

## CAUSES AND SCOPE OF GLOBAL FOOD SECURITY PROBLEMS IN THE MODERN WORLD



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**Abstract.** The issues of the food security problem are an important part of national security concepts in all developed countries. The level of food security of the population has an effect on the possibilities of physiological, psychological, intellectual condition of people; it determines the level of social peace or tension in the society. Lack of food leads to the inevitable death of people. Given the dynamics of the global economy, the possibilities of a profound study of the issue are not exhausted and require new approaches to the scientific search. In view of the above, the article addresses a detailed analysis and systematization of approaches to identification of the causes and exacerbation of the global food security problem. The opinions of scientists – both representatives of the classical economics school and contemporary authors – are analysed. The study has found the root causes, each of which, to some extent, gives rise to hunger and malnutrition in the modern world. Poverty, i. e. lack of money to buy food, as well as the existing system for regulation of the global food market was mentioned as the most important root causes by the author.

The extent of the spread of famine in the world is analysed. The results obtained show that almost in all parts of the world there is an increasing number of starving people lacking the ability to get provisions based on dietary intake levels. The situation in African countries, where the number of starving people is increasing, is particularly alarming. This requires the development of modern strategies to address the global food security problem and provide more favourable conditions for access to the global food market by improving the mechanism of regulation of international food trade.

**Keywords:** *global food problem, food security, undernourishment, extreme poverty, moderately or severely food insecure, severely food insecure, hunger.*

### Introduction

The global population is constantly growing. Currently, most people live in cities. Technology is developing at a rapid pace as the economies of the world become increasingly interconnected and globalized. Yet, most countries experience no sustainable growth and are not part of this new economy. In general, the global economy is not growing as dynamically as expected. Conflicts and instability gained momentum and became more insoluble, contributing to greater population displacement. Climate change and its vagaries affect the productivity of agriculture, the production of food and the natural resources, on which the production of food, systems and livelihoods in rural areas depends, including the reduction in the numbers of farmers. All of this has led to major shifts in the way food is produced, distributed and consumed worldwide – and to new food security, nutrition and health issues.

More than 820 million people in the world are still starving, highlighting the huge challenge of achieving the “zero-starvation” sustainable development goals by 2030. Hunger rates are rising in almost all subregions of Africa and, to a lesser extent, in

Latin America and Western Asia. The situation in South Asia has improved significantly over the last five years, but the prevalence of malnutrition in this subregion is still the highest in Asia.

Another worrying fact is that almost 2 billion people in the world are experiencing moderate or severe food security. The lack of regular access to the nutritious and adequate food experienced by these people puts them at greater risk of malnutrition and poor health. While food security is largely concentrated in low- and middle-income countries, it affects 8 percent of the North American and European population moderately or severely.

The global community's response to these negative trends should be bolder, not only in scale but also in multi-sectoral cooperation, including agriculture, food, healthcare, water supply and sanitation, education and other relevant sectors; and in various policy areas, including social protection, development planning, and economic policy.

This will require accelerated and concerted action by all stakeholders and countries, including tireless and more integrated support from the United Nations and the international community for countries to support their development priorities, through multilateral agreements and means of implementation, so that the countries can embark on a path of human-centred transformation to rid the world of inferiority, inequality, hunger, food insecurity, and malnutrition in all its forms.

**Literature review.** The problems of food supply for the population, uneven food production, consumption and trade around the world have been reflected in the works of many foreign and domestic scientists, among whom are O. Berezin (2011), L. Berezina (2011), O. Bilorus (2008), P. Sabluk (2008), A. Sen (1981) and others. At the same time, existing scientific approaches to assessment of the food problem on a global scale that are described in the works of B. Suresh (2014), S. Gajanan (2014), S. Prabuddha (2014) come out of characteristics of food supply security through a defined limiting consumer goods basket and afterwards determine the course of the development of agricultural industry. In the works of A. Satinder (2015), Y. Motarjemi (2014), H. Lelieveld (2014), C. Charis Galanakis (2016), Stein T. Holden (2016), H. Ghebru (2016) a system of indicators has been used to evaluate food problem. Still, the research of the above authors considered the food problem only in terms of one approach, without due consideration of other groups of reasons. That is why it is necessary to systematize and identify all groups of reasons

that are exacerbating the problem of hunger and malnutrition in the world in order to combat it in the future.

**Setting the objectives of the article.**

The objective of the article is to systematize different approaches to the reasons for emergence and aggravation of the global food problem.

**Research methodology.** The common methodological bases of the research are the fundamentals of the contemporary economic theory, as well as works and researches of leading Ukrainian and foreign scientists on the food problem. The informational bases of the research are works of national and foreign specialists in the area of food problem and food security and the author's research. Advanced methods of scientific cognition have been used to achieve the set purpose: a historical and logical approach, systemic and functional analysis and factor analysis.

**Research results.** There are various scientific approaches that explain the essence of the global food problem. Scholarly opinion is related to the name of economist Thomas Malthus, who published *An Essay on the Principle of Population* in 1798 and argued that the world's population is growing faster than the production of goods required to meet the needs of mankind. The following phrase could be the main postulate of the book: "The power of the population is much stronger than the power of the earth producing food for the humans". Malthus argued that productivity was increasing in arithmetic progression, and population was growing in geometric progression. These factors inevitably lead to a reduction in life expectancy and hunger. Today, it is unambiguously clear that Malthus was wrong in his calculations. For example, in his time, the population of the planet was about 950 million people. If it had doubled every quarter of a century, according to Malthus's forecast, the planet would have been inhabited by 242 billion people these days (Malthus, 1993).

Another scientific opinion is related to poverty. F. Lapi, J. Collins, and P. Rosset, authors of *World hunger: Twelve Myths*, emphasize that wealth is the main problem, rather than scarcity. The planet produces enough food to provide each person with a diet of 3,500 calories a day (Lapi, Collins &

Rosset, 1998). The problem is that people are too poor to buy food for themselves.

Indian economist S. Mahendra Dev, Director and Vice Chancellor of the Indira Gandhi Institute of Development Research (IGIDR), also stresses that rising food prices are undermining the food security and well-being of the most vulnerable strata, destroying their limited purchasing power even more. Poverty limits adequate nutrition of millions of people (Mahendra, 2010).

Another scientific thought links the exacerbation of the global food problem with the environmental degradation. In particular, Z. M. Ilyina notes that as a result of soil degradation, more than 14 million hectares of arable land are annually abandoned, which, in turn, requires reclamation of new territories. Ploughing exceeds the threshold value of 40 % in many regions of the world (Ilyina, 2011).

Many scientists believe that inefficient government is at the root of the problem of food shortages. Shenggen Fan, a Chinese scientist and Director General of the International Food Policy Research Institute (IFPRI) stresses that skilful government management is the one to overcome hunger and malnutrition (International Food Policy Research Institute).

A. de Waal, author of many books on famine in Africa, also supports this view and argues that “any government, if desired, is able to take effective measures to stop the famine” in one of his books titled *Famine that Kills: Darfur, Sudan*. “When the government does not take such measures, it is for some reason interested in the continuation of famine and death” (De Waal, 2014).

The most contemporary cause of aggravation of the global food problem is the

neo-liberal model of globalization, which gives rise to disproportionate development in the global food market. Supporters of the latter approach argue that it is possible to call the current state of global economic relations a crisis, since there is a considerable disparity in the social and economic development of countries around the world and the disproportion of their relationships, which is one of the reasons for the aggravation of the global food problem.

Summarizing the various approaches to the causes of aggravation of the global food problem, it is possible to conclude that all of the above causes of starvation and malnutrition have an impact on the aggravation of the current food shortages setting, but poverty is the most significant, i. e. lack of funds to buy food, as well as the existing global food market regulation system.

The decade of the declining prevalence of malnutrition in the world is over and famine rates are slowly rising, according to FAO. The global prevalence of malnutrition remained almost unchanged, although it decreased by 11 % (Fig. 1), while the total number of malnourished people has been slowly increasing for several consecutive years (Fig. 2).

This means that today, just over 820 million people suffer from hunger, i. e. approximately every ninth person in the world. This underscores the enormous challenge of achieving the Sustainable Development Goals of Zero Hunger by 2030.

The situation is most alarming in Africa, where the prevalence rate of malnutrition has been showing a modest but steady increase in almost all subregions since 2015. It reached 26.5 percent and 30.8 percent in Central and Eastern Africa, respectively.

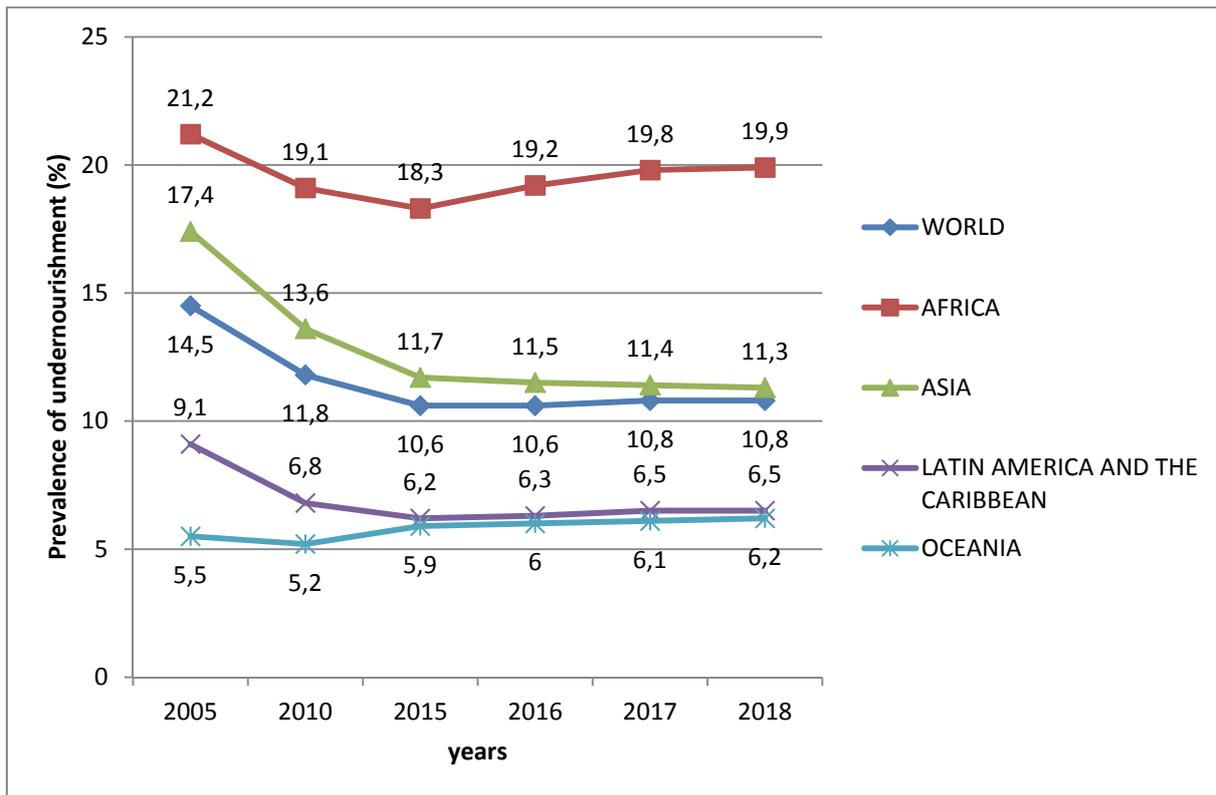


Figure 1. Prevalence of undernourishment in the world, 2005-2018 (Food and Agriculture Organization of the United Nations, 2019).

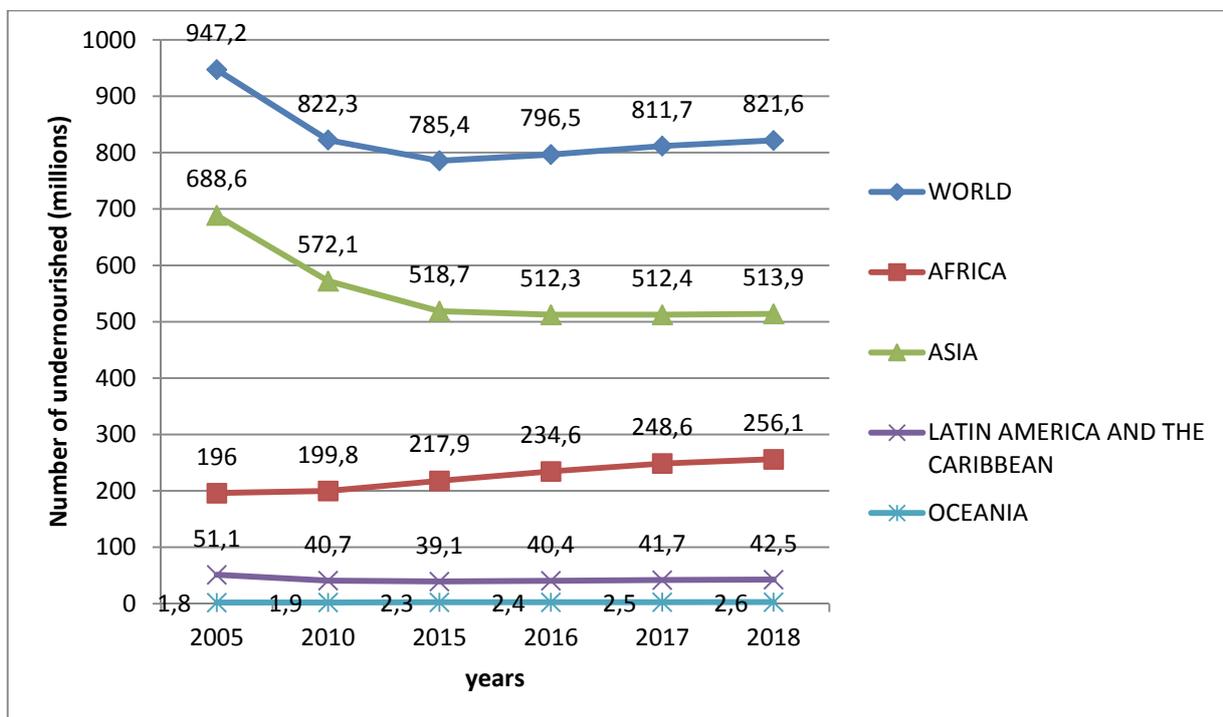


Figure 2. Number of undernourished people in the world, 2005-2018 (Food and Agriculture Organization of the United Nations, 2019).

According to recent estimates, 9.2 % of the global population (or just over 700 million people) in 2018 have experienced severe food insecurity, suggesting the maximum possible reduction of consumed food, i. e. they were hungry. Not surprisingly, the data for 2018 and for the years 2014 to 2018 correspond to the prevalence rates of malnutrition, which confirms the complementarity between the two indicators when monitoring the degree of severe food deficiency or “hunger”.

Fig. 3 shows the trends in the number of malnourished, food-poor and extremely poor people in the world from 2005 to 2018, contrasting their number with the growth in the world's population over the same period.

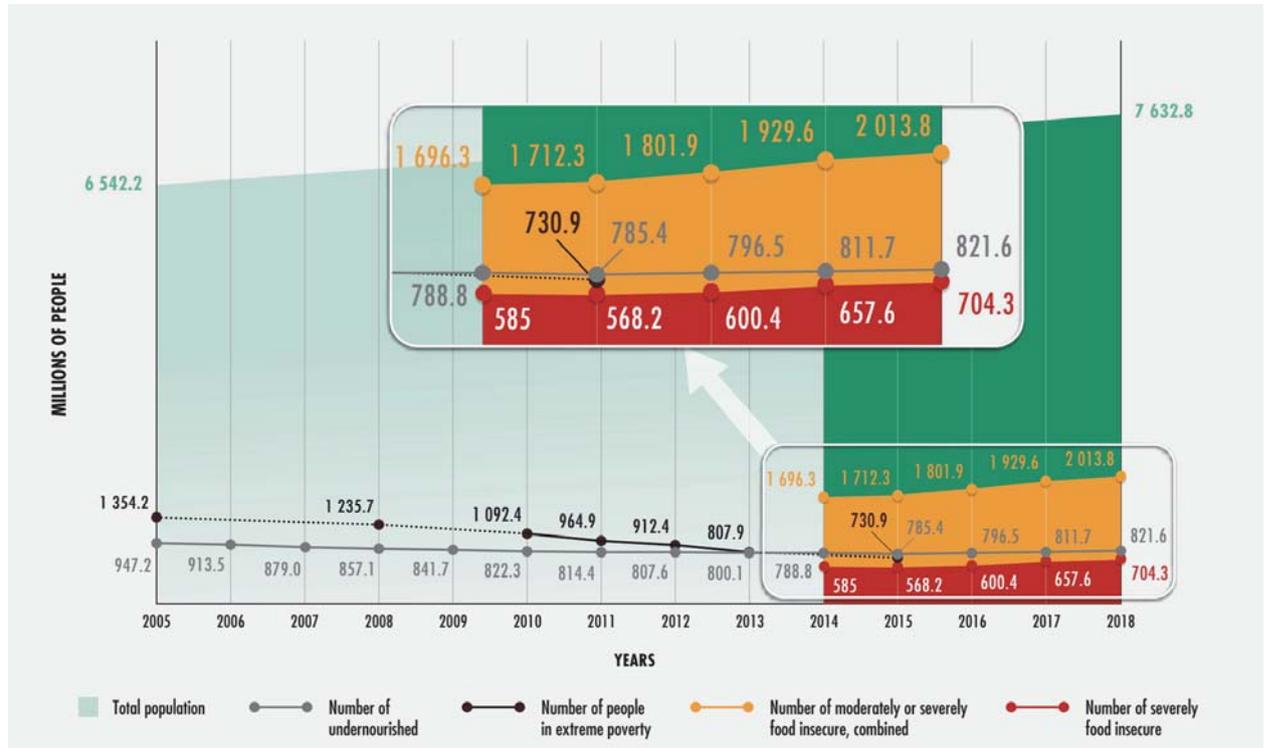


Figure 3. The numbers of undernourished and of food insecure have been on the rise in recent years, after a decade-long decline in extreme poverty and undernourishment (The World Bank, 2019).

These indicators provide a stable picture. Both extreme poverty and malnutrition declined from 2005 to 2015, albeit at different rates. The number of malnourished people and the number of the very poor were very close to 2015 levels, both indicators exceeding the food security threshold.

To put this in context, it becomes clear from Fig. 3 that even as the world population grows from 6.5 to 7.6 billion in 2005–2018, the number of malnourished people has decreased from almost 950 million to approximately 820 million. This is reflected in a reduction in the prevalence of malnutrition from 14.5 percent in 2005 to 10.8 percent in 2018.

## Conclusions

Based on the study, it is possible to conclude that the food security problem is still one of the most pressing and important issues in modern economic relations. The global food security problem is rooted in many causes affecting its status in certain regions of the world one way or another. We believe the most significant of these are: the low standard of living of the majority of the population in developing countries accompanied by extreme poverty; environmental issues related to soil fertility and pollution, as well as insufficient government regulation of food security in many developing countries, have a significant impact.

Hunger rates are rising in many countries where economic development is slowing down — it is striking that most of them are not the low-income countries but the middle-income countries. Economic shocks are exacerbating the problem of food security in these countries. Economic change tends to have a more severe impact on food security and nutrition as extreme poverty and inequality rates increase. Slowdowns and recessions disproportionately undermine food security and nutrition where inequality rises, especially in middle-income countries. Therefore, reducing such inequality should be the overriding goal for improvement of food security and nutrition, or the eventual result.

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