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PHILOSOPHICAL AND SOCIAL FACTORS OF CLIMATE CHANGE

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Annotatsiya: Maqolada global iqlimni isishi muammosi khaqida fikr yuritilgan. “Issikhona effecti” qodisasi taҳlil qilinib, bu qodisani asosiy tashkil etuvchilaridan biri bulgan dunyo tartibining buzilishi, keng kulamli migration, Er tarikhidagi ўsimliklar va ҳayvonlarning oltinchi ommaviy ўқ bўlib ketishining tezlashishi, muzliklar erishi, dengis sathining kўtarilishi va dunyoning qirғoq bўyi shaharlarining kўp kismini suv bosishi kabi oqibatlardir.

Kalit so’zlar: global iqlim o'zgarishi, issixhona effekti, "yashil makon", toza rivojlanish mexanizmi, dunyo tartibining buzilishi, muzliklar erishi, dengiz tizimining ko'tarilishi, "Taraqqiyot strategiyasi"

Annotation: The article discusses the problem of global warming. The phenomenon of the " Greenhouse effect" is analyzed, and its main consequences are the disruption of the world order, large-scale migration, the acceleration of the sixth mass extinction of plants and animals in the history of the Earth, the melting of glaciers, the rise in sea levels, and the flooding of most of the world's coastal cities.

Keywords: global climate change, greenhouse effect, "green space", mechanism of clean development, disruption of world order, melting of glaciers, rise of sea level, "Strategy of Development"

Аннотация: В статье рассматривается проблема глобального потепления. Анализируется феномен «Парниковый эффекта», основными последствиями которого являются нарушение мирового порядка, масштабная миграция, ускорение шестого в истории Земли массового вымирания растений и животных, таяние ледников, повышение уровня моря и затопление большинства прибрежных городов мира.

Ключевые слова: глобальное изменение климата, парниковый эффект, «зелёные зоны», механизм чистого развития, нарушение мирового порядка, таяние ледников, повышение уровня моря, «Стратегия развития»

Introduction:

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The UN Climate Change Conference (COP29) was held in Baku, the capital of Azerbaijan. President Shavkat Mirziyoyev also attended its opening session. In his speech, he stated that climate change is becoming a factor that exacerbates geopolitical tensions.

Mirziyoyev began his COP29 speech by noting that the problem of climate change has become a global threat. According to the president, it directly influences the intensification of geopolitical tensions. He added that the consequences of climate change are being felt most acutely in Central Asia.

“Climate change is becoming the main global threat today and is directly affecting the intensification of geopolitical conflicts. We are acutely feeling its consequences in Central Asia. Climate issues are becoming a new obstacle in improving the quality of life of our population and implementing national development strategies.

Our main goal within the Paris Agreement is to prevent the rapid rise of temperatures in the region and keep the increase within 1.5–2°C during this century.”

According to the president, Uzbekistan plans to reduce greenhouse gas emissions by 35% by 2030.

“In this regard, we are firmly carrying out large-scale reforms aimed at achieving carbon neutrality in Uzbekistan. We plan to reduce greenhouse gas emissions by 35% by 2030. We are also ready to expand this commitment by 2050. We will increase the share of green energy to 40%. We are building electric vehicle and green hydrogen clusters, as well as solar and wind power generation hubs. Under our ‘Green Space’ program, we are rapidly expanding green areas. Together with neighboring countries, we are implementing a Regional Climate Strategy. These days, we will sign a multilateral agreement on supplying green energy to Europe.”

The issue of climate change is becoming more pressing year after year. Why has the climate become so unstable? What should we do to change the situation? What awaits us in the future?

In the 19th century, scientists discovered that certain gases trap heat escaping from the Earth and that without them this heat would dissipate into space. Carbon dioxide plays the main role in this process: without it, the planet would turn into a frozen desert. In 1896, it was first predicted that an increase in greenhouse gas concentrations would cause a rise in global temperatures. Today, their concentration in the atmosphere has increased by 43% compared to the pre-industrial era, and the Earth's average temperature has risen to the level scientists predicted.

Reliable evidence—such as studies using radioactive radiation—exists to determine the share of industrial greenhouse gas emissions. Research findings show that excess gases are the result of human activity. Natural fluctuations in CO_2 levels have always occurred, but these changes took thousands of years. According to geologists, humans release carbon dioxide into the atmosphere much more intensively than nature.

Scientists predict that in the next 25–30 years the climate will continue to warm and weather conditions will become more extreme. Coral reefs and other vulnerable ecosystems are already disappearing. If greenhouse gas emissions continue to rise uncontrollably, scientists fear long-term serious consequences: global instability, mass migration, accelerated sixth mass extinction, glacier melt, rising sea levels, and flooding of coastal cities. These gases are already having an impact, and this presents our generation with profound moral questions.

The Lancet Countdown is an international study analyzing the relationship between climate change and human health. It is prepared annually by more than 200 scientists and specialists and is recognized by the UN and the World Health Organization (WHO).

In 2024, global temperature increased by 1.55°C, surpassing the 1.5°C threshold set in the Paris Agreement. Climate change is seriously affecting natural ecosystems, human physical and mental health, food security, productivity, and overall lifestyle.

Impact on population health: Climate change increases cardiovascular and respiratory diseases, especially among the elderly and children. According to studies, in 50 countries of Europe and Central Asia, the situation is extremely serious, as half of the children are regularly exposed to heatwaves—twice the global average—affecting every fourth child worldwide. The number of

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children exposed to abnormal heat in this region—where temperatures are rising faster than elsewhere—has already exceeded 92 million.

Economic losses and food security: According to World Bank experts, if no clear adaptation measures are taken soon, by 2050 Uzbekistan's economy may shrink by 10%. This will significantly reduce employment and household incomes. They also warn of macroeconomic shocks caused by droughts, floods, infrastructure damage, agricultural losses, and rising raw material prices.

Increasing frequency of natural disasters: Experts note that rainfall between 2014–2023 increased by 61% compared to 1961–1990. This caused floods, threatening both public health and infrastructure. For example, in May 2024, heavy mudflows in Surxondaryo region caused the death of 360 livestock, increasing the risk of zoonotic diseases. This incident clearly demonstrated the importance of developing effective adaptation strategies.

Proposals to mitigate the problems: Uzbekistan has been implementing measures to reduce the negative effects of climate change and environmental problems. The National Action Plan for Disaster Risk Reduction and Climate Resilience (2023–2030) and the Strategy for Transition to a Green Economy (2019–2030) were adopted. The Green University was established to train specialists capable of solving the region's environmental challenges, and a regional climate adaptation strategy for Central Asia was launched.

However, the growing scale and rapid intensification of climate-related problems may render current measures insufficient.

Taking this into account, experts from the “Development Strategy” Center propose the following actions:

1. Closer cooperation between Uzhydromet and the Ministry of Health to protect public health in changing climate conditions. This integration will enable early risk detection and prevention of weather-related health issues. France’s heatwave response plan (Le Plan Canicule) can serve as an example.
2. Improving the qualifications of primary healthcare workers so they can respond quickly to climate-related emergencies and protect public health.
3. Adapting key social services (water supply, healthcare, education) to climate risks, ensuring they consider the needs of vulnerable populations.
4. Studying Singapore’s NEWater project for wastewater recycling to meet growing water demand. This multi-stage purification process produces high-quality reusable water, reduces pollution, and improves water ecosystems.
5. Introducing digital solutions like Rice Advice to use water efficiently in agriculture. Such tools help farmers optimize water, fertilizer, and planting times, increasing productivity.
6. Studying South Korea’s innovative technologies for reducing the carbon footprint of construction materials. Hanil Cement’s Remitar FS150 captures 0.4 kg of CO_2 per cubic meter, reduces waste, and saves cement while maintaining strength—useful for Uzbekistan’s active construction sector.
7. Ensuring better working conditions during extreme heat, including flexible work schedules, mandatory breaks, drinking water, and shaded areas.
8. Exploring biochar production to improve soil fertility and moisture retention, especially in water-scarce regions.

Today, the global community recognizes climate change as one of humanity’s most pressing challenges. Amid globalization, industrial growth, expanding production, and agriculture, humanity is overexploiting natural resources.

As a result, climatic shifts occur worldwide: natural disasters and floods in some regions, droughts and desertification in others. Persistent dust storms have emerged in several regions, including ours.

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Uzbekistan faces several climate-related challenges. Industrial growth has quadrupled in recent years, and increasing vehicle, railway, and air transport have raised emissions. Air quality is decreasing due to pollution from vehicles, industry, construction, and power plants.

In addition, inefficient water use contributes to desertification. Agriculture uses excessive water—for example, producing 1 kg of potatoes requires over 500 liters of water.