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WE ARE AT WAR WITH NATURE, IF WE WIN, WE'LL LOSE

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Abstract

As science and technology develop, people's influence on the Earth is increasing day by day. The rivalry of different countries on economic fields, irregular development of industry and especially lack of attention against nature make world's population be face to face with dangers. Ecological problems such as global warming, lack of drinking water, weather pollution, greenhouse effect become more dangerous every year and put our planet into inevitable disaster unless substantial measures are taken.

The non-environmentally friendly production process is among the reasons that trigger these problems. In which, wrong methods are used in many stages of the production process, starting from the energy sources used. As a result, the atmospheric layer is polluted with harmful gases, which causes a number of serious diseases in people. (Obesity, blood pressure, childwasting)

The processes such as cutting down trees, the greenhouse effect, and desertification within the framework of industry and agriculture do not allow the Earth to restore itself. Also, in the background of the demands which occur due to the demographic growth, with not to prevent the mentioned processes can cause the problems like human death, hunger, poverty. On the other side, it is impossible to meet the needs of people without current industry.

But is there a way out of this situation? How should states strike the right balance between ecology and industry?

Keywords: Global warming, weather pollution, anthropocentrism, ecosystem, government policy

1. Introduction

Between 2011 and 2015, about 20 million hectares of forest were destroyed every year, and since 2016, an average of 28 million hectares of forest land has been destroyed. This means that a forest area the size of a football stadium is destroyed every second in the world. (The World Counts, n.d.)

In 2020 5.8 billion people could use safe water resources. That means, they got cleaned water which was at homes and it could be got easily. The other part of the people deprived of the cleaned water resources. (Drinking-water, 2022)

History has always witnessed human cruelty towards nature for personal interests. An example of this can be the blind use of natural resources, or indirect pollution and destruction of the atmosphere and green areas on the planet. Especially, the current situation doesn't give a positive forecast. The Canadian astrophysicist Hubert Reeves explained this situation clearly – "We are at war with nature, if we win, we will lose." (Hubert Reeves - Vikisöz, n.d.)

The examples shown above can create some imagines in people's mind how situation is on the world as the place of living of people. The changes that have taken place on our planet in recent decades are not encouraging at all. Through limited water resources, global warming, demographic crisis, weather pollution and different infections that mentioned problems create make people be face to face with the one question: "What do we do?"

The current trend is leading the human world to disaster. Problems such as depletion of water resources, hunger, poverty, in addition to global warming, its destructive effect on the earth and especially on icebergs can be examples of this. Why is humanity facing these problems? Is there a way out of these dangers? Who is responsible for these processes?

In the next part, we will try to clarify the causes of the current problems, the main factors that trigger them, and the possible ways out of the threat of extinction on humanity, the responsibility of entrepreneurs and the state.

2. Basic concepts

2.1. Anthropocentrism

The word anthropocentrism comes from the Greek words for "human" and "center" and is defined simply as human-centered thinking. (Anthropocentric | Etymology, Origin and Meaning of Anthropocentric by Etymonline, 2016, as cited in Gribben J. and Fagan J.M., 2016) People are anthropocentric in the way that they intrinsically value human interests above non-human interests, often without even realizing it. (Gribben J. and Fagan J.M., 2016, 1) This are main reasons of current negative impacts to the earth by human. Anthropocentrism is at the root of problems like deforestation, water pollution, water pollution This situation actualize the term of ethical anthropocentrism. Ethical anthropocentrism is often a focus in environmental ethics discussions, which unpack our valuation of the natural world in an effort to determine how we ought to live in relation to that world. (Goralnik L. and Nelson M. P., 2016, 145)

2.2. Ecosystem

A biological ecosystem is a supersystem that includes all living things (living organisms) in a given area and their physical environments, where they function together as a system. (Kutvan A. B., 2022, 1) Ecosystem services can be explored by focusing either on a single service that may be provided by various ecosystems or by looking at a single ecosystem that may provide a variety of

services. (Brauman K. and Daily G. C., 2014, 1149) Today, various negative and positive events are balancing each other within the ecosystem, and we are witnessing a violation of this balance in recent times. One of the main reasons for this imbalance, as mentioned above, is related to the damage caused by people to nature for their personal interests.

2.3. Climate change

Climate is an area's general pattern of atmospheric or weather conditions measured over long periods of time ranging from decades to thousands of years. (Miller G.T., Spoolman Jr. S.E., 2009, 141) There are several reasons that directly affect the climate such as factory emissions, greenhouse effect etc. Political approaches to the mitigation of climate change focus on international efforts to reduce emissions and to augment ecological sinks (e.g., by increasing the amount of the world's surface that is forest). (Begon M, Townsend C.R., Harper J.L., 2006, 234) But it is still fact that adequate measures are not being taken by relevant institutions today. Climate and environmental justice movements, for example, express frustration with inaction on climate change or fight against the harmful industrial expansion. (Barlow N. et al. 2022, 58) For this reason, the cause and potential consequences of the mentioned problem will be examined in detail in the next sections.

3. Production process

5 million people become dead due to the weather pollution each year.

Undoubtedly, as the population of the world increases, in parallel, the critical problem of meeting human needs becomes more urgent for the world economy. These needs include material well-being, education, recreation and similar needs in addition to basic needs such as food and clothing. Meeting the huge demand requires the creation of the complex economic system. Production process, finance management, monetary policy are only a small part of this huge system. But what happens in the background while this process is running?

With the organization of the production process, countless factories are operating in different countries today, and in the background of this activity, we are witnessing the emergence of a serious ecological imbalance. Although we cannot see the consequences of this problem directly, if we look at some statistics, we can see the problems caused by air pollution in the atmosphere. According to the United Nations Department of Statistics in 2021, China was the world's superpower with a 27.4% share in the manufacturing process. (Analysis of Main Aggregates, n.d.)

On the other hand, in 2017, the number of people sick due to air pollution in China was 27.93 million. According to this indicator, China has taken the second place in the world after India. (Air pollution, n.d.) As it can be seen, the unregulated development of industry causes air pollution and indirectly affects people's health. So, the country that ranks first in the world in terms of industrial power, at the same time, is in second place in terms of the number of sick people as a result of the complications of the production process. Although it is very important to prevent these processes, on the other hand, the world needs this kind of production process. Because it is impossible to ensure prosperity in the world without meeting the basic needs of people, hunger, poverty, and therefore a global crisis can be experienced. Without thinking alternative options and applying phased changes it seems impossible to restore this situation. According to the research in 2019, the 22.66% of the world population works in industry field. (World Bank Open Data, n.d.) (approximately 1.7 billion people) That means, by ceasing the working process in thousands of factories at the same time may cause a serious unemployment problem. But how to decrease the amount of the harmful gases by not dismissing the employees in their current work.

Actually, it is known to the science how to neutralize nitrogen dioxide, sulfur dioxide, carbon monoxide and other gases release into atmosphere today. So that, the installation of specially produced filters (Industrial Air Filtration Unit) on gas export pipes in enterprises can be an example of this. Within the framework of the current mechanism, harmful gases are neutralized by passing through various stages and released into the nature. On the other hand, utilization of alternative energy resources (energy from wind, sun, water) seem as partial solution of the problem. Because, mentioned systems may ensure the energy demand of the huge companies.

4. Global warming

One of the main ecological problems of the world is global warming. The reason why this problem happens, originates from releasing harmful gases into atmosphere from cars, factories, also eliminating green areas and forests. So that, the process that reflection of the sunlight from the World cannot be completed due to the imbalance of the gas level at atmosphere. As a result, the temperature of the weather increases. According to calculations, as a result of increase in amount of carbon dioxide, the average number of temperatures in the World may increase by 2-6 degrees, which is much more than the current indicator. (Bharat R. S., 2012, 93)

Getting worse of the global warming problem every year, the increase in average temperature yearly leads the problem of melting huge icebergs. Actually, in this situation one of the worst problems can be seen as increase the volume of water in the oceans, but the recent research made in glaciers indicates a new problem. Thus, in 2015, during the study of two pieces of ice on the Tibetan Plateau, more than 30 viruses of different genes, unknown to science, were found that were frozen about 14,400 years ago and managed to survive inside the glaciers to this day. (Zhong et al., 2021) These viruses can mutate under extremal conditions and can be deadly dangerous for humanity. Against the background of global warming, with the melting of glaciers, it is possible that similar viruses will spread to the Earth and pose a serious threat to humanity. It can be concluded that the problem of global warming is a problem that has the potential to bring about the end of humanity, even if it is not felt so much in our daily life.

The annual increase in the average level of temperature also affects the snow layer on Earth. Images taken from space stations show that the volume of snow on our planet has decreased by 10% since 1960. (Bharat R. S., 2012, 99) Apparently, this result is a clear indicator of the decrease in the mass of water on Earth. It is obvious that the water supply used in industry and people's drinking water is decreasing year by year. This trend threatens the basic water needs of people, as well as their food needs, by leaving agricultural fields without water in the future. Protection of green areas, maximum reduction of tree cutting and especially firewood use can help to restore the gas balance in the atmosphere layer.

5. Drinking water resources

The rapid growth of the world's population also increases the demand for drinking water. This problem in itself leads to depletion and pollution of water sources. Also, as a result of this process, the level of a number of rivers, lakes and other drinking water bodies decreases.

Without clean, drinking water, people cannot develop as individuals, and it is even possible to call them poor. So, from a child to an adult, without access to water, it is impossible for an individual to reveal his potential in any field, that is, to be productive. This applies from education to work life. In particular, women and children suffer the most due to the problem of thirst. Because they are more sensitive to thirst and diseases. Estimates show that women around the world spend 200 million hours every day carrying water for their families. (Reid, 2023) This proves that a large number of people are quite far from drinking water sources. Looking at the ratio of drinking water to the total mass of water in the world, it is possible to see the reason why millions of people are deprived of water. It is estimated that ocean and brackish groundwater make up 97.5% of the earth's water, which

is largely untreated and unfit for consumption. The amount of drinking water on Earth is only 2.5%. (R. Rajagopal Michael & Edwin Brands, p. 1)

Due to the increase in global warming, sea levels are rising, which increases the possibility of saltwater pollution of freshwater sources. In the context of climate change, global warming is expected to increase further, which in turn will lead to intensive use of household equipment such as refrigerators and air conditioners. The point is that water is widely used in the power plants that meet the demand for electricity, so a certain dependence and circulation is created in this process. (Benjamin K. Sovacool, p. 7-8) That is, people waste large amounts of water resources and then need water again to protect against environmental problems caused by this waste.

As a way out of these problems, scientists recommend the use of green technology. Green technology can create new business opportunities, markets and jobs. Also, this technology is capable of turning salt water into drinkable water. For example, this technology is used in Mozambique, where 40% of the population, approximately 130 million people, do not have access to water. (Safe, Cheap and Sustainable: Clean Water Technology for Africa, 2019) Thus, with the system established as a result of the joint activity of European and African scientists, salty and dirty water is purified in the range of 80-90% and presented to the population.

Similar activities not only save human lives, but also contribute to sustainable development in the world. Balanced use of natural resources, energy security, systematic organization of industry, overcoming existing global problems (including environmental), will create conditions for ensuring inclusive development in the world. This technology will play an important role in the fight against a number of diseases caused by environmental problems in people's health, as well as improving food safety and general well-being of the population.

6. Impact of climate change on human health

Unfortunately, many people are experiencing the consequences of environmental problems today. The World Health Organization predicts that 250,000 people will die each year due to climate change between 2030 and 2050. (Climate Change and Health, 2021) Among the main factors influencing this process are average annual high temperature, air pollution, food safety, access to drinking water, extreme natural disasters.

Especially in recent years, due to climate change and unbalanced use of natural resources, obesity has become widespread. So, if the part of the population suffering from obesity was 19.8% in 2000 in US, (GRAHAM, n.d.) this indicator is 36.2% for 2021. (Obesity Rates by Country 2023, n.d.) Another factor influencing the occurrence of obesity is the greenhouse effect, the amount of gases in the atmosphere. Being overweight is a condition that damages and changes organs by affecting the body structure. The major organs most affected by obesity include vital organs such as the heart, liver, kidneys, lungs, skin, blood vessels, and the brain, (Jiang et al., 2016) and we are witnessing how serious a problem it is.

The way out of this situation is to reduce the use of energy-generating carbon dioxide gas in industry, including minimizing meat consumption. Experts estimate that the Mediterranean diet alone (based on minimal meat consumption) reduces greenhouse gases by 72%, land use by 58%, and energy use by 52%. (Climate Change and Obesity - PubMed, 2021) Another complication caused by obesity is high blood pressure (hypertension), which according to research is associated with obesity in 57.4% of cases. (Zhang et al., 2019)

Due to climate change, areas involved in food production, such as agriculture, are also suffering great damage. As a result, the world's population either lacks safe food or has no access to food at all. According to the calculations carried out in 2019, 47 million children under the age of 5 worldwide were found to be underdeveloped (child wasting). (Climate change is hurting children's diets, global study finds, 2021) This is also a regional problem. The economy and financial potential of the country where the individual lives plays a big role

here. Because, in many poor countries (Congo, Haiti, Somalia), people's access to food products is very low. (The World's Hungriest Countries in 2022, 2022)

On the other hand, despite the financial potential, a lot depends on people's food choices. In the above statistics, although the United States has the strongest economy in the world (GDP - 20.807.27 trillion dollars), more than 36% of the population is obese. (Calimanu, 2021) So, in addition to the environmental situation, a lot depends on people's personal choices and lifestyles. If in 2020, 26.2% of the population in the United States was engaged in physical sports, (Prevalence of Physical Activity, Including Lifestyle Activities Among Adults, 2003) this indicator was 19.3% in 2019. (Physical Activity, n.d.) This indicator proves that even if people have access to safe food, their protection from many diseases is based on a healthy lifestyle and activity. It can be concluded that in parallel with the provision of general well-being and safety, regular educational measures should be held among people. Against the background of fighting global problems, in addition to the policies of states, the contribution of people as individuals in society to these processes will be of particular importance in the process's effectiveness and long-term prosperity.

7. State policy in combating environmental problems

Restoration of the current ecological situation is impossible without a systematic state policy. In this direction, states can take various measures in the direction of balanced use of water resources, energy security, protection of forestry, and indirect sustainable development.

Estimates show that 32 billion cubic meters of water is lost every year due to poorly constructed infrastructure. (3 Global Issues Governments Can Solve at a Local Level, n.d.) However, the needs of millions of people could be met with this amount of water. With the application of artificial intelligence systems, it is possible to achieve great progress through the automatic detection of water leaks in pipes. At the same time, it is possible to achieve abundant productivity thanks to accurate irrigation, in addition to preventing the waste of millions of cubic meters of water through the drip irrigation system in agricultural fields. (Water-Smart Agriculture: the Efficiency Drive the World Needs, n.d.)

In addition, the proper management of runoff water is very important. Therefore, purifying and recycling wastewater, using it as organic fertilizer in agriculture also creates conditions for all-round use of resources.

The role of energy security is also very important in ensuring sustainable development. So, today, due to the use of coal in industry, harmful gases such as Sulfur dioxide (SO₂), Nitrogen oxide (NO_x) and Carbon dioxide (CO₂) are released into the atmosphere. (Coal and the Environment - U.S. Energy Information Administration (EIA), 2023) 46% of the carbon dioxide in the atmosphere worldwide comes from coal production. (The End of Coal?, n.d.)

The most effective public policy to solve the process is the transition to alternative energy sources. Either through solar or solar wind energy, energy from fuels can be compensated. Research shows that the solar energy reaching the Earth in 1 hour is 430 quintillion kilowatts, and the energy used by the entire world population in a year is 410 quintillion kilowatts. (This Incredible Fact Should Get You Psyched About Solar Power, n.d.) It can be concluded that by using solar energy at its full potential, it is possible to meet the needs of the world's population for 1 year in 1 hour. Due to this, there is no need to use external reserves, such as oil-gas, coal, etc. in the process of obtaining energy. However, there is an urgent need to create and transition to an alternative energy infrastructure before the environmental situation worsens and plunges people into irreversible disaster. (John Houghton, 12)

In addition to the correct use of water resources, the construction of alternative energy infrastructure, in order to restore the gas balance in the atmosphere, it is necessary to protect forestry, educate individual organizations, institutions, societies and communities and involve them in the process of tree planting in local

areas. Estimates show that there are 3 trillion trees in the world and about 15 billion trees are destroyed every year. (How Would Planting 8 Billion Trees Every Year for 20 Years Affect Earth's Climate?, n.d.) Without stopping this trend, all other measures to be taken will not be effective in restoring our planet. Therefore, the mentioned processes should be managed in a comprehensive manner. As a result, after a certain period of time, it is possible to return the natural infrastructure on Earth to its previous state.

8. Conclusion

The ecological crisis that we are facing today is caused by parallel demographic growth and meeting people's needs at the expense of natural resources. One of the main issues is the unsystematic and unplanned use of these resources. Water reserves, energy consumption, and the blind industrial use of underground resources have created a great imbalance between gases in the atmosphere, which in turn has led to the creation of the greenhouse effect and, indirectly, to an increase in the average annual temperature. It is directly linked with the anthropocentric habits of people that a huge number of people on the Earth believe that all the resources on the Earth were created only for human beings. At present, humanity is facing the problem of global warming. In addition, the problems that have arisen have brought hunger, thirst and misery to our planet.

Due to environmental crises, many diseases have arisen among people, including diseases such as obesity, heart failure, gas pressure, and viruses that have managed to survive in glaciers for thousands of years are considered a source of deadly danger today. All these listed problems are closely related to each other. In order to solve these problems, it is necessary to have a clear impression about using the resources efficiently and to provide comprehensive state support. In parallel, the close participation of society as a whole in this process is of great importance. The use of alternative energy sources, conservation of natural resources, protection of forestry and greenery will be humanity's only hope to get rid of global warming, air pollution, diseases and other problems in one way or another. This is also an effective solution for protection of ecosystem through the world. Finally, the collected materials and facts prove one thing: no matter how inefficient and irresponsible people live, they have the ability to destroy themselves, not the Earth. Because all the crises that arise can only lead to the destruction of humans and animals as a species from disease, hunger, natural disasters and similar events. After such a situation, if there is a tree, a seed or a drop of water on our planet, then millions of years will pass and the Earth will regain its beauty.

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