

**Impact Factor:**

ISRA (India) = **6.317**  
ISI (Dubai, UAE) = **1.582**  
GIF (Australia) = **0.564**  
JIF = **1.500**

SIS (USA) = **0.912**  
РИНЦ (Russia) = **0.126**  
ESJI (KZ) = **9.035**  
SJIF (Morocco) = **7.184**

ICV (Poland) = **6.630**  
PIF (India) = **1.940**  
IBI (India) = **4.260**  
OAJI (USA) = **0.350**

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)  
**International Scientific Journal  
Theoretical & Applied Science**

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2021 Issue: 04 Volume: 96

Published: 30.04.2021 <http://T-Science.org>

QR – Issue



QR – Article



**Ibrogim Tashpulatovich Azimov**

Tashkent State Pedagogical University named after Nizami  
PhD, Head of the Department of Biology, Uzbekistan

**Bekjon Ibrogimjon ugli Azimov**

Tashkent State Pedagogical University named after Nizami  
teacher of the Department of " Zoology and Anatomy», Uzbekistan

## THE CURRENT STATE OF THE VEGETATION COVER OF THE AKHANGARAN

**Abstract:** This article describes the geographical location of the Akhangaran basin and the current ecological state of the vegetation cover. The level of influence of biotic, abiotic, and anthropogenic factors affecting the vegetation cover of the basin is also highlighted. Data on the composition of vegetation cover, phytocenotic diversity, the degree of desertification and its mechanisms are presented.

**Key words:** transformation, degradation, succession, phytocenotic diversity, vegetation cover, map, geobotany, anthropogenic factor.

**Language:** English

**Citation:** Azimov, I. T., & Azimov, B. I. (2021). The current state of the vegetation cover of the Akhangaran. *ISJ Theoretical & Applied Science*, 04 (96), 466-468.

**Soi:** <http://s-o-i.org/1.1/TAS-04-96-93> **Doi:** <https://dx.doi.org/10.15863/TAS.2021.06.96.93>  
**Scopus ASCC:** 1100.

### Introduction

UDC 581.4.582.(575.111)

Intensive population growth and the development by mankind of large areas of land lead to the reduction and destruction of natural, including the diversity of plant resources. In this regard, anthropogenic transformation of natural vegetation cover is considered an important indicator of degradation of plant resources. And this, in turn, determines the need to identify anthropogenic successive processes in the vegetation cover and develop measures to combat them. In this regard, the justification of changes taking place in the natural vegetation cover and the assessment of their current state are of important scientific and practical importance [6,7].

In the world, special attention is paid to studies conducted on the composition of local vegetation cover, assessment of the resource capacity of vegetation cover, monitoring of processes taking place in the vegetation cover. Especially, the determination of changes in vegetation cover in zones

with strong anthropogenic pressure contributes to the correct justification of successive processes with a complex of physical, geographical and anthropogenic factors [4,5].

In this regard, the Akhangaran river basin, located between the Chatkal and Kuramin mountain ranges of the Tien Shan, is one of the centers of plant biodiversity in Central Asia, on the one hand, it is distinguished by the presence of plant types characteristic of all high-altitude belts of Central Asia. On the other hand, the presence of historical anthropogenic pressure in the survey area determines the need for studies on the complete inventory of the vegetation cover of the Akhangaran river basin and the assessment of changes in phytocenotic diversity through the application of modern cartography methods. In this regard, the characterization of the current state of vegetation cover, the identification of its degree of transformation and the mapping of vegetation cover of the Akhangaran river basin are of important scientific and practical importance [6,9]

In the Republic, special attention is paid to the assessment of the state of vegetation, geobotanical

## Impact Factor:

ISRA (India) = 6.317  
ISI (Dubai, UAE) = 1.582  
GIF (Australia) = 0.564  
JIF = 1.500

SIS (USA) = 0.912  
РИНЦ (Russia) = 0.126  
ESJI (KZ) = 9.035  
SJIF (Morocco) = 7.184

ICV (Poland) = 6.630  
PIF (India) = 1.940  
IBI (India) = 4.260  
OAJI (USA) = 0.350

research in pastures and hayfields, restoration or conservation of degraded and degraded lands. In this direction, significant important results have been achieved in mapping the vegetation cover of large mountain forest reserves, assessing the state of desert pastures, and practically improving degraded pastures. The decision of the Cabinet of Ministers of the Republic of Uzbekistan "On measures to further improve the procedure for determining the boundaries of administrative and territorial units, inventory of land resources and geobotanical surveys of pastures and hayfields" set the task of "conducting geobotanical research in order to prevent the degradation of pastures and hayfields". Based on these tasks, including the identification of the phytocenotic structure of the vegetation cover of the Akhangaran river basin, the assessment of the degree of transformation, the establishment of prospects for rational use of vegetation cover, the compilation of inventory maps and their implementation in practice are of important scientific and practical importance [1,2].

The protection of the environment and the rational use of natural resources, in particular pasture vegetation, involves an in-depth, comprehensive study of the components of all high-altitude belts of Uzbekistan.

In recent years, Uzbekistan had adopted a number of laws and regulations to combat desertification, ratified a number of United Nations conventions to combat desertification and acceded to the Johannesburg decrees. Based on the importance of preventing negative environmental processes, international investments are attracted to the Republic [3,9].

Cartographic is considered one of the effective methods of studying negative environmental processes and rational use of plant resources.

Maps are not only data drives, but also contain information about possible real relationships in the studied environment system.

Based on the need to study natural resources, monitoring sites were laid on the Akhangaran plateau in 2010-2020. Here, in particular, geobotanical and cartographic studies have been carried out in order to identify the typological structure of the phytocenotic diversity of the vegetation cover, the degree and mechanisms of its transformation under the influence of anthropogenic factors based on the use of traditional and remote survey methods [3,10].

The Akhangaran plateau is located between the Kuraminsky and Chatkal ranges from the Kengsaz pass (4062m) and the beginning of Aktashsay.

Information about high mountain vegetation and its habitat conditions in the area of the Akhangaran plateau can be found in the works of A.Ya. Butkov (1969), Z.A. Mailun (1984), N.I. Akjigitova (1984), U. Allanazarova, T. Rakhimova, K. Tojibaev (2002) and others [2].

Cartographic construction work was carried out according to the generally accepted scheme for creating maps "Vegetation" of a survey scale using space photos and computer versions of satellite images from the Internet taken from different devices and dates of the year (NOAA 1986-2000, Landsat MT 1989, Resus 01 1998, Terra Modis 2003 года) [6].

As a result of geobotanical and survey work, the degree and mechanisms of anthropogenic desertification were studied and evaluated separately. A "Map of the vegetation cover of the Akhangaran river basin" and a separate test section "Map of the vegetation cover of the Akhangaran plateau" (M 1:200000) using field materials and space images taken from various devices from the Internet and modern technology (GIS, Internet) [1].

The Akhangaran plateau is the most dynamic site in the basin, all types of livestock of the summer-autumn seasons graze 2-3 times more than the norms in the Namangan and Tashkent regions.

There are no rocks, steep slopes, the surface is represented by a flat plateau, where there are many springs and along them there are spots of haloxerophilic meadows in subalpine vegetation. Along the springs, due to cattle watering, the degree of disturbance of plant communities reaches from 25 to 75%.

Phytocenotic diversity, composition, structure, degree of disturbance and mechanisms of their anthropogenic desertification are identified in the compiled map at monitoring sites by laying anthropodynamic series.

The following plant groups have been identified on the Akhangaran plateau:

- Various *herbal* – *cereals* – *Persicária associations*
- *Persicária* – *Festuca associations*
- Various *herbal* – *Festuca associations*
- *Lagotis* - *Festuca associations*
- *Puccinella* - *Festuca associations*
- Various *herbal* – *Ranunculus associations*
- *Oxytropis* – *Puccinella associations*
- *Lagotis* – *Ligularia associations*
- *Puccinella* – *Persicária associations*
- *Festuca* – *Cousinia associations*
- *Festuca* - *Acantholimon* – *Cousinia associations*
- *Artemisia dracunculus associations*
- Various *herbal* – *Cyperaceae associations*
- *Festuca* – *Prangos associations*
- cereals - heteroherbally - *Ferula* – *Prangos associations*
- *Prangos* – *Ferula associations*
- shrubby- various *herbal* - *Ferula* – *Prangos associations*
- shrubby – *Ferula associations*
- heteroherbally – *Aconogonon associations*

## Impact Factor:

ISRA (India) = **6.317**  
ISI (Dubai, UAE) = **1.582**  
GIF (Australia) = **0.564**  
JIF = **1.500**

SIS (USA) = **0.912**  
РИНЦ (Russia) = **0.126**  
ESJI (KZ) = **9.035**  
SJIF (Morocco) = **7.184**

ICV (Poland) = **6.630**  
PIF (India) = **1.940**  
IBI (India) = **4.260**  
OAJI (USA) = **0.350**

- haloxerophilic meadows - along springs associations cereals – various herbal - *Prangos* - *Juniperus seravschanica* associations - in river floodplains.

In conclusion, it should be noted that flora and phytocenotic diversity within the subalpine belt in meadows and steppes on the monitoring sections of the Akhangaran plateau have valuable vitamin-bearing plant resources. This is a powerful livestock feed base of the Republic of Uzbekistan. This

interesting and poorly studied zone, in comparison with the mid-mountain vegetation of the Akhangaran river basin, which needs further, more thorough study from the point of view of anthropogenic disturbance of phytocenotic diversity.

The results can be used to determine how best to combat desertification in conservation plant communities and to protect the gene pool of the studied area.

## References:

1. Azimov, I.T. (2010). *Sovremennoe sostojanie rastitel'nogo pokrova ahangaranskogo plato. Sovremennye problemy strukturnoj botaniki. Materialy respublikanskoj nauchnoj konferencii*, (pp.19-22, 7). Tashkent.
2. Azimov, I.T. (2005). Kartografirovaniye pastbishchnoj rastitel'nosti bassejna reki Ahangaran. *Jekologicheskij vestnik*, Tashkent: Chinor ENK, - №5, pp. 28-31.
3. Azimov, I.T., & Sultonova, N. B. (2010). Pastbishchnaja rastitel'nost` Ahangaranskogo plato. *Biologicheskie nauki Kazahstana*, Pavlodar, pp. 9-13, 9.
4. Akzhigitova, N.I. (1984). *Vysokogornye dernovinistye stepy - Cryoxeropoia*. V kn. Rastitel'nyj pokrov Uzbekistana i puti ego racional'nogo ispol'zovanija. (pp.170-198, 3). Tashkent: Izd-vo «Fan» UzSSR. T 4.
5. Akzhigitova, N.I. (2002). *Raznoobrazie rastitel'nyh soobshhestv osnovnyh formacij subal`pijskogo pojasa Zapadnogo Tjan`-Shanja*. V kn. Bioraznoobrazie Zapadnogo Tjan`-Shanja: Ohrana i racional'noe ispol'zovanie, (pp.146-148, 4). Tashkent: «Chinor ENK».
6. Allanazarova, U., Rahimova, T., & Tozhboev, K. (2002). *Kartografirovaniye rastitel'nogo pokrova Zapadnogo Tjan`-Shanja*. V kn. Bioraznoobrazie Zapadnogo Tjan`-Shanja: ohrana i racional'noe ispol'zovanie. (pp.61-66, 6). Tashkent: Izd-vo «Ehinor ENK».
7. Butkov, A.Ja. (1969). *Vysokogornaja rastitel'nost` Zapadnogo Tjan`-Shanja i ee hozjajstvennoe znachenie*. V kn. Ocherki po geografii rastitel'nogo pokrova Uzbekskoj SSR. (pp.3-35, 2). Tashkent: Izd-vo «Fan» UzSSR.
8. Leman, J. (1975). *Rol' tematicheskoy kartografiyi v izuchenii okruzhaushhej sredy*. V kn. Puti razvitiya kartografii. (pp.132-140, 1). Moskva: Izd-vo MGU.
9. Majlun, Z.A. (1984). *Vysokogornye, ili subal`pijskie luga - Cryomesopoia*. V kn. Rastitel'nyj pokrov Uzbekistana i puti ego racional'nogo ispol'zovanija. (pp.267-331, 5). Tashkent: Iz-vo. «Fan» UzSSR. T 4.
10. Tazhiboev, K.Sh., & Azimov, I.T. (2016). Jendemizm flory bassejna reki Ahangaran (Zapadnyj Tjan`-Shan'). *Vestnik Karakalpakskogo otdelenija Akademii nauk Respubliki Uzbekistan*, Nukus, №1, pp. 67-69, 10.