

Global food security: Challenges in achieving the Sustainable Development Goals

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Abstract. The aim of this study was to substantiate the peculiarities of the current state of global food security. In the process of writing the article, the following methods were applied: bibliometric analysis (using Google Analytics, Vosviewer v.1.6.18 and SciVal), system-structural analysis and synthesis, historical, dialectical, graphical and descriptive-statistical methods. The article clarifies the essence of the economic category “global food security”, which is considered as a state of the world food system, in which all people in all regions of the world have physical, social and economic access to an adequate volume of safe, high-quality, nutritious and wholesome food to ensure an active and healthy life over the long term. It is noted that advancement toward fulfilling the 2nd Sustainable Development Goal “ending hunger” is insufficient and uneven. In 2023, more than 700 million individuals in the world suffered from hunger, and 29% of the world’s population faced food insecurity. Forecasts show that achieving the 2nd Sustainable Development Goal by 2030 will be impossible without increased efforts and innovation. It has been established that the dynamics of food insecurity vary greatly between regions. The situation is the worst in Africa, with the food insecurity rate reaching 58% in 2023. Conflict, extreme climate events, economic crises and income inequality are the main factors that worsen the food security situation. These factors create a synergistic negative impact, especially in countries with low and middle incomes, and require the development of comprehensive measures to address food security issues. The study’s practical value is found in the application of the results of the food security monitoring, which will contribute to the adoption of effective solutions to overcome hunger and achieve the goals of sustainable development

Keywords: risk of hunger; malnutrition; food affordability; inequality in access to food; access to safe food; conflicts and food crisis

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INTRODUCTION

One of the primary challenges of modernity is to ensure food security, particularly in the context of global economic and environmental change. Despite the significant progress made in the fight against hunger, millions of people worldwide continue to experience malnutrition and limited access to quality food. In addition, the effects of climate change, dwindling natural resources and economic crises are making it harder to achieve the Sustainable Development Goals, including goal No. 2, which is to end hunger. Scientific research in this area is important for creating effective strategies to ensure food security at the global level and fulfil international commitments. Success in achieving these goals depends on a comprehensive approach that considers economic, social, and environmental factors, which is why analysing the current state and challenges is critical to formulating long-term solutions for sustainable development. This cross-cutting issue remains unresolved in 2024 and meets the most pressing needs of the economy and society.

F. Lin *et al.* (2023) analysed the effect of martial law in Ukraine on global food security trends. The authors developed three forecast scenarios, according to which wheat trade is expected to decline by 60%, prices to rise by 50%, and serious food insecurity, particularly for countries that depend on wheat imports from Ukraine. Given Ukraine's role in the agricultural sector, food prices in some countries could rise by 10-30%, and welfare losses could be 15-25%. The authors X.-Y. Zhou *et al.* (2023) also paid attention to the problem of weakening food security due to martial law in Ukraine. The researchers developed an improved cascading failure model to monitor the effects of war on global food security and stressed the need for international organisations to step up efforts to balance the needs of large and small countries, with a particular focus on the most vulnerable states in Africa and Asia. In the work of A. Molajou *et al.* (2023) proposed a new paradigm that expands the approach to analysis and strategy development for macro-policy to include strategies for managing vital resources, including food, water, and energy.

A. Sridhar *et al.* (2023) analysed that the COVID-19 viral outbreak has caused a large-scale imbalance in all fields of the international economy, a reduction in the workforce, in particular in agriculture and the food industry. The closure of businesses around the world due to quarantine has disrupted the entire supply chain, from producer to end consumer. This study examines the implications of COVID-19 for global food security and its economic aspects. The authors also paid attention to the introduction of sustainable agricultural approaches, such as urban farming, crop rotation,

hydroponic farming, and small-scale family agriculture, conserve natural resources and attain the Sustainable Development Goals. The proposed innovative solutions, such as the use of artificial intelligence, machine learning, and blockchain, are interesting from a scientific point of view as promising tools for developing the agricultural sector and strengthening food security.

M.O. Alabi & O. Ngwenyama (2023) highlighted that the COVID-19 pandemic significantly impacted food security and global food supply chains, resulting in heightened food insecurity in Canada and the United States. The main challenges include a deteriorating economic situation, labour shortages, limited access to food, transportation difficulties and changing consumer preferences. The pandemic has also caused the closure of production facilities and increased uncertainty about product quality and safety. The authors emphasise the need to redesign food supply chains to be resilient to post-pandemic challenges and propose a new framework for creating smarter and more resilient food supply chains in the post-COVID-19 environment. The study by K.A. Abay *et al.* (2023) examines the implications of martial law in Ukraine for both global and regional food security. Particular attention is paid to the Middle East and North Africa region, which is susceptible to trade disruptions due to its high dependence on food imports. The authors point out that the crisis will affect poor and rich households, as well as urban and rural populations differently.

J. Cheng & X. Yu (2024) developed a comprehensive food security assessment system that includes four main aspects: security in terms of quantity, nutrition, environment, and capacity. China's food security index was assessed using the entropy method, and the spatial and temporal dynamics of food security distribution in seven regions was analysed using the Gini coefficient of Dagum and its decomposition, which allowed to confirm the overall and contextual convergence of food security levels in different regions. O. Skydan *et al.* (2020), based on an analysis of current trends in food security, developed a new doctrine that integrates environmental, economic, organisational, social and regulatory aspects into a single governance mechanism. According to the authors, the presented mechanism allows to eliminate shortcomings in the public administration of food security and provides a systematic approach through the introduction of regulatory instruments that affect the process of food security formation.

L. Stuart *et al.* (2024) focused on the fact that food security is one of the key aspects of environmental sustainability in the world, and food insecurity negatively affects human health and well-being, as well as

drives mass migration, jeopardising national security and hindering global sustainable development. It is analysed that ensuring food security requires a balanced approach to numerous issues related to atmospheric and earth sciences, economics, agronomy, agricultural engineering, and social sciences. The authors conclude that the American Meteorological Society community has significant potential to play a more active role in the global food system in the future, which will help to bridge scientific and technological gaps and improve global food security.

The authors R. Dulambayeva *et al.* (2023) examined the potential for implementing a food security management system in the Republic of Kazakhstan, utilising data-driven decision-making to align with the principles of sustainable development. The authors note that an important external factor for Kazakhstan is the current geopolitical situation, in particular the invasion of Ukraine by Russian troops. The paper also outlines various internal and external factors impacting food security in the region and suggests a data-driven decision-making framework for effective management.

Thus, the main aim of this study was to substantiate the peculiarities of the current state of global food security, monitor the progress made in achieving the 2nd Sustainable Development Goal, and identify key challenges to food security in the context of global economic and environmental changes.

MATERIALS AND METHODS

The bibliometric analysis, performed using Google Analytics, Vosviewer v.1.6.18, and SciVal, enabled the identification of research groups that have made significant scientific contributions to the study of global food security and the progress and challenges in achieving the Sustainable Development Goals. The use of Vosviewer v.1.6.18 facilitated the creation of bibliometric networks that encompass researchers and individual publications in the field of global food security monitoring, as well as to justify the feasibility of using different approaches to strengthen it and achieve 2nd Sustainable Development Goal. These networks were created based on the analysis of citations and bibliographic links, which allowed to form a list of the main literature sources and authors who have studied the relevant issue.

The basis of this study (theoretical and methodological) was the Food and Agriculture Organization report (2024) and FAOSTAT (n.d.) data, as well as a collection of foundational and applied scientific research by scholars in the field of food security, economic theory, sustainable development, development theory, and international relations. The study used systemic and

structural analysis and synthesis to determine the relationship between the factors of influence (a significant growth in the intensity and frequency of conflicts, extreme climate events, economic downturns and a general slowdown in economic growth) and the level of food security. The issue of the systemic and structural nature of food security arose from the need to find out how changes in various aspects affect changes in the overall system of tax security. Furthermore, the article identified trends in food security levels across various regions of the world.

The historical and dialectical approaches, along with the method of scientific abstraction, were used to clarify the essence of the category “global food security”. Thus, a thorough study of the processes and conditions for ensuring global food security made it possible to identify the basic, most essential features of this category, abstracting from others that were considered secondary in this study. Graphical and descriptive-statistical methods were used to graphically summarise, compare and emphasise the key characteristics of the global food security situation. The abstract and logical method was used at each stage of the study to identify the current state of global food security, monitor progress towards achieving 2nd Sustainable Development Goal, and identify key challenges to food security in the context of global economic and environmental change. This study monitors various food security indicators from 2005 to 2023. Different food security indicators are analysed for different periods of time due to changes in the methodology for calculating the Food and Agriculture Organization of the United Nations indicators, the analysis of which formed the basis of this study.

RESULTS

The fulfillment of the Sustainable Development Goals is a common goal for all countries, which should support comprehensive efforts to create a world free of food insecurity, hunger and all forms of malnutrition by 2030. Progress towards this goal is insufficient and uneven. While there is significant positive momentum in some countries, food insecurity and hunger continue to grow in many regions of the world (especially in rural areas). In general, the factors that exacerbate the problem of malnutrition and food insecurity in the world are conflicts, economic downturns, climate change, insufficiency of access and affordability of nutritious food.

Global food security refers to a comprehensive condition where all people, in every region of the world, have physical, social, and economic access to adequate, safe, nutritious, and high-quality food that supports an active and healthy life over the long term. Global food security includes stability of supply, resilience of

food systems to external influences (such as conflicts, climate change, economic crises) and adherence to the principles of sustainable development, which include preserving resources for future generations. The world is significantly behind the schedule for achieving the

2nd Sustainable Development Goal – “ending hunger”. During the COVID-19 viral outbreak, the level of malnutrition went up significantly, and remained almost unchanged in 2021-2023. The main indicators of the scale of hunger in the world are shown in Figure 1.

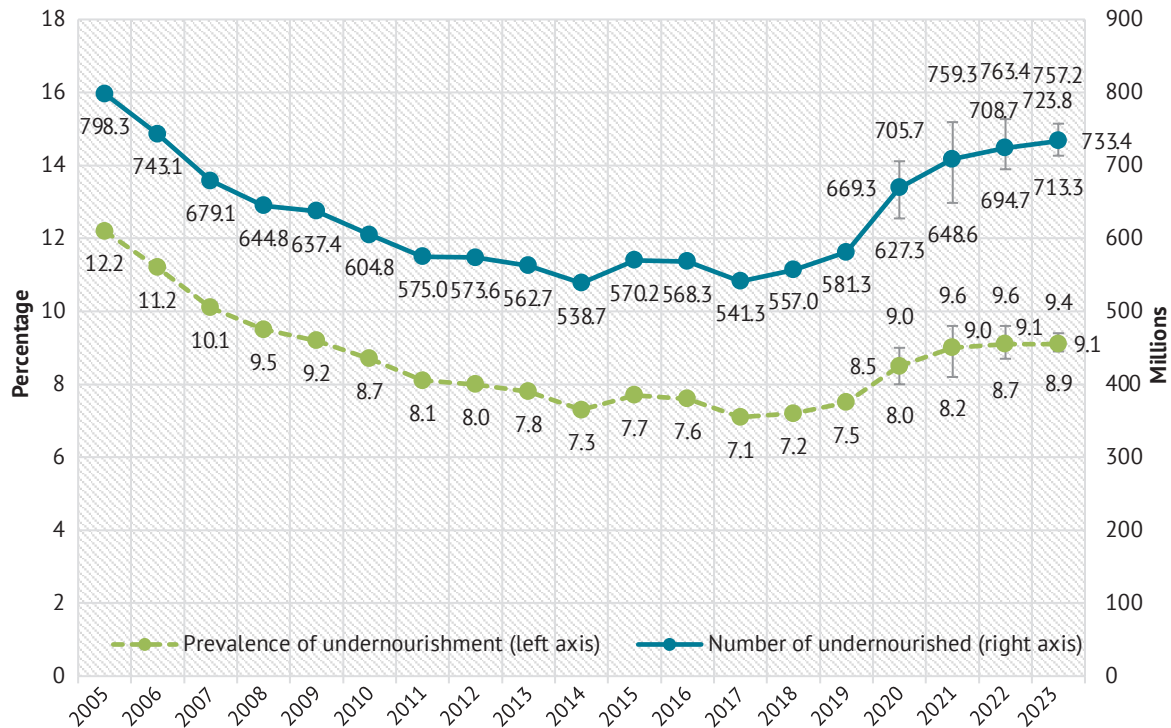


Figure 1. Key indicators of the scale of hunger in the world (2005-2023)

Notes: in the line chart, vertical bars show the limits of the calculated range

Source: generalised from Food and Agriculture Organization (2024) and FAOSTAT (n.d.)

Thus, Figure 1 shows that in 2023, between 713 million and 757 million people suffered from hunger worldwide, an increase of 152 million people contrasted with 2019. Since 2017, there has been a sharp growth in the incidence of starvation in the world (the “undernourishment” indicator): in 2017, 7.1% of the world’s population suffered from starvation, and in 2023, it was already 9.1%. In addition, progress in ensuring access to safe food has also slowed. In 2023, about 29% of the world’s population faced food insecurity. The issue of inequality in access to food continues to be a particularly pressing concern: more than 71% of people who do not have access to healthy food live in low-income countries. Thus, the state of global food security remains extremely challenging. According to the Food and Agriculture Organization (2024), by the end of the decade, more than 580 million people worldwide will suffer from chronic malnutrition. In 2015-2023, some

progress was made in the fight against various forms of malnutrition, but the problems of childhood obesity and low birth weight remain unresolved. Considering current trends, it is important to note that the world is not on course to achieve any of the seven nutrition-related goals by 2030.

The world needs to introduce comprehensive approaches that will help to improve the effectiveness of the fight against malnutrition, overweight and obesity, and micronutrient deficiencies, addressing the common causes of various forms of malnutrition. It should be noted that the existing problem is exacerbated by the lack of clear data on the available volumes and effectiveness of funding aimed at achieving global food security objectives. Due to the different systems for assessing funding for food security, there are significant discrepancies in estimates, which leads to the inability to fully identify areas with insufficient funding and

ineffective monitoring. There is a need to clearly define the sources and specifics of food security funding and to standardise approaches to its evaluation.

Innovative solutions are needed to increase funding to address global food security challenges in countries with high levels of hunger. However, for low- and middle-income countries, the process of raising affordable resources is quite a challenge. According to the Food and Agriculture Organization (2024), in countries with limited access to finance, malnutrition among children is quite common, while in countries with optimal access to finance, overweight is quite common. The vast majority of countries face food insecurity factors, including extreme climatic conditions.

It is worth noting that the task of accelerating the achievement of Sustainable Development Goals was discussed at the “Summit of the Future 2024”, which took place in New York in September 2024. “The Summit of the Future 2024” is a high-level event that brought together world leaders to build an international consensus on how to achieve a better present and preserve the future. It was emphasised that it is necessary to return the world to the path of fulfilling common commitments to achieve the Sustainable Development Goals after a significant deterioration during the COVID-19 pandemic (United Nations, 2024). In addition to improving the mechanisms for responding to global shocks and crises, the transformation of food systems based on the results of the 2021 UN Summit on Food Systems is identified as a common task for all countries. The need to create food systems that will ensure a transition to a healthy diet, promote nature restoration and take into account climate change is emphasised. In addition, recommendations are made to create a fair and sustainable multilateral trading system that will also cover food and agricultural markets. Support for 2nd Sustainable Development Goal is being implemented as part of the follow-up to the Food Systems Summit, led by the UN Food Systems Coordination Centre. The dynamics of food insecurity indicators by region of the world is summarised in Figure 2.

In Africa, despite all the world's efforts, the scale of hunger continues to grow (the aggregate level of food insecurity increased from 45% in 2015 to 58% in 2023), in Asia it remains almost unchanged (24.8% in 2023), and in Latin America it is significantly reduced (from 34.6% in 2020 to 28.25% in 2023). Africa is characterised by the highest proportion of the population that suffers from hunger: about 20.4% of the world's population is hungry in this region, 6.2% in Latin

America and the Caribbean, and 8.1% in Asia. According to the Food and Agriculture Organization (2024), by 2030, most of the world's undernourished people will live in Africa. In 2024, Asia will remain the leader in terms of the number of hungry people in absolute terms: the region has more than 384 million hungry people, or more than half of the total number of hungry people in the world. In Africa, 298 million people faced the problem of hunger in 2023, and 41 million in Latin America and the Caribbean.

However, hunger is not the only problem with the current state of global food security. In 2024, food insecurity rates are higher than they were before the COVID-19 pandemic, with little change between 2021 and 2024. In 2023, around 28.9% of the global population – approximately 2.33 billion people – experienced food insecurity (either moderate or severe), meaning they lacked consistent access to sufficient food. North America and Europe report the lowest levels of both moderate and acute food insecurity.

In order to develop measures aimed at strengthening food security, it is necessary to analyse the main factors of malnutrition and food insecurity, as well as to identify the countries most often affected by these problems. In the period 2014–2024, there was a significant increase in the intensity and frequency of conflicts, extreme climate events, economic downturns and a general slowdown in economic growth, which weakened the level of food security in the world. The impact of these factors is exacerbated by severe income inequality. The dynamics of undernutrition prevalence in countries affected by certain factors, such as conflicts, extreme climatic events and economic downturns, or countries with high levels of income inequality, are presented in Figure 3. Each of the main factors has its own characteristics, but they are often interrelated and create a synergistic effect, negatively affecting the vast majority of aspects of food security (availability, utilisation, accessibility and stability), as well as other aspects of nutrition. This conclusion is supported by the data on the relationship between food security and nutrition factors and indicators (Fig. 3). Most low- and middle-income countries are affected by at least one of the main factors, with many experiencing several factors simultaneously. This combination contributes to a notable increase in hunger and food insecurity. Figure 4 highlights the difference between the 2019 and 2023 undernutrition prevalence rates in different groups of countries, when different numbers of factors are taken into account.

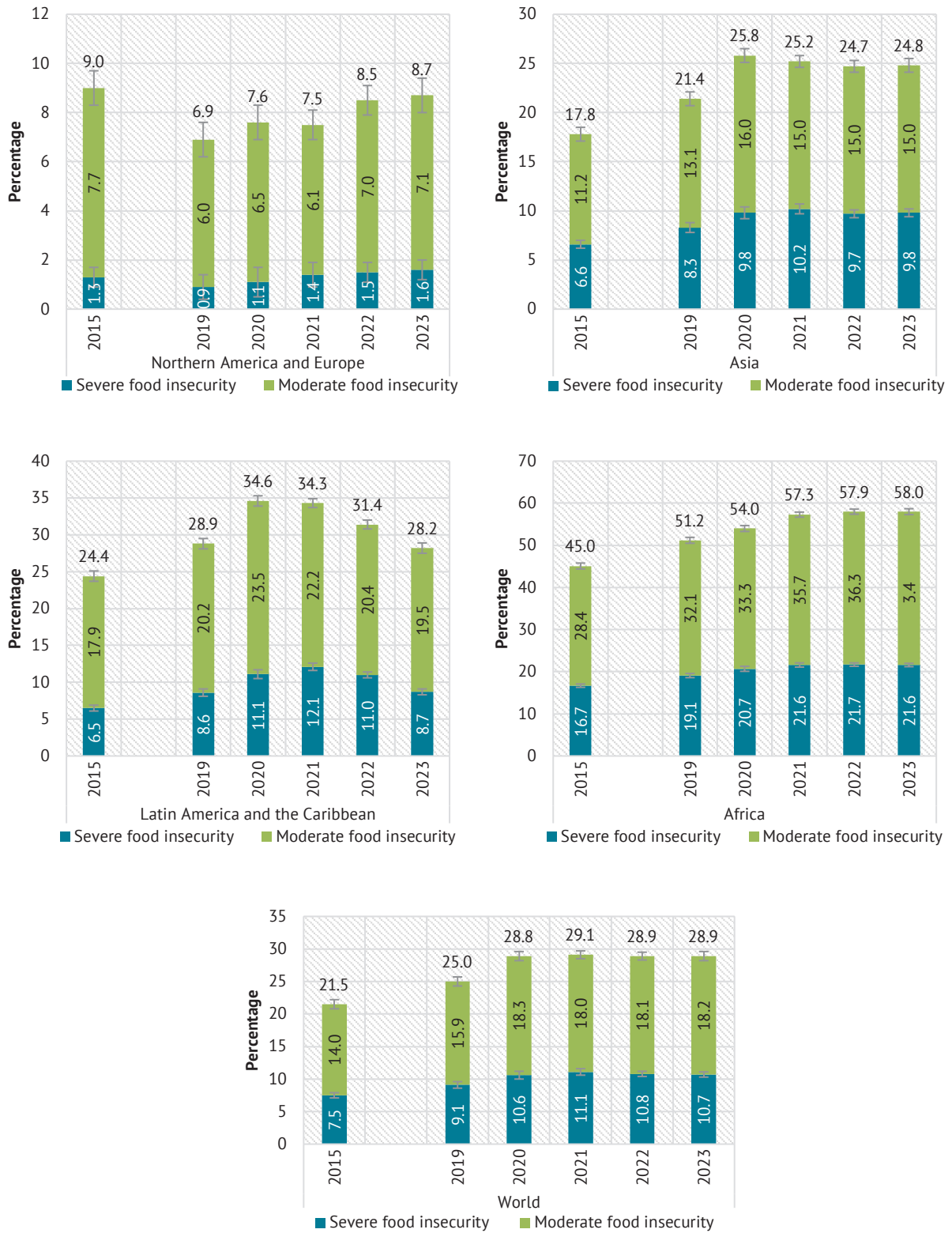


Figure 2. Dynamics of food insecurity indicators by regions of the world (2015, 2019-2023)

Source: generalised from Food and Agriculture Organization (2024) and FAOSTAT (n.d.)

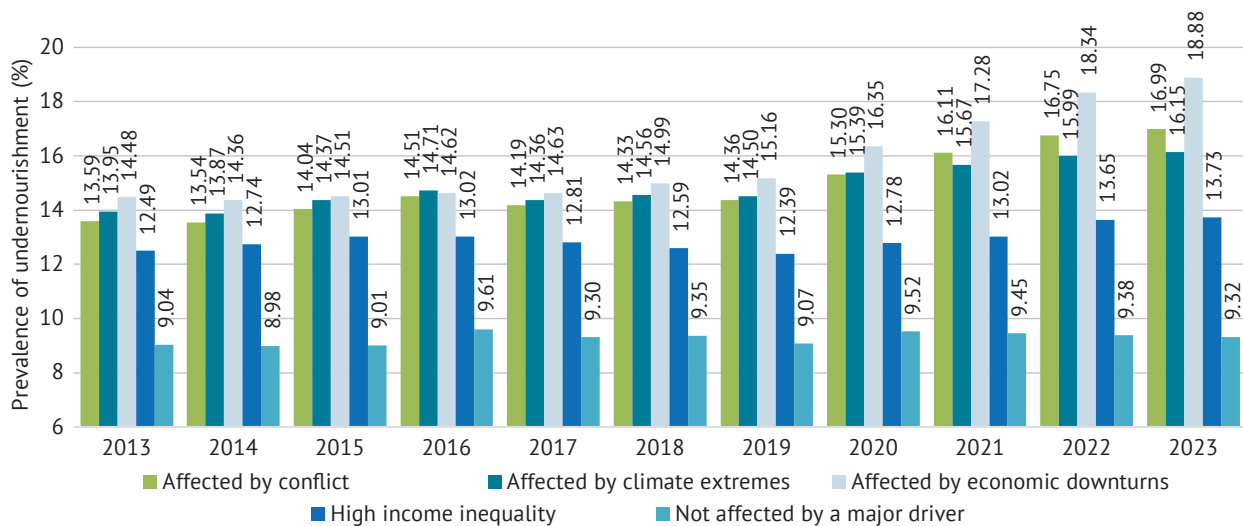


Figure 3. Changes in the prevalence of undernourishment in countries with high income inequality (2013–2023)

Source: generalised from Food and Agriculture Organization (2024) and FAOSTAT (n.d.)

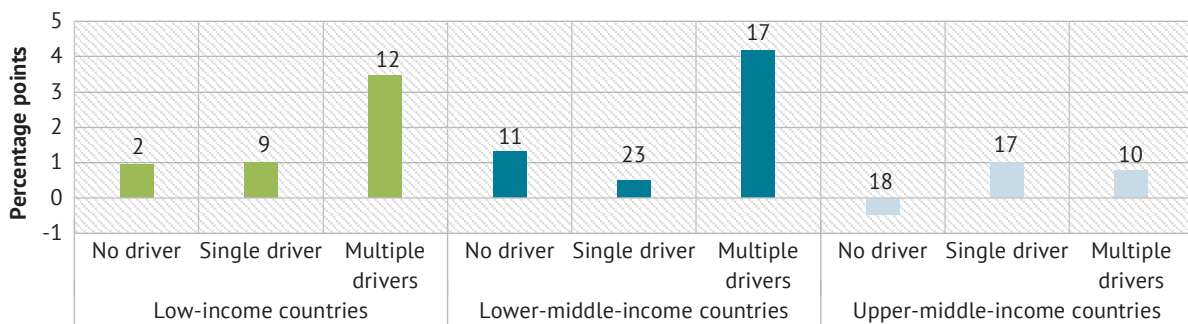


Figure 4. Difference between the prevalence of undernourishment in 2019 and 2023 in different groups of countries

Notes: the numbers at the top of each column are the number of countries that have been assigned to a particular category

Source: generalised from Food and Agriculture Organization (2024) and FAOSTAT (n.d.)

The data presented in Figure 4 suggests that the presence of several factors affecting food security, including the most dangerous ones (conflicts, extreme climatic events and economic downturns), create a synergistic effect, significantly weakening the level of food security in a particular country. Thus, in today's environment, the agricultural sector faces numerous challenges related to climate change, population growth and limited resources. Effective agricultural management is a key factor in protecting plants from weeds, pests and pathogens, increasing crop productivity, and introducing innovative technologies that can significantly affect food security.

One of the main recommendations is to adapt integrated agricultural management systems, which involves the use of crop rotations, post-harvest sowing and optimisation of fertilisation systems. These methods not only increase crop productivity, but also ensure the preservation of soil fertility, which is critical in the

face of increasing food demand. The use of modern management technologies, such as precision farming, enables agricultural producers to effectively control resources, which in turn reduces the cost of cultivation, increases crop productivity and the level of profitability of their cultivation.

Protecting plants from weeds, pests and pathogens also requires new approaches. The introduction of biological control agents and integrated plant protection systems based on environmentally friendly methods can reduce the use of chemical pesticides. This will improve product quality, which in turn will have a positive impact on public health. An important element of food security is also the introduction of innovative minimum tillage technologies. In addition, the use of the latest agricultural technologies, such as hydroponics, vertical farms and precision farming, can significantly increase agricultural productivity, especially in conditions of limited resources, such as water and land.

These approaches ensure the stability of food resources, reducing the risks of hunger and food shortages.

The introduction of new technologies in agriculture allows not only to increase crop productivity but also to adapt production to changing environmental conditions. This is especially important given global challenges like climate change and socio-economic crises, which could disrupt food supplies. Investments in R&D, as well as in farmer training, are needed to introduce new technologies that will make agriculture more sustainable and efficient. Thus, effective agricultural management, plant protection, increasing crop productivity and introducing innovative crop production technologies are important factors that directly affect the food security of the population. These approaches not only ensure the stability of food resources, but also contribute to reducing the risks associated with hunger and food shortages, thus forming the basis for sustainable development of the agricultural sector.

DISCUSSION

The findings of E. Shahini *et al.* (2024) are confirmed by the results of the authors' research in terms of the fact that war has catastrophic consequences for global food security. These consequences can be long-lasting and even irreversible, so it is important to analyse their impact on ecosystems and look for innovative ways to mitigate them in the future. These methods should form the basis for planning the recovery of areas affected by hostilities, including the restoration of ecosystems and natural resources.

The article by O. Shebanina *et al.* (2024) notes that significant soil contamination is a problem that causes a decrease in the overall state of food security. It is emphasised that the Russian invasion of Ukraine has led to large-scale environmental pollution, the consequences of which will take many years to remedy. In order to comprehensively analyse the scale of pollution and forecast its consequences, the author reviews soil pollution in certain regions of Ukraine. It is emphasised that the level of pollution varies depending on the location and course of hostilities. The disposal of chemical waste and ongoing conflicts in eastern Ukraine have led to soil contamination with heavy metals and petroleum products. In Kharkiv region, cadmium pollution increased by 200%, while in Kherson and Zaporizhzhia regions, oil spills increased by 139 and 156% respectively, causing health problems.

The impact of soil pollution on food security and sustainable development was studied by a group of authors I. Bulba *et al.* (2024), who analysed the state of land in different regions of Ukraine. It was found that in the Dnipro region, soil contamination levels were

three times higher than the maximum permissible concentration for lead and 1.5 times higher for fluoride. In Mykolaiv region, the concentration of lead exceeds the permissible level by five times, while the content of zinc, copper, fluorine and oil products exceeds the permissible levels by 25%. In Zaporizhzhia region, lead exceeds the standard by 11 times, the content of zinc and fluorine is increased by 50%, and that of oil products – by 35% and phosphates – by 30%. The paper emphasises that military operations affect the physical and chemical properties of soils, in particular, they lead to an increase in the acidity and density of the topsoil. The authors stress the importance of analysing the consequences of military operations, as well as developing and implementing eco-friendly technologies to restore the impacted areas.

Expanding on these results, a thorough research paper by V. Shebanin *et al.* (2024) published the results of a study on the introduction of new agrotechnological crop rotations and evaluation of their effectiveness on degraded lands of the Mykolaiv region, where active hostilities took place. The results showed that new crop rotations increase gross output by 1.3 times compared to previous figures. This is extremely important in the context of restoring food security not only in Ukraine but also in the global world. The results obtained can serve as a basis for the development and implementation of programmes aimed at restoring the structure, fertility and quality of damaged land, strengthening food security and achieving 2nd Sustainable Development Goal.

The study by O.A. Otekunrin *et al.* (2020) analysed the readiness of African countries to achieve the goal of zero hunger by 2030. The authors conclude that serious problems of hunger in the world are caused by ineffective governance, conflicts, and climate change. The authors emphasise that despite the decline in child mortality in Africa, many challenges remain in ensuring food security. African governments are advised to focus on implementing sustainable agricultural practices and creating effective policies to combat hunger. In addition to these important findings, the study recommends that data on the effectiveness of funding for global food security be adjusted.

The authors of the study N. Rahman & R. Yasin (2022) emphasised that achieving the goal of zero hunger has faced significant challenges due to the economic impact of the COVID-19 pandemic. It was also noted that in order to ensure the survival of vulnerable children, there is a need to provide humanitarian assistance and support agricultural production to ensure a stable food supply. The above study also considers economic crises in countries as a factor affecting food security. In the publication A. Muneeza & Z. Mustapha (2021), the authors analyse the problem of food insecurity in

conjunction with the specifics of Islam and note that it is in line with the basic principles of Shariah, which aim to achieve public welfare through ethical resource management. The researchers concluded that hunger is a problem that requires joint efforts of national governments under the leadership of the UN. In Islam, this cooperation is regarded as a collective responsibility, where both government agencies and affluent individuals must fulfill their duties to society. Interesting results in the field of the studied topic were obtained by E. Mutea *et al.* (2022), who analysed the state of food security in Kenya and concluded that half of the country's population faces problems with access to food. This study also focuses on the significant problems with food security in Africa, which are projected to worsen.

The article by A. Poltorak (2015) assessed the food security indicators for the period 2009-2013 in Ukraine and determined the dynamics of the weighted average food security indicator. The conclusions drawn about the need to adapt state policy to ensure the stability of food security are still relevant in 2024, as the state of food security remains extremely unsatisfactory. Article I. Atamanyuk *et al.* (2019) is devoted to the important economic problem of forecasting grain crop yields, taking into account unstable weather factors, which is extremely important in the process of monitoring the condition of food security. A flowchart of the algorithm is proposed, which illustrates the peculiarities of calculating the parameters of the forecasting model, as well as a formula for estimating the extrapolation error, which helps to determine the amount of information needed to obtain the desired level of forecasting quality.

Thus, the problem of ensuring food security in the world is characterised by a high level of urgency, and the outcomes of scientific research confirm the existence of serious threats to global food security caused by conflicts, environmental pollution and economic crises, in particular in the context of the war in Ukraine. The extent of soil contamination is worsening the situation with access to food, and effective solutions require a comprehensive approach, including innovative agricultural technologies and adaptation of public policies. It is important that national governments make efforts to restore the affected areas, monitor environmental impacts, and implement sustainable practices to ensure food security and achieve global development goals.

CONCLUSIONS

It is emphasised that the process of ensuring global food security is complicated by numerous challenges, of which climate change, military conflicts, economic crises and pandemics such as COVID-19 are particularly critical. Numerous research studies have pointed to a

significant deterioration in food availability and quality, especially in regions that are dependent on imports. In addition, the impact of armed conflicts causes food prices to rise and increases the risk of famine in vulnerable countries. The authors stress the importance of an integrated approach to monitoring and managing food security, one that considers economic, environmental, and social factors in order to achieve sustainable development goals. The essence of the economic category of "global food security" is clarified, which is considered as a complex state of the global food system, in which all people in all regions of the world have physical, social and economic access to adequate, safe, high-quality and nutritious food to ensure an active and healthy life over the long term.

It is analysed that achievement of the 2nd Sustainable Development Goal "ending hunger" by 2030 remains one of the most acute problems in the world. Despite some positive changes, global progress in this direction is insufficient and uneven. In particular, in 2023, more than 700 million people were hungry, and about 29% of the world's population faced food insecurity, especially in low-income countries. The COVID-19 pandemic has made the situation much more complicated, exacerbating food insecurity and disrupting food supply chains. Projected indicators indicate that the world will not be able to achieve the 2nd Sustainable Development Goal by 2030 without intensified efforts and innovative solutions. An important aspect is the standardisation of approaches to assessing food security financing, as existing funding gaps and insufficient monitoring make it difficult to identify and overcome problems.

It has been shown that the dynamics of food insecurity in different regions of the world has significant differences and peculiarities. Africa has the worst situation, where the level of food insecurity continues to grow (up to 58% in 2023), while in Asia it remains stable and in Latin America the indicators are decreasing. Africa remains the most vulnerable region, with 20.4% of the population suffering from hunger, and it is projected that starting in 2030, the majority of the world's food-insecure population will reside in that region. Conflict, extreme climate events, economic stagnation and income inequality have been shown to be the main factors that weaken food security, often acting in combination to create a synergistic negative impact on nutrition and access to food. These factors primarily affect low- and middle-income countries, leading to a significant increase in undernutrition. Many countries are simultaneously affected by several of these factors, which complicates the fight against hunger and makes it necessary to develop comprehensive measures to overcome food security problems.

Consideration of new environmental technologies for the remediation of contaminated areas, analysis of the effect of climate change on global food security, and assessment of the effectiveness of existing government policies in the sphere of environment and agriculture will form the basis for further research. Additionally, an important area will be the development of integrated approaches to monitoring soil and water quality, which will allow for an accurate assessment of the effects of military conflicts.

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CONFLICT OF INTEREST

None.

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Глобальна продовольча безпека: виклики у досягненні цілей сталого розвитку

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Анотація. Основна мета цього дослідження полягала в обґрунтуванні особливостей сучасного стану глобальної продовольчої безпеки. У процесі написання статті були використані такі методи, як бібліометричний аналіз (за допомогою Google Analytics, Vosviewer v.1.6.18 та SciVal), системно-структурний аналіз і синтез, історичний, діалектичний, графічний та описово-статистичний методи. Уточнено сутність економічної категорії «глобальна продовольча безпека», яка розглядається як комплексний стан світової продовольчої системи, при якому всі люди у всіх регіонах світу мають фізичний, соціальний і економічний доступ до достатньої кількості безпечних, якісних та поживних харчових продуктів, що забезпечують активне та здорове життя в довгостроковій перспективі. Зазначено, що прогрес у досягненні 2-ї цілі сталого розвитку «ліквідація голоду» є недостатнім і нерівномірним. У 2023 році понад 700 мільйонів людей у світі страждали від голоду, а 29 % світового населення зіштовхнулося з продовольчою небезпекою. Прогнози свідчать, що досягнення 2-ї цілі сталого розвитку до 2030 року буде неможливим без посилення зусиль та впровадження інновацій. Встановлено, що динаміка продовольчої небезпеки сильно варіюється між регіонами. В Африці ситуація найгірша – рівень продовольчої небезпеки досяг 58 % у 2023 році. Основними чинниками, що погіршують ситуацію з продовольчою безпекою, є конфлікти, екстремальні кліматичні явища, економічні кризи та нерівність доходів. Ці фактори створюють синергетичний негативний вплив, особливо в країнах із низьким і середнім рівнем доходів, і потребують розробки комплексних заходів для вирішення проблем продовольчої безпеки. Практична цінність дослідження полягає у застосуванні результатів проведеного моніторингу стану продовольчої безпеки, що сприятиме прийняттю ефективних рішень для подолання голоду і досягнення цілей сталого розвитку

Ключові слова: ризик голоду; недостатнє харчування; економічна доступність продовольства; нерівність у доступі до продовольства; доступ до безпечних харчових продуктів; конфлікти і продовольча криза