

**HUMAN INFLUENCE ON MIDDLE ZARAFSHAN OASIS. CHANGE OF NATURAL LANDSCAPES,
DEVELOPMENT OF GEOGRAPHICAL PROCESSES AND MEASURES TO FIGHT AGAINST THEM**

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Abstract

It is known that the Zarafshan region has been one of the agricultural, horticultural and viticultural regions of Central Asia since ancient times. These lands have favorable natural conditions for the development of agriculture, animal husbandry, horticulture and other fields. But here you can find many areas of natural landscapes that have changed as a result of human influence. In particular, anthropogenic influence from natural-geographical processes, erosion and floods occurring in mountain and sub-mountain regions complicate the nature of these lands and have a negative impact on the economy. Preventing and combating such incidents is of great importance in the protection of nature and the use of land resources in the economy. It is important to study the landscapes that have changed as a result of human influence, as well as to study the development of natural geographical processes.

Keywords: natural landscape, natural-geographical process, erosion, slope, human economic activity, ravine, flood event, nature protection, washing.

Introduction

Middle Zarafshan oasis is the most densely populated place in our country, with the most favorable natural conditions. That is why the landscapes here have changed strongly as a result of human economic activity.

Several factors influence the development of erosion processes and floods in this area, which are calculated from natural processes. These factors are negatively affected by the relief of the place, climate, nature of the rocks, soil, land use, etc.

The amount of precipitation, their seasonality, and intensity have a strong influence on soil washing and, at the same time, on flood events.

The wide spread of loess, loamy and other porous rocks, large slope, sparse vegetation, disorderly grazing of livestock, abundant and rapid rains in the spring make soil washing easier in these places.

In addition, human economic activity has a significant impact on soil erosion. In places where agrotechnical rules are violated during plowing and cultivation of crops, soil washing is especially intensified. In the region of Middle Zarafshan, the erosion process occurs in two forms. The first is called soil erosion, which occurs as a result of rainwater washing away the upper layers of the earth. The second is cliff erosion. The first is the beginning of the erosion process, and the second is its

continuation, because the layers of water that have washed along this particular plane gradually flow down to the lowlands and merge with each other. If measures are not taken to stop these flows in time, this flow will create very deep ditches. Then, the water goes along these channels to the lower layers of the earth. As a result, ravines are formed.

The shape and size of the cliffs in the Middle Zarafshan oasis are very diverse. In most places, the sides of the ravines are steep, much deeper and longer. Most of them are 200-300 m long, 0.5 m to 2-3 m wide, and 40 cm to 4 m deep. The depth and width of the ravines in the upper parts are quite different from the ravines in the middle and lower parts. The depth and width of the above ravines are not very large, 20-40 cm, and the width reaches from 0.5 m to 1 m. These ravines are formed by rain and meltwater washes, mainly on the northern slopes of the mountain and in the typical and dark gray soils of the mountain slope plains and in the highlands where loess rocks are widespread. This process developed around the Dargom channel in Panjakent, Karatepa, Chaqilikalan mountain and mountain regions of the Middle Zarafshan basin.

Human economic activity has had a strong impact on the erosion process and other phenomena. A number of negative effects of human activity have reduced soil quality, especially its fertility, and reduced the area of fertile land. As a result of improper land use, increased soil erosion, non-observance of irrigation rules and norms, cutting of forests, non-observance of livestock feeding norms on pastures, densification of the soil cover or, on the contrary, increased erosion. Even now, overgrazing of cattle in the regions of the Middle Zarafshan foothill oasis is causing soil erosion.

Natural-geographical processes in the mountain and sub-mountain regions of the Middle Zarafshan oasis cause great damage to the national economy. Reducing or increasing their impact depends on people's attitude towards nature. Therefore, it is of great importance to study these processes in depth and to develop measures to combat them. These measures include:

1. Reducing the causes of the erosion process, and at the same time preventing its consequences.
2. Ensuring that the particles of the soil layer exposed to the washing process remain firmly attached. To do this, it is necessary to increase tree groves and meadows in these regions, and strictly limit the cutting of existing trees.
3. Regulation of snow and rainwater that forms surface streams with the help of agrotechnical methods. In order to protect the slopes from erosion and erosion, cutting the mountain slopes to form terraces, thereby reducing the slope of the slopes. This, in turn, fundamentally changes the surface flow, stops erosion in a short time, improves the hydrological regime of the slopes, increases the moisture retention properties of the soil, and increases the water supply to the mountain slopes. It also improves the water regime of the area and helps cover the mountainous regions with forests.
4. One of the most important, powerful, reliable and long-established methods of combating erosion and floods on mountain slopes is planting fast-growing shrubs and trees in a terrace manner, creating forest strips, on forest slopes the surface attenuates the flow. It protects the soil from erosion and erosion, stops the growth of ravines, helps to maintain the snow cover for a long time, helps to increase the reserve of ground water, and improves the water regime. A clear example of this is the forest massifs of Amonqo'ton, Kamangaron, Mominabad located on the northern and north-western slopes of Chaqilikalon.
5. It is also important to build hydrotechnical devices around the ravines to protect the slopes from erosion and erosion. In order to prevent the natural-geographical processes that may occur in the

Middle Zarafshan oasis and to reduce the damage caused by them, it is necessary to thoroughly study these processes.

6. Practical measures of nature protection require a thorough study of the environment and a complete determination of the amount of natural resources, the level of annual growth and recovery. This requires the development of the scientific basis of nature protection.

Conclusion

The data analyzed above show that the influence of human activities on natural landscapes was strong in the Middle Zarafshan basin. Conditions for the formation of anthropogenic landscapes were formed gradually. Oases differ from other types of anthropogenic landscapes not only by their natural geographical features, but also by the complexity of their morphological structure, structural-dynamic development. In this regard, it can serve to comprehensively study the landscapes of Samarkand, Kattakorgon.

Taking into account that the natural and anthropogenic landscapes of the Middle Zarafshan basin have been strongly changed up to now, oasis landscapes have formed in all irrigated areas of the basin. Currently, the state of geoeological oasis landscapes is not the same in all parts of the basin, the geoeological situation is deteriorating from east to west along the Zarafshan basin.

In the irrigated agro-landscapes in the Middle Zarafshan oasis, the formation of soil-vegetation cover due to human activity, the local climate, underground water, chemical and physical composition of the soil, qualitatively and quantitatively different processes take place. Here, the interactions of the components also occur in a different way than in natural landscapes. Irrigated agrolandscapes differ from natural geocomplexes in that they are human-controlled agrosystems.

References

1. Umarov M.U., Abdujabborov M.A., Abbasov S.B. Human influence on the nature of southwestern Uzbekistan. 1990. 31-35 b, 38-43 b
2. Abdulkasimov A. A., Abdulkasimov A., Abdulkasimov I. Anthropogenic landscapes of Middle Zarafshan. 04/25/2021 04/25/2021
3. Asia and environmental problems. Study guide - Tashkent, 2004.-260 p.
4. Abdurakhmonova Yu. H. Landscape complexes of the Zarafshan basin and their use in agriculture. Proceedings of the international scientific conference: current problems of biology and ecology. - Samarkand, 1999. 220-221 p.
5. T. K. Artykov. The current state of irrigated soils of Uzbekistan and ways to improve them // Ecological problems of improving indicators of irrigated lands: Proceedings of the Republican Conference. - Samarkand, 2002 -78-82 p.
6. Rakhmatullayev A. Analysis of the correlation between the ecological state of the oases of the Republic of Uzbekistan and human health // Lectures of the Academy of Sciences of the Republic of Uzbekistan. - Tashkent, 2011, - No. 6 .. p. 93-96.
7. Rakhmatullayev A. R. Geographical basis of optimization of the ecological situation in the oasis of geosystems. // Doctoral dissertation abstract - Tashkent, 2018. -86 p.

8. Koziev R. K. The current state of irrigated lands in the Republic of Uzbekistan // Increasing the productivity of irrigated water and their ecological problems: conference materials, part 1. - Samarkand, 2002. 7-11 p.
9. Hydrometeorological Center of Uzbekistan Yearbook of soil pollution in the territory of the Republic of Uzbekistan for 1991-2014. -Tashkent, 1992 - 2015.
10. Hydrometeorological Center of Uzbekistan Yearbook of soil pollution in the territory of the Republic of Uzbekistan for 2000-2012. Tashkent. 2000 - 2014 years.