



Research Article

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Received: 2 February 2023 / Accepted: 13 April 2023 / Published: 5 May 2023

Food Security as a Component Part of National Security: The Impact of the Russian-Ukrainian Conflict

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DOI: <https://doi.org/10.36941/jesr-2023-0082>

Abstract

The Russian-Ukrainian conflict has severe consequences, and the problem of food security has become global. In the current geopolitical conditions, as a strategic element of national security, food security does not fully provide the government and its population with affordable food. Also, it does not form a favorable socio-economic climate in society. Geopolitical conditions dictate their own rules, and for all governments, the solution to the food crisis is of paramount importance. After all, both warring countries are vital suppliers of agricultural products, and the ongoing conflict further highlights the fragility of global food supply chains: both important players are effectively out of the market for a while. Thus, the relevance of the topic of this study is caused by the need to develop scientific approaches and theoretical foundations of food security in conjunction with the categories of national security, as well as an integrated approach to the study of the conceptual apparatus of the food security system in the context of the Russian-Ukrainian conflict. The above-stated leads to the goals of the study, which are to determine the places of food safety in the structure of national security in the context of the Russian-Ukrainian conflict. The result of the study is an analysis of the state of food security in geopolitical conditions and a survey of the theoretical aspects of food security in the context of the Russian-Ukrainian conflict. Conclusions: Since the issue of ensuring food security in the context of geopolitical processes in connection with the Russian-Ukrainian conflict has not been sufficiently studied, the results obtained during the study will become a significant find for researchers, analysts, and practitioners in the field of international relations and world politics.

Keywords: food security, the Russian-Ukrainian conflict, the impact of the war on food security

1. Introduction

The study's relevance is beyond doubt because for all countries of the world, food security is an essential requirement for high-level national security and long-term economic development.

The consumption of primary food products is one of the main components of the standard of living of the population, a generalizing characteristic of the state of the social potential of the region, and a set of life benefits consumed by the population mainly at the place of residence, as well as the main factor of stability. The dynamics of the standard of living is an essential benchmark in developing the strategy for developing the regional economy as a whole and its structural components (Alibayev & Onuchko, 2022). The most important fields of a successful developing state are inextricably linked to the organization of food security. Both the quality of life and, in general, the sovereignty of the State depend on the availability of food supplies. Ensuring food security is designed to neutralize existing and emerging threats that can decrease production volumes, worsening the population's access to essential types of food. In this regard, it is evident that any state that wants to avoid the risks of malnutrition of its people must provide its citizens with food during a period of market instability (Dadalko, 2013).

Food security being fundamental stability of the state in the world community, serves as a necessary material condition for a person's life, a group of people, and society, realizing functions and capabilities for political, socio-economic, demographic, cultural, and intellectual development. The spectrum of specific manifestations of the food problem is broad enough: from a temporary lack of certain products to hunger, from localization of parts of the state to an international scale (Gabunia, 2016).

The latest data shows that nearly 800 million people worldwide suffer from hunger. At the end of 2021, 193 million people faced a food crisis in 53 countries or territories.

Before the Russian-Ukrainian conflict, some countries were already volatile due to economic, climate problems, and in particular, consequences of the COVID-19 pandemic.

The Russian-Ukrainian conflict has grave consequences, and the problem of food security acquired a global character. In the current geopolitical conditions, acting as a strategic element of national security, food safety not fully provides states with their population's available food products. It does not form a favorable socio-economic climate in society.

Geopolitical conditions dictate their own rules for all states addressing the food crisis is of paramount importance. After all, the belligerents are key agricultural product suppliers. The continued conflict more vitally highlights the fragility of global food supply chains: both important players are away from the market for a while.

So the Topic's relevance of the given research is caused by the need to develop scientific approaches and theoretical foundations of food security in conjunction with the categories of national security and an integrated approach to the study of the conceptual apparatus of the food security system in the context of the Russian-Ukrainian conflict.

The above-stated ideas predetermined the study's goals: to determine the place of food security in the structure of national security in the conditions of the Russian-Ukrainian conflict.

And the study's novelty is the study of the theoretical aspects of food security in the context of the Russian-Ukrainian conflict.

To achieve the set goals, it is necessary to decide on several tasks:

- analysis of the state of food security in the conditions of the Russian-Ukraine conflict.
- determination of the place of food security in the structure of national security.

2. Materials and Methods

The methodological basis of this study was a complex analysis based on a combination of structural-functional and systemic approaches, including content analysis of information and materials, which made it possible to detect significant characteristics of the processes under study. Also, general

scientific and particular scientific methods were applied: comparative, dialectical, and historical methods, system-structural and comparative legal analysis.

In the first part, the application of the method of statistical analysis made it possible to assess the state of food security in the conditions of the Russian-Ukrainian conflict. Meanwhile, applying general scientific methods allowed us to define the place of food security in the state's national security system, conduct characteristic comparative conditions that form food safety in the state, and hold structuring elements of food systems security.

The goals and objectives of the study were achieved through systematic analysis and synthesis of scientific papers and publications on the topic of the study. Among scientists and politicians, it is worthwhile to emphasize the scientific works of Artuk Erhan, Falcone Guillermo, Porto Guido and Bean Rijkers (2022), Pauline Weil and Georg Zachmann (2022), Glauber Joseph and David Laborde (2022), O'Donnell Lynn (2022), Okonjo-Iweala Ngozi (2022), Sherman Eric (2022), and Azimzhan Khitakhunov (2022).

The scientific works of the following scientists were taken as a theoretical basis: E.G. Dedkov, I.A. Korostelkin, O.P. Zhidkov (2019), V.A. Dadalko (2013), A. Khitakhunov (2022), B.S. Myrzaliev, N.S. Sabyr, A. Murat (Myrzaliev, Sabyr and Murat, 2020), T.I. Espolov, G.Zh. Azretbergenova, B.S. Myrzaliev, R.Z. Zhaleleva, M.U. Rakhimberdinova, N.B. Syzdykbaeva, N.Zh. Brimbetova, G. Sultanbekova, D.N. Akynbekova, K.N. Zhangaliyeva, M.S. Bekturganova, N.A. Abilkayyr, in particular A.A. Kaygoradtsev (Kaygorodtsev, 2006), and others.

The first sources include meeting minutes of the Food and Agriculture Council of the Organization of the United Nations, the European Union, the Eurasian Economic Commission, and others.

The second group of sources includes official statistics data from the media, speeches, and others.

3. Results and Discussion

According to current estimates, around 800 million people worldwide suffer from hunger.

A report by FAO notes that at least 135 million people faced a food crisis in 2020. According to the FAO Global Report on Food Crises (GRFC) 2020, in 2019, the number of people in acute food and livelihood crisis or worse, according to the terms used in the Food Security Phase Classification (IPC), reached 135 million in 55 analyzed countries and territories. Approximately 183 million people in 47 countries are reported to be moderately or borderline food insecure (Phase 2) and at risk of moving into Phase 3 or higher if they face additional shocks or stressors. In 2019 Yemen, the Democratic Republic of the Congo, Venezuela, South Sudan, Ethiopia, the Syrian Arab Republic, Venezuela, northern Nigeria, and Haiti faced the most severe food crisis (FAO, 2019). Finally, according to statistics, at the end of 2021, there were already 193 million people who faced a food crisis in 53 countries.

Based on the above data, it is possible to conclude that before the Russian-Ukrainian conflict, some countries were already in a very fragile situation due to economic, climate and security issues. In particular, the impacts of the COVID-19 pandemic have led to an increase of almost 120 million people suffering from malnutrition globally.

FAO noted in February 2022 that its global food index reached a record high of 140.7 on average due to the conflict, up 3.9% from January and 24.1% higher than its level a year ago. Vegetable oils rose 8.5% from the month before, while meat price growth was 15.3% and cereal prices rose for 14.8%. The increase in production costs was the underlying reason for the increase in prices, and this problem poses great risks for modest households in underdeveloped countries. At the same time food security has become a priority for economic stability of developed countries (Sherman, 2022).

The world food market is constrained by the damage that was caused by the crisis of Russian-Ukrainian relations, as both of these market participants provide the main share of supplies. The intercountry conflict caused the rapid rise in food prices, which also exacerbated the difficult market situation.

It should be noted that in terms of world merchandise trade, the shares of Ukraine and Russia

are limited to 2.2 per cent, but the cereals and energy capacities of these countries maintain a leading position. The World Food Programme (WFP), the UN Food Aid Agency, delivers about half of its wheat purchases through Ukraine and provides food to more than 80 countries (Okonjo-Iweala, 2022).

In 2021, the share of Ukraine in world exports grew as barley supplies increased by 14%, and wheat sales by 10%. At the same time, the share of Russian supplies rose to 12 and 18 percent. The combined food production capacity of Russia and Ukraine provides 57% of the world's sunflower oil exports. Ukraine's share in EU procurement is in the range of 35-40%. Many Eurasian countries depend on grain imports from Russia and Ukraine. These include Armenia (92% of imports from the two countries), Georgia (85%), and Azerbaijan (77%).

Today, the dependence of Eurasian countries on Russian and Ukrainian grain is clearly visible. Among such countries, Armenia (92 per cent), Azerbaijan (77 per cent) and Georgia (85 per cent). According to UN projections, the area sown for grains, maize and sunflower will be reduced by 20-30%. Based on this, exports to Ukraine are expected to decline and the figure ranges from 33% to 50%. In the case of Russia, export restrictions will entail new risks and a reduction of supply in the range of 10 to 30% (Weil & Zachmann, 2022).

Currently, Ukrainian-Russian export is about 12% of the total number of calories sold worldwide. Russia's share in world trade in nitrogen and potash fertilizers is 15% and 17%, respectively. Nitrogen fertilizer production is directly linked to the use of natural gas. For this reason, EU countries have to import up to 40% of this raw material from Russia. At the moment, Russian troops control the largest areas of Ukraine, where the main food production is carried out: ventures for maize and sunflower (25-30%), barley (10-15%) and wheat (20-25%) production are located in such areas (Glauber & Laborde, 2022).

The conflict triggered a spike in wheat and maize prices. About 80 per cent of households in developing countries have suffered significant price shocks as they are the main purchasers of cereals.

According to experts, in comparison to January, the average daily price of wheat and maize rose by 53 per cent and 23 per cent, respectively in March. Futures prices for these products increased from 24% to 40%. Estimates showed that average household wealth would decline in 43 of the 53 countries included in the sample due to rising prices. Overall, households have lost about 1.5 per cent of their real income, while Armenia, Tajikistan, Georgia and Kyrgyzstan are expected to face the fall by more than 5 per cent. Price growth causes inequality level growth. Food inflation has a big impact on the well-being of the population, because in conditions of war the range of expensive products is greatly expanded, including energy (Artuk et al., 2022).

It can be concluded that the conflict provoked serious food problems already acute after the COVID-19 pandemic.

Summing up the statistics, FAO noted the consequences of the conflict:

- deadline for the harvesting of winter crops and the spring sowing campaign was also violated;
- disruption of logistics and disorders in all segments of food supply chains;
- the desolation of agricultural land and reduced access to it;
- damage to crops as a result of military operations, especially during the growing season in spring;
- the destruction of the assets and infrastructure of the agri-food system.
- availability is a significant challenge for both food production and supply chains: only one-fifth of agribusinesses surveyed by the government indicated that they have enough fuel for the spring sowing campaign this year;
- critical agricultural inputs, including seeds, fertilizers, pesticides, and equipment, are only available to a limited extent. (FAO, 2022)

The fact that the Russian Federation and Ukraine play a significant role in world agriculture must be recognized. After all, both countries are net exporters of agricultural products and are the leading food suppliers to world markets.

Thus, the Russian-Ukrainian conflict has led to food shortages, rising prices, declining wealth, and political instability in countries dependent on food imports. Separate and individual efforts are insufficient to escape the crisis; first, broader international cooperation is needed to end the conflict.

After analyzing the above official data, we note that the value of food self-sufficiency is growing in the face of intense geopolitical processes. The protection of vitally essential interests in the food security field is expanding through the prism of solving national security problems and is one of the most topical problems for today.

Therefore, it is vital to determine the place of food security in the structure of national security in the context of the Russian-Ukrainian conflict.

In general, food security creates a vector for the movement of the national food system towards the optimal state of the state. In this sense, pursuing food security is an ongoing process today.

National security is characterized as the degree of protection of the state. It integrates several private types of security, which allows, on this basis, to more fully assess the condition of ensuring the security of the interests of the state, not only from individual threats such as interstate conflicts but also from systemic threats arising from the interaction of several negative factors.

Global problems are problems affecting all of humanity. By their nature, global problems are different, but the need to solve them pursues one goal - ensuring the safe development of society. The food problem is one of them. The food problem is manifested in the fact that there is a shortage of food on Earth because the geography of world food production does not coincide with the geography of their consumption. The food problem is resource, socio-economic, primarily political and environmental character.

We have collected the existing seven main blocks of global threats in Table 1.

Table 1. Global threats

| | |
|----------------|---|
| Global Threats | Interstate conflicts |
| | Terrorism |
| | Transnational crime |
| | Nuclear war, radiological, chemical, and biological weapons |
| | Energy and raw material problem |
| | Internal conflict, civil war, genocide, and others. |
| | Economic threats: food crisis, pandemic, and others. |

The food threat is usually understood as the process of purposeful and accelerated transformation of potential factors of hunger into active elements with the simultaneous activation of the latter. In other words, the food threat is a kind of indicator of food security.

The term “food safety” in conditions of the Russian-Ukrainian conflict was supplemented and expanded. Analysis of the opinions of various authors and the content of regulatory documents allows the formulation of a definition of food security and the condition of economic countries, which ensures food independence states and satisfies the population of the need for physical and financial access to food in sufficient quantities.

After analyzing all the sources used in the study, we highlight the following terms, formative food safety Table 2.

Table 2. Compiled by the authors based on sources

| |
|--|
| Terms formative food safety |
| Security necessary products food population by world installed norms |
| Creation reserves |
| Availability of food regardless of the state of development |
| Creation of favorable conditions for the population, which does not depend on the level of inflation |

| |
|---|
| Terms formative food safety |
| Development of agro-industrial complex as a guarantor of food security |
| Budget control in context funding development of agro-industrial complex |
| Control of budgetary funds in the context of financing the development of the agro-industrial complex |

It is time to admit that, again, food security is ensured by efficient industries of the agro-industrial complex (APC). After all, APC, which includes agriculture and food processing, is the leading food supplier to the population. The state of food security of the country directly depends on its booming activity. All state programs for the development of the agro-industrial complex set themselves the goal of producing competitive products in demand on the markets and providing the population with mainly locally processed agricultural products. The successful development of the APC is ensured by a system of financial, material, and labor resources (Alibayev E., Onuchko M., 2022).

Ensuring food security is one of the main directions in the state's national security. It depends on agriculture and food industries' productivity since 80-85% of food funds are formed, and strategic food supplies are created in the country (Makhov, 2017). As practice has shown, developing countries that cannot provide food for population products in the necessary volume are forced to import them from other countries, while the conflict has worsened this chain.

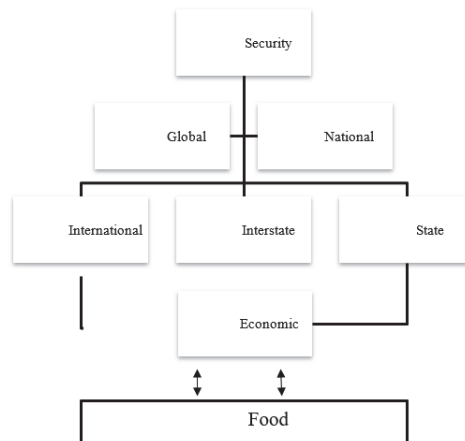
The ability to the self-sufficiency of food products is a severe indicator economic situation in the world.

These elements should be considered in the interaction since they are inextricably linked and affect each other. So, defective food products lead to an increase in their prices and thereby affect their availability. High prices for basic foodstuffs and access to lower-quality markets negatively affect the physical availability of high-quality products. These conditions apply both to the state and the specific region.

Obviously, in the conditions of geopolitical processes, management of the agro-industrial complex and the food industry remain an essential element in maintaining economic security states in conditions of globalization; as mentioned above, the state of food security is primarily determined by the mechanisms of regulation of agriculture and the food industry. The food security of the state is ensured by supplying the country with its resources, the optimal volume of imports, high competition for exports, the level and pace of development of the agro-industrial complex and the food industry, the size of strategic and operational food reserves, and the stability of the country's food complex.

After analyzing the structure of food security as an integral part of national policy, we can conclude that the multi-level hierarchy (Table 3) solves the problem.

Table 3: Compiled by the authors based on sources



International structures solve questions and problems related to maintaining food security on the global level. Their essential function is to regulate state policies on ensuring food security. The state-level aims to form national policy and legislation that ensure food security (Makhov, 2017). The central direction of the state agricultural policy on achieving and ensuring food security is the development and state support for the agro-industrial complex as a guarantor of sustainable development. Thus, a food security mechanism security advocates sustainable state production of agricultural products, providing physical access to food and the possibility of its consumption by the population in sufficient quantities.

The development and implementation of mechanisms for state support of agricultural producers are determined as a priority direction of the state agrarian policy. Even though food security is a global problem, its implementation largely depends on the states themselves.

As Klimova argues, general food safety creates vector movements in national food systems to optimal condition states. In this sense, pursuing food security is an ongoing process (Klimova, 2016).

State food security is ensured by the proper functioning of all elements of its infrastructure (Table 4). The effective interaction of the infrastructural aspects of food security will contribute to ensuring the national security of the state and all its structural components in their interconnection and interdependence.

Table 4. The main infrastructural elements of food security in the national security system.

| | | | | | |
|--|----------------------|--|--------------------------|--|---|
| National security | | | | | |
| Economic security | | | Food security | | |
| State level | | Economic sector | | Consumption | |
| Financial support of the agro-industrial complex | Regulatory framework | Production of agriculture and products | Fighting price disparity | Monitoring system and state of food security | Improving the physical availability of food |
| Note – developed by the authors based on sources | | | | | |

Prospects of solutions to the food crisis in the world depend on the efficient work of the APC enterprises. In this structure, three major sectors industries (sectoral groups) stand out which are involved in ensuring the food security of the state:

- agriculture (agriculture and animal husbandry), forestry, and fish economy: Enterprises of these industries supply the population directly with food. The amount of food produced, i.e., their physical accessibility and the quality of food products, that is, their safety, depends on the performance of enterprises in these sectors. Without the effective functioning of these industries, it is generally impossible to ensure food security, which determines the role of enterprises in these sectors in providing food security (Bekova, 2016);
- industries processing agricultural raw materials: Enterprises processing agricultural raw materials jointly with agricultural enterprises directly contribute to food security because some types of food (for example, bread), without their participation, do not reach the end consumer. Food safety is directly related to the practical activities of these enterprises industries (Botkin, 2016);
- industries producing means of production for agriculture and processing agricultural products: covers the maintenance of production, purchase, storage, transportation, and sale of agricultural products. Without an adequate supply of farms and industries processing agricultural products with the necessary assets, producing food in the required quantity is impossible. In addition, the efficient use of essential equipment and fertilizers helps to reduce food costs and thus ensure their affordability. The role of companies in these sectors in ensuring food security is high (Bekova, 2016).
- The continuous work of the country's agro-industrial complex guarantees the socio-economic stability of society and political and financial independence by supplying the

population with products, food, and government consumption goods. Despite the negative factors of war, under the influence of which agribusiness enterprises operate, they continue to reveal new ways of development and improvement.

4. Conclusion

Food security is an integral and most important part of national and economic security, ensuring the sustainable production of essential food products and their availability to the population. Food security is a necessary and sufficient material condition for a person's life, any group of people, and society as a whole. It ensures its functions and development opportunities - physiological, demographic, economic, political, cultural, intellectual, and others- especially during this challenging period. If, on the other hand, ensuring food security contributes to a stable social climate in society, then, unfortunately, due to geopolitical processes, in some countries, there are no necessary stocks and reserves of food, and social instability has arisen in the world, which allows us to consider the food problem as the most critical structural element that ensures the national security of the country and even more.

The topic of food security and providing the population with high-quality and safe food is a very complex and urgent problem. This is part of the country's national security since the state cannot ensure the national, including economic, protection of the population without meeting the demand for high-quality food products. It is certainly not easy to discuss ensuring the country's economic, political or national security before guaranteeing the population's food security. (Alibayev, 2022)

The Russian-Ukrainian conflict and its negative impact on food security raised serious concerns. Competition led to a sudden and prolonged decline in food exports, and this caused an additional increase in world food prices, from which low-income and food-deficit countries were the first to suffer.

The Council of the Food and Agriculture Organization of the United Nations recommends:

- to ensure the smooth functioning of value chains, steps must be taken to protect productive assets, including crops, livestock, capital goods, and equipment, from destruction or disruption caused by war.
- the range of suppliers and increase the diversification of food supply sources. Countries directly dependent on food imports from Ukraine and the Russian Federation should cope with shocks and maintain resilience. To do this, they will have to switch to other international trade channels, as the diversification of food imports reduces vulnerability to shocks caused by events in specific regions.

This can also be achieved by tapping into existing food stocks and increasing the diversity of domestic food products needed for a healthy diet.

- support vulnerable groups of the population.
- and avoid situational political reactions. Measures taken in countries that could be disrupted by war should be carefully analyzed for possible negative impacts on international markets in the short and long term. For example, while lowering import tariffs and using export restrictions may quickly increase the availability of goods in domestic markets, such measures will inevitably exacerbate price increases in international markets and the global situation.
- improve market transparency and strengthen dialogue. Global market transparency is critical with uncertainties in agricultural markets and the need to adapt to supply and demand shocks. Initiatives like the G20 Agricultural Market Information System (AMIS) aim to increase this transparency by providing objective, timely and relevant market assessments to enable informed policy decisions. (FAO, 2022)

Summing up and analyzing the state of food security in geopolitical conditions, it should be noted that political dialogue and coordination are necessary to minimize disruptions and ensure the continued normal functioning of international markets and the efficiency of trade flows to meet

global demand and ensure food security because it will get worse.

The results obtained during the research can be used as information and analytical material and will be useful for researchers and practitioners who study international relations and world policy; and are also intended for a wide audience of readers interested in the issues covered in the article.

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