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INTERACTION BETWEEN ECOLOGICAL FACTORS AND PEOPLE

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Abstract

"Ecology" is a Greek word that refers to the living conditions of living things and their interactions with the environment.

Keywords: Ecology, ecological FVs, conditions associated with changes in the state of land (soil, underground), changes in the state of the atmosphere and FVs are catastrophic situations that have a profound effect on human life,flora and fauna, the hydrosphere and the atmosphere..

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Man is a part of the natural system - the biosphere, and his vital activity is closely related to it.

Biosphere - the part of the earth where living beings are distributed. The boundaries of the biosphere are determined by the regions of distribution of organisms in the lithosphere, hydrosphere, and atmosphere. One of the most important concepts of ecology is habitat. The environment is a set of factors and elements that affect the organism in its place of residence.

All environmental factors are conditionally divided into biotic, abiotic and anthropogenic factors. One of the most important concepts of ecology is habitat.

Biotic factors are the influence of the living organisms surrounding the living organism.

Abiotic factors - the influence of non-living nature on the organism (air level, humidity, air composition, water, soil, etc.)

Anthropogenic factors are factors related to human influence on the natural environment. Living organisms, including human life, cannot exist without the environment and nature, it is impossible. A person is characterized by the exchange of substances with the environment, which is the basic condition of any living organism. The human body is largely dependent on plants, insects, animals, and microorganisms that are components of the biosphere. It is part of the global metabolism. Like other animals, the human body is prone to daily and seasonal rhythms, and is sensitive to seasonal changes in the surrounding temperature and the activity of solar radiation. Man is a part of nature, but under the influence of the evolutionary development of the biological system, our primitive ancestor reached such a limit that the possibilities of social revolution opened up after him. Today, a person is a part of society, which is a separate part of the social environment. He is capable of amazing abilities such as self-awareness, understanding the world and changing it. Man, as a living creature and a collection of individuals, is subject to the laws of the ecosystem and the ecosphere. The uniqueness of the "Man and Environment" ecosystem is determined not only by physical and biological factors, but also by socio-economic conditions, which are becoming more and more important in the relationship between man and nature in terms of the development of society. In the process of labor activity directed to a specific goal, a person has influenced nature, changed the organization of his life, and established special forms of social relations**.**

Environmental emergencies are catastrophic situations that have an incomparable impact on human life, flora and fauna, hydrosphere and atmosphere. Their classification is hilma - hilma. According to the nature of origin, environmental PVs are divided into the following: Violation of dry conditions. Under the influence of natural causes or human economic activities, the properties of the soil are gradually deteriorating, that is, land degradation is taking place. The reason for this is the improper use of fertilizers and pesticides. For example, increasing the amount of pesticides containing salts of heavy metals can reduce soil fertility and kill microorganisms and earthworms. Careless reclamation works reduce the humus layer. It fills fertile soil with less productive soil. When the trees are cut, the grassy layer below them is damaged. The roads traveled by the tractor also cause great damage to the ground. Forest fires are especially damaging. Along with the trees, the entire world of animals, microorganisms and plants will disappear. Land degradation includes the process of erosion, which is observed with the change of flora and fauna of the land, the decrease in productivity, and the appearance of saline lands. **Soil erosion** is a process of various degradation of soil and adjacent layers by various natural and anthropogenic factors. According to the reasons, the following types of soil erosion are distinguished: **water, wind, ice, landslide, river biological erosion**. As a result of the reduction of arable land, the processes of land deterioration, pollution and salinization will increase. Contamination of the soil layer with salts of heavy metals occurs mainly due to waste and gases from industry and transport, as well as irregular burial of toxic waste in the soil.

Biodegradation - reduction or destruction of biodiversity leads to desertification of lands. This happens with the reduction of water resources, the loss of the vegetation layer, the impoverishment of the fauna and the reconstruction. Irrational use of low-water lands by humans (a lot of grazing of animals on these lands, destruction of the vegetation layer, disruption of rational relations between geological exploration and earthworks and animal husbandry) causes them to turn into deserts. Change in atmospheric conditions.

Protection of the environment, preservation of ecological stability remains one of the issues in the attention of the world community today.

Air pollution is due to *natural and anthropogenic sources.*

A). *Natural factors* include phenomena such as rock erosion, earthquakes, volcanic activity (volcanic eruptions), soil erosion, forest fires;

B). *Anthropogenic factors* include gas emissions from the activities of industrial enterprises, as well as the use of various fuels by automobiles, railways, water transport, the release of harmful substances into the air, and other similar phenomena.

Natural and anthropogenic sources play a major role in the quality and quantity of atmospheric air in Uzbekistan. In the industry, the fuel - energy, chemical and petrochemical industries are considered to be the main cause of emissions of nitrogen oxides. Inefficient use of fuel leads to excessive emissions into the atmosphere. This affects the level of atmospheric air pollution in settlements and cities where these facilities are located (Tashkent, Angren, Navoi). One of the measures aimed at reducing atmospheric air pollution is the state control of the toxicity and amount of smoke of used gases from car engines. In the republics, work on the transfer of motor vehicles to alternative fuel types is being continued. Currently, the conversion of vehicles to compressed natural gas and liquefied petroleum gas is being successfully implemented. It is planned to produce "Damas" cars equipped with gas cylinder equipment in the "Uzavtosanoat" system. At the moment, works are being carried out in cooperation with a number of large enterprises on the installation of gas cylinder equipment in cars. The gas and heat cycle of the atmosphere is seriously affected by forest burning and cutting, plowing of the land, construction of new water reservoirs, changes in water flow, drying up of swamps. Industrial facilities, TETS, motor vehicles burn a large amount of organic fuel, which leads to the following situations:

- to increase the content of carbon dioxide in the atmosphere.

This process causes heating of the air as a result of the thermal effect;

- Freons, fluorine, bromine and chlorine compounds affecting the temperature of the earth and falling into the atmosphere cause destruction of the ozone layer.

Other factors influencing climate change include:

- pollution of the ocean with oil products, which leads to the violation of moisture and heat exchange between the atmosphere and the ocean;

- influencing clouds to cause precipitation; - release of water vapor into the atmosphere;

- the influence of the irrigation system, increased evaporation.

A layer of polluted air called "**smog**" forms over industrial centers or large cities. It can be conventionally divided into three layers: the lower one is the layer between the houses, the middle layer is 20-30 m high, the upper one is the 50-100 m high layer fed mainly by smoke and waste from industrial enterprises. The influence of solar radiation on hydrocarbon gases and nitrogen oxides emitted from vehicles into the atmosphere creates photo smog (photo-oxidants), which poses a great threat to human health. Currently, there is a lack of oxygen in many industrial zones. In such cases, as a result of photosynthesis, a smaller amount of oxygen is released than the oxygen consumed by plants, industry, transport, people, and animals, which means that in these cases, as a result of photosynthesis, oxygen is released less than the amount of industrial consumption by people, animals, and plants. This situation causes pulmonary and cardiovascular diseases among the population.

The appearance of powerful vehicles in ground, air, and water transport causes people to be constantly exposed to high levels of noise. The relative weight of traffic in the total noise level of the city is 60-80%. High temperature, noise, dust, radiation, electromagnetic field all lead to atmospheric air pollution. Acid rains are the result of industrial air pollution, air pollution from automobiles and aircraft engines, as well as the burning of various fuels.

About 40% of all nitrogen oxides are produced by thermal power plants. These oxides turn into nitrogen and nitrates, and the latter interact with water to form nitric acid. One of the most common air pollutants is sulfur dioxide, which is produced by burning coal, oil, and fuel oil.

Acidic water is dangerous not only for plants, but also for human health.

Depletion of the ozone layer. The stratosphere absorbs the sun's ultraviolet rays and protects living creatures on earth from the harmful effects of these rays. The amount of ozone in the atmosphere is not large. It quickly breaks down under the influence of hydrogen, nitrogen, chlorine compounds. The consequences of climate warming accelerate the destruction of the ozone layer, the formation of a "hole" in it, and the flow of ultraviolet rays to the earth's surface. In recent years, as a result of human activity, the fall of substances containing these compounds has increased sharply. Dust is one of the most common atmospheric pollutants. Dust appears during the impact of the wind on the rocks, forest fires, volcanic eruptions, and industrial waste.

Dust has a harmful effect on the human body, flora and fauna. It accelerates the destruction of buildings and constructions and causes a number of other negative consequences. Change in the state of the hydrosphere. The rapid growth of industrial and housing construction is causing water shortage and its quality is decreasing. The main reasons for the depletion of water resources are the following: - depletion of water resources due to human impact on the biosphere; - sharp increase in demand for water; - large pollution of water sources. As a result of the shallowing of water bodies, the disappearance of small rivers, the drying up of lakes, the cutting of forests, the unplanned grazing of animals, the non-stop plowing of deserts, and the thoughtless development of land reclamation systems gives.

The demand for water is increasing by 6-8% every year, which is due to the growth of industrial enterprises. Water consumption for household work is increasing. In recent years, it will be 400 meters/day for each person. Pollutants can be biological, mechanical and chemical. The water is so polluted that many living creatures are dying in rivers and ponds, especially fish. Such waters cannot be consumed without purification and disinfection. Production waste, household garbage, petroleum products, and heavy iron waste are dumped into rivers and lakes.

The **main polluters** are chemical plants, oil refining and petrochemical plants, paper production industries, fertilizers used to feed plants, and chemicals used in the fight against pests of agricultural crops. As a result of the destruction of tankers, it leads to a large-scale pollution of the seas with fuel. Measures to protect the population from environmental emergency situations in Uzbekistan. Nowadays, scientists and experts from all over the world are developing and implementing **new measures** to solve environmental problems:

1. Protection of green plants and trees in residential areas is being strengthened.
2. The use of water, soil, forest and underground resources by production enterprises and other organizations is under constant control.
3. Extraction of minerals and underground resources should be based on the plan, use them in accordance with the purpose, do not allow savings, wastage, preserve as much as possible their important contents for the industry, do not release them.
4. Application of new modern methods of protection against poisonous gas, dust, ash released into the atmosphere, use of new equipment.
5. Avoid soil pollution.
6. Use water sparingly, avoid wastage, avoid polluting water with industrial and other waste, ensure regular operation of hydrotechnical facilities.
7. Taking into account sanitary requirements when planning housing construction. According to the recommendations of ecologists and medical workers, buildings should not exceed 50% of the area ideal for living, and the area covered with asphalt and stone should not exceed 30%. Green plants and lawns not only improve the microclimate, but also have a good psychophysiological effect on people. In cities, it is necessary to reduce the areas covered with stone, asphalt, and concrete, reduce the intensity of car traffic, build small parks and gardens, and green the facades of buildings. The implementation of the above measures will help prevent the occurrence of an environmental crisis. Man should live in harmony with nature.

Everyone needs to know the following in the process of **environmental educational work:**

- economical use of natural resources and their protection; - protecting the environment from pollution;

- striving to leave nature natural for future generations. It is expedient to develop the ecological culture of people in work teams on the basis of our previously tested values. It is necessary to use natural resources wisely and sparingly:

- maintenance of trees, bushes and flowers in the garden and avenue on the basis of scientific technologies;

- in densely populated areas, forest areas should be organized and turned into landscaped parks. It is the duty of humanity to leave the nature intact to future generations.

REFERENCES:

1. Nigmatov I. , Tojiyev M. X. Favqulodda vaziyatlar va fuqaro muhofaza Учебник 2003

2 .С.В.Белов и др.Безопасность жиз-недеятельностиУчебник для вузов 2003

3.Л.А.Михайлов и др. Безопасность жиз-недеятельности Учебник для вузов 2007

4. H.E.G'oyipov Hayot faoliyati xavfsizligi Учебное пособие 2007

5.G'.YO.Yorma-tov, O.R.Yuldashev, A.L.Hamraeva Hayot faoliyati xavfsizligi Учебник 2009

6.A.Qudratov, T.G'aniyev, O'.Yo'ldoshev, G'.YO.Yormatov, N.Xabibullayev, A.D.Xudoyev Hayot faoliyati xavfsizligi Текст лекций 2009

7.М.Ю.Юнусов, Э.Ж.Икромов Фуқаро муҳофазаси – доимий зарурат Учебное пособие2002

8. Ravshanova, I. E., M. S. Ahmadjanova, and Y. S. Shermatova. "Role of physiological and psychological characteristics of a person in life safety." *European Journal of Research and Reflection in Educational Sciences Vol* 8.1 (2020).

9. Равшанова, Иноятхон Эркиновна, and Ёкутхон Собировна Шерматова. "ТАЛАБАЛАРНИНГ ПСИХОЛОГИК САЛОМАТЛИГИНИ ТАЪМИ НЛАШНИНГ АСОСИЙ МЕЗОНЛАРИ. " *Интернаука* 3-2 (2020): 87-89.

10 Umarova, S. M. "PROTECTING THE POPULATION OF UZBEKISTAN FROM ENVIRONMENTAL EMERGENCIES." (2022): 130-135.

11. Inoyatkhon, Ravshanova, and Ahmadjonova Mohiyatkhon. "A HEALTHY LIFESTYLE IS A KEY FACTOR IN THE EDUCATION OF DEVELOPED PERSONS." *Innovative Technologica: Methodical Research Journal* 2.05 (2021): 147-150.

12.Zokirjon. "Absolution Capacity of Irrigated Gray-Brown Fulvous Soils." *INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY RESEARCH AND INNOVATIVE TECHNOLOGIES*. Vol.

13. Mahkamov, Gulomjon Mamurovich, and Rozali Yakubovich Ruzmatov. "About the practice of using excursions in natural lessons." *ACADEMICIA: An International Multidisciplinary Research Journal* 11.3 (2021): 2066-2070.

14. Tursunova, Shahodat A., and Sardorbek T. Mamasoliev. "ALGOFLORA OF TYPICAL GRAY SOILS FOR CONTINUOUS TILLAGE." *Chief Editor*.

15.Mansurovich, Azimov Muxiddin, and Azimova Dilafruz Gayratovna. "Theoretical foundations of the organization of the agency for youth affairs." *Asian Journal of Research in Social Sciences and Humanities* 12.4 (2022): 510-511.

16.Meliboyev, Tavakkal Tursunovich, and Dilfuza Atkhamovna Ibragimova. "Technology for Introducing a Healthy Lifestyle Into the Minds of Young People." *European Journal of Research Development and Sustainability* 2.2 (2021): 56-58.

17. Тожибоева, Севара Хайруллаевна. "Биология дарсларида Абу Али ибн Синонинг табиат ва инсон саломатлигига оид қарашларидан фойдаланиш усуллари." *Современное образование (Узбекистан)* 12 (2018): 42-47.