

Research of influence of the rise of a level of Caspian Sea on the process of desertification in the coastal zone of Azerbaijan by the satellite data.

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The most characteristic feature of the Caspian Sea is periodic fluctuations in its level, which differ it from other large lakes of the Earth planet. According to Humilev in the past, unexpected transgressions and regressions of the level had an influence on the fate of the whole ethnos. In 1978 the sea level began to increase and in 1995 its average yearly mark rose to the mark intensifies of the average – 26,52 m. Intensifies of the level rise over that period totaled in average about 14,5 sm. in per year. This rise, the most intensive and continuous over the whole period of the instrumental observations has brought to multibillion losses to the economy of the Caspian states. As a result of rise of a sea level on 2,5 m there were considerable changes took place in a nature of the Caspian coastal zone. As a result of flooding of coastal zone and increase of a level of subsoil waters the process of desertification has intensified. The aim of the present researches was study of an evolution of process of desertification in the Azerbaijan coastal zone in period of last rise of a level of Caspian Sea. With that end in view the digital space photos received with the help of artificial satellites of Earth the LANDSAT and the RESOURCE for 1982 and 2000 with resolution 30 and 100m were used. Besides the space photos, the topographical, landscape, geomorphological, soil maps and maps of vegetation were used. Also the information about water-supply and social and economic structure of region was collected. The “Arc View” program with all necessary applications was as software. By results of the carried out analyses of the space photos and calculations the types, reasons and intensity of process of desertification of the Caspian coastal zone were determined. The appropriate maps and also a map of the prognosis of a desertification in the scale of 1: 100000 were drawn up. The correlation between a rise of the level of Caspian Sea and a degree of desertification of the Azerbaijan coastal zone were established. The areas exposed to the moderate and heavy desertification in the researched region makes up 70 %, and weak and very heavy accordingly 19% and 11 %. In comparison with 1982 in 1998 the territory exposed to process of desertification in the researched region was increased on 340.606 km². The areas of the heavy desertification were increased from 21 % in 1982 to 36 % in 1998. The area of moderate desertification was decreased from 54 % in 1982 to 35 % in 1998. It indicates that the areas of moderate desertification have been replaced by heavy and very heavy. For the aforesaid period the areas of the weak desertification increased only on 1 % (with 18 to 19 %). Thus, the areas with a weak and moderate desertification have decreased, also the area which do not expose to desertification has decreased, but the areas with heavy and very heavy degree of desertification have considerably increased. At the end of the report the necessary measures for combat desertification are offered.