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BAN ON THE USE OF NON-RENEWABLE NATURAL RESOURCES IN THE CONTEXT OF THE GLOBAL STRUGGLE TO PRESERVE THE CLIMATE

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Abstract. *The article examines the problem of climate change caused by the widespread use of non-renewable natural resources. It analyzes the environmental and socio-economic consequences of the idea of banning their use, as well as the prospects for energy transition. Particular attention is paid to the role of communication between key participants - states, scientific and business communities, mass media and citizens - in the implementation of climate change. It concludes that an integrated and coordinated approach to sustainable development is necessary.*

Keywords: *climate, non-renewable resources, sustainable development, environmental policy, environmental communication, renewable energy.*

Introduction

Climate change is one of the most pressing and multifaceted challenges of our time.

Accelerated global warming, extreme weather events, and the destruction of ecosystems are all directly related to human activity, primarily the massive use of fossil fuels. Against the backdrop of these threats, proposals are being made to ban the use of non-renewable natural resources as a strategic measure to protect the climate. However, the implementation of such a ban requires a comprehensive analysis — environmental, economic, and communicative — and an understanding of the consequences at the global and local levels[1].

1. Environmental reasons for the ban

Non-renewable resources, primarily oil, coal and natural gas, are the main source of greenhouse gases. According to IPCC, they are responsible for more than two-thirds of all CO_2 emissions [2]. The extraction and use of these resources not only pollute the atmosphere, but also degrade soils, water resources, and disrupt natural landscapes and biodiversity [3].

A ban on their use could significantly reduce the impact on the climate and ecosystems, as well as stimulate a transition to cleaner energy sources.

1.1. Impact on the climate system

The main argument in favor of banning the use of non-renewable natural resources (primarily oil, coal and gas) is their direct impact on climate change. The combustion of these resources releases huge amounts of carbon dioxide (CO_2), methane (CH_4) and other greenhouse gases into the atmosphere, disrupting the planet's thermal balance. According to the IPCC, to limit global warming to 1.5°C from pre-industrial levels, global consumption of fossil fuels must be reduced by more than 80% by 2050 [1].

In addition, methane, often released during gas production and transportation, has a greenhouse potential 28–36 times higher than CO_2 over a 100-year time horizon [2].

1.2. Disruption of ecosystems and loss of biodiversity

The extraction and processing of non-renewable resources is accompanied by the destruction of natural landscapes, deforestation, disruption of animal migration, and pollution of soils and water bodies. The development of deposits, especially in arctic, tropical or mountainous regions, entails the loss of unique ecosystems, often irreversible [3].

The destruction of habitat is one of the main factors in the extinction of species, and the degradation of ecosystems is a direct path to a decrease in the sustainability of the biosphere.

1.3. Environmental Pollution

In addition to greenhouse gas emissions, fossil fuel extraction and combustion activities result in the formation of particulate matter, sulfur dioxide, nitrogen oxides, mercury and other toxic substances that are dangerous to both nature and human health. Air pollution causes more than 7 million premature deaths annually, according to the World Health Organization [4].

It is also important to consider water pollution - oil and petroleum products regularly enter the ocean as a result of accidents and leaks, having a devastating effect on marine flora and fauna.

1.4. Violation of natural cycles and planetary boundaries

Modern science points to the existence of so-called planetary boundaries — limits of intervention in global processes, beyond which irreversible changes in the biosphere occur. Of these, the limits of climate change, loss of biodiversity, and disruption of the nitrogen and phosphorus cycles have already been exceeded. Active use of non-renewable resources exacerbates these processes, pushing humanity towards a state of environmental instability [5].

1.5. Long-term instability

Non-renewable resources are, by definition, exhaustible. Their reserves are limited, and, according to forecasts by the International Energy Agency (IEA), an irreversible decline in oil production may begin as early as the middle of the 21st century. From an environmental point of view, this means that focusing on such an energy model is doomed not only to environmental, but also to resource crises [6].

2. Socioeconomic risks and challenges

A sharp refusal of non-renewable resources could have serious consequences for economies, especially those dependent on oil and gas exports. Without appropriate preparation, this would lead to a decline in living standards, increased unemployment and social instability [4]. Therefore, the ban should be implemented in stages, in combination with investments in “green” infrastructure, support for vulnerable industries and economic diversification [5].

2.1. Economic dependence on fossil fuels

Many countries and regions of the world are economically dependent on the production and export of oil, coal and gas. For example, in Russia, Saudi Arabia, Nigeria, Venezuela and a number of other countries, a significant share of GDP is formed by the oil and gas sector [1]. A sharp rejection of these resources without well-developed alternative scenarios threatens the collapse of economies, a sharp drop in budget revenues and a deterioration in social conditions.

2.2. Rising unemployment and social instability

The closure of coal mines, oil and gas enterprises will entail mass layoffs.

The fossil fuel extraction and processing sector is a major employer, especially in single-industries and single-industry towns. The lack of timely retraining and creation of new jobs will lead to social tensions, increased poverty and protest movements [2].

2.3. The Need for Economic Diversification

Strategic diversification of the economy is necessary to reduce dependence on non-renewable resources and minimize risks. This includes the development of high-tech industries, green energy, services, and science. However, such transformations require significant investment, time, and institutional support [3].

2.4. Price Fluctuations and Energy Security

A ban or significant restriction on the extraction of fossil resources on the global market will inevitably affect prices. Sharp jumps in energy costs are possible, which will lead to inflation, more expensive production processes, and a decrease in the competitiveness of the economy. Ensuring energy security during the transition period is one of the main tasks of state strategies [4].

2.5. Social Perception and Political Will

The adoption of strict environmental measures depends on the support of the population and the political will of leaders. Environmental reforms are often perceived as threats to the usual way of life, which increases resistance. Therefore, open communication, social counseling, and the development of support programs for vulnerable groups of the population are important [5].

3. Potential of renewable energy sources

Technological developments allow for the wider introduction of alternative energy: solar, wind, geothermal. However, the implementation of a complete transition requires solving the problems of energy storage, modernizing infrastructure and training specialists [6].

The transition is only possible with global cooperation, large-scale investments and political will.

3.1. Diversity and Availability of Renewable Resources

Renewable energy sources (RES) such as solar, wind, hydropower, biomass, and geothermal energy have enormous potential to replace fossil fuels. The geographic abundance of solar and wind energy allows for the adaptation of energy systems to local conditions, which facilitates the decentralization of production and reduces dependence on centralized energy grids [1].

3.2. Technological Advances and Cost Reduction

The cost of producing energy from RES has decreased significantly over the past decades. For example, the price per kilowatt-hour of solar and wind energy has fallen by 70–90% since the early 2010s, making them competitive with fossil fuels without taking into account external environmental costs [2]. Energy storage technologies (batteries, hydrogen systems) can address the issue of variable generation and ensure a stable energy supply.

3.3. Integration into energy systems

Transition to renewable energy sources requires modernization of energy infrastructure.

Smart grids, demand response systems and distributed generation facilitate optimal use of resources and increase energy efficiency [3].

3.4. Economic and social benefits

Development of renewable energy sources stimulates the creation of jobs in the design, construction and maintenance of installations. According to the International Renewable Energy Agency (IRENA), the global number of people employed in renewable energy sources has exceeded 13 million people and continues to grow [4]. In addition, renewable energy helps reduce air pollution and, accordingly, improve public health.

3.5. Limitations and Challenges

Despite the prospects, there are a number of problems: the need to store and transmit energy, territorial restrictions (for example, the impact on the landscape and biodiversity during the construction of wind farms), as well as social resistance from local communities. Solving these issues requires an interdisciplinary approach and taking into account environmental and social factors [5].

4. Environmental awareness and education

The formation of an environmental culture begins with education. Schools, universities, the media, and educational projects play a key role in disseminating knowledge about sustainable development and climate risks. Only a conscious society can support and actively participate in the "green" transformation [7].

4.1. The Importance of Environmental Awareness

Environmental awareness is a set of knowledge, values, and attitudes aimed at understanding the relationship between man and nature, as well as readiness for responsible behavior in relation to the environment. A high level of environmental culture of the population is an important factor in the successful implementation of measures to reduce the negative impact on the climate and natural resources [1].

4.2. The Role of Education in the Formation of Environmental Culture

Modern education is a key tool for the formation of an environmental worldview. The introduction of environmental disciplines and modules into school and university programs promotes the development of critical thinking skills, understanding of climate change issues and ways to solve them. Additionally, interactive teaching methods, projects and research activities are used, which increases student involvement [2].

4.3. Influence of the media and social networks

The media and digital platforms play a dual role: on the one hand, they disseminate scientifically based information and shape positive environmental practices; on the other hand, they can serve as a platform for the dissemination of misinformation and environmental skepticism. The development of media literacy and the creation of reliable sources of environmental information are key [3].

4.4. Educational campaigns and social movements

Public initiatives, volunteer programs and events dedicated to environmental protection help to form a community of people who share environmental values. Such movements help to create social norms that motivate environmentally responsible behavior at the level of individuals and organizations [4].

4.5. Influence of cultural and social factors

Environmental awareness is formed under the influence of cultural traditions, religious beliefs and social institutions. Successful environmental programs take these features into account, adapting communication and educational methods to the local context, which increases the effectiveness of the impact [5].

5. Communication as the basis for climate change

Communication between all participants in the process — the state, business, science, society — is critically important for the successful implementation of climate policy.

The implementation of climate initiatives is impossible without effective communication between all key participants — government institutions, the scientific community, business, and society. Communication allows for a common understanding of goals, knowledge sharing, and coordination of actions in the face of high uncertainty and complexity of climate challenges [1].

5.1. Dialogue between government and society

Effective environmental policy is impossible without citizen participation.

Communication must be two-way: the state is obliged to explain its actions, and society must have the opportunity to influence decisions. Public hearing formats, feedback platforms, and participation in the development of sustainable development strategies are becoming instruments of democracy in the environmental context [8].

5.2. International interaction

For the successful implementation of environmental reforms, it is important to establish two-way communication. The state should not only inform the population about climate plans and their rationale, but also provide platforms for public discussion and participation in decision-making. Public hearings, consultations, and digital platforms increase trust and reduce resistance to change [2].

The climate agenda is global in nature. The Paris Agreement, international climate conferences, and intergovernmental consultations are examples of how dialogue between countries is becoming a way to coordinate interests and jointly fight for climate security [9].

5.3. Educational and media communications

Public opinion is formed through educational resources, media, and social networks. A positive agenda, success stories, and scientifically based data help to form environmentally responsible behavior and reduce resistance to change [10].

5.4. Interdisciplinary cooperation

Scientists, engineers, environmentalists, lawyers, and politicians should maintain an ongoing dialogue. Without the interaction of science and practice, it is impossible to find sustainable solutions to such a complex and multi-level problem as the energy and environmental transition. Mass media and educational campaigns play a critical role in shaping public opinion and motivating sustainable behavior. The use of scientifically based messages, positive examples, and accessible formats helps reduce environmental skepticism and increase environmental responsibility [4].

The global nature of the climate crisis requires large-scale international cooperation.

International conferences, such as the Conference of the Parties to the UNFCCC (COP), serve as platforms for exchanging experiences, agreeing on commitments, and forming collective actions. Modern communication technologies ensure the prompt exchange of information

between countries and experts [3]. The climate problem is multidisciplinary. Effective communication between scientists from different fields (ecology, economics, sociology), as well as between researchers and practitioners (politicians, business) contributes to the development of integrated solutions and innovative approaches to sustainable development [5].

5.5. Communication barriers and challenges

An important task is to overcome communication barriers - from differences in language and terminology to cultural and ideological differences. The presence of disinformation and "climate skepticism" requires the use of well-thought-out strategies based on trust, transparency and tailoring of messages to audiences [6].

Conclusion

The ban on the use of non-renewable natural resources as a climate security measure is not only a technological and political, but also a communication challenge. Its implementation requires coordinated actions by states, transparent and ethical environmental policies, broad public involvement and open dialogue between all stakeholders. Only with sustainable communication, trust and responsibility can we talk about real prospects for building a low-carbon, environmentally sustainable future.

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