

## SOME CONSIDERATIONS ON THE ECOLOGICAL STATUS OF LAND RESOURCES

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### ABSTRACT

In this work, the issues of research of land resources are covered. Information about the need to take into account the natural geographic, economic geographic, and social geographic factors of the study of land resources is given. Emphasis is placed on aspects of efficient and environmentally safe use of resources.

**Keywords:** nature, ecology, natural resources, land resources, geocology.

The state of land resources and their proper use remains an urgent issue both at the national and global levels. Despite the measures taken, land degradation is increasing. It is known that cultivated land provides the main part of gross agricultural products. This, in turn, leads to an increase in the level of use of arable land.

The Ferghana Valley has a complex landscape structure, it is a huge and unique depression among the mountains. It has various natural and anthropogenic landscapes in its high altitude regions such as desert, hills, mountains and pastures. The use of available natural resources in the area since ancient times, the extremely dense population has led to a very serious change of the natural environment. This situation can be observed in the city of Ko'kan and surrounding districts.

The process of degradation of land resources can be divided into 2 categories:

1- Under the influence of natural climatic factors (increase in temperature, change in the level of groundwater, disturbance of landforms).

2 - Violations of environmental requirements are observed during the development and exploitation of land resources related to anthropogenic activities.

Violations of the following environmental requirements are observed in the use of land resources in the territories of the Kokan zone:

1. Development and use of new lands without carrying out reclamation preparatory measures at the required level
2. Improper use of chemicals in the cultivation of agricultural products
3. Increase in the extensive method of land use in cultivated areas
4. Improper irrigation of lands
5. Lack of development of irrigation facilities and equipment in agricultural production
6. Dumping of untreated drainage and ditch water into water bodies
7. Ditch - lack of sufficient development of drainage networks
8. Improper implementation of measures for recultivation of disturbed lands

#### 9. Disruption of economic mechanisms in the use of land resources.

The role of anthropogenic influence in the degradation of land resources is great.

The proximity of groundwater to the surface of the earth in the desert zones located on the territory of Uchkoprik, Buvayda, Baghdod, and Dangara districts in the Kokan zone leads to an increase in the level of mineralization in the soil. In the northern regions of the Kokan zone, the groundwater level is one meter. This indicator is equal to 1-3 meters in the southern, western and eastern regions.

In spite of reducing the use of chemicals used in agriculture in agricultural production due to the deterioration of the ecological condition of land resources in these areas, it is observed that the level of pollution with chemical compounds has not decreased in the last 10-12 years. In many cases, this is also caused by the disposal of waste from industry and household services. This is seen in the process of groundwater reuse.

The level of soil pollution in the Kokan zone is 4.6-6.1 times higher than the permitted standard.

In the 2nd half of the 20th century, the development of new lands in the Fergana Valley region led to the development of irrigated agriculture in these regions, which relies on several main collectors and ditch networks.

The existence of irrigated agriculture in the districts of the Kokan group since ancient times and the release of production waste and chemical compounds into nature led to an increase in the level of soil mineralization in this area. This indicator is as follows according to regions: 10-30 g/l in the northern parts of the Kokan zone, 5-10 g/l in the southern regions, 10-30 g/l in the western regions, and 5-10 g/l in the eastern regions.

In addition, pesticides, heavy metals and other economic wastes that have fallen into the soil have a great negative impact on the pollution of land and water resources.

The new Ko'kan chemical enterprise was intended for the production of sulfuric acid and amphos. Located in the Sokh river cone, this enterprise started to pollute the soil and drinking water in this region, which is made up of coarse rocks and has an extremely fast water transfer ability. As a result, the activity of this enterprise was stopped. The hills are mainly composed of conglomerate, sandstone, sand gravel, limestone, gypsum layers, and the rough rocks are covered with thin loess deposits. In some places, sand and sandy layers have been completely washed away. Erosion processes are often observed in areas with a steeper terrain and weak undulations. As a result of the development of land without taking into account the specific characteristics of the hills, processes such as soil washing, gully erosion, suffocation zones, karst phenomena, salinization, erosion occur in large areas.

In the Kokan zone, the wind blowing into the valley at a high speed (15-20 m per second) is active up to the Altiariq meridian. In this process, the entire Kokan oasis, especially Dangara, Beshariq districts will cause serious damage. In some years, the seed is replanted 2-3 times due to severe damage to cotton. It is observed that soil, humus, and sand are blown away by the wind, destroying crops and gardens, and damaging farm facilities. Therefore, its environmental and socio-economic consequences are also comprehensive, countermeasures should be distinguished by their comprehensiveness and large-scale.

The rational use of the land resources of the Fergana Valley and their protection is a task of great national importance. In the districts of the Kokan group, land is very limited, so it is

necessary to develop and implement intensive management systems in the use of land resources. Today, land resources are decreasing year by year due to poisoning, swamping, salinization, soil erosion, densification, and land use for construction and other purposes. Now the main issue is to establish intensive use of land resources and soil in the Kokan zone, to preserve the humus layer of the soil in the western parts of the region, and to reduce wind erosion, it is appropriate to organize ikhota forests. In order to prevent salinization, swamping and other ecological conditions in this area, management of ditch systems, solving issues related to water erosion (cliffs, karst, pockets, landslides, etc.)

The western part of the valley is opposite to the "Kokan" and "Bekabad" winds. When these winds blow, they cause great damage to agricultural land. As a result of wind erosion, the yield of cotton in this area decreased from 34.5 centners to 22.1 centners. Ikhota forests were established in the regions of the Kokan zone in order to prevent soil erosion. Later, such situations occurred due to the cutting down of these forests by the population. It is time to further develop this idea, which shows the optimal way of wind erosion control measures in valley conditions. In addition to soil erosion, large areas of land in the southeastern, southern, and southwestern parts of the valley are highly saline, which in turn reduces crop yields and disrupts the soil structure. In terms of intensive development of agriculture, great attention should be paid to the washing of these saline lands, to the water, and to the open and closed drainage systems.

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