

SHARE OF UNDERNOURISHED POPULATION IN THE WORLD - DYNAMICS AND ANALYSIS

GHERHES MIHAI STEFAN^{*1}, DELAN SERGIU CONSTANTIN¹,
NEAGU-CORICI FABIO ALEXANDRU¹, BĂLAN IOANA MIHAELA^{*1},
FIRU NEGOESCU GHEORGHE ADRIAN¹

¹University of Life Sciences "King Mihai I" from Timisoara, Romania

*Corresponding author's e-mail: gherhes.m@yahoo.com ioanabalan@usvt.ro

Abstract: Undernourishment is a hidden but devastating problem that affects the lives of millions of people every day. Although it may seem hard to imagine in a world with remarkable advances in science and technology, there are still entire populations that do not have access to sufficient nutritional resources for a healthy and active life. This lack of food affects more than just physical health: it affects mental development, educational success, and even the economic stability of a nation.

Key words: food security, undernourishment, geographical regions, world, global intervention.

INTRODUCTION

Malnutrition is a hidden but devastating problem that affects the lives of millions of people every day. Although it may seem hard to imagine in a world with remarkable advances in science and technology, there are still entire populations that do not have access to sufficient nutritional resources for a healthy and active life. [1,2,7] This lack of food affects more than just physical health: it affects mental development, educational success, and even the economic stability of a nation.

Africa is one of the continents most severely affected by malnutrition. Especially in sub-Saharan African regions, access to essential food and nutritional resources is a major challenge. About one in five people in this area are malnourished, and the level of food insecurity is alarming, especially affecting children and vulnerable people.[5,6]

The factors contributing to this crisis are complex and include extreme poverty, armed conflict, climate change and economic instability. [3,4] For example, frequent droughts and floods in countries such as Ethiopia, Somalia and South Sudan greatly reduce agricultural production, leading to food shortages. [8,12] Furthermore, conflicts in regions such as the Sahel prevent access to fertile land and directly affect agricultural production, exacerbating food insecurity.

Countries rich in natural resources face malnutrition, although this may seem paradoxical. Even if they have large reserves of oil, minerals or fertile agricultural land, many of these countries fail to ensure an equitable distribution of resources and adequate food security for the entire population. [9,21] Among the main causes are corruption and lack of agricultural investment. In some resource-rich states, funds that could be directed to agriculture and social programs are sometimes diverted or mismanaged, leading to food insecurity.[15,18]

International organizations are making significant efforts to alleviate this crisis, but structural and political challenges mean that undernutrition remains an endemic problem in many parts of the African continent.[10, 22]

MATERIALS AND METHODS

For this research, external data from third-party sources was used, which provides a solid basis for our analysis. The data used was obtained from Our World in Data, which is based on reports from the Food and Agriculture Organization of the United Nations (FAO). Specific data refer to the dynamics of the undernourished population in different regions of the world for the period 2000-2022, as presented in the table provided. These sources were chosen based on the credibility, timeliness and public accessibility of the data.

External data collection involved downloading raw data sets in Excel format from Our World in Data and checking them for completeness and consistency. The table includes data on the percentage of the undernourished population in Africa, Latin America and the Caribbean, North America, Southeast Asia, South Asia, Europe, West Asia, Oceania, and worldwide, for the period 2000-2022. Metadata, including description of variables, reporting periods, and initial collection methodologies, were checked to ensure that datasets were consistent with the aims of this study. Incomplete data or those that were not validated were removed from further analysis.

Data on the dynamics of the undernourished population were analyzed for each region in order to understand trends specific to each geographic area. The processing was carried out exclusively using Microsoft Excel, which allowed the management and analysis of the data sets.

Data analysis was based on the application of descriptive statistical methods, using the functions and tools available in Microsoft Excel, such as basic formulas for calculating means. External third-party data was analyzed to identify relevant trends and correlations, providing a complete picture of the subject under study.

RESEARCH RESULTS

The analyzed data reveal the dynamics of the undernourished population in different regions of the world, for the period 2000-2022. The values reflect the percentage of the undernourished population and provide valuable insight into the evolution of food insecurity by region and period.

Table 1.

The dynamics of the undernourished population

Region \ Year	Africa	Latin America and the Caribbean	Northern America	South-Eastern Asia	Southern Asia	Europe	Western Asia	Oceania	World
1	2	3	4	5	6	7	8	9	10
2000	9.7	-1.9	-10.2	7.8	3.6	-10.2	-3.1	-6	12.7
2001	8.9	-2.4	-10.4	7.6	5.2	-10.4	-3.8	-6.5	12.9
2002	8.3	-2.2	-10.6	6	7	-10.6	-4.2	-6.8	13.1
2003	8.3	-2.8	-10.3	5.6	7	-10.3	-3.9	-5.9	12.8
2004	7.9	-2.8	-10.2	4.9	8	-10.2	-4.6	-5.7	12.7
2005	7.1	-2.8	-9.6	5.2	8.1	-9.6	-4.2	-5.2	12.1
2006	7.5	-2.5	-8.7	5.3	6.8	-8.7	-3.8	-4.8	11.2
2007	8.4	-2	-7.8	4.8	5.3	-7.8	-3.3	-3.5	10.3
2008	8.6	-2	-7.2	4.6	5.4	-7.2	-2.3	-3.2	9.7
2009	8.2	-1.9	-7.1	3.6	5.9	-7.1	-2.5	-2.9	9.6
2010	6.5	-2.4	-6.1	2.5	6.8	-6.1	-2.1	-2.1	8.6
2011	6.6	-2.3	-5.7	1.8	6.4	-5.7	-0.3	-2	8.2
2012	6.7	-2.4	-5.6	0.8	6.8	-5.6	-0.5	-2.2	8.1

Table 1. (cont.)

1	2	3	4	5	6	7	8	9	10
2013	7.1	-2.4	-5.4	0.6	6.2	-5.4	-0.1	-2.1	7.9
2014	7.6	-2.6	-5.2	-0.2	5.9	-5.2	0.4	-2	7.7
2015	7.9	-2.6	-5.4	-0.4	6.1	-5.4	1.2	-1.7	7.9
2016	8.8	-1.7	-5.3	-1.3	5.1	-5.3	2.2	-1.7	7.8
2017	9	-1.7	-5	-1.7	4.7	-5	2.3	-1.4	7.5
2018	9	-1.7	-5.1	-2.1	4.7	-5.1	2.7	-1.2	7.6
2019	9.1	-2.3	-5.4	-2.6	5.4	-5.4	2.4	-1.5	7.9
2020	9.8	-2.4	-6.4	-3.6	6.7	-6.4	1.6	-2.9	8.9
2021	10.1	-2.3	-6.8	-4	7.1	-6.8	0.9	-2.7	9.3
2022	10.5	-2.7	-6.7	-4.2	6.4	-6.7	1.6	-2.2	9.2

Source: Ritchie, Rosado, and Roser, 2023 [14]

- Africa

General trend. We see a significant increase in the rate of undernutrition, from 9.7% in 2000 to 10.5% in 2022. This indicates that Africa is facing continued difficulties in ensuring food security, and especially from 2016 to 2022, the rates are constantly increasing.

Notable growth. The increase observed after 2015 suggests that, despite some progress in previous years, factors of political instability, climate change, and other regional challenges have contributed to increased food insecurity.[5,14]

- Latin America and the Caribbean

Consistent decrease. The rate of undernutrition is steadily decreasing in this region, starting from -1.9% in 2000 and reaching -2.7% in 2022. The decrease is steady and significant through 2019, suggesting that hunger reduction efforts have been successful, likely thanks to social and economic programs in the region.

Easy growth. During 2020-2022, a slight increase in undernutrition is observed, reflecting possible economic difficulties and food supply crises associated with the COVID-19 pandemic. [5,14]

- Northern America

Low and stable rate. North America shows a decrease in undernutrition, from -10.2% in 2000 to -6.7% in 2022. The negative values suggest that the region is experiencing food overabundance, but the moderate decrease also indicates the existence of challenges in equal access to food for all segments of the population .

The pandemic and its impact. A slight increase in the rate of undernutrition is observed since 2020, coinciding with the pandemic, suggesting increasing food insecurity for certain vulnerable groups. [5,14]

- South-Eastern Asia

Fluctuations. In Southeast Asia, undernutrition rates fluctuate, starting at 7.8% in 2000 and declining to negative values as of 2014, indicating progress in combating food insecurity.

Significant recent growth. From 2018 to 2022, negative values suggest an increase in undernutrition, a possible consequence of economic problems and the COVID-19 pandemic, which have affected supply chains and agricultural production. [5,14]

- Southern Asia

Cyclicity. In this region, the percentage of undernourished population has steadily increased from 3.6% in 2000 to 7.1% in 2021. This indicates a problematic situation in providing adequate food, which could be influenced by population growth and economic challenges.

Decrease in 2022. A slight decrease is observed in 2022 (to 6.4%), suggesting some improvement or economic recovery efforts.

- **Europe**

Significant progress. The undernutrition rate in Europe shows a stable and constant decrease, from -10.2% in 2000 to -6.7% in 2022. This underlines the fact that the majority of the European population has adequate access to food resources, recording a surplus. However, after 2014, the decline is no longer so steep, suggesting a stabilization of food security conditions. [5,14]

- **Western Asia**

Decrease and stabilization. Although it started with negative values, the undernutrition rate increased slightly, reaching 2.4% in 2019, but decreased slightly afterwards. This indicates improvements in access to food and the supply of food resources, although some regions are still vulnerable, especially in the tense geopolitical context of the region. [5,14]

- **Oceania**

Marginal fluctuations. Oceania had quite varied values, with a slight improvement over time, from -6% in 2000 to -2.2% in 2022. Decreases in recent years suggest a greater capacity to ensure food security, but regional vulnerabilities, including those caused by of climate change, continues to affect the stability of the food supply. [5,14]

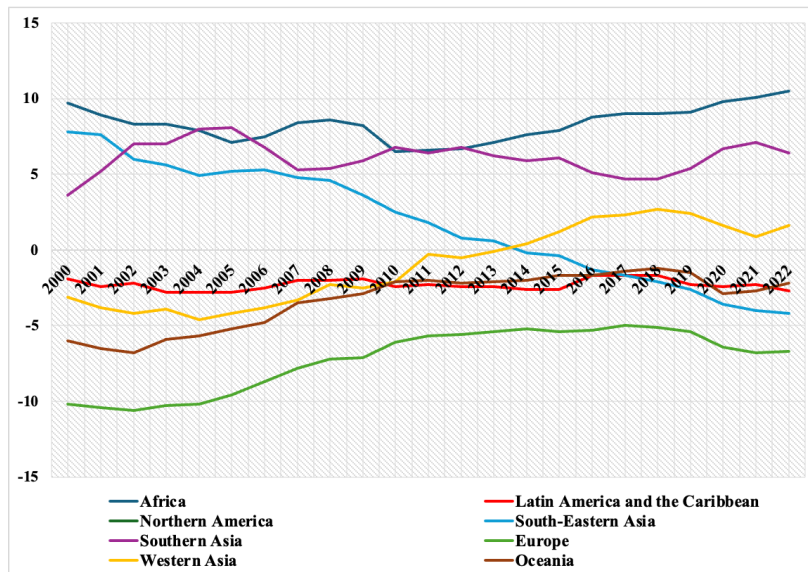


Figure 1. Analysis of the dynamics of the undernourished population in the world

Source: Original by [14]

The current global situation shows a downward trend. Globally, the rate of undernutrition is steadily decreasing, from 12.7% in 2000 to 9.2% in 2022. This indicates global progress, but the rate of decline is not very high, and starting from 2020 a slight increase is observed. This can be attributed to the impact of the COVID-19 pandemic, climate change and international conflicts, which have affected access to food for many communities.

CONCLUSIONS

Asymmetric progress. It can be seen from the data that progress in reducing undernutrition has not been uniform across world regions. [11,20] While some regions, such as Latin America and Europe, have seen steady improvements, other regions such as Africa and South Asia still face major difficulties in this area.

The COVID-19 pandemic. Increases in the rate of undernutrition in 2020-2022 are likely the result of economic disruptions caused by the COVID-19 pandemic, which has

disrupted supply chains, increased food prices, and reduced population access to essential food resources.[13,19]

Risk factors. The impact of climate change and armed conflict are important factors contributing to increased food insecurity, especially in regions such as Africa and South Asia, which are vulnerable to these risks.

The need for global intervention. The data underscore the importance of international interventions and cooperation to reduce undernutrition, especially in vulnerable regions. It is essential that global efforts focus on improving the resilience of food systems by building local capacities, equal access to resources, and implementing climate change adaptation strategies.

This analysis provides a clear perspective on the persistent challenges in combating undernutrition and highlights the need to address each region differently, taking into account the specific risk factors and socio-economic context.

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