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# Assessment of the Typification of the Complex Landscape of The Land Areas of The Namangan Adyrs of The Ferghana Valley. Republic Of Uzbekistan.

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**Abstract:** Namangan adyrs are located in the north-eastern part of the Fergana Valley, with a complex landscape, the development of ravines in ravine-prone areas in the process of ravine erosion, as the channels of water flows deepen, the factor of erosion of the underlying mountain breeds will become increasingly important.

Widespread anthropogenic land development in Uzbekistan in 1975-2002 influenced the activation of erosion and man-made soil disturbance, which led to a reduction in more than 300 thousand hectares of agricultural land and a deterioration in the soil - environmental situation of the country.

Mapping of ravine erosion in complex landscape conditions in the world practice of erosion, it is customary to map linear forms of ravine erosion by deciphering aerospace photographs, as well as traditional mapping methods using topographic maps. The article provides for the patterns of manifestation of the growth and development of the ravines of the Namangan adyrs, studied linear forms of erosion with the identification of their morphological and morphometric characteristics.

**Keywords:** Erosion relief, valleys, plains, low mountains, middle mountains, hollows, high slopes, river beds, gullies, ravine, damage, dangerous ravine, interpretation, aerial photograph, aerospace photograph, photographic plans, topographic maps, density.

Namangan adyrs are located in the northeastern part of the Fergana Valley [1]. Of great importance are the complexly landscaped ravines, dangerous places, the relief of which we call the totality of unevenness of the earth's surface, which is especially characteristic of the development of ravine formations. Depending on the nature of the relief, the terrain is divided into flat, hilly and mountainous [2, 3].

The problem is aggravated by the fact that in the arid zone and the mountainous region of the Republic, the use of traditional methods of melioration and reclamation of soils disturbed by ravines and man-made human activities. [4].

An important criterion for assessing complex landscape ravine erosion is the definition of the territory by categories of land hazard ravine, which should underlie the design of anti-erosion measures. A ravine is a danger of land - a territory where a combination of natural conditions creates a risk of development of ravine erosion during economic use [5].

The main source causing soil erosion is concentrated water flow from atmospheric precipitation runoff and irrigation. All other natural ravine hazard factors are to some extent related to their eroding power [6].

The development of ravines into dangerous places in the initial stages largely depends on the armoring role of vegetation, which is determined by the amount of ground mass and roots. These indicators in natural landscapes are determined by the biological type of vegetation, and for the cultural agricultural background [7,8]. But the soil-protective role of plants under conditions of natural moisture cannot be established, regardless of the periods of vegetation development and erosion-dangerous precipitation. The soil protection capacity in our case was calculated by dividing the projective cover by the maximum 20-minute precipitation erosion index [9,10].

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According to the degree of manifestation and ravine danger of the territory, depending on the anthropogenic factor, the categories of agricultural land can be arranged in the following sequence (in descending order): low mountains, middle mountains and adyrov - year-round pastures of middle mountains - seasonal pastures of high mountains. The same sequence by types of crops: tilled - perennial rainfed plantations - annual cereals of continuous sowing - perennial rainfed plantations - annual grasses - perennial grasses [11,12].

The typification of the relief for assessing the complex landscape ravine danger of the territory of the Ferghana Valley is as follows:

A. River valleys.

- modern channels, floodplains and deltas of large rivers are slightly ravine hazardous;
- a complex of low (I-III) river terrace levels of large rivers - slightly ravine hazardous;
- a complex of high (IV-VI) river terrace levels - medium and highly ravine hazardous;
- heavily incised canyon-shaped riverbeds and adjacent floodplain terraces are highly ravine hazardous;
- ancient alluvial - proluvial deltas - slightly ravine hazardous;

B. Lake depressions and dry drainless basins.

- the bottoms of modern lake depressions and ancient drainage basins. The dried-up bottom of the Aral Sea is non-hazardous;
- slopes of lake basins and drainless basins - weakly - medium ravine hazardous;

B. Plains and plateau Ustyurt.

- plains with deflationary - accumulative eolian landforms (composed of sands) - not ravine hazardous;
- flat and slightly sloping plains, alluvial - proluvial, composed of rocks, - medium ravine;
- Slightly sloping plains of the Ustyurt plateau with clayey - rubble deposits - not ravine hazardous;
- hilly - wavy plains and ridges of Ustyurt - slightly ravine dangerous;
- steep ledges of the Ustyurt formation highland (“chinks”) - highly ravine-hazardous;

G. Plains and plateau Ustyurt.

- foothills and sloping foothill plains are slightly dissected - medium ravine hazardous;
- foothills are moderately and strongly dissected - highly ravine-hazardous;
- hilly, hilly and wavy foothills - slightly - and medium - dangerous ravine;
- alluvial fans of IV-V order rivers - slightly ravine hazardous;

D. Low mountains, remnant low mountains and low-mountain uplands.

- low mountains are weakly - and moderately dissected - weakly and moderately ravine-hazardous;
- strongly - and very strongly (badlands) dissected low mountains - slightly ravine-hazardous;
- remnant low mountains and uplands with varying degrees of dissection - slightly ravine hazardous;
- erosional - dissected hilly - ridged uplands of the foothills ("adyrs") - very dangerous ravine;
- steep landslide - scree slopes of low mountains and hills - medium ravine;

E. Middle mountains.

- weakly and moderately dissected middle mountains - moderately dangerous ravine;
- strongly dissected middle mountains - slightly - and medium ravine dangerous;
- rocky, deeply dissected highlands - non-hazardous;
- Alpine plateau and leveling surfaces are slightly dissected - slightly ravine hazardous.

The need for such typification is dictated by the most important circumstance that the distribution and conditions of development

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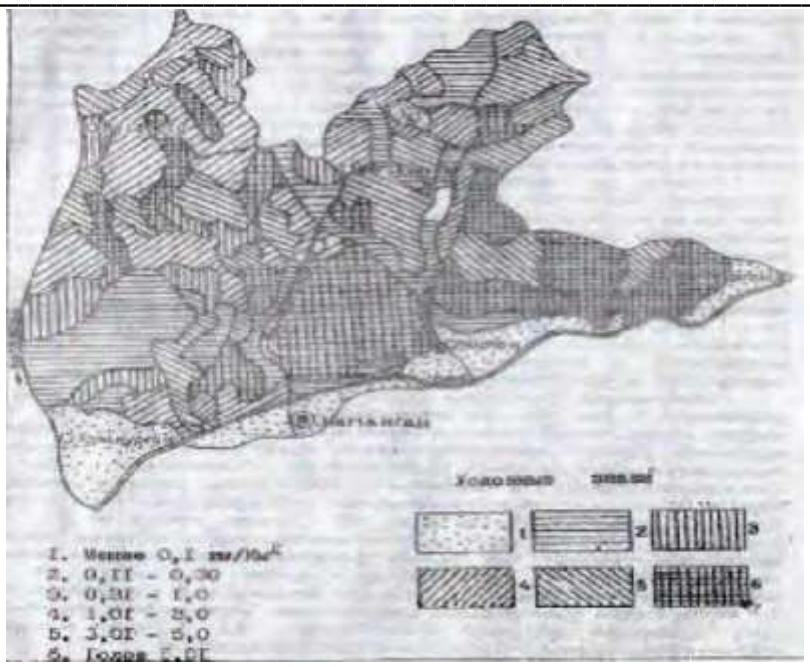

Such large-scale maps allowed us to take into account linear forms of erosion of less than 10 m. According to the density map, the entire studied northeastern part of the Namangan region, the maximum indicators (more than 10 units / sq. km.) Are found on the irrigated lands of Chartak, Aikiran, Peshkaran, Uychi, Yangikurgon adjoining adyrs with easily mixed light gray soils on loess-like rocks. Here the density of the ravine network reaches 63.1 units. / sq. km., which is considered one of the highest rates in the Middle region [25,26]. Such a high density of ravines, according to our recommendations (Nigmatov et al. 1994), does not allow the frequent use of methods of radical amelioration with the preservation of the soil layer of ravine areas [27].

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