

## Facts and figures on world food insecurity and malnutrition

### The impact of the COVID-19 pandemic

The world is off track in the combat against hunger and malnutrition.

The COVID-19 pandemic is exposing “**weaknesses in our food systems, which threaten the lives and livelihoods of people around the world, particularly the most vulnerable and those living in fragile contexts**”.

The above sentence summarises the gist of what says the recent [State of Food Security and Nutrition in the World 2021](#) (SOFI 2021) produced jointly by a team of technical experts from FAO, IFAD, UNICEF, WFP and WHO.

What is important, in this sentence, is that the pandemic is not just presented as the cause of the worsening of the food situation, but as a revealer of what is wrong in the way the world has been organising its food systems.

#### Food insecurity: the figures

In an earlier article on the global food situation, we had drawn the attention of readers on the three main ways to measure the extent of world malnutrition and we discussed the difficulties of making estimates, as well as issues around the stability and consistency of the numbers produced. This year we will limit this article to the result, inviting those readers interested by these questions to refer to what we had written last year [[read](#)].

#### Moderate and severe food insecurity, as captured by surveys

The prevalence of moderate and severe food insecurity is measured on the basis of large national surveys using the [Food Insecurity Experience Scale](#) (FIES) introduced by FAO in 2014, complemented by results of the [Gallup© World Poll](#) (GWP). Because of the pandemic, interviews with eight questions in 2020 were made through telephone conversations (see Box 1). The principle here is not to compute estimates based on statistical data, but to ask people about their experience.

The results over the years during which the surveys were conducted show that a growing number of people are experiencing moderate and acute food insecurity in the world, particularly in Asia and Africa.

It can be seen from **Table 1** below that nearly one person out of 8 in the world - **928 million** - suffered from **severe** food insecurity in 2020. This proportion was **more than one person out of four in Africa** (347 million people) and approximately **one out of ten in Asia** (471 million people). Women are slightly more affected than men.

In Africa, more than one third of the people experiencing severe food insecurity in 2020 originated from Eastern Africa, while the situation deteriorated in all sub-regions of the continent, the increase of the number of the concerned being the fastest in Western Africa (multiplied by 3 since 2015). In Asia, more than 80% of people interested came from South Asia, while in Latin America, the number double between 2015 and 2020.

The increase between 2019 and 2020, the year when COVID-19 started to hit, is of 329 million people, of which almost half in Asia.

### Box 1: The eight questions asked during the FIES survey

These questions refer to the experiences of the individual respondent or of the respondent's household as a whole. The questions focus on self-reported food-related behaviors and experiences associated with increasing difficulties in accessing food due to resource constraints.

“During the last 12 months, was there a time when, because of lack of money or other resources:

1. You were worried you would not have enough food to eat?
2. You were unable to eat healthy and nutritious food?
3. You ate only a few kinds of foods?
4. You had to skip a meal?
5. You ate less than you thought you should?
6. Your household ran out of food?
7. You were hungry but did not eat?
8. You went without eating for a whole day?”

(Source: [FAO](#))

**Table 1: Number of people having experienced severe food insecurity in 2015, 2019 and 2020 (in millions)**

Region	2015	2019	2020	Variation
Africa	215.9	286.7	346.6	130.7
Asia	319.9	414.7	471.1	151.2
Latin America and the Caribbean	46.6	65.3	92.8	46.2
Oceania	1.1	1.6	1.1	0.0
Northern America and Europe	15.0	11.6	15.9	0.9
<b>World</b>	<b>598.5</b>	<b>779.9</b>	<b>927.5</b>	<b>329.0</b>

Source: [FAO](#)

**Table 2** shows an amazing figure of near to **2.4 billion people** who experienced moderate food insecurity in the world in 2020 (almost 1 person out of 3). This proportion was of nearly **three people out of five in Africa** and of more than **one out of four in Asia** (1.2 billion people).

The very high jump in the number of food insecure can clearly be linked to the consequences of the COVID-19 pandemic that have been highlighted on [hungereplained.org](https://www.hungereplained.org) since early 2020 [read [here](#) and [here](#)], even though the pandemic is not the only explanation but rather an accelerator of past trends. Between 2019 and 2020,

almost 150 million more people experienced severe food insecurity, while nearly 320 million additional people were exposed to moderate food insecurity, amplifying a trend that had already been visible for several years. The most striking case, perhaps, is the Latin American and Caribbean region, where the number of people that experienced severe food insecurity doubled between 2015 and 2020.

Given the characteristics of the pandemic that circulates faster among inhabitants of large and dense cities where population is concentrated and where employment is frequently informal and insecure, its impact on poverty and food insecurity is often felt more in urban than in rural areas. Moreover, the pandemic also highlights inequalities, with women hit harder than men [[read](#)]

**Table 2: Number of people having experienced moderate food insecurity in 2015, 2019 and 2020 (in millions)**

Region	2015	2019	2020	Variation
Africa	567.2	708.6	798.8	231.6
Asia	834.6	1043.2	1198.7	364.1
Latin America and the Caribbean	171.8	207	267.2	95.4
Oceania	4.0	5.7	5.1	1.1
Northern America and Europe	102.5	85.4	98.3	-4.2
<b>World</b>	<b>1680.1</b>	<b>2049.9</b>	<b>2368.1</b>	<b>688.0</b>

Source: [FAO](#)

### Estimates of the number of people suffering from 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 July 2021 the latest of this series of SOFI reports prepared 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](#), displays data estimates that suggest that there were between **720 and 811 million chronically undernourished people in the world in 2020**, equivalent to 9.9% of total world population<sup>2</sup>. For the first time, these estimates are presented as a range, because of the specific difficulties met when making these estimates, due to the pandemic (Figure 1).

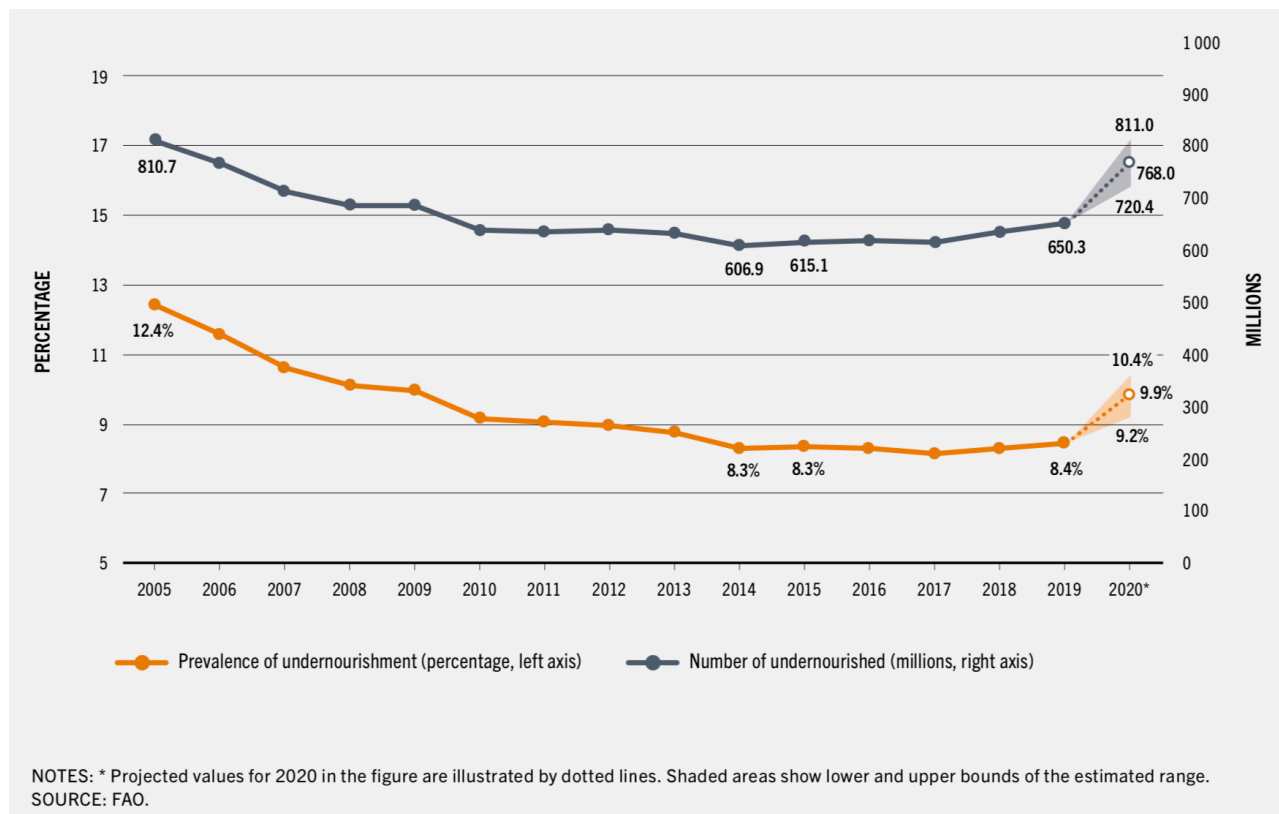
<sup>1</sup> Chronically undernourished people are unable to meet their minimum food requirements over a sustained period of time. This is fundamentally different from those people who suffer from a transitory undernourishment that may occur as a short term or temporary situation. [[FAO](#)]

<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. The methodological details are provided in Annex 1B of the [UN report](#).

In absolute numbers, more than half of the world's undernourished were found in Asia (418 million) and more than one third in Africa (282 million). Compared with 2019, about 46 million more people in Africa, 57 million more in Asia, and around 14 million more in Latin America and the Caribbean were affected by hunger in 2020.

According to these figures, 70 to 161 million additional people faced chronic hunger in 2020, compared to 2019. This trend confirms the movement observed in the data drawn from the FIES survey.

**Figure 1: Number and percentage of chronically undernourished people (2005-2020)**



The total estimated number of undernourished in 2020 is roughly equivalent to the number in 2006 (see **Figure 1** above and **Table 3** below), illustrating a lost decade-and-a-half in the combat against hunger and undernourishment, despite a general commitment (in words) to the UN's [Sustainable Development Goals](#), and the launching of several initiatives aiming at eradicating hunger.

Since 2015, it is worth noting that the estimated number of chronically undernourished increased by almost 80 million people in Sub-Saharan Africa, while it rose by around 50 million in Asia. Figures in **Table 3** point clearly to Africa as the region where action is most needed in order to reverse this concerning trend that has been accelerated by the pandemic. This is no surprise, considering the type of food and agricultural policies and strategies that are being implemented on this continent [[read](#)].

Food insecurity has rapidly degraded in South America, the regional picture being particularly affected by the crisis in Venezuela where prevalence of undernourishment increased from 8.4% in 2004-06 to 27.4% in 2018–2020 and the situation in Mexico where prevalence almost doubled over the same period.

**Table 3: Estimates of the number of undernourished people in the world  
(in millions)**

Region	2005	2015	2020	Variation (from 2015 to 2020)
Africa	195.0	199.7	281.6	81.9
Asia	553.6	369.9	418.0	48.1
Latin America and the Caribbean	51.9	36.4	59.7	23.3
Oceania	2.3	2.4	2.7	0.3
Northern America and Europe	n.r.	n.r.	n.r.	-
<b>World</b>	<b>810.7</b>	<b>615.1</b>	<b>768.0</b>	<b>152.9</b>

Note: Figures do not add up.  
2020 figures are projected values.  
Source: [FAO](#).

To the explanatory factors given by the UN (war, climate change and economic downturn), one should add the economic policy measures, particularly in the area of food and agriculture, adopted by countries often under the influence of international organisations, particularly financial organisations, and large multinational companies (Box 2).

These policies and private sector- and donor-led initiatives such as [AGRA](#) have contributed to further marginalise poor farmers in Africa by supporting large private investments, the penetration of multinationals in input markets (seeds, fertiliser and pesticides) and an unregulated digitalisation of agriculture [[read](#)]. As a consequence small peasants are being deprived of their land to the benefit of private investors or excluded from agricultural development programmes [[read](#)], and large multinationals are collecting profits by siphoning off government subsidies on inputs [[read](#)].

Regrettably, there is as yet no serious discussion among national or regional decision makers on the validity of these policies with respect to the attainment of the hunger eradication goal. The main concern, for them, remains to produce more, whatever the resulting social or environmental impact may be. The way production is taking place does not matter, as long as output increases! This idea is still well rooted in the mind of policy-makers, even if consequences of this stance means more hunger, more rural urban migration, greater exclusion of large parts of the rural population, and although there are serious doubts about the sustainability of achievements made.

The forthcoming UN Food Systems Summit does not seem to set for addressing usefully these issues [[read here](#), [here](#) and [here](#)].

## Box 2: The causes of hunger and malnutrition

As has been usual in the SOFI series presented by the UN, the list of [causes hunger](#) and malnutrition resulting from the “weaknesses” of food systems offered by the 2021 report - conflicts, climate variability and extremes, economic slowdowns and downturns, high income inequality, low productivity and inefficient food supply chains, unaffordability of healthy diets - is suggested without pointing at the fact that these are the consequences of underlying **human decisions** that are the real root causes of the persistence of these “weaknesses” over decades.

Conflicts are human made, climate change is due to the extraordinary boom of greenhouse gas (GHG) emissions resulting from the massive use of fossil fuels by humans [\[read\]](#), and economic slowdowns and downturns are an effect of the rules and policy decisions that humans and their governments have made to manage the world economy, as are income inequality and poverty [\[read\]](#). As for low productivity and inefficient food supply chains, they too are the consequence of technological and organisational choices made by mankind over the last century, that are everything but “natural” or “inescapable” [\[read\]](#).

It is essential to point at this here from the start, to avoid proposing solutions to hunger and malnutrition that will only scratch the surface of the problems to be solved and merely alleviate in part the negative effect of fundamental choices made.

Unfortunately, this is largely what the SOFI report does by advocating mitigating measures such as social protection to help families during conflicts, insurance and finance against extreme climatic events, cash support to vulnerable groups in case of crisis that either seem unfeasible because unrealistic (can social protection really be implemented when a conflict situation weakens the state apparatus?) or a relief that is evidently useful but does not address the true causes of the problem. Moreover, they are based on the dangerous belief that everything can be fixed with money, without modifying the real economy and its processes.

It is true that, some problems can be mitigated immediately through financial means without having to wait for the root causes to be resolved and for profound changes to be enacted [\[read\]](#). This should then, of course, be done without delay. But it does not exempt the world from simultaneously designing deep reforms [\[read\]](#) and implement them to avoid having to mobilise emergency relief again and again, while the economy continues to generate suffering for hundreds of millions of people.

The COVID-19 crisis should be an opportunity for accelerating such changes and for propelling economic and food systems towards greater social, economic and environmental sustainability.

### More data on undernourishment resulting from direct measurements

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

- More than **149 million children** under five years of age (22% of the total) across the world suffered from stunted growth (low value of height for age). This number decreased by 10% between 2012 and 2018 but will probably increase as a result of the pandemic whose effect is likely to last for several years;
- **45.4 million children** under five in the world were affected by wasting (weight too low for height). Roughly half lived in Southern Asia and one quarter in Sub-Saharan Africa. Not surprisingly, there is strong evidence that they are mostly found in poor households and here too, it is expected that the pandemic will contribute to raise these figures;

- Africa and Asia accounted for more than nine out of ten of all stunted and wasted children;
- In 2019, **29.9 percent** of all women aged between 15 and 49 years were affected by anaemia, with rates above 30% in Africa and Asia, and only 14.6% in Northern America and Europe;
- The latest estimates available give **20.5 million babies** suffering from low birthweight in 2015 (one out of seven). It is important to remember that low birthweight newborns have a higher risk of dying in the first 28 days after birth. Those who survive are more likely to suffer from stunted growth and lower intelligence quotient. They also face increased danger, later in life, of overweight and obesity and adult-onset chronic conditions, including cardiovascular diseases and diabetes.

Data and considerations on overweight and obesity:

- Adult overweight and obesity are increasing sharply in all regions, with global prevalence hitting 13.1% in 2016. This trend has been boosted by industry-led marketing and greater access to ultra-processed foods, often high in energy, fats (particularly saturated and trans fats), free sugars and salt, along with inadequate levels of physical activity. Highest rates are found in Northern America, Western Asia, and Australia and New Zealand with levels around and above 30%;
- Overweight and obesity are on the rise in almost all countries and are known to be contributing to **4 million deaths** globally every year.

#### Healthy diets: unaffordable for almost half of humanity

The affordability of healthy diets is an important factor in a person's food choices, and ultimately, of the population's food security, nutrition and health.

#### **Box 3: Healthy diets**

Healthy diets contain a balanced, diverse and appropriate selection of foods eaten over a period of time.

A healthy diet ensures that a person's needs - specific to their gender, age, physical activity level and physiological state - for proteins, fats and carbohydrates, including dietary fibre, vitamins and minerals are met. A healthy diet includes less than 30% of the total energy intake from fats, with a shift in fat consumption away from saturated to unsaturated fats and without industrial trans fats. Moreover, less 10% of total energy intake comes from free sugars (preferably less than 5 percent).

The diet comprises at least 400 g of fruits and vegetables per day, and less than 5 g per day of salt. While the exact make-up of a healthy diet varies depending on individual characteristics, as well as cultural context, locally available foods and dietary customs, the basic principles of what constitutes a healthy diet are the same.

(Source: [FAO](#))

The affordability of a diet is determined by the cost of food relative to a person's income. It is therefore affected by changes in personal income and variations of prices of healthy food. Both are largely a result of economic policies (e.g. labour market and wage-related policies, social policies) and by policies that determine market conditions for food products

(e.g. market organisation and regulation, taxes and subsidies applied along food value chains, including the possible internalisation of externalities<sup>3</sup>).

On average, according to the UN report, the cost of a healthy diet was **60 percent more** than that of a diet that just meets requirements for essential nutrients, and almost **five times** as much as a diet that just covers the minimum dietary energy needs through a starchy staple.

The cost of a healthy diet increased by 7.9% globally between 2017 and 2019, and differences are notable across regions (Table 4). All regions except Africa present lower increases than the global average. Africa had the largest increase in the cost of a healthy diet on the period considered, and second largest was in Northern America and Europe and Latin America and the Caribbean.

The high cost coupled with persistent high levels of income inequality puts healthy diets out of reach for around **3 billion people** throughout the world in 2019. This number is slightly less than in 2017 and will likely increase in most regions in 2020 due to the COVID-19 pandemic.

**Table 4: Affordability of healthy diets**

Region	Cost of a healthy diet		People unable to afford a healthy diet in 2019	
	Cost in USD per person per day in 2019	Variation (2017-2019 in %)	Total number (millions)	Variation (2017-2019 in %)
	Africa	4.37	12.9	1017
Asia	4.13	4.1	1853	-4.2
Latin America and the Caribbean	4.25	6.8	113	8.4
Oceania	3.25	6.2	0.5	-14.9
Northern America and Europe	3.43	6.8	17	-3.6
<b>World</b>	<b>4.04</b>	<b>7.9</b>	<b>3000</b>	<b>-0.7</b>

Note: Figures do not add up.  
Source: [FAO](#).

The unaffordability of healthy diets is strongly associated with undernourishment and different forms of malnutrition, including child stunting and adult obesity.

There is solid evidence that shifting to healthy diets with sustainability considerations can contribute to reducing health and climate change costs, because the hidden costs of these diets (health and environment-related, in particular) are lower compared with those of current consumption patterns towards which wage, income and food policies condemn more than half of world population [\[read\]](#). It is estimated that the adoption of healthy diets could lead to a reduction of up to 97% in direct and indirect health costs and 41–47% in the social costs of GHG emissions by 2030. It would also help to preserve natural resources (soil, water, biodiversity).

<sup>3</sup> An externality corresponds to a situation where the act of producing or consuming by an economic agent has a positive or negative impact on one or several other agents not directly part of the act, and where these affected agents do not have to pay for all the benefits that have accrued to them or are not fully compensated for the harm they have suffered. In practical terms, this often means that the costs of such externalities end up being met by future generations.



This illustrates how combating malnutrition is central to any transition towards a more sustainable world, and how it calls for changes in a great number of very diverse economic policies.

More diversification of agricultural production, promotion and support to the adoption of environment-friendly technologies are indispensable. Economic policies are required for reducing inequalities and improving income of the poor to offset some of the negative effects of urbanisation on food consumption (more usage of easy-to-prepare, highly processed foods or convenience foods that are often energy dense and rich in fat, sugar and/or salt, whose production has rapidly increased, with negative consequences for the environment).

## Conclusion

The state of global food security and nutrition described in this year's SOFI shows that the world is not on track for eradicating hunger by 2030. Worse even, the situation deteriorated in 2020. With the COVID-19 crisis and its dramatic impact on the economy during which the most vulnerable people are being hit hardest, we see more food insecurity everywhere, and malnutrition in all its forms are progressing.

This is happening in a world where food is more than abundant, although in many places the negative consequences of climate change are starting to be felt.

These facts and figures strongly undermine the hope for a brighter future.

At [hungerexplained.org](http://hungerexplained.org), we think that unless policies followed by countries are fundamentally modified in a way that we have suggested on several occasions on this site<sup>4</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.

Some believe that the solution can be found in the combination of pro-growth policies - even if they are exclusive and develop inequality - and social protection and education measures. In fact, when this approach is implemented, social protection is often used as a cover-up for the most violent anti-social economic policies. This, in our view, is not acceptable.

While social protection and education measures are indispensable and, if well designed, it is true, they can contribute to creating more capacity for the poor to graduate out of poverty, they can only be effective if overall and sectoral economic policies (particularly but not exclusively in the food and agricultural sector) are conducive and offer opportunities for the poor to improve their living by a fairly remunerated work so as to have access to healthy diets. Social protection alone does, however, not constitute a sustainable solution for eradicating malnutrition.

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(August 2021)

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<sup>4</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 - Transforming food systems for food security, improved nutrition and affordable healthy diets for all](#), 2021.
- FAO, [Voices of the Hungry - The Food Insecurity Experience Scale](#). Website.

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

- Opinions: [Who will decide what we will be eating in the future?](#) by George-André Simon, 2021.
- Opinions: [Personal reflections on food summitry](#) by A. MacMillan, 2021.
- Opinions: [Struggle for the Future of Food](#) by Jomo Kwame Sundaram, 2021.
- [The real cost of food - Can the market alone guide our food systems towards more sustainability?](#) 2020.
- Opinions: [Green Counter-Revolution in Africa?](#) by Jomo Kwame Sundaram, 2020.
- [COVID-19 and food crisis: the main operating mechanisms](#), 2020.
- Opinions: [Back to reality - Reflections around the COVID-19 crisis](#), by M. Maetz, 2020.
- [Food, Environment and Health](#), 2017.
- [The causes of hunger](#), 2012.

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

Archives on the world food situation :

- [Facts and figures on world food insecurity](#), 2020.
- [Facts and figures on world malnutrition](#), 2019.
- [Facts and figures on world malnutrition](#), 2018.
- [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.