

Monitoring of ecology and nature protection in the territory of Uzbekistan

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Abstract: In the development of naturalistic knowledge about the nature of the territory of Uzbekistan, the construction of new cities, the emergence of irrigation facilities, the development of handicrafts based on the information written down by Arab and Iranian tourists such as ibn Hudodbek, ibn Rustad, al-Masudi, Istakhri, Yaqut, ibn Batuta, who lived in the Middle Ages The scope of human influence on nature has expanded, and knowledge about the living environment, natural elements, climate, surface structure, water, soil vegetation has been studied. The dams, canals, ponds, mined remains of mines, ruins of old cities such as Afrosiyob, built in the territory of Uzbekistan, are full proof.

Key words: paleolithic, space, Bactria, Afrosiab, nature, ecology, geographical, ethnography, Amudarya, Zarafshan

Due to the convenient geographical location of Surkhandarya, knowledge, science and culture started very early in this area. Its favorable climate, land and water resources, beautiful landscapes, and fertile soil have captivated mankind since ancient times. According to the testimony of archeological experts, in "Teshiktosh" (Surkhondarya) many ancient human settlements belonging to the Paleolithic, 12,000-5,000 BC, Mesolithic and 5,000-3,000 BC periods can be found on the territory of Uzbekistan. During this period, such state associations as Sugdiyona, Khorezm, Surkhandarya and Bactria were established on the territory of our country. Therefore, as a result of the construction of new cities, the emergence of irrigation facilities, the development of handicrafts, the scope of human influence on nature expanded, and the knowledge about the living environment, natural elements (climate, surface structure, water, soil vegetation) was formed. This is fully confirmed by the dams, ditches, ponds, mined remains of mines, and the ruins of old cities such as Afrosiyob built in Uzbekistan at that time.[1.36]

In the development of naturalistic knowledge about the nature of the territory of Uzbekistan, the information written down by Arab and Iranian tourists such as ibn Hudodbek, ibn Rustad, al-Masudi, Istakhri, Yakut, ibn Batuta, who lived in the Middle Ages, is also very important. Ibn Hudodbek left valuable information about the nature, land and air, deserts and rivers of Turkestan in his work entitled "Distances and Countries", while Ibn Rustod left valuable information about marshes, wetlands, lakes (about the island), landscapes.

The first, scientifically perfect information about the nature of the territory of Uzbekistan was left by our lexicographers Muhammad ibn Musa Termizi, Abu Nasr Farabi, Abu Bakr Narshahi, Abu Rayhan Beruni, Abu Ali ibn Sina, Mahmud Kashghari who lived in the 9th-12th centuries. They left their valuable scientific information about nature and its balance, flora and fauna, human treatment with medicinal plants, land and its geography, ecology of seas and oceans, in short, respect for nature in the period before the science of ecology was founded. The great scholar Muhammad Musa al-Khorazmi, who lived and created in the years 782-847, writes: "Know that when the eyes of the rivers are filled with tears, sorrow has fallen on their heads. People, don't take your love away from the river. What did this noble person mean? Did he mean that streams and rivers are being polluted or wasted? In any case, it is not surprising that allamas, in the example of a stream and a river, meant that there is kindness between people and the environment, and that water is a great blessing. In another valuable work, "Kitab surat ul-arz", they left valuable information about natural resources such as plants and animals, rivers and seas, world oceans, poles, equator, deserts and mountains being the main wealth of the earth.[2.26]

Also, in the works of "Surat al-arz", he showed the details of 537 geographical environments on earth, including more than 200 mountains, seas, oceans, countries and their exact geographical coordinates

with scientific accuracy. They also proved that one degree of the meridian arc is equal to 111.8 km (111.0 km according to the current accuracy). It is important to make maps and atlases in cartographic works.

More than 180 works related to various fields are mentioned by the Arastus of the East, Abu Nasr Farabi (870-910). In his work entitled "Origin and classification of sciences", it is stated that the science of nature is richer than all other educational sciences and occupies the main place in the society with its scope, and also thinks that the existence of the material world consists of four elements - fire, air, water and earth. These very deep philosophical ideas are very compatible with the concepts of the atmosphere, hydrosphere, and lithosphere, which are considered the geographical crust. Also, in the books "Structure of Human Organs", "About Animal Organs and Their Functions", he wrote down his thoughts on the structure, characteristics, similarities and differences of some human and animal organs based on scientific and methodological theories. As a tourist, he traveled around Turkestan and left important information about the natural geography of the country, the nature of Movarounnahr, including its flora, fauna, waters, and climate. Another compatriot, Abu Bakr Narkhashi, has a lot of interesting information about the topography, history, population, Amudarya and Zarafshan rivers of the city of Bukhara in his work entitled "Bukhara City".

More than 150 works of the great encyclopedist scientist Abu Rayhan Beruni, who lived and worked in the territory of Uzbekistan, have reached us in the fields of mathematics, physics, geography, mineralogy, ethnography, botany, history and other sciences. He was the first on earth to prove that the earth rotates around the sun instead of the sun, 550 years before Copernicus, he founded the heliocentric theory and also proved that the earth rotates around its axis from west to east. He tried to explain the interaction of things and events with the laws of development of phenomena in the universe. Also, in the work "Saydana" he wrote down information about the description and geography of plants, that 750 of 1116 different medicines are obtained from different plants, 101 from animals, and 107 from minerals. The properties, distribution and levels of action of the plant, animal, and mineral properties of this salve are expressed in this work. Based on his scientific observations and experiences, he came to an important conclusion that all phenomena in nature are governed by certain laws of nature. Beruni approaches a number of natural-scientific issues from a dialectical point of view and says: "The possibilities necessary for the existence of plants and animals on earth are limited. But plants and animals strive for endless reproduction and struggle. The world continues to fill up with crops and reproduction. Although the world is limited, reproduction is not limited as the days go by and result in the creation of crops and progeny. Since the 20s of the 20th century, studies on the comprehensive study of the natural conditions of Uzbekistan and the country's natural reserves have been studied in 3 main directions, such as ecological-geographical regional-landscape studies.

L.V. Oshanin, D.N. Kashkarov, A.L. Brodskiy in biological sciences have made a great contribution to the study of the natural resources of the territory of Uzbekistan. I.I. Granatov, M.M. Kononova, F.Yu. Geltser in the field of microbiology, and N.V. Donilovs in the field of human and animal physiology have done significant work in the study of flora and their ecology in the desert and high mountain zone. Medical research works in biological sciences are conducted in specialized institutes of the Academy of Sciences of Uzbekistan, relevant laboratories and departments of universities and pedagogical institutes.

Literature

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