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Global challenges to modern international security system

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Abstract: Ensuring global international security requires a thorough study of threats that negatively affect processes in countries around the world. Given the nature of threats, the goal of security research is to timely identify, overcome an existing or prevent a potential threat by partially or completely neutralizing the impact of threats. In connection with global challenges to the modern system of international security, the concept of individual and collective security in the world is being revised. This is forcing the countries of the world and military-economic blocs to reconsider their defense policies, focus on increasing military budgets and developing new defense strategies. Identification, analysis and forecast of global challenges in the modern system of international security are very important and relevant. The purpose of the article is to identify the problems and prospects for countering the global challenges of the modern international security system. The development of geopolitical relations in the modern world is determined by current global security problems that directly or indirectly affect all countries of the world. The modern world is faced with many challenges that require not only a defensive response, but also countermeasures aimed at eliminating not only the problems themselves, but also the risk factors caused by these problems. The main attention should be focused not only on countering threats, but also on developing preventive measures to overcome the possible consequences of an increase in new global and regional risks to national security. It has been proven that the main global challenges to international security are: military actions between countries and frozen conflicts, economic globalization, competition for resources, climate change and environmental problems, mass uncontrolled migration, technological changes and cybersecurity, international terrorism and extremism. The result of overcoming existing or preventing potential global threats is the protection of national and international interests and ensuring the sovereignty of states.

Keywords: security, globalization, environmental security, global security, energy security, demographic aspect of security, social security

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Abstract: Due to global challenges to the modern system of international security, the concept of individual and collective security in the world is being reconsidered. It forces the countries of the world, military-economic blocs to review their defense policy, to focus on increasing military budgets and developing new defense strategies. The definition, analysis and forecast of global challenges in the modern system of international security is very important and relevant. The purpose of the article is to determine the problems and prospects of countering the global challenges of the modern international security system. The development of geopolitical relations in the modern world is determined by urgent global security problems that directly or indirectly affect all world countries. The modern world is faced with many challenges that require not only a defensive reaction, but also countermeasures in order to eliminate not only the problems themselves, but risk factors caused by these problems. The main attention should be focused not only on countering threats, but also on the development of preventive measures to overcome the possible consequences of increasing new global and regional risks to national security. It has been proven that the main global challenges to international security are as follows: hostilities between countries and frozen conflicts, economic globalization, competition for resources, climate change and environmental problems, mass uncontrolled migration, technological changes and cyber security, international terrorism and extremism.

Keywords: security, globalization, environmental security, global security, energy security, demographic aspect of security, social security

Introduction

The current geopolitical situation in the world is characterized by a number of complex challenges affecting stability and security at the global level. The international balance of power is changing due to the active military aggression of the Russian Federation against Ukraine, Israel's war against the Gaza Strip, and the tense atmosphere of relations between the Democratic People's Republic of Korea and South Korea, China, and Taiwan. The civilized world condemned the Russian Federation's aggression against Ukraine, imposed sanctions, and is helping Ukraine with weapons and finances. Sanctions also had a reverse negative economic effect on the countries that imposed them. China's influence on world processes is growing rapidly, at the same time, due to active political processes, the role of the United States on the world stage is being reconsidered and the positions of regional states such as India, Brazil, and Iran are being strengthened. The traditional unipolarity of the world is changing and gradually giving way to a more dispersed and multipolar system of world politics which leads to a change in international alliances, an increase in regional conflicts and unpredictability in international relations among the world countries. Tense relations among the countries of the world and military actions have become a catalyst for changes in international relations, security policy and geopolitical strategies.

Due to global challenges to the modern system of international security, the concept of

individual and collective security in the world is being rethought. It forced NATO countries to review their defense policies, focusing on increasing military budgets and developing new defense strategies. The definition, analysis and forecast of global challenges in the modern system of international security is very important and relevant.

Materials and Methods

In the course of the research, the following methods were used: dialectical, generalization, comparison, system analysis, observation of economic activity, graphic, etc.

Results

Theoretical and methodological aspects of ensuring the economic security of the state are studied by the science of economic security - ecostate (from the English ecostate, economic security of state). The object of ecostate research is the security of the state, society, regions, enterprises and individual citizens, which is determined by the state of the economy. The subject of the study is the conceptual basis of the formation of economic security, general laws of its development, principles and main directions of provision (*Andruseac, 2016*).

The most large-scale armed conflicts that arose on the planet after the Second World War have not stopped until now, and the more local ones have entered the phase of frozen conflict, some have been localized or even stopped completely. Fig. 1 shows the countries and the duration of armed conflicts on their territories after the Second World War.

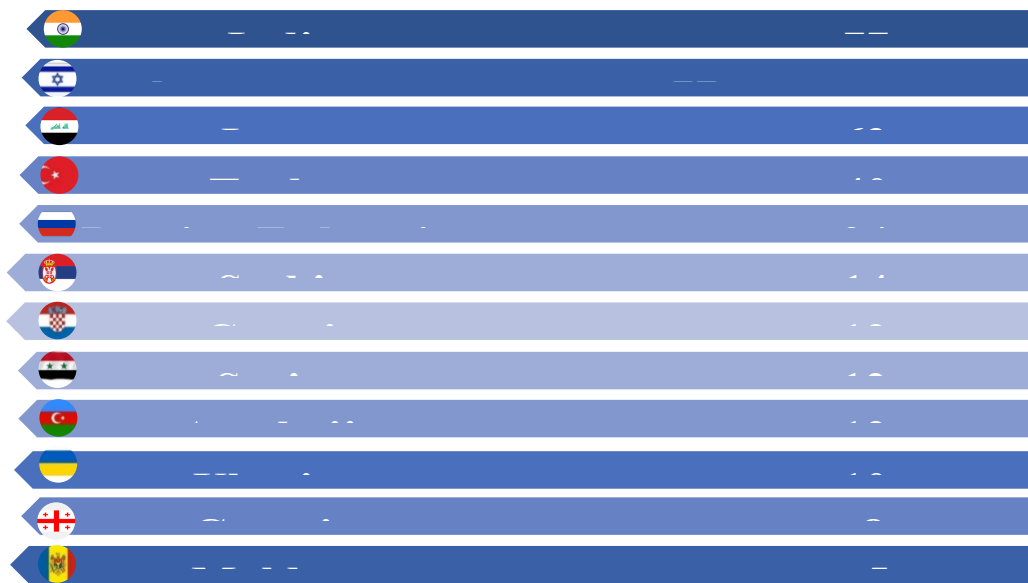


Figure 1. Countries and the duration of armed conflicts on their territories after the Second World War (as of February 2024), years (Imperial War Museums, 2024)

From fig. 1 it is obvious that India and Israel have been operating in armed conflict for the longest time (75 years).

The modern geopolitical landscape is characterized by a number of complex challenges affecting stability and security at the global level.

1. Military actions between countries and frozen conflicts

2. Economic globalization, on the one hand, promotes economic growth and development, but on the other hand, it increases inequality and creates new tensions. Competition for resources, including energy and water, is becoming more intense, which may lead to new conflicts and the strengthening of nationalist and protectionist sentiments.

3. Climate changes and environmental problems. Climate change threatens the stability of the entire planet, causing extreme weather conditions, rising sea levels, and affecting food security. These changes can lead to mass migrations, regional conflicts and increased social tensions.

4. Technological changes and cyber security. The rapid development of technology creates new opportunities for development, but also leads to new threats, such as cyber attacks on critical infrastructure, the spread of disinformation, and the influence of electoral processes. This creates new challenges for national and international security.

5. International terrorism and extremism. Terrorist groups such as Islamic State and Al-Qaeda continue to pose a significant threat. Radicalization through the Internet and global migration flows complicate the fight against terrorism and contribute to the spread of extremist ideologies.

6. Growth of international migration. Conflicts, economic crises, and climate change cause massive population displacements. This causes tensions in host countries, promotes the growth of xenophobia and nationalism, and threatens international stability.

Economic sanctions often include measures such as trade restrictions, financial embargoes, bans on the export or import of certain goods, and freezing of foreign assets. They can be aimed at individual companies, sectors of the economy, government bodies or even entire countries. The purpose of such sanctions is to influence the economic situation and political decisions of the target country, demanding a change in its behavior.

The hostilities in Ukraine and the Middle East have had a negative impact on the world's energy security. Gas and oil prices have risen significantly due to concerns about potential supply disruptions and sanctions imposed on the Russian Federation.

Developed countries which implemented sanctions began to look for alternative sources of energy resources in order to reduce dependence on Russian supplies. This has led to increased demand for oil and gas from other regions, such as the Middle East and North America. This diversification of supplies is one of the key areas of market adaptation to new realities. This actualized measures to ensure the developed countries of the world energy security and the transition to renewable energy sources. Many countries have begun to invest more actively in wind, solar and other alternative energy sources in an effort to reduce their energy dependence.

At the same time, rising energy prices have led to rising inflation in many countries, affecting the cost of living and economic stability, which, in its turn, necessitated government interventions and regulation aimed at protecting consumers and supporting the economy.

Consequently, changes in energy prices, the search for alternative energy sources and reconsidering energy security policy is to affect the global economy and international relations for many years to come.

Sanctions also hit hard not only on the aggressor, but also brought negative consequences for the countries that impose them, due to interdependence and globalization. Such consequences may include losses to own companies, loss of sales markets, rising prices and reduced global economic stability. The reaction of financial markets to similar geopolitical crises is often characterized by increased volatility, changes in investment priorities and reassessment of risks.

Today's international security situation in the world has actualized the issue of food security at the global level. She showed how important it is to have diverse sources of supply and promote the sustainability of agricultural supply chains. Some countries have already begun developing strategies to ensure greater independence from imported agricultural products by investing in their own agriculture and developing alternative sources of supply.

In addition to the direct humanitarian component, an important aspect of international security is the migration crisis and support for military refugees. Many countries have expanded their programs for refugees, providing them with shelter, medical care, education and social support.

The main components and indicators of a comprehensive approach to assessing the security indicators of the countries of the world are presented in fig. 2.

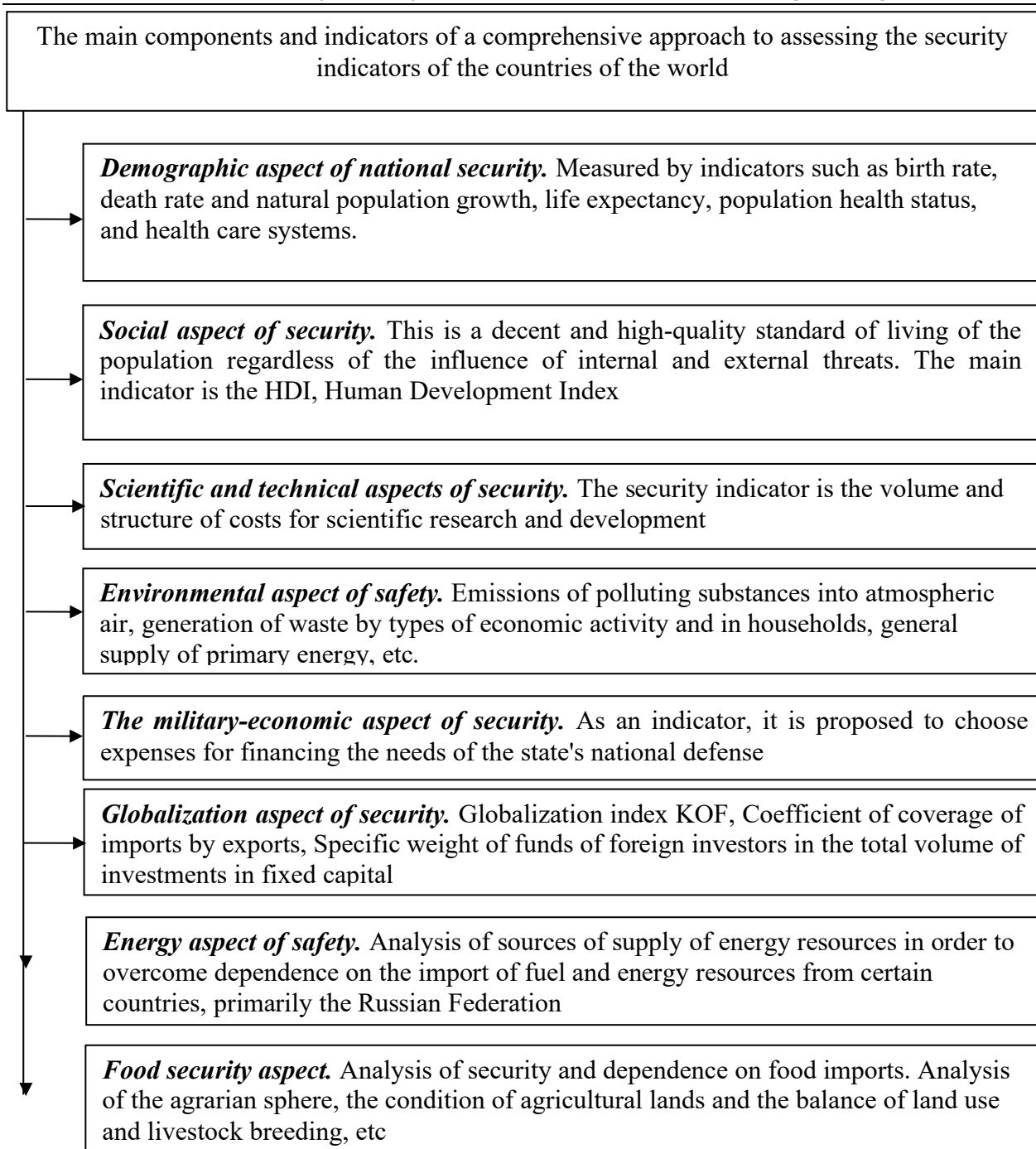


Figure 2. The main components and indicators of a comprehensive approach to assessing the security indicators of the countries of the world

Every country in the world needs to monitor and maintain the proposed indicators within certain parameters, which will allow managing these indicators to ensure the security of the countries of the world. It is proposed to take the following directions to ensure security, which will include clear parameters and indicators that will allow monitoring the security of the country in the conditions of global challenges of the modern international security system. Eight main aspects of ensuring the security of the countries of the world are proposed:

1. **Demographic aspects of national security.** It characterizes the state of protection of the state, society and the labor market from demographic threats, which characterizes the processes of reproduction of the population according to its main structural elements. Demographic security is usually measured by indicators such as fertility, mortality and natural population growth, life expectancy, population health and health systems. The demographic situation in the country is

sufficiently reflected by such an indicator as the depopulation ratio. It testifies to the size of the country's population decrease, in which the birth rate is insufficient to compensate for the death rate, which is an obvious threat to the economic security of the state in the demographic sphere from the point of view of reproduction of the state's human potential. The depopulation coefficient is calculated as the ratio of the number of births to the number of deaths for the same reporting period (year). The threats are the reduction of the birth rate, the increase in mortality and the aging of the population, depopulation, labor migration of the population.

2. Social aspect of security. Social security of the state is understood as such a state of development of the state, in which a decent and high-quality standard of living of the population is ensured regardless of the influence of internal and external threats. As an indicator of the social aspect of the economic security of the state, it is proposed to use the Human Development Index (HDI) (*Khodzhaian, 2017*). This indicator is published in the annual reports of the UN, is a comprehensive indicator of life expectancy, literacy, education and standard of living, and indicates that the state is lagging behind the optimal characteristics according to each of the specified criteria (average life expectancy, literacy of the population and continuous coverage of youth in education, average annual income per capita at purchasing power parity). The human development index provides a comprehensive picture of the effectiveness of government policy in the social sphere and can be considered as an adequate indicator of the level of compliance of the social aspect of the state's economic security with world standards.

Threats are a high level of poverty, social inequality and high differentiation of the population's incomes, deterioration of the physical, psychological and genetic health of the population, low educational and professional level of the population.

3. Scientific and technical aspects of state security. The level of scientific and technical development of the country plays an important role both in ensuring its international competitiveness and the level of welfare of society. At the same time, the more import-dependent and raw material-based the domestic economy is, the more important is proper funding of fundamental and applied research, which can help reduce its dependence on other subjects of the global economy and, accordingly, strengthen national security. Commonly used indicators of the effectiveness of scientific and technical research in the country are: the number of performers of scientific research and development, the dynamics and structure of scientific research and development by sectors of activity, the volume and structure of financing costs for the implementation of scientific research and development, the specific weight of costs for the implementation of R&D in the GDP of the country etc. Of course, from the point of view of evaluating the effectiveness of government policy in the scientific and technical sphere, the level of expenses for financing science is quite indicative, but since this indicator is defined as a share of GDP. Therefore, as an indicator of the state of safety of the scientific and technical sphere, it is proposed to choose such an indicator as the share of enterprises that implement innovations in the total number of industrial enterprises. The threats are the accumulation of technological backwardness, the reduction of budgetary support for science and innovative investments of enterprises, the disruption of relations between the real sector of the economy and scientific institutions, and the loss of personnel potential in the scientific and research sphere.

4. Environmental aspects of safety. Industry causes significant damage to the environment both globally and at the level of individual states. The security of countries in terms of the ecological sphere is the protection of the vital interests of man and citizen, society and the state, which ensures the sustainable development of society, the timely detection, prevention and neutralization of real and potential threats to national interests in the spheres of the functioning of natural monopolies, the use of subsoil, land and water resources, minerals, protection of ecology and natural environment. Environmental indicators recommended by the UN and produced by state statistics agencies include: emissions of pollutants into the air, application of mineral and organic fertilizers, generation of waste by types of economic activity and in households, general supply of primary energy, etc. In our opinion, the state of the natural environment of the state is sufficiently reflected by such an indicator as the volume of emissions of pollutants into the air from stationary and mobile sources, 1000 tons /

year. Threats are uncontrolled emissions of pollutants into the air, an increase in waste by types of economic activity.

5. The military-economic aspect of security. Military and economic security is an integral component of the national security of any state. At a time when military force continues to be a determining element of the state's ability to defend its national interests, ensuring the necessary level of military security guarantees the sovereignty, territorial integrity and inviolability of the state from encroachments with the use of military force (*Saganiuk, 2007*). It is under the condition of sustainable economic development that it is possible to solve all other tasks of ensuring national security. Military-economic security can be represented as the ability of the military economy to support the military power of the state and to realize the military-economic potential in the scope and terms stipulated by the governing documents of the state (*Abramova, 2015*). It is proposed to choose the costs of financing the state's national defense needs as an indicator for assessing the state of the military-economic aspect. The level of these costs should be sufficient to ensure the state's defense capability as its ability to defend itself in the event of armed aggression or armed conflict. The threats are the loss of financial independence in solving socio-economic issues, the limitation of the state's access to foreign markets, the budget imbalance in the conditions of the financial resources shortage of the state, the significant level of dollarization of the economy in the conditions of the growth of the external debt of the state, the increase in the total amount of the state debt.

6. Globalization aspect of security. Globalization processes are the basis for the emergence and escalation of certain external threats to the security of the national economic system, as well as a source of new opportunities for its development, which makes it expedient to consider aspects (manifestations) of globalization from the point of view of constructive and destructive influence. From the point of view of impact on the economic security of the state, the globalization of international economic relations has such manifestations as a new level of interdependence and interpenetration of economic systems and transnationalization of the world economy. According to the results of the assessment of the strength of the correlation between the sub-indices of the KOF-index of globalization and the indicators of the economic development of the countries of the statistical sample, the hypothesis was confirmed regarding the absence of a direct statistical relationship between the level of the state's involvement in the world economy and its economic growth, which allows us to consider the deepening of globalization processes as a source of additional threats for the economic security of the state. In order to develop the idea of the ambiguity of globalization role in ensuring the state economic security, scientists and specialized organizations are actively developing synthetic indices of globalization, which are designed to provide a comprehensive assessment of the multifaceted manifestations of this process - the Kearny index (The A.T. Kearny / Foreign Policy Magazine's Index), the KOF index of globalization (KOF Index of Globalization), Maastricht Globalization Index (The Maastricht Globalization Index), New Globalization index (The New Globalization index), CSGR globalization index (The Center for the Study of Globalization and Regionalization's Globalization Index) (KOF Globalization Index, 2024). With these indicators, it is possible to objectively measure the degree of involvement of the country in the system of the world economy. Transnationalization has a two-way impact on the development of the national economy, and can be both a source of threats and new opportunities for its development. With a sufficient degree of objectivity, the level of transnationalization of the national economy reflects the specific weight of foreign investors' funds in the total volume of investments in fixed capital, which was chosen as an indicator of the investment component of the state's economic security.

7. Energy aspect of safety. The state of the economy, which ensures the protection of national interests in the energy sector from existing and potential threats and makes it possible to meet the real needs of the population and the national economy in fuel and energy resources. Threats are energy dependence on oil and gas imports, ineffective use of fuel and energy resources, insufficient rates of diversification of their supply sources

8. Food security aspect. The level of food security of the population, which guarantees socio-economic and political stability in society, sustainable and high-quality development of the nation,

family, individual, as well as sustainable economic development of the state. The threats are the unsatisfactory quality of domestic agricultural products, the price inaccessibility of certain food products for certain segments of the population.

Conclusions

It was determined that security is a complex category that characterizes the ability of a national or international system to neutralize the negative impact of various threats in order to protect national or international interests and ensure the sovereignty of states.

It is proven that the main global challenges to international security are: hostilities between countries and frozen conflicts, economic globalization, competition for resources, climate change and environmental problems, mass uncontrolled migration, technological changes and cyber security, international terrorism and extremism.

Ensuring global international security requires a thorough study of threats that negatively affect processes in the countries of the world. Given the nature of the threats, the purpose of security research is to timely identify, overcome an existing or prevent a potential threat, through partial neutralization or complete neutralization of the impact of threats. The result of overcoming existing or preventing potentially possible global threats is the protection of national and international interests and ensuring the sovereignty of states.

The expediency of ensuring international security for every country in the world to analyze and monitor the main aspects of ensuring security and maintain indicators in certain parameters, which give opportunity to manage the level of security of the country in conditions of global challenges to the modern international security system, is justified. They are identified as follows: demographic aspect, social aspect, scientific and technical aspects, environmental aspect of safety, the military-economic aspect, globalization aspect, energy aspect, food security aspect.

Conflicts of interest

The authors declare no conflict of interest.

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Authors contribution

Conceptualization, Y.I. and I.Y.; methodology, Y.I.; software, Y.I.; check, Y.I., I.Y.; formal analysis, I.Y.; resources, I.Y.; analytical data, Y.I.; visualization, I.Y.; supervision, I.Y.; project administration, Y.I. All authors have read and approved the published version of the manuscript.

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