



WAYS TO PRESERVE THE ENVIRONMENT AND ITS SUSTAINABILITY

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***Annotation.** This article analyzes the current state of the ecological environment, the relationship between nature and society, and modern approaches to ensuring ecological sustainability. Ecological problems arising as a result of population growth, industrialization, urbanization, and the unregulated use of resources are highlighted, and scientific and practical solutions for their elimination are considered. In particular, the national consequences of such global problems as pollution of the atmosphere and water bodies, soil degradation, and a decrease in biodiversity have been analyzed.*

***Key words.** Environment, environmental sustainability, environmental safety, environmental protection, pollution, biodiversity, rational use of resources, green technologies, renewable energy, environmental monitoring, sustainable development.*

In the process of globalization, as a result of human impact on the environment, living organisms, even humans, are causing a sharp change in the ecological environment, the emergence of various levels of environmental problems. Today, all human activity and scientific achievements are aimed at preserving these living environments, namely the ecological environment, and maintaining its stability.

It is known that innovations in the field of biology worldwide are directly related to scientific and technological progress. Because the study of the ocean floor, extreme polar regions, thickets, and vast deserts from a bio-ecological point of view through various advanced technical means leads to the discovery of new species; the

development of botany, zoology, human anatomy and physiology, genetics, biogeography, bioethics, and biotechnology leads to the perfect study of organisms. Ecology is also a fundamental branch of biology, occupying a special place in the study of living organisms' habitats and ways to maintain their stability.

All types of living organisms live, reproduce, develop, undergo certain changes, are in constant motion, and leave offspring in a specific environment and under the influence of its constituent factors. Resistance to the physical forces of the environment is a common characteristic of living organisms. For example, plants cool their bodies by evaporating water in the heat. The physical forces of the environment are difficult to control, because they are infinite and always in motion. It is known that living organisms are affected by several natural forces in one place - light, pressure, temperature, humidity, solar radiation, and others. This place, where various physical forces act, is the environment for organisms.

The environment is an ecological concept, consisting of a complex of natural elements and realities with which living organisms interact directly and indirectly. The environment consists of all natural ecological factors (air, light, soil) surrounding organisms. Environmental elements directly or indirectly influence the state of organisms, their growth, development, reproduction, and distribution. The environment of each organism consists of a huge number of organic and inorganic natural elements, as well as artificial elements arising from human activity. (A.Ergashev. 2003, p. 29).

Environmental elements, in addition to having a complex effect on a particular organism, are not all equally important. One element is necessary and necessary for the organism, the second element is insignificant, and the third can have a harmful effect. Currently, in ecology, terms such as "external environment," "environment," "living environment," "geographical environment," "natural environment," and "ecological environment" are used instead of "environment" [Ergashev A. 2003, p. 30].

The natural environment is the totality of natural factors of living and non-living nature, areas where direct human influence has not been observed. For example, the bathyal and abyssal zones of the oceans. The natural environment changes as a result of human activity and influences organisms.

The living environment refers to the totality of factors specifically necessary for an individual's life. It is a broad concept that directly surrounds organisms, representing a particular organism or biocenosis where an organism reproduces under the influence of a combination of abiotic and biotic factors. Without them, living organisms cannot live in one place. In the habitat, organisms live in constant interaction with environmental factors. Many examples can be given. [Ergashev A., Ergashev T.; 2005, p. 36.]

For example, for intestinal microflora, a constant temperature and nutrient medium are its habitat. Thus, the habitat (conditions) is the totality of environmental factors necessary for the life of living organisms.

The concept of ecological environment is identical to the concept of habitat, living conditions in terms of content, composition, and structural organization. Because the science of ecology studies the interaction of living organisms with the factors of the "living environment." Ecological factors affect organisms not in isolation, but simultaneously in a complex way. Because the organism cannot live without complex factors. Organisms perceive, react, and react differently to each ecological factor. Each species requires its own unique living conditions and ecological environment. For example, for epiphytic plants, a certain substrate and high humidity in the air are extremely important (parmalia, bearded usnia, mosses, ferns are characterized by high humidity and low temperatures, while tropical forests in southeastern Asia, epiphytic plants in the equatorial forests of Africa and South America (high temperature and constant humidity, abundant precipitation are characteristic for orchids, some species of aloe) are considered factors (Figure 1). Different perception and adaptation of living organisms to the influence of

environmental factors arose in the process of their evolutionary development.

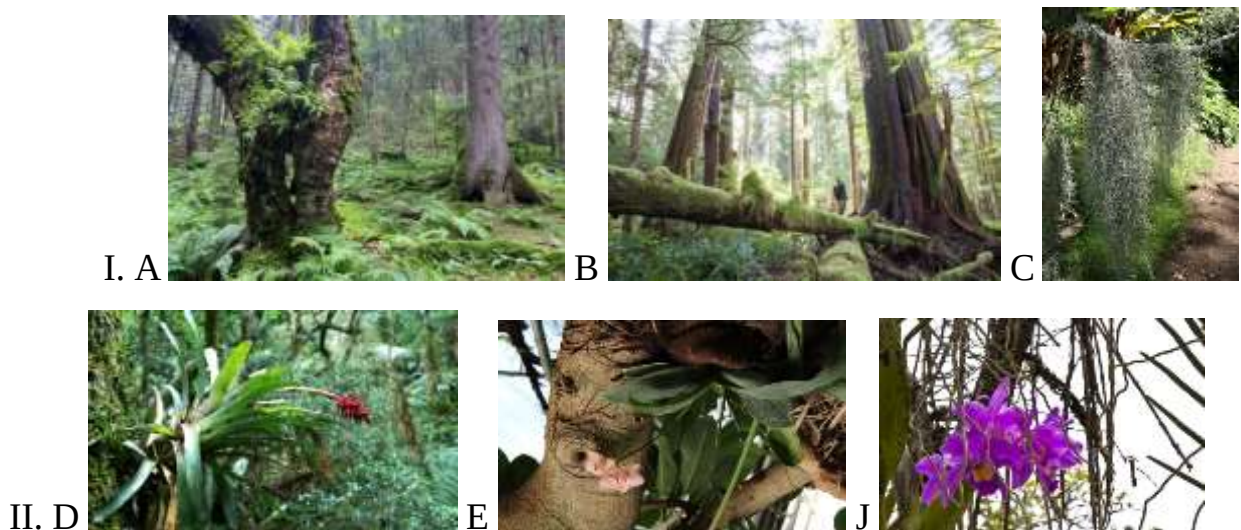


Figure 1. Epiphytic plants. I. Epiphytes of northern forests (A - ferns; B - Lichens; C- mosses - Spanish moss - *Tillanda usneoides*; (4-e) II. epiphytes in tropical forests. D - Epiphytic aloe - *Aechmea distichanta*; E - epiphytic orchid **Falenopsis**; J-Wild orchid (5-e).

Any medium is divided into two by its general composition:

1) Abiotic environment - the place of all the forces of nature and its realities.

By their origin, they are not related to the activity of living organisms;

2) Biotic environment - various forces, movements of nature and realities in it, by their origin, depend on the life activity of living organisms living today. The living environment (conditions) directly surrounding organisms is the place where an individual organism or biocenosis grows and reproduces as a result of the combined influence of abiotic and biotic factors. For example, meadows, swamps, tugai forests, lakes, etc.

A thorough ecological study of the habitat of living organisms, understanding the degree of influence of ecological factors on them, and determining their adaptation characteristics to these factors are the most important factors in their preservation. In this regard, the implementation of the above-mentioned measures is of great importance in preserving the existing ecological environment, ensuring its cleanliness and purity, and maintaining the stability of the ecological environment. In conclusion, it can be said that preserving the ecological environment and its stability is the duty and responsibility of every person, and carrying out work in this direction is an important factor in preserving natural resources for future generations, ensuring the sustainability of life on our Earth, and in general, preserving the purity of Mother Nature.

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