

ABOUT ECOLOGY

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**Abstract.** It is known that the word "Ecology" has become very popular in recent years. This word is often mentioned when talking about the unfavorable state of the environment. Sometimes this term is used together with words like "Society", "Family", "Human", "Health". Ecology belongs to the group of biological sciences and is currently being formed as a separate science. Also, today the science of ecology is developing in close connection with social life. His field of social ecology was born.

**Key words:** Ecology, Haeckel, phytomass ecosystem, microbiology

**Introduction:** Ecology studies the living conditions of living beings and their complex relationships with the environment in which they live and the laws born on this basis. In addition, the science of ecology develops scientific recommendations for the optimal organization of human interaction with nature. In this, ecology relies on achievements in biology, botany, zoology, physiology, biochemistry, morphology, molecular biology, microbiology and other sciences that study the structure and function of living beings. After all, after the stage of branching of sciences, it is necessary to legally generalize, combine, classify, and systematize the knowledge gathered in the relevant fields.

**Main part:** Man is in constant connection with nature in the early stages of his development.

He always lived in an integral connection with the world of flora and fauna and their resources. Therefore, a person is always aware of the lifestyle and distribution characteristics of animals, fish, birds, etc had to take into account. Of course, the ideas of the ancient people about the environment did not have a scientific character. They did not always correctly understand the nature of changes in the environment. But over time, their ideas about nature or the environment served as a source for the accumulation of ecological knowledge. In the ancient manuscripts that have reached us, not only various animals and plants are mentioned, but also some information about their lifestyle and the importance of the environment is given. The term ecology was introduced to the science for the first time in 1866 by the German biologist Ernst Haeckel. The word "Ecology" (from the Greek oikos - home, place of residence, abode, logos - science) means "the science of home, one's place of residence" according to its content. In a more general sense, ecology is a science that studies the interaction of organisms with their environment (at the same time, their interrelationship (diversity)

with other organisms and species). Ecology was formed and formalized as an independent science only in the 20th century. In fact, the great importance of ecology as a science has been understood since recent times. This is explained in terms of the following situation. The increase in the number of people on earth and the increasing impact on the natural environment have put a number of new vital issues that need to be solved. A person should now have complete information about how the nature around him is structured and "how it works", or rather, he should know it well. Ecology studies the same problems. The idea of ecology is very important as a fundamental science. If we recognize the relevance of this science, first of all, we must understand its laws, concepts, and terms. we must learn to use it. After all, they greatly help people to determine their place in the natural environment that surrounds them, and to use natural resources correctly and rationally.

Today, ecology, created on the basis of the synthesis of biological knowledge, has emerged as a new science summarizing the knowledge gathered in the biological direction. Unlike other biological sciences that study certain features of the structure of organisms and the processes that occur in them, in ecology, large biological systems that unite individual organisms into a whole (for example, not only ants, but all ants and their serious attention is paid to the study of the living environment), to the study of the interaction of the organism with the environment in which it lives and with other large creatures. In the second half of the 20th century, modern sciences were "greened" in a unique way.

This is, of course, to determine the great importance of ecological knowledge, that human activity in many cases not only damages the environment, but also has a negative effect on it, changes living conditions, and poses a threat to human life. is related to understanding the possible.

What is Ecology?

- The word "Ecology" is Greek and means "house" and "logos" - science. This science studies all living organisms that live in a "natural home" and undergo functional processes necessary for life in this home. That is why ecology is a science that studies organisms in their "home". This science attaches great importance to the diversity and generality of the relationships between organisms and the environment. The term "ecology" was introduced to science for the first time in 1866-1869 by the great German Darwinist Ernest Haeckel (1834-1919). F. Engels praised E. Haeckel's services at the time and said, "The concept of natural selection was stabilized thanks to the works and services of E. Haeckel, and the variability of species was illuminated by their adaptation to the environment and the transmission of genetic traits." Until E. Haeckel, the great biologists of the 18th and 19th centuries made a great contribution to the development of biological science, studied the living and distribution of plants and animals, but they did not use the word "Ecology". For example, at the beginning

of the 18th century, Anton van Levinguck knew that nutritional dependencies in microorganisms control their number. The English botanist Richard Bradley gave information about the biological productivity of plants. In 1887, the German hydrobiologist K. Moebius (1825-1908) developed the doctrine of biocenosis, the association of various organisms. The main task of the science of ecology is to determine the laws of development, the formation of populations, various senoses, biocenoses and ecosystems formed by species representatives, and to clarify their relationship with the environment. The main tasks of general ecology were defined as follows in the decisions of the third conference of ecologists held in Kiev in 1954: To determine the multifaceted relations between organisms and the environment, to study the ways of historical adaptation of species to the environment: to study the number and quality of species found in ecosystems, as well as the climate and soil conditions of the place where species are found:

To reveal the structure of the ecosystem, the relationships of the species found there with each other and with the environment and with the dead natural components: Temperature, humidity, soil indicating the composition of the ecosystem types, amount of salts (in water, soil) and presence of biogenic substances and determination of their abundance and abundance: When comparing the amount of the ecosystem, revealing the relationships of its main components with each other and with the environment, determining the phytomass produced during the growth, reproduction and photosynthesis of species and the speed of its absorption by animals: 6. Seasonal distribution of all components found in ecosystems, studying the changes that occur throughout the year and over many years, creating general laws based on this or that ecosystem, developing measures for the future.

The information about 500 types of plants and 154 types of animals in the scientific works of the ancient Greek scientists Hippocrates and Aristotle had an ecological nature. For example, Aristotle in his scientific works described the life and distribution of more than 500 different animals, birds, and fish. , gave information about migration from one place to another. Galen, Theophrastus also left valuable information about the adaptation of various animals to life and nature. Z.M. Babur (1483-1530) in his historical work "Boburnoma" contains a lot of information about various plants and animals in Central Asia and India, their growing, habitat, flowering and reproduction periods. brings As a result of the discovery of a new land, the conquest of one country by another country, the study of the nature of these lands, the systematics and morphology of plants and animals, their adaptation to the place where they live, are studied. At the beginning of the 20th century, the science of ecology developed rapidly. At first, the ecology of plants and animals was studied individually, and later they were studied together as a union. Ch. Adams (1913), V. Shelfordlar (1913) guides on animal ecology are created by In Uzbekistan, the works of

T.Z.Zohidov, K.Z.Zokirov, I.I.Granitov, A.M.Muzaffarov, A.E.Ergashev, P.K.Zokirov are important. The Department of Ecology under the Turkestan Dirilfununi, founded in 1920, started training ecologists in connection with the establishment of ecological journals and scientific associations. Most of the environmental problems existing in the territory of the Republic of Uzbekistan depend on economic and other factors, starting from the change of the sources of certain wastes and the disposal of harmful substances, bringing them to the minimization of their impact on the environment. Among them, the importance of ecological education and upbringing is very great. Ecological culture is formed in exchange for ecological enlightenment. Environmental consciousness will emerge only with the help of comprehensive ecosciences. The role of future bachelor teachers in the formation of environmental consciousness among young people is incomparable. They should have a clear idea of the methods of assessing the pollution of the atmosphere, water bodies, the distribution of harmful compounds to the environment, as well as the national and international legal norms of environmental pollution and crisis. In the era of modern science and technology development, keeping the ecological situation in balance, protecting the environment depends on economic, socio-political and other factors.

The main leader of these factors is environmental education and upbringing. It is appropriate to use ancient national educational tools in the formation of ecological consciousness in the minds of young people. In the future, the problem of environmental protection will be solved first of all by creating a technological ring with zero emissions.

Atmospheric air pollution is regulated by sanitary norms. It is intended to determine the permissible concentration of harmful substances in the atmospheric air of one or another settlement. Combinations of the following harmful substances in the overall effectiveness; acetone, acetophenone and phenol, vinylacetate, valerian, fatty acids, ozone, nitrogen (II) oxide and formaldehyde, sulfide gas, hydrogen sulfide, hydrogen fluoride and sulfuric acid aerosol, furfurool, methanol and ethanol, cyclohexane and benzene, sulfate, those composed of chloride, nitrogen, acid, ethylene, propylene, butylene and amylin, 2-3-dichloro-1,4 naphthoquinone, acetic acid and its anhydride, and others. Harmful factors released from cotton and textile, light and chemical industry enterprises in agriculture; include dust, toxic gases, high temperature, humidity, noise, vibration and other emissions. Among them, ammonia is a colorless, pungent, suffocating, highly explosive gaseous substance. Hydrogen sulfide is a colorless, odorous gas that is highly toxic. The toxic gases released in the paper industry turn into acids; styrene, acrylonitrile, acrylic acid, hydrochloric acid, nitrogen and carbon oxides. The above toxic organic substances pass through soil, water and air to plants and then to animals.

Animals and plants enter the human body through exercise and cause various diseases.

Pesticides, organochlorine and organophosphorus substances used in agriculture accumulate in the soil structure, destroy its natural structure and cause serious damage to soil microflora, its productivity reaches 20%.

Therefore, the earth is the source of life for mankind and all living organisms, its economic, vital and ecological importance is unlimited.

To love nature, to cultivate the ability to use it correctly and consciously is the basis of ecological education and culture, and it creates in people the ability to understand responsibility in front of nature. Love of country, patriotism begins with love of nature. Ecological education is an integral part of moral education. Towards a dialectical understanding of ecological consciousness and thinking in humans will help. It is necessary to prepare young people who are well aware of the importance and responsibility of this task in order to carry out ecological education and upbringing at the required level at all levels.

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