Anomaly (ca. 860 CE–ca. 1250 CE), Little Ice Age (ca. 1250 CE–ca. 1850 CE), Industrial Period (ca. 1850 CE–ca. 1950 CE), Modern Warm Period (ca. 1950 CE–present day). The reconstructed climatic evolution in the investigated sedimentary succession is coherent with the short-term climate variability documented at the Mediterranean scale. By integrating the planktonic foraminiferal turnover from carnivorous to herbivorous–opportunistic species, the oxygen isotope record and the pollen distribution, we document importantmodification from the onset of the Roman Period to the present-day. From ca. 500 CE upwards the documentation of the cooling trend punctuated by climate variability at secular scale evidenced by the short-term δ18O is very detailed. We hypothesise that the present day warm conditions started from the end of cold Maunder event. Additionally, we provide that the North Atlantic Oscillation (NAO) directly affected the central Mediterranean region during the investigated time interval.

ID: 01919, 03.- Regional and transregional climate variability over the last 2000 years, (Poster)

THE PROBLEMS OF CHANGE CLIMATE CONDITIONS FOR THE PERIOD OF OVER THE LAST CENTURY OVER MOUNTAINOUS TERRITORY OF ARMENIAN REPUBLIC

Varduhi Margaryan[1] 1) Yerevan State University. Faculty of Geography and Geology. Department of Physical Geography and Hydrometeorology. * Varduhi Margaryan, vmargaryan@ysu.am

As a result of climate global changes are changed weather phenomena in different regions, which, mainly, depend on common circulation of atmosphere. Armenia as a mountainous country, with dry climatic conditions, for his whole territory is vulnerable for global climate change. So, identification and assessment of spatial distribution of the dynamics of climate change, a reliable prediction of climate change and the timely warning, the development of rapid response systems, warning of the population and higher levels of education are the main conditions for human security and sustainable development of the republic. Considering the above, the set a goal to study, identify and analyze the dynamics of air temperature and precipitation over the last century (instrumental observations), analyze the problem of climate forecasts.

For the solution of the offered problems, as the theoretical basis was presented a relevant research, in particular, the works on climate change. As starting material, the actual observations of Armstatehydromet of air temperature and precipitation were used. As a methodological basis was used: in the geographical, physical and mathematical, correlation methods and characterization techniques, statistical analysis and extrapolation. Using the trend equation and the extrapolation method, in the work was estimated dynamics of the change in the average surface air temperature and annual precipitation of the study territory for the period 1935-2015.

As a result of studies have shown that almost the entire territory of the republic there is a tendency of growth of annual the temperatures. Unlike temperature changes in annual precipitation is not allocated its uniqueness. In some areas of the country there is a tendency to increase, and in others - decrease. In our opinion, this is due to the peculiarities of the complex orography and local circulation of atmosphere. Therefore, assessment the dynamics of the changes of air temperature and precipitation, and its socioeconomic impact, of risk and vulnerability of this territory towards the change climate, predicting the expected values, processing management policy strategy should be carried out in the local small scale volumes, particularly in mountainous countries.

ID: 01927, 28.- Climate variability signals in groundwater (and unsaturated zone) archives, (Poster)

THE CHALLENGES OF RATIONAL USE AND PROTECTION OF GROUNDWATER RESOURCES THE ARID REGION OF ARARAT VALLEY IN THE CONTEXT OF CLIMATE CHANGE

Varduhi Margaryan[1] 1) Yerevan State University, Faculty of Geography and Geology, Department of Physical Geography and Hydrometeorology, Yerevan, Armenia. E-mail: vmargaryan@ysu.am * Varduhi Margaryan, vmargaryan@ysu.am

In the country underground waters constitute the main component of predominantly water resources and have a major role in the water balance. Thus, about 40% of the water used is derived from groundwater, and 96% of the water used for drinking is carried by groundwater. They are also used for irrigation, industry, fisheries and other purposes.

As a rule groundwater are formed under the influence of natural and anthropogenic factors, of which are the defining elements of the climate components. So, due to the observed at the present time of global warming, which has not spared our country and observed changes in the climate elements undoubtedly affect the overall balance of underground resources.

Ararat depression, which is characterized by its arid climate, one of the richest areas of underground water resources. More than 65-70 % of fresh underground water is used in different sectors of the economy is taken from this territory.

So, considering the above, the set a goal to find out and analyze the problem of the use and protection of