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## **HUMAN IMPACT ON THE ENVIRONMENT**

Human influence on nature began in ancient times. Back then, people's influence on the world around them was minimal. At first, people consumed what the environment gave them: berries and various fruits, meat and animal skins. Gradually, they learned to master animal husbandry, agriculture, manufacture tools, cut down forests and influence nature in other ways. All natural resources were quickly restored, and a certain balance was maintained. And when industry began to actively develop in the 19th century, people increasingly "caught fire" with the idea of making the most of natural resources, mistakenly believing that they were endless. In addition, the growth of the world's population has also had an impact on the environment, as there is a need to develop new territories. In the XVIII century. The world's population began to grow rapidly. Scientists believe that the industrial revolution led to the explosive growth of the world's population.

By the beginning of 2022, humanity numbered approximately 7.92 billion people. To provide for such a large number of people, huge areas are allocated for cattle breeding and agriculture, minerals are constantly being extracted, and various energy sources are used, including non-renewable ones - oil, gas, and coal. With the rapid growth of the Earth's population, the biosphere

cannot adapt quickly enough to anthropogenic, that is, human-caused pollution [1].

Industrial and thermal power plant emissions contain not only carbon dioxide, but also other impurities that negatively affect the environment. For example, oxides of sulfur and nitrogen, dissolving in rainwater, turn into acids – acid rains are falling, killing vegetation, animals and destroying buildings and monuments. Slowly but surely, this is leading to climate change. For the last 200-300 years or so, air temperature has been monitored in different parts of the World. According to these observations, since 1850, the planet's climate has been changing towards an increase in global temperature. These are dangerous changes, as they lead to melting of polar and high-altitude ice, sea level rise, changes in the map of sea currents and prevailing winds. All this threatens natural disasters: flooding of coastal areas, floods, droughts, changes in vegetation and wildlife. In general, climate change has a negative impact on the animal world. Due to melting glaciers, rising sea levels and changing weather conditions, the number of animals in certain regions is decreasing, as well as ecosystems are disrupted. As the climate changes, it becomes difficult for many animals to find food. This also applies to humans. I would like to pay special attention to garbage. As humans consume natural resources, they also create by-products that end up in Earth's diverse ecosystems [2]. Plastic waste, water pollution, pesticide runoff, and cans and bottles are just some of the byproducts produced by humans that can harm the Earth and the species living on it.

The damage can be physical (animals can get stuck in plastic packages or choke on them) or chemical (fertilizers that cause algae blooms), but in any case they can cause long-term damage to the flora and fauna of an area .

Of course, human influence on nature can be not only negative, but also positive. At the end of the last century, people realized that man and nature are inextricably linked. In any case, the deterioration of the environment will have a bad effect on human health and quality of life, so various laws on nature protection began to be created. Due attention is also paid to the animal world. Reserves and parks are being created where the natural habitat of a particular biological species is preserved. Actions and demonstrations are held in support of the conservation of natural resources and the use of alternative devices. Today, there are laws and bans on visiting forests, fishing and poaching. Global environmental problems require global solutions and joint efforts of all countries and societies. We must support international agreements and initiatives aimed at preserving nature and combating climate change [1].

In conclusion, saving the environment is a task that lies on the shoulders of each of us. We must act now to ensure the future of our planet and the next generations. With our awareness, efforts, and cooperation, we can achieve a sustainable future for all living beings on Earth [2].

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### **ENERGY-INTENSIVE MATERIALS AND PRODUCTS: APPLICATIONS AND PROSPECTS IN BELARUS**

Energy-intensive materials are substances capable of releasing significant amounts of energy under certain conditions. These materials play a key role in industries such as aerospace, defense, chemical production, and mining. In Belarus, the use of energy-intensive materials has both industrial and research significance. This report examines the types of such materials, their applications, and the enterprises involved in their development and utilization.

#### **Main Types of Energy-Intensive Materials.**

Energy-intensive materials include substances that release energy through chemical or physical processes. The main types are:

##### **Explosives:**

- TNT (trinitrotoluene), RDX (hexogen), HMX (octogen).
- Used in mining, construction, and defense.

##### **Fuels:**

- Solid rocket fuels, liquid propellant mixtures (e.g., kerosene + liquid oxygen).
- Applied in aerospace and military technologies.

##### **Pyrotechnic Compositions:**