lower and higher VCI values indicate poor and good vegetation conditions, respectively. As can be seen from the May VCI map taken from the FAO website, vegetation is in good condition in most of the territory of Armenia, except for some valley regions in Syunik and Tavush, and in some parts of the Ararat valley .



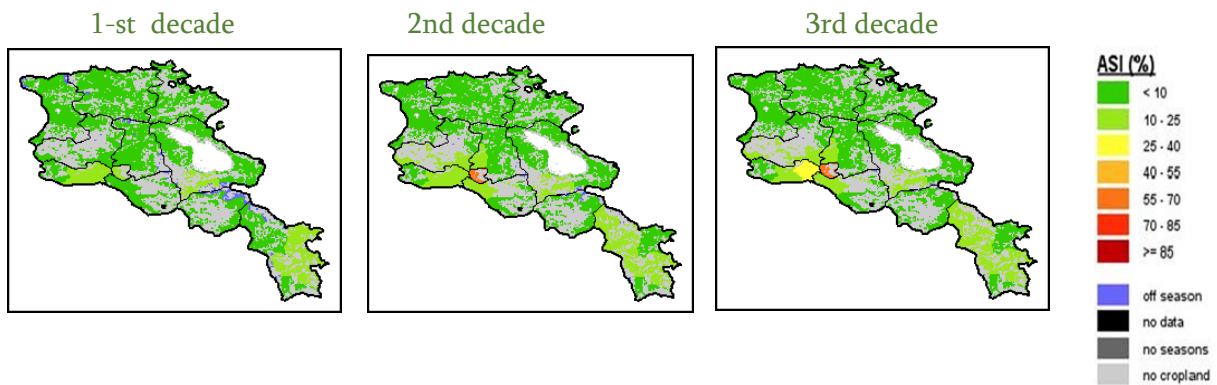
3.2 Normalized Difference Vegetation Index (NDVI)

The Normalized Difference Vegetation Index (NDVI) is an indicator of photosynthetically active biomass which is obtained by comparing the amount of absorbed visible red light and reflected infrared light. Based on the April NDVI map posted on the FAO official website, the spatial distribution of NDVI values in May is consistent with the distribution of VCI showing favorable vegetation conditions in most regions of Armenia, except for some valley regions in Syunik and Tavush, and in some parts of the Ararat valley .



3.3 Agricultural Stress Index (ASI)

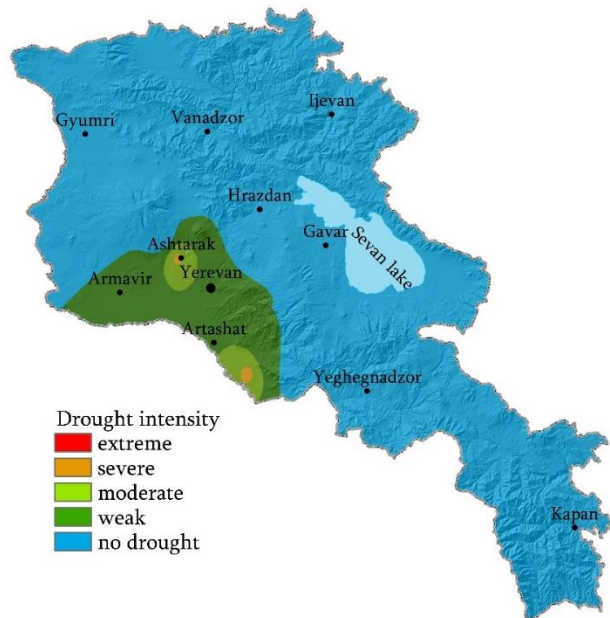
The Agricultural Stress Index (ASI) indicates the impact of agricultural drought. As can be seen from the data of April, there was no agricultural drought in the territory of the Republic except for some parts of the Ararat valley.



3.4 Assessment of meteorological drought intensity

Drought intensity was evaluated by Selyaninov's hydrothermal coefficient according to the data of 38 meteorological stations. The drought intensity map shows that there were no drought conditions in the territory of Armenia, except for some stations in the Ararat valley.

Drought Monitoring, 21-31 May, 2023



Thus, analyzing the observed temperature and precipitation anomalies, as well as the values of the vegetation indices, we can conclude that the observed weather conditions observed in May have not led to the formation of drought conditions in Armenia, except for some valley regions in Syunik and Tavush, and in some parts of the Ararat valley.