

## Facts and figures on world malnutrition

Food is at the basis of our life. It is in the food we eat that we find the building blocks for our bodies and the energy required to conduct our daily activities.

In a world where inequality is the rule [[read](#)], it is also present in food: some of us eat too little and some too much. Eating an inadequate quantity and quality of food (too much or too little compared to our requirements) is source of **malnutrition**.

Until recently, the world was mainly concerned (at least in speech, if not in deed) with inadequately low food intake. Hunger, undernourishment, [food security](#) have been analysed, estimated and combatted for many years. Nowadays, overnourishment, overweight and obesity have also become a domain of interest.

There are three main ways of trying to measure the extent of malnutrition:

- Indirectly through statistics and norm-based estimates;
- By asking people about their experience in this area and the perception they have of it;
- By direct measurement of certain characteristics of the body of a sample of people (anthropometric measurements).

The problem with the results of these various methods is that they may not always be consistent.

### Data on chronic undernourishment

Statistics on chronic undernourishment<sup>1</sup> have been produced for several decades by the UN Food and Agriculture Organization (FAO) through the publication, since 1999 of its flagship report, SOFI (see the [first SOFI of 1999](#)).

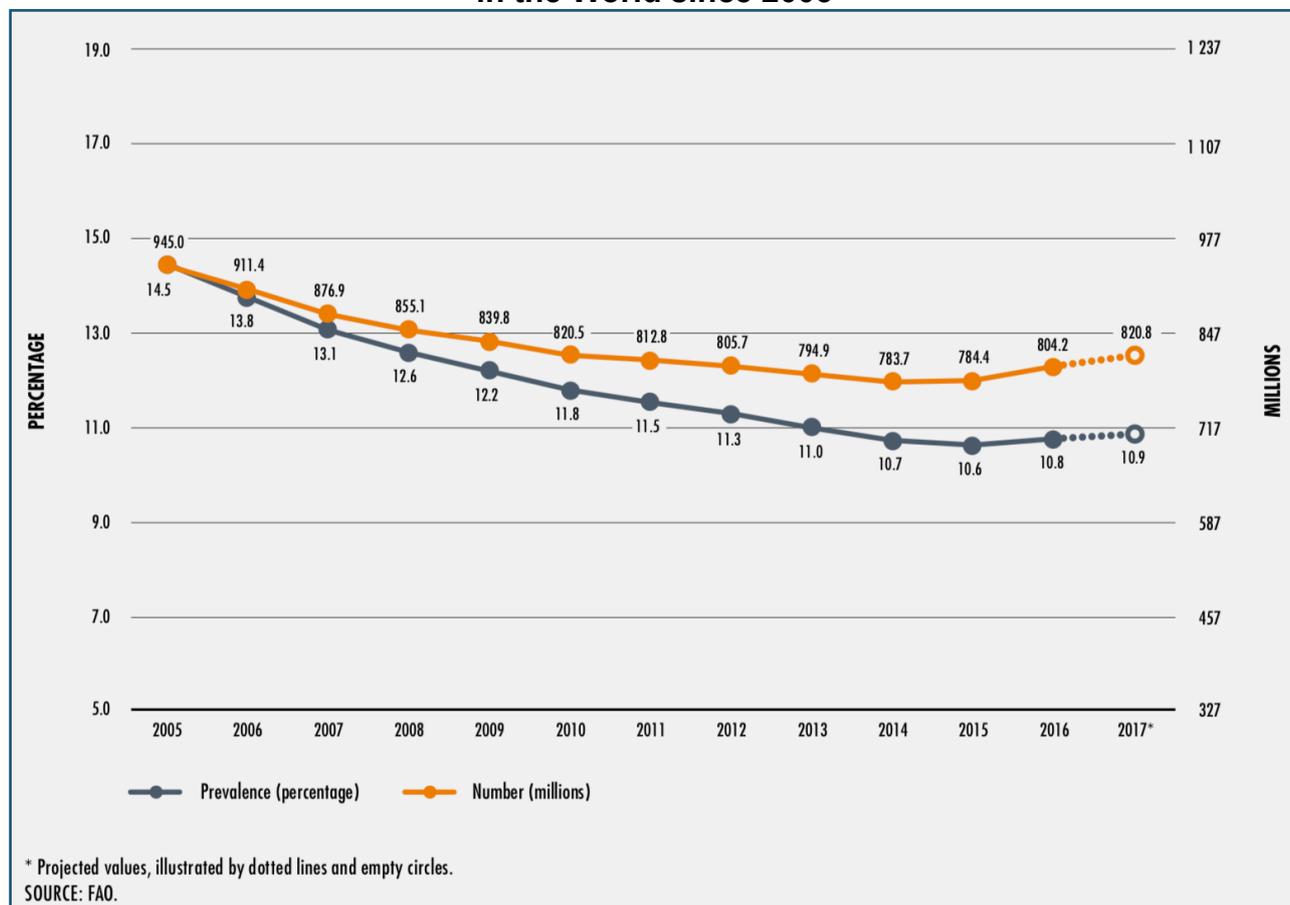
In September 2018 the latest of this series of SOFI reports on the [State of Food Insecurity and Nutrition in the World](#) published jointly by FAO, the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP) and the World Health Organization (WHO), in the framework of the monitoring process of the [Sustainable Development Goals](#), presents data estimates that suggest that there were **821 million chronically undernourished persons in the world in 2017** (+16 million persons compared to estimated figures for 2016), equivalent to one

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<sup>1</sup> Chronically undernourished people are unable to meet their minimum food requirements over a sustained period of time. This is fundamentally different from those people who suffer from a transitory undernourishment that may occur as a short term or temporary situation. [[FAO](#)]

person out of nine<sup>2</sup>. These estimates show the pursuit of the recent increase in hunger-affected people in the world [read] that reverses the declining trend that had been observed during the period from 2003 and 2013.

**Figure 1: Number and percentage of chronically under-nourished persons in the World since 2005**



Source: FAO

In absolute numbers, Asia remains by far the region with most persons suffering from chronic under-nourishment (almost 515 million people), while Africa is the region where the proportion of total population undernourished is highest (20.4% - up to 31.4% in Eastern Africa).

The increase estimated in 2017 at world level is confirmed in every region, with Africa representing the bulk of the change observed (+15 million people).

The main factor put forward by the UN to explain the observed increase of chronic undernourishment is climate change because of its greater variability and more frequent extremes in addition to war in the case of conflict-affected countries.

The estimated number of undernourished in 2017 is equivalent to the number in 2010 (see Figure 1 above). Since then, it is worth noting that the number of chronically

<sup>2</sup> These figures are estimated for individual countries on the basis of a computation that uses as inputs (i) dietary energy consumption per person that is derived from production, trade and population statistics; (ii) the coefficient of variation of this consumption based on results of past household surveys or derived from a statistical model, and; (iii) the average minimum individual dietary energy requirement at a certain level of activity, based on the age and sex structure of the population. [read [here](#) Annex 1]

undernourished increased by almost 56 million people in Africa, while it dropped by almost the same number in Asia (less 55 million). Figures in Table 1 point clearly to Africa as be the region where action is most needed in order to reverse this concerning trend.

The situation has degraded in South America (probably because of low prices of exports) and most parts of Africa (particularly in West Africa) while the reduction of the number of chronically undernourished in Asia appears to have stopped to decrease, mainly because of the situation observed in Western Asia (because of war) and in South-East Asia (because of extrême climatic events).

When comparing the numbers of chronically undernourished in 2004-06 and 2015-17 at national level, some countries strike by their particularly poor performance. In Africa, numbers were almost multiplied by 3 in Uganda (from 6.9 to 17.2 million) and more than doubled in Nigeria (from 9.1 to 21,5 million). Other bad performers in Africa include Madagascar and Malawi. In the Near East, numbers were multiplied by 7 in Lebanon and 3 in Jordan, because of the flux of refugees in connection with the Syrian crisis, while unsurprisingly Iraq and Yemen are other bad performers. No data are available for Syria or Venezuela.

The best performers are China (down from 204.7 to 123.5 million), India (from 253.9 to 195.9) and Indonesia (from 41.9 to 20.2 million).

**Table 1: Estimates of the number of undernourished people in the world (in millions)**

Region	2005	2010	2016	2017
Africa	196	200,2	241,3	256,5
Asia	686,4	569,9	514,5	515,1
Latin America and the Caribbean	51,1	40,7	38,9	39,3
Oceania	1,8	1,9	2,6	2,8
<b>World</b> <sup>☆</sup>	<b>945</b>	<b>820,5</b>	<b>804,2</b>	<b>820,8</b>

\* figures do not add up.

2017 figures are projected values.

Source: FAO.

To the explanatory factors given by the UN, one should add the food and agriculture policy measures adopted by countries, often under the influence of international organisations, particularly financial organisations, that contribute to further marginalise poor agricultural producers by depriving them of access to their land to the benefit of large private investors or by excluding them from agricultural development programmes [\[read\]](#)

### Severe food insecurity

Severe food insecurity is measured on the basis of a survey conducted in 140 countries since 2014<sup>3</sup> in collaboration with Gallup [\[read\]](#).

<sup>3</sup> A sample of people is questioned during the survey on their experience, based on the use of a Food Insecurity Experience Scale (FIES) which has 4 levels: 1. Uncertainty regarding ability to obtain food; 2. Compromising on food quality and variety; 3. Reducing food quantity, skipping meals; 4. No food for a day or more.

The results over the four years during which the surveys were conducted shows that a growing number of people are experiencing acute food insecurity, particularly in Africa and Latin America (see Table 2).

**Table 2: Number of persons having experienced severe food insecurity over the 2014-2017 period (in millions)**

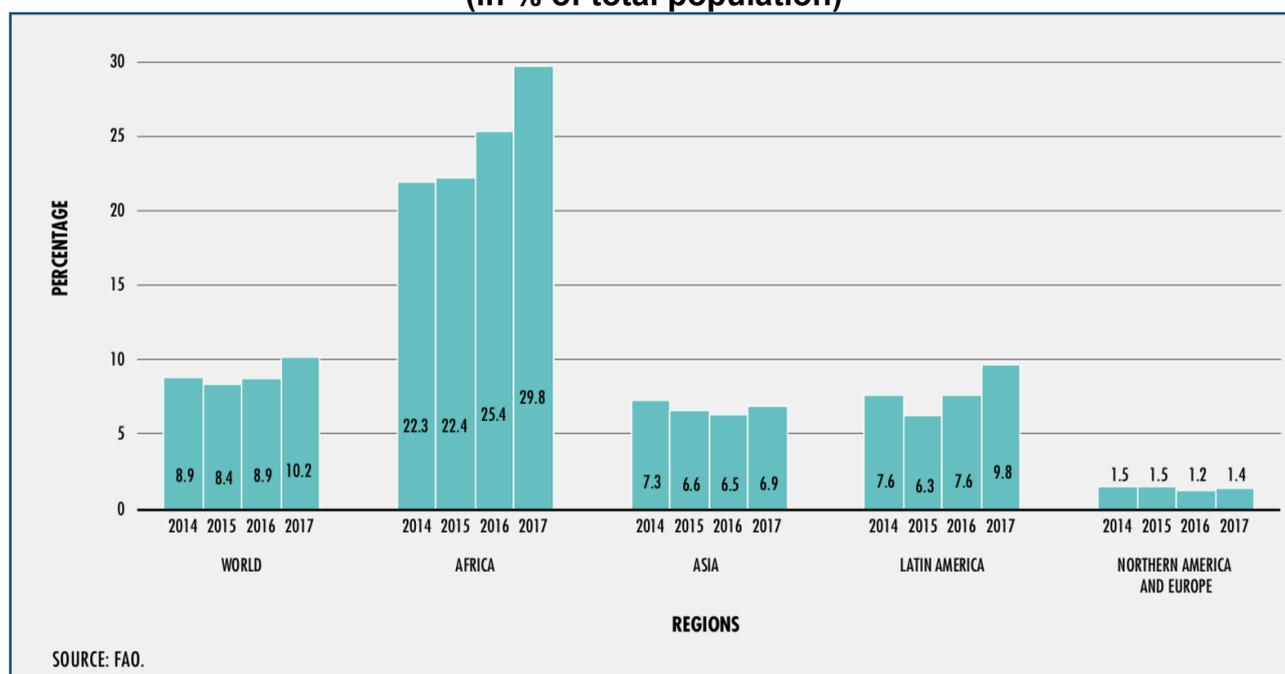
Regions	2014	2017	variation
Africa	260,1	374,9	114,8
Asia	319,3	311,9	-7,4
Latin America*	43,8	58,9	15,1
Northern America and Europe	16,2	15,2	-1
<b>World**</b>	<b>647,3</b>	<b>769,4</b>	<b>122,1</b>

\* Central and South America.

\*\* figures do not add up.

**Almost one person out of ten in the world - 770 million people - suffered from severe food insecurity in 2017.** This proportion is of approximately one person out of three in Sub-Sahara Africa (346 million people) and approximately one out of fifteen in Asia (311 million people). Women are slightly more affected than men, particularly in Latin America.

**Figure 2: Severe food insecurity in the world between 2014 and 2017 (in % of total population)**



It is interesting to note that while global statistics generally do not give estimates of the number of under-nourished in rich countries<sup>4</sup>, those on severe food insecurity provides some insight on hunger also existing in those countries. They suggest that there are every year around 15 million people in the so-called “developed” countries who suffer from severe food insecurity, of which more than 3 million in the US, 2.7 million in the UK, 0.8 in Germany, 0.9 in France and 0.6 in Italy. At [hungerexplained.org](http://hungerexplained.org), we have already drawn

<sup>4</sup> Largely because the 2.5% error on estimates based on statistics is larger than the result of the computation.

the attention of our readers to the degradation of the food situation in rich countries and, based on data published by several NGOs, we believe that there are several tens of millions of people who suffer chronic undernourishment in rich countries where the need for food assistance programmes increased considerably in recent years. [\[read\]](#)

### More data on undernourishment

The data presented here results from direct anthropometric or other measurements performed on samples of persons:

- Nearly **151 million children** under five years of age (22% of the total) across the world suffer from stunted growth. Their number decreased by 9% between 2012 and 2017 (slightly decreasing in all regions, more in Asia, less in Africa);
- Over **50 million children** under five in the world are affected by wasting (weight too low for height). Roughly half live in Southern Asia and one-quarter in Sub-Saharan Africa. Not surprisingly, there is strong evidence that they are mostly found in poor households;
- Prevalences of anaemia in women: more than **613 million women** aged between 15 and 49 years (one third of the total) are affected by anemia, the highest rates being found in Africa and Asia.

### Data on overweight and obesity

These data also result from direct measurements:

- Over **38 million children** under five were considered overweight in 2017;
- Between 1980 and 2016, prevalence of adult obesity had more than doubled to reach a total of **672 million affected people** (13.2% of total adult population), North America, Europe and Oceania coming first with more than one third of adults concerned.

### Data on mortality caused by malnutrition

There is little reliable and regular data on mortality caused by malnutrition. Estimates of the number of people dying every year as a result of undernourishment range from 5 to 9 million, according to various sources over the last ten years. For example, in 2009, WFP declared that “*25,000 people, both of adults and children, die a day from hunger and related causes*”, but this data was provided without any source or indication on the method used for making this estimate [\[read\]](#).

WHO, who publishes statistics on main causes of deaths [\[read \(p.13-16\)\]](#), only produces data on number of deaths due to childhood and maternal undernutrition that it estimates to be around 3.9 million deaths (35% of total deaths) for children under age of five, adding that “*diarrhoea is a leading cause of malnutrition in children under five years old*” Moreover, estimates of children deaths from diarrhoea by WHO range from 0.5 million [\[read\]](#) to 1.5 million [\[read\]](#) a year.

In 2018, UNICEF estimated at “*about 3 million children*” the number who died from undernutrition each year, while not indicating a source or a method for estimating this figure ([UNICEF](#)).

It can be seen quite clearly from these figures that data on the mortality impact of undernourishment are poor. And there are good reasons for that, the main being that less than one half of deaths in the world have a recorded cause ([WHO](#)).

Data on mortality by cause relies on several sources:

- Vital registration systems that are generally considered as highly unreliable and ineffective;
- Demographic surveillance systems, that are expensive and only have a limited coverage;
- Verbal autopsy, which is a method of finding out the cause of a death based on an interview with next of kin or other caregivers and that tends to provide only one cause of death, while the causes may be multiple [[read](#)].

Data on number of deaths due to overweight and obesity are probably more reliable. They appear explicitly in WHO's [Global Health Observatory \(p.16 to 18\)](#), combined with those related to physical inactivity as a cause for cardiovascular diseases (mainly heart disease and stroke), diabetes, musculoskeletal disorders (especially osteoarthritis); some cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon). Worldwide, **at least 2.8 million people die each year as a result of being overweight or obese** ([WHO](#)). At national level, in the US, the country where the prevalence of obesity is the highest in the world, estimates by various sources range from 400,000 to 800,000 deaths every year linked to obesity.

## Conclusion

In a cruel twist of irony, the increase of the number of undernourished people in the world takes place at a time when declarations and pledges to eradicate hunger by 2030 have multiplied [[read here](#) and [here](#)]. This strongly undermines the hope for the bright future that was promised to us not so long ago, as policies adopted almost everywhere in the world are in favour increased inequality [[read](#)]. It is also in contradiction with projections recently published by the Economic Research Services of the US Department of Agriculture [[read](#)] which, on the basis of optimistic projections of declining food prices and rising incomes, project the world food security situation to improve and foresee the number of food insecure in the world to fall as low as 446 million by 2028. This perspective is a view that appears like a beautiful fiction when compared with the trend observed on the ground. We would like to believe in it, but cannot, especially as it gives the impression that we have just to sit, do nothing and wait for incomes to raise and food prices to fall...

At [hungerexplained.org](#), we believe that unless policies followed by countries are fundamentally modified in a way that we have suggested on several occasions times on this site<sup>5</sup>, one can only expect that the degradation observed will continue in the future, along with its huge attached human cost in terms of lost lives and suffering.

[Materne Maetz](#)  
(September 2018)

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<sup>5</sup> See: [Policies for a transition towards more sustainable and climate friendly food systems](#) 2018, [Climate is changing - Food and Agriculture must too - Towards a "new food and agricultural revolution"](#) 2016, and [Seven principles for ending hunger sustainably](#), 2013.

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For more information:

- FAO, IFAD, UNICEF, WFP and WHO, [State of Food Insecurity and Nutrition in the World, 2018](#).
- UNICEF, [Malnutrition](#), 2018.
- WHO, [Obesity - Situation and trends](#), WHO website.
- Mathers, C., [Global health risks: mortality and burden of disease attributable to selected major risks](#), WHO, 2009.

Earlier articles on [hungerexplained.org](http://hungerexplained.org) related to the topic:

- [Why famines in a world of plenty? 2017](#).
- [The World Economic Forum's "New Vision for Agriculture" is moving ahead on the ground...](#), 2017
- [How to stop the global inequality machine](#), 2017.
- [Climate finance for poor countries: confusion, lack of transparency and probability that commitments made will not be respected](#), 2016.
- [Africa: can the continent end hunger and become food self-sufficient by 2025? 2016](#).
- [Countries are getting ready to approve new Sustainable Development Goals for the 15 years to come: What is new compared to the MDGs in 2000?, 2015](#).
- [More resources are needed to combat hunger in rich countries](#), 2014.
- [Seven principles for ending hunger sustainably](#), 2013.
- [Food security: definition and drivers](#), 2013.
- [Exclusion](#), 2013.
- [La FAO va tester une nouvelle méthode pour mesurer la faim dans le monde](#), 2013 (In French only).
- [Deux «revenants» menacent la France: la pauvreté et la faim](#), 2012 (In French only).

and all our articles under "[World Hunger](#)" category.

Archives on the world food situation :

- [Facts and figures on world hunger 2017](#)
- [Facts and figures on world hunger 2015](#)
- [Facts and figures on world hunger 2014](#)
- [Our comments on SOFI 2013](#), 2013
- [Facts and figures on world hunger 2013](#)
- [What is the real number of hungry people in the world?](#), 2013