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**NATURAL FACTORS INFLUENCING DESERTIFICATION IN
MOUNTAIN AND MOUNTAINOUS TERRITORIES.**

Adilova Ozoda Amonovna- Doctor of Philosophy Chemistry (PhD), teacher of
Department of Geography and Fundamentals of Economics knowledge Jizzakh
State Pedagogical Institute

Kholmurodova Nodira- Master student of Geography and Fundamentals of
Economics knowledge Jizzakh State Pedagogical Institute

Abstract: The article examines the natural factors influencing the process of desertification in mountainous and foothill areas: geological structure, topography, climatic conditions, groundwater and surface water, soils and flora.

Basic concepts: lithological, petrographic, albedo, transpiration, deflation, ephemeral, ephemeroid, suffocation, karst.

Introduction. Factors influencing the development of desertification can be divided into two groups: natural factors and anthropogenic factors. Natural factors include the geological structure of the place, relief, climate, groundwater and surface water, soils, vegetation, fauna.

Geological factors influencing desertification include lithological and petrographic composition of rocks in mountainous areas, hardness, water solubility, physical, chemical erosion resistance and other properties. These features affect the formation of various landforms, erosion processes on the slopes, the deposition of deposits, the parent rock of the deposits. The abundance and scarcity of groundwater with rocks also depends on the mechanical and chemical composition of the deposits in the eroded crust. Mountains made of granite contain a lot of spring water, which is also found in the upper parts of the mountains. In limestone soils, springs are very rare, and when atmospheric precipitation penetrates the ground through rock cracks and reaches the waterproof layer, it rises to the surface in the form of springs. On slopes composed of limestone, plant species that prefer more calcium are prevalent.

In mountainous areas, the impact of relief on desertification is significant. Soil and vegetation cover, microclimate are different in different expositions of slopes. In the north-facing exposures, the soil and vegetation are thick and rich in vegetation. Even under the influence of human activities, desertification on the dry southern slopes accelerates rapidly, and soil washing is strong. The slope of the slopes affects the thickness of the soil, vegetation. The relief forms in the mountains (convex, concave) also determine the thickness of the soil and the abundance of vegetation. In all mountains, soil erosion is strong on the hillsides, with xerophytic sparse grass cover. Sparse grass cover has developed from the convex areas on the hillsides. Strong winds blow the snow quickly, the soil moisture evaporates, resulting in unfavorable conditions for the growth of various plants. In hollow relief forms (although it is less noticeable), moisture and erosive materials from the convex shape accumulate, resulting in plants growing denser than the convex shape.

Climate is one of the strongest natural factors influencing desertification. The effects of climate on desertification have been studied in detail in V.A. Kovda by N.S.Orlovsky, N.G.Kharin, I.S.Zonn, and other scientists. Climatic elements are factors that determine the process of physical evaporation, transpiration rate, humidity, recurrence of drought, deflation. Climate change is one of the factors contributing to desertification.

He explains that the development of desertification on a global scale is due to deforestation in V.A. Kovda, degradation of vegetation cover in pastures, which leads to increased soil erosion and escalation of dust storms. Indeed, in mountainous areas, deforestation of trees and shrubs, excessive thinning of natural grass cover accelerates soil washing, and flooding is a frequent recurrence. The stripping of soils without vegetation has a major impact on the radiation balance in arid areas, including mountain slopes. N.S.Orlovsky, who studied this process, writes that in sparse, bare lands, albedo is large, in such lands the surrounding plants lose more heat than in rich soils, and the hot air exacerbates the drought.

Indeed, on mountain slopes, where plants are sparse and in thick soils, differences in soil and air temperatures are significant, forming a peculiar microclimate.

Wind is also one of the main natural factors that have a strong impact on desertification. Wind increases physical evaporation, transpiration, and dries the surface quickly. Depending on the strength of the wind, the soil particles are blown away. It occurs strongly in the foothills of mountainous areas, on windswept slopes, on sparsely vegetated surfaces. Wind speeds from 10m/s blow out light rock particles with a diameter of 0.5-0.6 mm and collect them in the shallow depths of streams.

Because groundwater lies deep in mountainous areas, they make little contribution to soil and plant formation, only hydromorphic soils have developed around springs, in watery streams, and in small areas near groundwater near streams.

Plants are the strongest indicator of desertification. In arid areas, precipitation is normal and air temperature is normal, and evenly developed pastures maintain a smooth growth of plants, without degradation (degradation). However, a decrease in the amount of precipitation or prolonged exposure to chronic hot temperatures has a negative effect on the plants. In such unfavorable weather conditions, favorable conditions for desertification are created. In mountainous areas, pruning of trees and shrubs prevents the development of ephemeral and ephemeroïd, shrub-like plants.

The strong roots of trees and shrubs strengthen the soil and the erosion layer beneath it. As a result, shrub-like perennials and grasses grow thickly around trees and shrubs.

In mountainous areas, far from rural areas, the difference between natural vegetation, including trees and shrubs, and well-preserved pastures is 70-80%. 70 - 80 percent difference.

Animals are also affected to some extent by desertification. Rodents in particular play a major role. Even in mountainous areas, on soft thick-soiled slopes, squirrels, squirrels, and rats build nests, removing soil from the ground and

forming small foci for deflation. V.P. Kostin studied the distribution and influence of rodents on the Ustyurt plateau and wrote that the nests they created created conditions for suffocation, the formation of karst processes, and field mice (sandflies) caused damage to saxophones up to 5%. A similar situation occurs in mountainous areas. Rodents are especially common around the lands used in lalmi farming, where wheat, barley, sesame, and peas are planted.

Conclusion. This means that natural factors also have a direct impact on the desertification process. Geological structure of the place, lithological composition of rocks in mountainous areas, hardness or softness of rocks, solubility in water, susceptibility to physical and chemical erosion, topography erosion, mountain exposures, loss of fertile soil cover due to continuous wind, evaporation, transpiration factors such as moisture content, recurrence of drought, deflation process, degradation of vegetation cover, increase of rodents in arable lands have a serious impact on desertification.

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