III. ПРИРОДНИЧА ГЕОГРАФІЯ: ТЕОРІЯ ТА ПРАКТИКА

Завантажити

UDC 911.2 https://doi.org/10.17721/2308-135X.2021.61.59-65

Nadirov Mahir Institute of Geography, National Academy of Sciences of Azerbaijan, Baku, Azerbaijan

ECOGEOGRAPHICAL RISKS AND ANTHROPOGENIC TRANSFORMATION OF GEOSYSTEMS ON THE COASTAL PLAIN OF CASPIAN SEA

Aim: The main aim of the study is to research the regularities of the anthropogenic transformation and ecogeographical situation of the landscapes on the coastal plain of the Caspian Sea from Pirsaat river to Astara river.

The methodological basis of the article is determine dynamic of forests we prepared forests maps of investigation area. For this purpose we used the topo map of the area of 1987, and Google Earth imagines. Then we compared these years' materials, and analyzed conclusions.

Results: In the article we have represented results of our investigation materials on the branch of technogenic transformation of the landscapes based on modern methods, and relevant maps are prepared. We have analyzed landscape components, like relief, climate, vegetation cover and etc., dynamics of forests, precipitations and etc. We grouped the anthropogenic activities in the investigation area. Consequently we have determined risks and hazards in the landscapes on the coastal plain of Caspian Sea due to human effects.

Transformation characterizes of Salyan and Lankaran, South-eastern Shirvan plains due to anthropogenic effects have researched in the article. Dynamic analyzes of old and modern topo maps, satellite maps, survey with older people let determine transformation degrees and development levels of modern natural and natural-anthropogenic landscapes. Eco systems of the protected areas are compared with landscapes exposed to anthropogenic effects based on analogy method. NDVI, dynamics of technogenic landscapes, forest ecosystems maps allow to create anthropogenic transformation map of the investigation area. We devided investigation are into 5 parts due to transformation degrees: unchanged landscapes that retain their natural structure, poorly transformed landscapes, medium transformed landscapes, strongly transformed landscapes, natural-technogenic landscapes. Then risk and hazards are assessed. System of measures to overcome ecological risks and hazards have been prepared by us. We have determined that 24% of the investigation area (1585 km2) were ecologically protected landscapes. In 26% of the area (1705 km2), natural complexes are poor transformed. In 40% (2598 km2) of natural complexes are moderately transformed, and in 10% (680 km2) of natural landscapes are strongly transformed and belong to high-risk areas. Compiled maps and scientific results can be source in management of risks in the area and in the proper organization of insurance business.

Theoretical and practical significance. The results of the research can be used by the research and design institutes of the Ministry of Ecology and Natural Resources. The obtained scientific results will enable the protection of the ecological diversity of landscapes on the plain of the Caspian Sea and optimize natural resource potential of landscapes.

Scientific novelty: The obtained scientific results will enable the protection of the ecological diversity of landscapes on the plain of the Caspian Sea and optimize natural resource potential of landscapes.

Keywords: coastal plain of Caspian Sea, technogenic transformation, anthropogenic activities, GIS, landscapes.

References

1. Ismayilov M.J. Identification of the structural and functional features of modern landscapes of contact zones for the purpose of spatial planning // Actual problems of landscape planning. Moscow, 2011. p. 138-142

2. Garibov Y.A. Optimization of natural landscapes of the Azerbaijan Republic. Baku: AzTU, 2012, 216 p.

3. Mammadov G.Sh. Soil resources of Azerbaijan. Baku: Elm, 2002. 131 p.

4. Mammadov R.M., Ismayilov M.J. Estimation of natural-resource potential of landscapes of Azerbaijan and their rational use // Herald of the Azerbaijan Geograpical Society. 2013. Vol. XVIII, p. 10-15

5. Nicolaev V.A. Cultural landscape - geoecological system // Heralds Moscow State University. Series 5, Geography. 2000. № 6. p. 3–8.

6. Nizovtsev V.A. Toward the theory of anthropogenic landscape genesis. Geography and natural resources. 2010, № 2. p. 95-100.

Надійшла до редколегії 10.03.2021