

## History and Formation of Ecological Education in Uzbekistan

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**Annotation:** This article provides information about the development of ecological education in Uzbekistan, its founders, contributing scientists, their research on the development of ecology.

In fact, Uzbekistan is a great cradle of science and education in the world. The natural sciences of the world were first formed in us as a science, and if we look at the history of such truths, they prove it with concrete facts. Ecological teachings were first recorded in Avesto texts written before our era. Ecological education and culture were formed in the ancient Khorezm state at that time. It is noted in this valuable monument that in the pre-Christian period, our ancestors made observations in all areas, leaving many rare ideas about ecology, soil ecology, plant ecology, housing ecology and cleanliness.

The first records that appeared in our country date back to the VI-III centuries BC and actually reflect ecological knowledge. During this period the inscriptions of Sughd, Khorezm, Rushan, Bactria, Urkhan, Enisey appeared. The inscriptions depict nature, natural resources, animal species, plant species and images, as well as people in the forest, on rocks, in caves. Pictures of hunting times, meals, and space were written or drawn.

The Avesto inscriptions were written in Turanzamin in the late 5th and early 6th centuries BC. It is the first letter of mankind in the natural, scientific, philosophical, religious direction.

In all parts of the Avesto inscriptions, especially in the Vendidad, detailed information is given about the physicians of that period, their functions, level of knowledge, diseases, their signs and symptoms, causes, diagnosis, treatment methods, medicinal plants, morphological features of these plants, the valuable medicinal herbs.

“According to the orientalist Bahromi, the Avesto names more than a thousand medicinal plants and shows when and what kind of medicine is made from them” writes H. Homidov (2001).

One of the greatest advices in the Avesto is: “It is necessary to love the land, to constantly increase its fertility, to take care of it, to save water during irrigation”. It is stated that a person engaged in farming should not waste water and know how to use it. According to the Avesto, people have to take care of four things throughout their lives: earth, water, fire and air. (Babaev H., Doschanov T. and others 2002).

According to M.Boys (1988), the first ecological concepts were formed in the Avesto, during which time there were slogans such as “do not pollute the water, do not pollute the soil”. The people of that time knew, “Do not pollute the soil, for wheat grows there, and you eat the wheat as bread, so the soil must be kept clean”. The people of the Avesto period followed them themselves, they glorified the earth so much that they did not even bury the dead directly in the ground. The history of ecological science begins with the book “Avesto”.

Thus, the ancient history of the formation of ecological science was founded in the territory of Uzbekistan, and this period is called “the first period of development of ecology”. Natural sciences were studied until Mirza Babur, by Al-Khwarizmi, Al-Fargani, Al-Jawhari, Beruni, Ibn Sina and other scholars, and they wrote very valuable works. Another scholar, Mahmud ibn Wali, was a naturalist and geographer, who wrote astronomy, geography, geology, mineralogy, botany, zoology, medicine, and agriculture in his book *The Secret of the Seas*. He has written more than 406 articles on plants and animals. Describes more than 30 varieties of melons, more than 10 varieties of grapes. During his travels, he described the location of 100 cities, 30 rivers, 20 mountains, natural climatic conditions, plants and animals, more than 180 minerals and precious ores, and methods of their use.

One of the people who studied the ecology of nature was Babur Mirza, who gave the names of plants and animals in local and other languages as well. He fully explores the world of wildlife and plants he encounters along the way. The migration, reproduction, and feeding of birds were almost never studied in the pre-Babur period, but the king and poet Babur fully studies these cases. Babur initially focused on the geographical location of the place, soil fertility, climate, and water. Babur is well versed in monocotyledonous and dicotyledonous plants and their pollination.

The scientific knowledge of Central Asian scientists in the field of natural sciences will remain the second stage in the development of ecological science. While ecological concepts have not yet been formed in the countries of the world, our scientists have studied nature in detail. In their works, they say that the preservation and preservation of nature, the living organisms in it, their role in human life is incomparable.

The third stage of science-based ecology is being formed in Uzbekistan, the first scientific work created as a result of empirical observations, which is the basis of world ecology, was written in 1931 by the Uzbek scientist D.N. Kashkarov. The monograph is called "Environment and community" and was published in 1933 in Moscow. This monograph was soon translated and published in the United States, and the word ecology was first used in science.

"British ecologist Ch. Elton describes this science as follows: "Ecology is the renaming of a very old object", says G.A. Novikov (1980).

Another great Uzbek scientist E.P. Korovin (1936) devoted his entire life to ecology. This scientist studied the role of the environment in the survival and life activities of living organisms, the forms of organisms, the life forms of plants, there were more than 150 of his disciples in this regard. Central Asian plants have been classified according to their development, botanical characteristics and adaptation. He proves that when plants grow in harmony with each other, they form fluorogenesis in the environment and make them interdependent.

T.R. Rakhimova (2009), one of the scientists who contributed to the development of ecological science in Uzbekistan in the twentieth century, conducted research on biochemistry, including the decline of flora and fauna, urban ecology.

D. Yormatova equates the science of ecology with the science of philosophy and writes that now this science participates in the study of everything. Introducing the book "Environmental Monitoring" to students for the first time, he points out the importance of monitoring in the study of nature. Monitoring provides information about the flora, fauna, ecosystems, soils, waters, atmospheric air, etc. of a particular area.

A. Ergashev (2001) devoted his doctoral dissertation to the issues of genetics and environmental safety. In the late twentieth century, ie since 1995, the science of ecology began to be taught as a science in many higher education institutions in the humanities and technical fields. However, this subject was not taught in the natural higher education system. In the late 1990s, this subject was taught as an optional subject, with ecology being taught in the humanities. In 1998, the curriculum of the Uzbek State University of World Languages taught ecology for a semester in order to give students an understanding of nature, to bring them into this world, at least a little bit.

As the 21st century approaches, natural disasters have proliferated, and natural disasters such as floods, cyclones, earthquakes, droughts, and desertification have proliferated in various parts of the world. For the peoples of Central Asia, such as the drying up of the Aral Sea, the only one in the region, salinization of soils, drought, declining rainfall, the need to know and understand nature. After the tragedy of the Aral Sea began to be reflected in Uzbekistan, the science of ecology became a separate subject in all higher education institutions in the country. Now in the curriculum, ecology are taught 76 hours in the second stage students.

Initially, in 1994-1998, the United Nations Sustainable Development Organization in Uzbekistan developed a new system for nature conservation, and for the first time the concept of sustainable development in ecology was formed. On January 11, 1994, the most environmentally difficult city of Nukus hosted an international conference on the Aral Sea Basin with the participation of scientists and experts from Central

Asia and Russia, 199 countries. The Republic of Uzbekistan has acceded to and joined a number of international conventions:

- Convention on Climate Change (March 14, 1993)
- Convention on the Conservation of Biological Diversity (March 7, 1996)
- Basel Convention on the Transportation and Control of Hazardous Waste (May 7, 1996)
- Convention to Combat Desertification (October 13, 1995)
- International Bonn Convention for the Protection of Waterfowl (Africa and Asia) (The Hague, June 1995).

The International Conference on Climate Change was held in Paris on November 30 and December 12, 2015. The Uzbek delegation also took part in this international conference. It is known that environmental threats are clearly felt in Uzbekistan, so participation in all international environmental conferences is achieved through the formation of environmental culture and consciousness, as well as the development of the education system, training of environmental personnel.

Today, the concept of ecologically sustainable development based on the proposals on the methodological structure and system of the process of teaching ecology in higher education institutions, the factors and features of increasing the abilities, skills and interests of students, providing students, lyceums, college students and higher education students with improved curricula allows to train environmental specialists with the competence of creative use of innovative technologies in the system of continuous environmental education.

#### References:

1. Babaev X., Doschanov T. and others (2002).
2. Boyes M. Beliefs and customs. Moscow. Main editorial office of oriental literature Publishing house "Nauka", 1988. P. 127-145
3. Yormatova D.Y. Ecology and nature protection. Tashkent. Science and technology. 2017. P. 23-30.
4. Stepanovskix A.S. Ecology. Textbook for universities. Moscow.: UNITI-DANA, 2001. P. 703
5. Rakhimova T.R. and others. Ecology. Tashkent. 2009. P. 12-15.
6. Khomidov H. (2001) is in the Concept book about this work.
7. Ergashev A. Agroecology. Tashkent. Plane Publishing. 2001. P.123-126.