Food and Agriculture Organization of the United Nations

World Health Organization

THE NUTRITION CHALLENGE

FOOD SYSTEM SOLUTIONS

- Malnutrition in all its forms continues to be one of the greatest challenges faced by our generation.
- Unhealthy diets are an important cause of malnutrition. They are now responsible for more adult deaths and disability than alcohol and tobacco use.
- One driver of the nutrition situation is that our current food systems do not provide the healthy diets needed for optimal health and wellbeing.
- Measures that can effectively support food system transformation for enhancing healthy diets and improve nutrition exist.
- Members of Parliament from across the world gathered in Rome at the Second International Conference on Nutrition (ICN2) in November 2014 and underscored the importance of parliamentary dialogue to prevent malnutrition.
- Parliamentarians can guide and monitor public sector policies and budget allocations towards transforming food systems.
- Parliamentarians are well placed to facilitate the implementation of the ICN2 commitments made by countries under the umbrella of the Decade of Action on Nutrition (2016-2025), and hold key stakeholders accountable for their action.

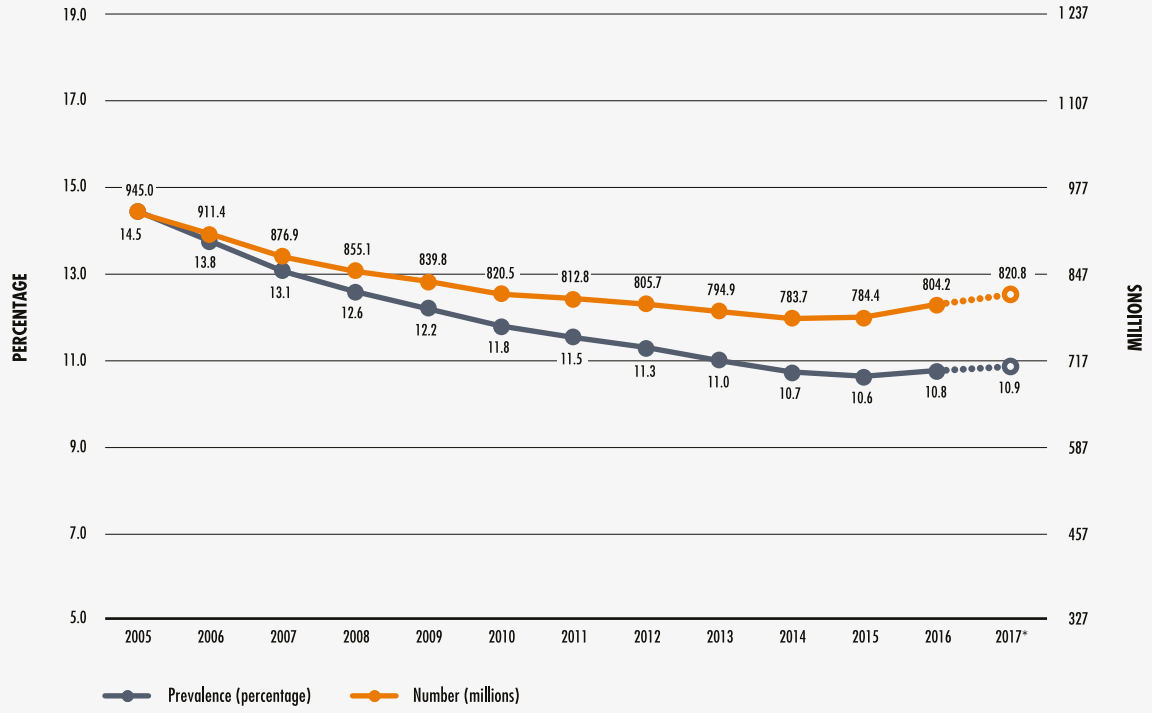
THE NUTRITION CHALLENGE AND FOOD SYSTEM SOLUTIONS

The way food is produced, marketed and made available to people has changed tremendously in the past 50 years. Many advances have been made, leading to more efficient food supply chains which have in turn generated improvements in food security and nutrition. Yet, malnutrition in all its forms continues to be one of the greatest challenges faced by our generation, and unhealthy diets are among the leading causes of death and disability.

In some parts of the world, people are not eating sufficient amounts of food to provide the calories, vitamins and minerals they need for optimal health, while in others, people are eating far more food than is necessary for their health and well-being, or simply too much of foods high in fat, sugar and/or salt.

This brief describes what parliamentarians need to know about the current nutrition situation in the world and how our food systems are shaping food environments that steer people towards unhealthy diets which are one of the causal factors of malnutrition. Parliamentarians are well placed to facilitate action to transform the world's current food systems. This brief gives concrete examples of measures through which policymakers can influence food systems so as to promote healthy diets and prevent malnutrition in all its forms, including undernourishment, stunting, wasting, micronutrient deficiencies, overweight and obesity, as well as diet-related non-communicable diseases (NCDs).

FIGURE 1: Prevalence and numbers of undernourished



Source: SOFI 2018[1]

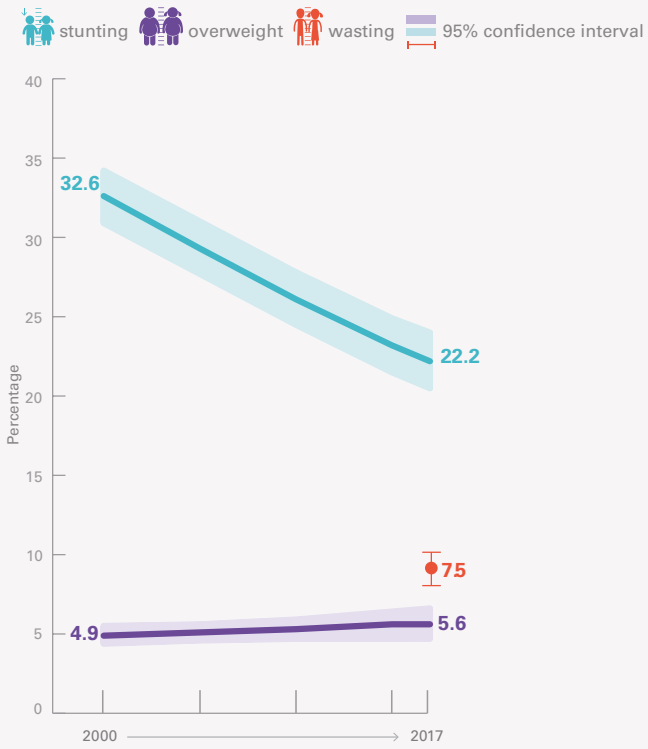
[1] **FAO, IFAD, UNICEF, WFP and WHO.** 2018. The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition. Rome, FAO. www.fao.org/state-of-food-security-nutrition

1. The current nutrition situation

1.1 Hunger and undernutrition

Hunger has decreased globally in recent decades, but since 2016 the number of undernourished people in the world has increased (**Figure 1**). Particularly worrying is stunting (low height for age) in children under five years of age, as this is a largely irreversible outcome of inadequate nutrition and repeated bouts of illness. Recent data tell us that stunting is declining, but it is not doing so fast enough (**Figure 2**). This is of special concern because stunting before the age of two could lead to poor cognitive and educational outcomes in later life. A stunted child is also at risk of developing obesity and NCDs in later life.

FIGURE 2: Percentage of stunted children (under 5)



Source: UNICEF,WHO,IBRD/WB. 2018.[2]

1.2 Deficiencies in vitamins and minerals

More than 2 billion people worldwide are affected by deficiencies in vitamins and minerals. These deficiencies are called 'hidden hunger', as people who suffer from them may look healthy and not consciously feel hunger. The consequences, however, are tragic. For example, anaemia affects over 613 million women of reproductive age worldwide and contributes significantly to maternal deaths[3]. While the causes of anaemia vary, it is estimated that half the cases are due to dietary deficiencies of iron, vitamin B12 and/or folic acid. Maternal

[2] **UNICEF, WHO, IBRD/WB**. 2018. Levels and trends in child malnutrition: key findings of the 2018 Edition of the Joint Child Malnutrition Estimates. www.who.int/nutgrowthdb/2018-jme-brochure.pdf

[3] **WHO**. 2014. Global nutrition targets 2025: anaemia policy brief. www.who.int/nutrition/publications/globaltargets2025_policybrief_anaemia

anaemia increases the risk of stillbirth, maternal and infant deaths, early child and maternal mortality and low birth weight of new-borns, as well as anaemia and poor growth and development in young children. It also impairs adult physical work capacity.

1.3 Overweight and obesity

Globally, nearly 2 billion adults are overweight, of whom 672 million are obese[4]. Obesity is on the rise in all regions of the world. In some areas, such as Africa, it is increasing at faster rates. It is not only adults who are affected: an alarming 38 million children under five years of age were overweight in 2017 globally[2] – an increase of 8 million since 2000. Overweight and obesity are risk factors for many NCDs such as heart diseases, stroke, type 2 diabetes, and some cancers. These NCDs are economically costly to societies, owing to high treatment costs, lost income and earning potential, and reduced labour productivity. Moreover, obese people may also suffer low self-esteem, depression and social isolation.

These nutritional problems are a cause for great concern, posing a significant challenge. They call for urgent and scaled-up action by countries and their partners in line with the international commitments made at the Second International Conference on Nutrition (ICN2, 2014), the UN Decade of Action on Nutrition 2016–2025, and the 2030 Agenda for Sustainable Development.

1.4 Drivers of the current nutrition situation

Malnutrition in all its forms has many causes. An important one is low-quality diets. Recent decades have seen a shift in dietary patterns worldwide. On the one hand, rising incomes in certain parts of the world have led to greater demand for, and consumption of, nutrient-rich foods such as fruits, vegetables, wholegrains and seafood. On the other hand, there has been a parallel – and more rapid – increase in the consumption of highly processed foods and beverages, which are often high in fat, sugars and/or salt, and processed meat[5]. While in high-income countries these changes have already occurred, low- and middle-income countries (LMICs) are catching up very fast (**Figure 3**). Although diets are becoming more diversified globally, evidence shows that certain foods that constitute a healthy diet, such as fruits and vegetables are not being consumed in enough quantities to meet recommended intakes.

A healthy diet is one that meets the nutritional needs of individuals by providing sufficient, safe, and diversified foods to maintain active life and reduce risks of disease. It contains fruits, vegetables, legumes (e.g. lentils, beans), nuts and whole grains (e.g. unprocessed maize, millet, oats, wheat, brown rice), and is low in fats (especially saturated fats), free sugars and salt[6]. Unhealthy diets are an important cause of malnutrition. They are now responsible for more adult deaths and disability than alcohol and tobacco use (**Figure 4**).

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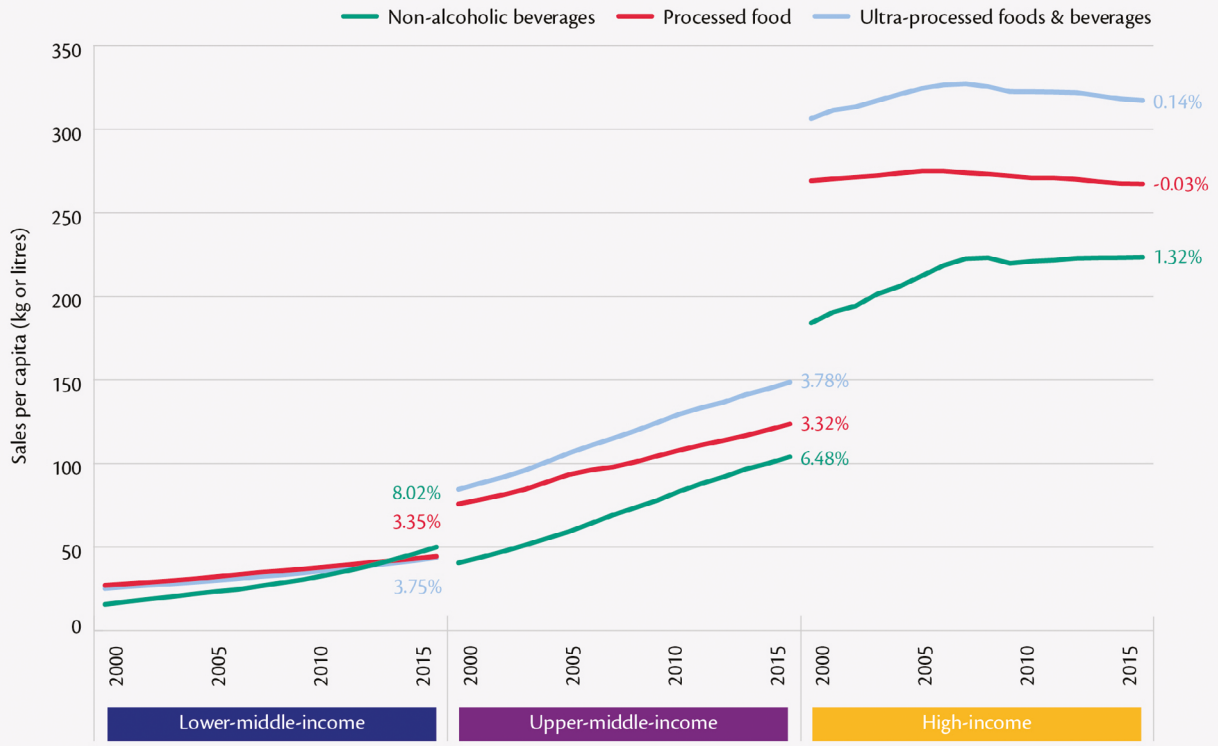
[4] **NCD Risk Factor Collaboration**. 2017. www.ncbi.nlm.nih.gov/pmc/articles/PMC5735219/pdf/main.pdf

[5] **Inamura F., Micha R., Kathibzadeh S., Fahimi S., Powels J., Mozaffarian D.** 2015. Dietary quality among men and women in 187 countries in 1990 and 2010: a systematic assessment. The Lancet, Volume 3, Issue 3, PE132-E142, March 01, 2015. www.ncbi.nlm.nih.gov/pubmed/25701991

[6] **WHO** (2018) Fact sheet: Healthy diet, Geneva. www.who.int/news-room/fact-sheets/detail/healthy-diet

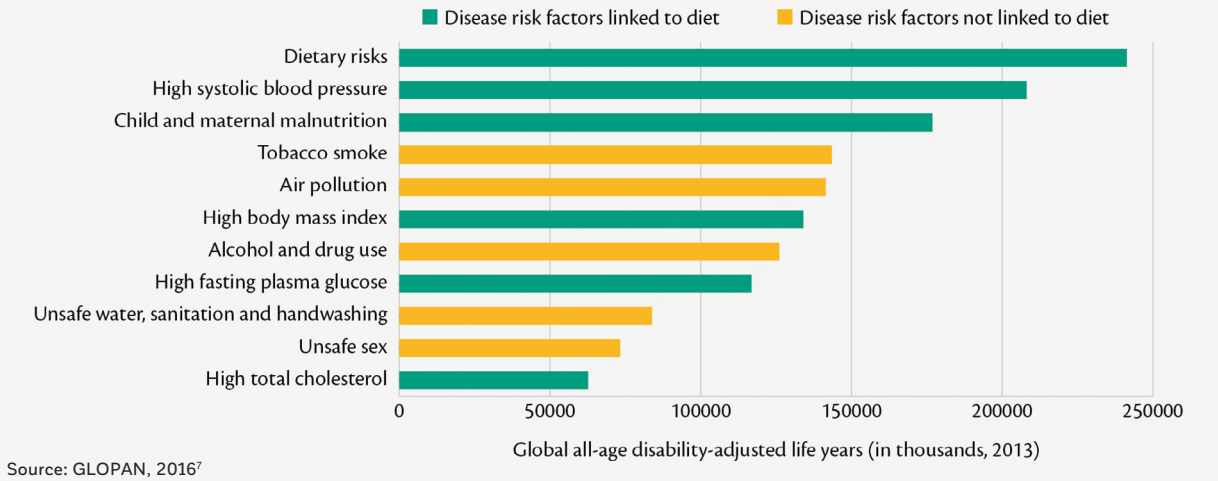
[7] **Global Panel on Agriculture and Food Systems for Nutrition.** 2016. Food systems and diets: Facing the challenges of the 21st century. London, UK. www.glopan.org/foresight

FIGURE 3: Trends in per capita sales volumes of non-alcoholic beverages, processed foods and ultra-processed foods by country income group, 2000–2015



Source: GLOPAN, 2016[7]

FIGURE 4: Six of the top 11 risk factors driving the global burden of disease are related to diet



Source: GLOPAN, 2016[7]

2. Food systems

2.1 Why are diets changing? The role of the food environment and food systems

In addition to a number of 'lifestyle' factors related to growing levels of urbanization, income, and increasing demands on women's time[8], what people eat is greatly affected by the foods physically available to them, the prices at which these foods are sold, and the extent to which they are culturally and socially acceptable.

The food environment is the space where consumers engage with a food system to make their decisions about acquiring, preparing and consuming food. It shapes people's dietary choices and influences their nutritional status[9].

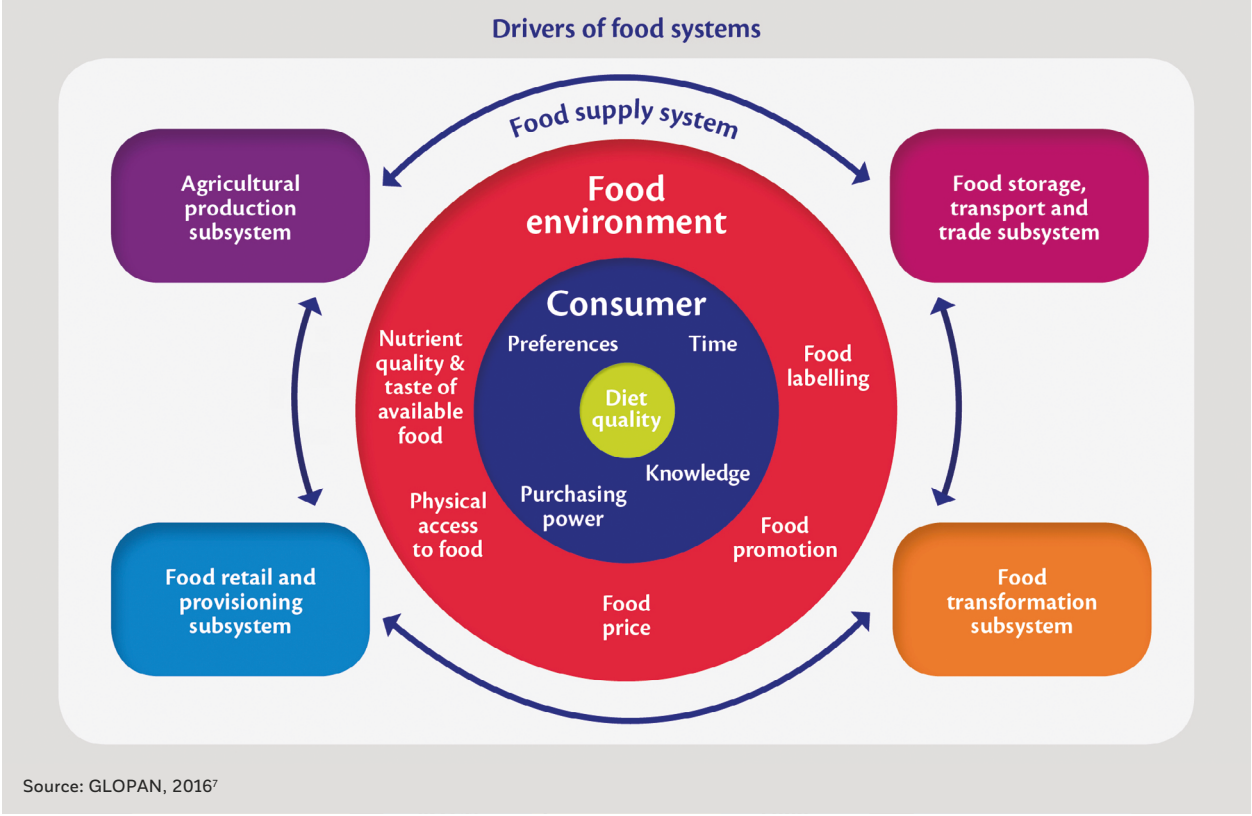
The food environment is influenced by all sub-systems of a given food system, as depicted in **Figure 5**. For example, energy-dense, processed food products which are often low in vitamins and minerals, are much more readily available and often cheaper than more nutrient-rich foods due to technological advances and market liberalization[10]. Industrial food production has also led to widespread use of agro-chemicals and antibiotics, which can have adverse health effects. Rapid rates of urbanization, often accompanied by increasing demand for highly processed convenience foods, are poised only to exacerbate these trends. Climate change likewise poses serious threats along the whole food system.

[8] **FAO**. 2004. Globalization of food systems in developing countries: impact on food security and nutrition. FAO food and nutrition paper 83. www.fao.org/3/a-y5736e.pdf - **Reardon, T., Tschirley, D., Dolislager, M., Snyder, J., Hu, C. & White, S**. 2014. Urbanization, diet change, and transformation of food supply chains in Asia. East Lansing, Michigan State University, Global Center for Food System Innovation.

[9] **HLPE.** 2017. Nutrition and Food Systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. www.fao.org/3/a-i7846e.pdf

[10] **Popkin BM., Adair LS., Ng SW**. 2012. Global nutrition transition and the pandemic of obesity in developing countries. Nutrition Reviews, 2012 Jan;70(1):3-21. www.ncbi.nlm.nih.gov/pubmed/22221213 | **Monteiro CA., Moubarac JC., Cannon G., Ng SW., Popkin BM**. 2013. Ultra-processed products are becoming dominant in the global food system. Obesity Reviews, 2013 Nov;14 Suppl 2:21-8. www.ncbi.nlm.nih.gov/pubmed/24102801

FIGURE 5: Linkages between food systems, food environment and diet quality



Source: GLOPAN, 2016[7]

2.2 What can policymakers do to change food systems?

One driver of the current nutrition situation is that our current food systems do not provide the healthy diets needed for optimal health and wellbeing. The challenge today is to improve food environments by making healthy diets more readily available and affordable, especially for vulnerable groups. Food systems play a role in all forms of malnutrition. The part they play in driving the overweight and obesity crisis may not yet be fully appreciated, especially in countries that have until recently been struggling to combat hunger and undernutrition. Currently, many policymakers outside the health sector may have a limited understanding of the nature and magnitude of the problems posed by NCDs, overweight and obesity. The prevention of obesity and NCDs requires action on the part of everyone