ABSTRACT

This report analyses the climate change problem from the local point of view of the Caspian sea level rise since 1978. It pretends to study the influence of big areas of water lands in Aral Sea basins over Caspian Sea precipitations. This water lands transfers any amount of volume of water to atmosphere by means of crop evapotranspiration. If we think that average residence of water vapour in atmosphere is 9.3 days, this amount of water will travel following wind direction as far as precipitation moment. Rise in precipitation implicates a change in Caspian's balance equation that would explain level increase. The aim of this report consists in to check this rise in precipitations using database of Caspian area, and studying possible relation between that change of climate and presence of water lands in Aral Sea basins.

To procure that, statistician study about monthly precipitation data between 1925 and 1998 has been done. Furthermore, study of wind direction and wind speed in the area located between Caspian Sea and water lands has been done. Oscillations of atmosphere's moisture content in that halfway space have been checked as well.

After this study, it can be concluded that precipitation in Caspian Sea for hottest months (that is mostly irrigation period) doesn't change, However, an average annual precipitation increase has been observed since 1960, and this is approximately date of water lands appears on Syr Darya and Amu Darya basins. It seems to coincide with the fact that wind directions are appropriate to transport moisture to Caspian Sea on some winter months and spring only.