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### **FARG‘ONA VODIYSINING NAMANGAN ADIRLARI RELYEFINING XAVFLI MAYDONCHALARINI BAHOLASH**

**Annotatsiya:** Farg‘ona vodiysi hududida xavfli hududlarda jarliklarning rivojlanishi eroziya jarayonida suv oqimi kanallari chuqurlashib borar ekan, ko‘proq tub qoyalarning eroziya omili muhim ahamiyatga ega bo‘ladi. 1975-1980 yillarda O‘zbekiston hududida keng tarqalgan antropogen yerlar rivojlanishi tuproqlarning eroziya va texnogen tebranish jarayonlarining kuchayishiga ta’sir ko‘rsatdi. Bu esa 300 ming gektardan ortiq qishloq xo‘jaligi yerlarining qisqarishiga, mamlakatning tuproq va ekologik holati yomonlashuviga olib keldi.

**Tayanch so‘zlar:** Eroziyadan xalos bo‘lish, vodiylar, tekisliklar, past tog‘lar, o‘rta tog‘lar, havzalar, baland yon bag‘irlar, daryo yotoqlari, jarlik, zarar, xavfli jarlik.

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### **ASSESSMENT TYPIFICATION OF RELIEF RAVINE DANGEROUS LAND SQUARES OF THE NAMANGAN ADYRS OF THE FERGANA VALLEY**

**Abstract:** On the territory of the Fergana Valley, the development of ravines on gully-dangerous territories in the process of gully erosion as the channels of water flows deepen, more and more The factor of erosion of the underlying rocks will be important. Widespread anthropogenic land development in Uzbekistan in 1975-1980 influenced intensification of processes of erosion and technogenic disturbance of soils, which led to a reduction in more 300 thousand hectares of agricultural land and deterioration of soil and ecological situation of the country.

**Key words:** Erosion relief, valleys, plains, low mountains, middle mountains, basins, high slopes, river beds, ravine, damage, dangerous ravine.

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Namangan adyrs are located in the northeastern part of the Namangan region.[1,2]

Of great importance are the ravine and dangerous places, the relief of which we call a set of irregularities in the earth's surface, which is especially typical for development of ravine formations. Depending on the nature of the relief, the area They are divided into flat, hilly and mountainous.[3,4]

The problem is aggravated by the fact that in the arid zone and mountainous region of the Republic application of traditional methods of reclamation and reclamation of damaged ravines and man-made soil activities.[5,6]

An important criterion for assessing gully erosion is determining the territory according to categories of ravine land hazard, which should form the basis of design anti-erosion measures. Ravine danger of land - a territory where a combination natural conditions creates a danger of development of gully erosion during economic use.[7,8]

The main source causing soil erosion is concentrated water flow from precipitation runoff and irrigation. All others are natural ravine hazard factors are to one degree or another related to their erosive power.[9,10]

The development of ravines in 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 cultivated ones by the agricultural background. But the soil-protective role of plants under conditions of natural moisture cannot be established regardless of the periods of vegetation development and the occurrence of erosive-hazardous precipitation. Soil protection capacity in our case is calculated by dividing the projective cover by the maximum 20-minute precipitation erosion index.[11,12]

According to the degree of manifestation and gully danger of the territory, depending on anthropogenic factor of the category of agricultural land can be arranged in the following sequence (in descending order): newly irrigated lands of gently sloping plains, foothills, adyrs and high river terraces - old irrigated lands with the same topography - rainfed lands of low mountains, middle mountains and adyrs – year-round pastures middle mountains – seasonal pastures highlands. The same sequence by type of crop: row crops - rainfed perennial plantings – annual grain crops continuously sown – rainfed perennial plantings – annual grasses – perennial grasses.[13,14]

Relief typification for assessing the ravine danger of the Fergana Valley territory as follows:

A. River valleys.

- modern channels, floodplains and deltas of large rivers are slightly dangerous;
- complex of low (I-III) river terrace levels of large rivers - low gully hazardous;
- complex of high (IV-VI) river terrace levels – medium – and highly gully-dangerous;
- strongly incised canyon-shaped river beds and adjacent floodplains terraces are highly gully-dangerous;
- ancient alluvial – proluvial deltas – slightly dangerous;

B. Lake depressions and dry drainless basins;

- the bottoms of modern lake depressions and ancient drainless basins. Dried the bottom of the Aral Sea is not dangerous;
- the slopes of lake depressions and drainless basins are weakly – moderately dangerous;

V. Plains and Ustyurt plateau.

- plains with deflationary – accumulative aeolian landforms (composed of sand) – not dangerous;
- plains are flat and slightly sloping alluvial – proluvial, folded rocks - moderately dangerous;
- gently sloping plains of the Ustyurt plateau with clayey – gravelly deposits – not dangerous;
- hilly - undulating plains and ridges of Ustyurt - slightly dangerous;
- steep ledges of the Ustyurt formation upland (“chinks”) – highly gully-dangerous;

G. Plains and Ustyurt plateau.

- foothills and sloping foothill plains are poorly dissected – moderately dangerous;

- foothills are moderately and strongly dissected – highly dangerous;
- hilly, hilly and undulating foothills - weak - and medium – ravine dangerous;
- river alluvial cones of order IV-V – low gully;

D. Low mountains, remnant low mountains and low mountain elevations.

- low mountains are weakly and moderately dissected - weakly and moderately dangerous;
- strongly – and very strongly (badlands) dissected low mountains – low gully hazardous;
- outlier low mountains and hills with varying degrees of dissection – low gully hazardous;
- erosive – dissected hilly – ridged uplands of the foothills (“adyri”) – a very dangerous ravine;
- steep landslide – scree slopes of low mountains and hills – moderately dangerous;

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- weakly and moderately dissected middle mountains - medium ravine dangerous;
- strongly dissected middle mountains – weakly – and medium ravines are dangerous;
- rocky, deeply dissected highlands – not dangerous;
- high mountain plateau and planation surfaces are poorly dissected – weakly dangerous.

The need for such typification is dictated by the most important circumstance that distribution and conditions for the development of linear forms of erosion in a very close manner associated specifically with geomorphological conditions. On the plains, which occupy almost 3/5 of the total area of the Republic, gully erosion is focal in nature and can develop in individual areas of the mesorelief. In conditions of dismembered relief with slopes of varying steepness and shape, near high river ledges terraces, on low and medium altitude mountain belts, where there is low development territory, it can manifest itself widely and variedly.[15,16]

In general, the entire leveled soil-substrate surface has a low fertility and minimal erosion resistance. Therefore, in mastering ravines for agricultural use there is a need to solve erosion processes and intensive growth of the fruit of rhodium planned lands.[17,18]

Soil and water conservation agriculture on the area of the reclaimed surface should be complex, combining agro-forests and hydro-reclamation methods of soil protection from erosion.[19]

In the ravine of the dangerous territories of the Adyrs, from organizational and economic measures into the practice of the agro-industrial complex, we introduced a complex of soil systems for conservation agriculture, two-time annual accounting and assessment of eroded lands on farms.

### **List of used literature**

1. Дадахожаев А., Мамаджонов М. М., Хайдаров Ш. Э. Научные основы борьбы с овражной эрозией наманганских адыров //Сборник статей Международной научнопрактической конференции. – 2016. – №. 2. – С. 16.
2. Дадахожаев А., Мамаджонов М. М., Хайдаров Ш. Э. Типизация рельефа для оценки оврагоопасности территории Узбекистана //Science Time. – 2018. – №. 4 (52). – С. 92-94.
3. Дадахожаев А., Мамаджонов М. М., Хайдаров Ш. Э. Оценка пораженности территории овражной эрозией и интенсивности роста оврагов Наманганских Адыров //Science time. – 2018. – №. 4 (52). – С. 95-99.
4. Дадахожаев А., Мамаджонов М. М., Хайдаров Ш. Э. Оценка оврагоопасных территорий северо-восточной части ферганской долины (наманганских адыров) //Science Time. – 2020. – №. 12 (84). – С. 45-49.
5. Юлдашев, Ж., Каюмов, Д., & Жураев, У. (2021). Олий таълим муассасаси профессор ўқитувчисининг маъруза ўтиш услуги ва ўзини тутиши. Экономика и социум, (1-2 (80)), 813-817.

- 6.Юлдашев, Ж., Каюмов, Д., & Жураев, У. (2021). Ўқув жараёни илмий асосда ташкил этишда талабаларнинг мустақил таълимини ривожлантиришнинг услубий асослари. Экономика и социум, (1-2 (80)), 802-806.
- 7.Anvarzhon, D., & Abdukhalikovich, X. M. (2023). DEVELOPMENT OF RAVAGED LAND PLOTS, TAKING INTO ACCOUNT SOIL AND WATER CONSERVATION AGRICULTURE (NAMANGAN ADYRS). Journal of new century innovations, 38(2), 109-112.
- 8.Дадаходжаев, А., Хамракулов, М., & Жўраев, У. (2022, September). ЭКОЛОГИК ТОЗА МАҲСУЛОТ ЕТИШТИРИШДА ЎСИМЛИКЛАРНИ ТУПРОҚ ВА ОЗУҚА ТАЛАБЛАРИНИ БОШҚАРИШ. In INTERNATIONAL CONFERENCE DEDICATED TO THE ROLE AND IMPORTANCE OF INNOVATIVE EDUCATION IN THE 21ST CENTURY (Vol. 1, No. 3, pp. 80-83).
- 9.Дадахўжаев, А., & Жўраев, У. И. Ў. (2022). Повышение плодородия засоленных почв в сельском хозяйстве наманганских адыров, размещением на основе севооборотов. Механика и технология, (Спецвыпуск 1), 118-122.
- 10.Muhammadali, R. A., Juraev, U. I. U., & Nurekeshev, S. S. O. (2021). Influence of seasonal mud of the Narin river for the coagulation process. ASIAN JOURNAL OF MULTIDIMENSIONAL RESEARCH, 10(5), 69-72.
- 11.U.I.Jo'rayev, A.A.Abdulakimov, & N.F.Allamurodov. (2023). EKOLOGIK MUAMMOLARNI BARTARAF ETISHDA MUQOBIL ENERGIYA . Новости образования: исследование в XXI веке, 2(16), 262–265.
- 12.Nurmuxamad Najmitdinovich Majidov, Dilshod Abdug'Ofur O'G'Li Qayumov, & Ulug'Bek Inomiddin O'G'Li Jo'Rayev (2023). TA'LIM SAMARADORLIGINI OSHIRISHDA ZAMONAVIY PEDAGOGIK TEXNOLOGIYALARNING AHAMIYATI. Oriental Art and Culture, 4 (2), 441-446.
- 13.Alisher Xaydaraliyevich Alinazarov, Dilshod Abdug'Ofur O'G'Li Qayumov, & Ulug'Bek Inomiddin O'G'Li Jo'Rayev (2023). O'ZBEKISTON OLIY TA'LIM TIZIMIDA FAN, TA'LIM VA ISHLAB CHIQRISH INTEGRATSIYASINI TAKOMILLASHTIRISHNING ASOSIY YO'NALISHLARI. Oriental Art and Culture, 4 (2), 234-240.
- 14.Dadakhodzhaev Anvarzhon, & Juraev Ulugbek. (2023). DEVELOPMENT OF RAVINE LANDS TAKING INTO ACCOUNT SOIL PROTECTION AGRICULTURE OF THE CHARTAK ADYRS. Proceedings of International Conference on Scientific Research in Natural and Social Sciences, 2(12), 193–197.
- 15.Dadakhodzhaev Anvarzhon, Hamrakulov Mansurjon Abdukhalikovich, Juraev Ulugbek Inomiddin ugli, & Abdulakimov Abdulaziz Abdumutal ugli. (2023). PRINCIPLES OF IMAGE EROSION MANAGEMENT OF NAMANGAN ADYRS OF UZBEKISTAN. Proceedings of Scientific Conference on Multidisciplinary Studies, 2(12), 121–125.
- 16.У.И.Жураев, А.А.Абдулакимов, & М.Р.Тўхтабоев. (2023). ИСПОЛЬЗОВАНИЕ ВЫСОКОПОТЕНЦИАЛЬНЫХ ВТОРИЧНЫХ. Новости образования: исследование в XXI веке, 2(16), 257–261.
- 17.Melibaeв Makhmudzhon, Dadahodjaev Anvar, & Jorayev Ulugbek Inomiddin ugli. (2023). Indicators Of Average Life Of Tractor Pneumatic Tires Under Cotton Processing Conditions. Journal of Advanced Zoology, 44(S7), 1027–1032.
- 18.Abdullayev Muhammadali Rustamjonovich, Jorayev Ulugbek Inomiddin Ogli. (2022). AHOLINI TOZA ICHIMLIK SUVI BILAN TAMINLASHDA SUV OLISH MANBAALARINING ORNI. Ta'lim fidoyilari, 6(7)107-110.
- 19.Dadakhodzhaev Anvarzhon., Hamrakulov Mansurjon Abdukhalikovich., Juraev Ulugbek Inomiddin ugli. (2023). GULLY EROSION AND THEIR DENSITY MAPPING. International scientific-online conference: INTELLECTUAL EDUCATION TECHNOLOGICAL SOLUTIONS AND INNOVATIVE DIGITAL TOOLS. 103-109

