

## **WORLD FOOD SECURITY OVERVIEW**

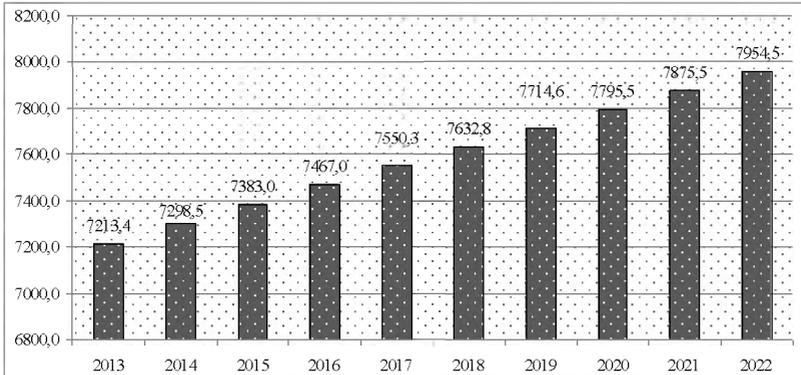
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Under the modern conditions food security provision becomes of paramount, due to a number of objective reasons. The main ones: rapid population growth (Fig.1), main types of natural resources exhaustion, disproportionate provision of food and food products to the population of different regions. Food security is becoming increasingly important under the market relations development conditions, within which the competitive environment arises, extending not only to enterprises and economic entities activities, but more and also to the state social environment, in which individuals need to create conditions for an adequate living standard provision independently. Food security occurs, at the individual, household, national, regional and global levels when all people, at any time, have physical and economic access to sufficient, safe and nutritious food to meet their needs and food preferences for an active and healthy life [6]. Food insecurity exists when people do not have adequate physical, social or economic access to food. Food availability appears in three forms. Physical accessibility implies a simple availability of vital products on the consumer market; affordability includes a financial opportunity to get them; social – the minimum differentiation in the consumption of the main product groups among different population segments. Self-sufficiency of the state to provide its population with relevant goods is related to food availability. As for Ukraine? Food security is the state guarantee for its population to have food unhindered economic access in order to maintain its normal life activities.

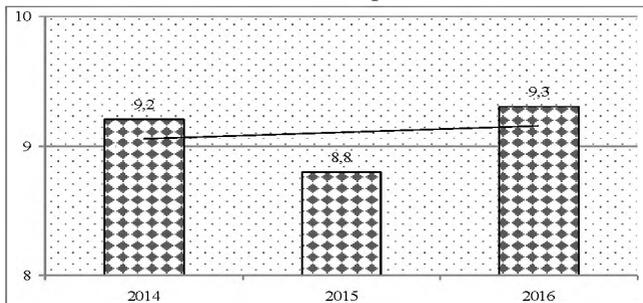
Sufficient quantities and assortment of food availability and economic affordability does not yet guarantee the national food security of the country. Not only the quantitative factor, but also the qualitative composition of food products and their ecological safety are being determined. Quality issues can be resolved with the help of ecologically certified production systems formation and the relevant certification procedures by enterprises implementation. At the present stage of the world economy development, effective ecologically certified agricultural production could become the basis for the state national food security ensuring, the population evolutionary ecological needs by clean and high quality food products satisfaction. It should be noted that the urgency of food security ensuring problem is not reduced either with the change in the world political system, or with the scientific and technological advancement of world civilization.



**Fig.1. Total world population trends**

Source: [5]

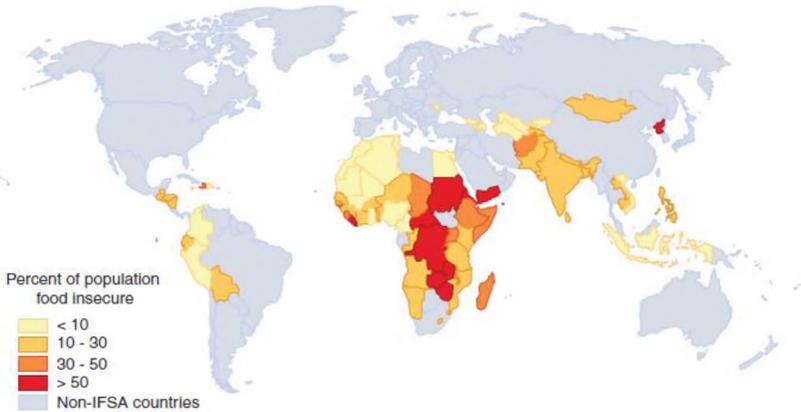
Food in human life activity plays a special role. Food problem can turn into a deep international crisis over the life of the current generation. In recent years, the dynamics of the people affected by severe food insecurity number, their percentage and the Food Insecurity Experience Scale were fluctuated (Fig.2). In 2016, this indicator has increased to 9.3 %, which exceeded the results of 2014. The estimated number of undernourished people increased to 815 million in 2016, up from 777 million in 2015.



**Fig.2. Percentage of people affected by severe food insecurity, measured using the Food Insecurity Experience Scale, 2017 survey.**

Source: [5]

More than 70 countries suffer from food shortage, food riots flare up in more than 40 countries. Food insecurity indicators differ greatly by region. Sub-Saharan Africa has the highest share of food-insecure people (31.7 %). Food insecurity is estimated to affect 14.8 percent of people in Latin America and Caribbean, 13.5 % in Asia (Fig.3).

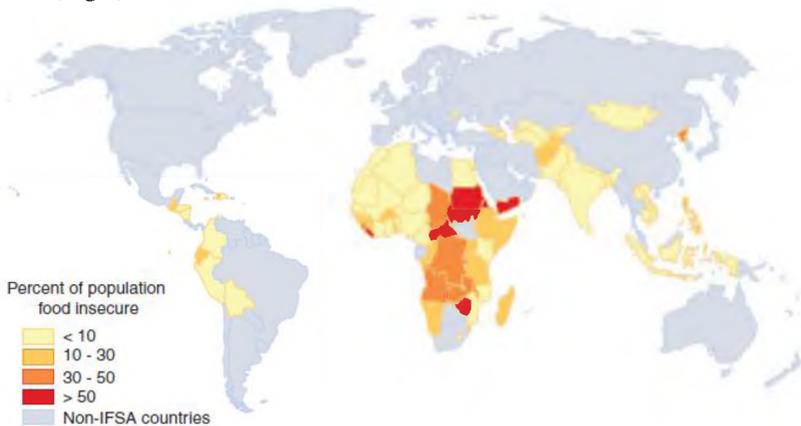


***Fig.3. Share of population that is food insecure, 2017***

**\* IFSA = International Food Security Assessment**

*Source:* [5]

Taking into account that according to projections incomes in all regions suffering from food insecurity will gradually increase, and then by 2027 food will become more affordable and accessible. So a significant insecurity of population that is food insecurity is expected. The biggest improvement projected for Asia, where the food–insecure population will fall from 13.5 % to 4.6 % in 2027. This trend is expected in other regions as well (Fig.4).



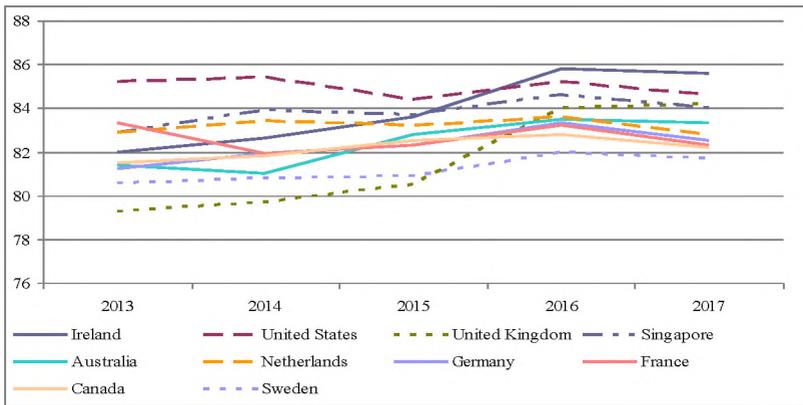
***Fig.4. Share of population that is food insecure, 2027***

**\* IFSA = International Food Security Assessment**

*Source:* [5].

The Global Food Security Index (GFSI) considers the core issues of affordability, availability, and quality across a set of 113 countries. The index is a dynamic quantitative and qualitative benchmarking model, constructed from 28 unique indicators, that measures these drivers of food security across both developing and developed countries. This index is the first to examine food security comprehensively across the three internationally established dimensions. Moreover, the study looks beyond hunger to the underlying factors affecting food insecurity. This year the GFSI includes an adjustment factor on natural resources and resilience [7].

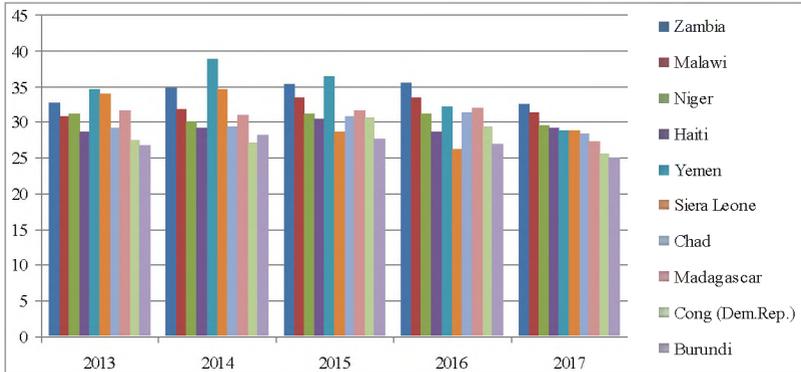
The world leaders by this index in 2017: Ireland (85.6), United States (84.6), United Kingdom (84.2), Singapore (84) and Australia (83.3). Generally, among developed countries, there is a general tendency of this index gradual increase and their food security improvement (Fig.5). But, it should be noted, that by the «Quality & Safety» category Portugal takes the first place, although its overall index ranks only 20th place. At the same time, the United States and Australia are among the five world leaders by this indicator.



**Fig.5. 10 top countries by the Global Food Security Index**

Source: [6].

As for the countries with the lowest Global Food Security Index they are represented mainly by low-income African countries (Fig.6). Among the leaders of these countries are Burundi (25.1), Congo (25.5), Madagascar (27.2), Chad (28.3) and Sierra Leone (28.7). The categories indicators of «Affordability», «Availability» and «Quality & Safety» of Global Food Security Index during the last five years not only did not increase, but have a clear tendency for the decrease which has negative consequences for the political and economic stability of these countries.



**Fig.6. 10 top countries with the lowest Global Food Security Index**  
 Source: [6].

As for Ukraine, in 2017 it headed 10 top countries with the lowest Global Food Security Index in Europe, occupied the 63rd rank of the world ranking and became the most deteriorated European country in comparison with 2012 and 2016 indicators, which is unacceptable from the standpoint of adequate agricultural production opportunities, the presence of unique fertile soils, significant resource and labor potential. A significant part of the population is not able to buy the necessary amount of food to provide an active and healthy life and some can only consume cheap products without getting the right amount of calories. By the mid–1990s, Ukraine has lost half of the meat consumption pre–crisis level, and since then this indicator did not increase.

Thus, food security could be provided under the following conditions: the population is provided with ecologically clean and healthy food products of domestic production according to scientifically grounded norms; food prices are available to everyone; created renewable strategic food stocks in case of natural disasters, wars and other emergencies.

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