

## Food security Second part: 50 years of food insecurity

## 1. From 1970 to 1995

The causes that can explain the evolution over time of the number of undernourished people have been the subject of numerous analyses and publications during the last decades. In a report published in 2000, the Food and Agriculture Organization of the United Nations (FAO) notes the importance of **economic growth** in reducing hunger, estimating that progress made in Asia in the 1970s was primarily due to the rapid growth of Gross Domestic Product (GDP). To support this claim, it quotes experts' estimates that a per capita GDP growth of over 3% would lead to a significant improvement in living standards and a reduction in poverty, which in turn would result in a decrease in food insecurity. In the same report, the FAO highlights the impact of the **Green Revolution** in Asia, the huge increase in food production it generated, as well as its consequences on job creation and growth of local consumption [read].

One can consider that the achievements observed in the 1970s, particularly in Asia (despite successive economic crises), are largely attributable to **technological changes** initiated in the 1960s, **huge investments** made in research and agricultural infrastructures (irrigation), as well as the ultimately more positive outcomes of **agrarian reforms** in Southern countries than what is generally recognised.

The agricultural development specialist Peter Timmer explains how food security strategies pursued in Asia have been contradictory to the economic liberalism advocated by international financial institutions [read]. It is indeed through trade restrictions and protection of the domestic market to stabilise prices, especially of rice (a staple in Asia), that these countries have managed to increase production and improve food security for their population. A high savings rate, high capital productivity, and significant investments in human capital formation have been key ingredients for rapid growth in Asia [read]. In the case of China – and later Vietnam – institutional transformations have also played a crucial role (see **box 1** below).

Despite these accomplishments, **Asia yet remains, in 2023, the region with the largest number of undernourished people**, with over a billion individuals experiencing severe or moderate food insecurity within the year, and 385 million in a state of chronic food insecurity [read]. Moreover, the Green Revolution and its agricultural model based on irrigation and the use of chemical inputs have excluded many small peasant farmers [read] and contributed to making agriculture vulnerable and spreading agricultural practices harmful for the environment [read] and for health.

#### Box 1 - The case of China

China is a remarkable example of success in the combat against poverty and food insecurity.

Food availability increased from less than 1,700 kcal in 1960 to 2,570 kcal per day and per person in 1995, mainly due to increased national food production.

The Chinese experience demonstrates the importance of technological development combined with better financial incentives, institutional reform, rural economic development, and other policies to increase food availability. The introduction of fast-growing varieties has increased rotation intensity and land productivity. Hybrid rice, for which Chinese scientists were pioneers in the 1970s, increased yields and covered nearly half of the rice area by 1990. Economic and institutional reforms resulted in a huge leap forward in agriculture. The post-reform GDP was twice that observed before the reform, and widespread participation of the population in rural economic growth led to an extraordinary reduction in absolute poverty in China between 1978 and 1985.

(based on : **FAO**, *Poverty Alleviation and Food Security in Asia: Lessons and Challenges*, FAO Regional Office for Asia and the Pacific, Bangkok, 1999).

**Remark:** According to the OECD, in 2021-23, China continued to strongly support its agriculture, with the share of support to agricultural producers in gross agricultural receipts averaging 14%, nearly three times higher than in 2000-02. This level of support was comparable to that in the European Union (16%) and significantly higher than in the United States (8%) [read]. The level of fertilizer consumption in China was one of the highest in the world (191 kg Nitrogen/ha cultivated in 2022 compared to 5 kg Nitrogen/ha in 1961 and 79 kg Nitrogen/ha in France in 2022 [see FAO database]. However, the record consumption of chemicals and the boom in intensive animal production have led to significant environmental and health complications.

Africa, on the other hand, saw the number of people suffering from hunger increase during the 1970s. This period was characterised by some political instability and difficulties for the former colonies to manage their affairs, particularly due to a lack of capacity and resources.

The annual price-fixing policies by the government of a unique **pan-territorial price** for the main agricultural products valid regardless of the location in the national territory, adopted by a large number of countries to ensure greater equality among producers, proved to be unbearable for national budgets and ineffective in providing the right incentives for production. Indeed, the set prices were too low, and agriculture was, in fact, **heavily taxed** compared to other economic activities. Cereal production, in particular, decreased in the countries concerned over most of the period. Average agricultural growth was less than 3% in most countries on the continent, slower than population growth and insufficient to make agriculture a driving force for development. The deterioration of the economic situation eventually led in the 1980s to a **virtual economic supervision** of many states by international financial institutions (IMF and World Bank).

In Latin America, the 1970s were, overall, a decade of fairly strong economic growth. The 1980s, on the other hand, were a challenging period marked by a decline in GDP per capita. That decade also saw the percentage of the population

living in poverty increase from 40.5% to 48.3%<sup>1</sup> and experienced a significant rise in the number of undernourished individuals. The combination of good and bad years may explain the **relative stability** in the number of undernourished people (see **table 1**).

## Table 1 - Number of undernourished people during the period 1960-1992 (in millions)

Group of countries	1969-71	1979-81	1990-1992*
Africa	103	148	173
Latin America and the Caribbean	53	48	66
Asia and the Pacific**	713	681	735
High income countries			20
WORLD	917	877	1015
India			227
China			272
Other countries in Asia and the Pacific**			236
* new method used by	EAO to make	ite actimatos	SOFI 2012

\* new method used by FAO to make its estimates, SOFI 2013 \*\* Oceania included Source: FAOSTAT, SOFI

## 2. From 1995 to the eve of the food crisis of 2007

The fast growth in food production, which was reaching 3% per year in nonindustrialised countries, eventually fell to 1% in the 1990s [read].

The causes were a **decrease in public spending** (particularly in research) and investments in agriculture, as well as a **general withdrawal of the state** following reforms related to **stabilisation and structural adjustment programs** imposed by international financial institutions.

These liberal reforms were accompanied by a **drop in food production**, partly linked to a downward trend in global prices resulting from the high agricultural subsidies put in place by OECD countries. The changes also encouraged non-industrialised countries to **develop export products**, which, as a consequence of the fallacy of composition, saw their global prices fall as a result of oversupply on the world market. African countries have particularly suffered from this slowdown due to the rigorous implementation of recipes advocated by international financial institutions and the heavy dependence of these countries on a limited number of

<sup>&</sup>lt;sup>1</sup> J. Graziano Da Silva, Políticas de Seguridad Alimentaria: Panorama General en América Latina y Caribe, Tercer Encuentro de Ex-Presidentes, FAO, 2008 (in Spanish).

export products. Despite improvements in production incentives, agricultural growth only experienced a relatively weak recovery, barely exceeding population growth [read] and private sector involvement, wished by states, was much less than expected, especially in Africa.<sup>2</sup>

The **loss of momentum of the Green Revolution** was also the result, particularly in Asia, of the fact that the most fertile areas had already been exploited, new biotypes of pests had appeared, and water and micronutrient shortages in plants began to affect yields. While China managed to reduce the number of undernourished people by more than 30% between 1990–92 and 2004–06, this figure remained virtually stable in India. This reflects a very different type of economic growth in these two countries [read].

**Diagram 1** shows the evolution of agricultural production in various parts of the world over the past six decades, and **diagram 2** shows the evolution of food insecurity in low- and middle-income countries between the early 1970s and the years leading up to the 2007 food crisis.

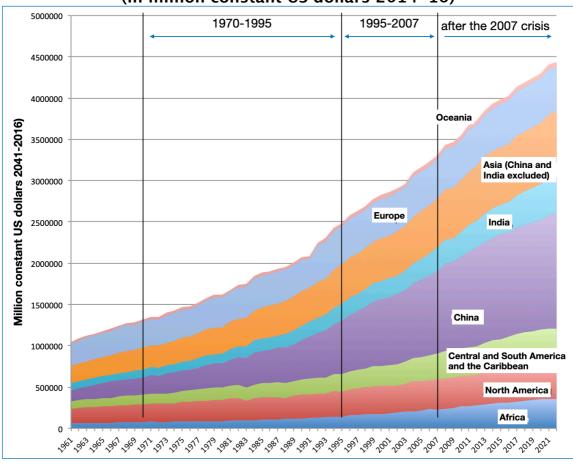
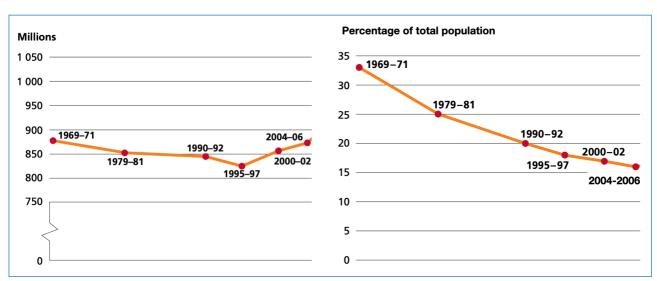


Diagram 1. - Evolution of global agricultural production\* (1961-2022) (in million constant US dollars 2014-16)

\* Agricultural production also includes non-food products s. Source: <u>FAOSTAT</u>.

<sup>&</sup>lt;sup>2</sup> M. Maetz, M. Kamanyire and A. Ngororano, Post-liberalisation cereal commodity markets in Eastern and Southern Africa, Economy Policy Research Centre (EPRC), Kampala, Uganda and FAO, Harare, 1997.



## Diagram 2 - Evolution of prevalence\* of chronic food insecurity (in %) and of the food insecure population (in millions) between 1969-71 and 2004-06

\* prevalence corresponds to the percentage of food insecure population in total population. Source: <u>FAO/WFP, 2009</u>.

In **Africa**, food insecurity was on the rise, and it is interesting to note that a large part of the increase in the number of undernourished people can be directly attributed to the **conflicts** that have raged on the continent. Thus, at the beginning of the 21st century, approximately 60% of the 200 million undernourished Africans lived in countries that were or had recently been in conflict and have significant mineral resources.<sup>3</sup> The disruption of the economy, communication and transportation difficulties, the displacement of refugees, and the economic problems resulting from the exploitation of mineral deposits (the Dutch disease syndrome) are part of the factors that explain this situation.

Latin America, on the other hand, saw a reduction of more than 17% in the number of undernourished people between the early 1990s and the mid-2000s. This decline can be attributed to a **period of economic growth**, especially between 2004 and 2007 when the yearly per capita GDP growth rate exceeded 3%.<sup>4</sup>

**Table 2** on the next page presents the details of the figures at the beginning and end of the period analysed.

The awareness of a **lack of progress in global food security** from the mid-1990s onwards triggered a series of reactions. These included the organisation of several **world food summits** [read] as well as significant changes

<sup>&</sup>lt;sup>3</sup> The 2010 FAO report on "<u>The State of Food Insecurity in the World</u>" emphasizes that the 22 countries identified as being in a state of prolonged crisis (or having areas in a state of prolonged crisis) included 166 million undernourished people, representing nearly 40% of their total population and almost 20% of the total number of undernourished people in the world.

<sup>&</sup>lt;sup>4</sup> J. Graziano Da Silva, Ibid.

in **food and agricultural policies**, such as the return in favour of subsidies, in their 'smart' version, and the emergence of the 'twin-track' approach that combines development initiatives with social programs to empower the most vulnerable to take advantage of economic opportunities thus created.

Groups of countries	1995-97	2004-06
Sub-saharan Africa	194	212
Latin America and the Caribbean	52	45
Asia and the Pacific	529	566
Middle East and North Africa	30	34
High income countries	21	15
WORLD	824	873
India	194	252
China	144	127

# Table 2 - Number of undernourished between 1995-97 and 2004-06 (in millions)

Source: FAO/WFP, 2009.

Unfortunately, this awareness was primarily accompanied by solemn speeches and formal commitments that did not really translate into action on the ground. Government spendings on agriculture continued to decline, except perhaps in the very last years of the period. As for international aid for agricultural and rural development, it remained at historically low levels, while an increasing proportion of international aid flows focused on emergency programmes. Development aid for agriculture dropped from around \$9 billion annually in 1987 to less than \$4 billion in 2002 [read]. In the case of Africa, aid in social sectors jumped from 13% in 1979 to 44% of total aid in 2007 [read].

## 3. Between the 2007-08 food crisis and the COVID-19 pandemic of 2020-22.

There are more than plenty of publications on the food crisis, its drivers, and its consequences. The explanations often given to explain the causes of the crisis [read] generally include:

- **Production shortfalls** due to climate-related uncertainties observed in some major exporting countries like Australia and Canada;
- Gradual reduction of stock levels of more than 3% per year since the mid-1990s, especially in the case of cereals. This reduction was linked partly to a policy shift demanded by international financial institutions, requiring countries to decrease physical food stocks due to the high cost of storage;

- The **increase in oil prices**, which contributed to the rise in production costs due to higher fuel and fertiliser prices (namely nitrogen fertiliser). Energy prices began to rise in 2003 (+15% compared to 2002). The surge of energy prices that followed (37% in 2004, 20% in 2006, 43% in 2007, and 60% in 2008) also had consequences on the cost of goods transportation;
- As a result of expensive oil, there was a marked growth of the demand for biofuels made from sugar cane, corn, oilseeds, and palm oil,<sup>5</sup> the production of which was heavily subsidised by OECD countries. In 2006, \$11 billion to \$12 billion was mobilised for the production of bioethanol, to which must be added subsidies for the production of agricultural products intended for the production of biofuels [find out more here about food-energy linkages].
- The change in the structure and level of **food demand** resulting from economic development and rising incomes in non-industrialised and emerging countries, combined with population growth and urbanisation;
- **Speculation** in financial markets contributing to short-term price volatility of agricultural commodities which lead to price increases at the peak of the crisis. However, the characteristic of speculation is to quickly seek to realise its profits. This meant that, although they strongly destabilised the market, these increases were generally short-lived;
- The instability of exchange rates and especially the **weakening of the dollar** observed between August 2007 and August 2008;
- **Decisions made by some exporting countries** to restrict their exports in order to protect their consumers caused panic in regional and international markets.

Most of the factors mentioned above were temporary in 2007–08, with the exception of the evolution of food demand. However, some of them were the consequences of underlying causes that unfolded over time and will continue to shape the future of agriculture and global food security, namely:

- the level of investment in agriculture and rural development,
- **climate change** and **the degradation of natural resources** (land, water, biodiversity),
- the likely long-term trend towards higher fossil fuel prices.

In 2008, the hope was that this crisis (interpreted then as the result of a combination of circumstances) could be easily overcome and that, with short-term measures to assist the most affected populations, a recovery in investment and support for agriculture, the situation could return to a more 'normal' state, although with an increase in the price of certain food products. The FAO estimated at that time that by 2017, 'compared to the average of the observed prices during the period 2005–2007, the real price of wheat [would increase] by 2 percent; rice by 1 percent; maize by 15 percent; oilseeds by 33 percent; vegetable oils by 51 percent; and sugar by 11 percent.' [read]

<sup>&</sup>lt;sup>5</sup> The importance of the effect of this factor on the rise in prices has been the subject of very different estimates, depending on the sources. It was source of an intense controversy, particularly between the Director General of IFPRI and the US Secretary of Agriculture, during the roundtable organized at the High-Level Conference in Rome in June 2008.



However, by the end of 2010, it became clear that the efforts made by certain countries and international institutions (notably through the Global Agriculture and Food Security Programme – GAFSP – managed by the World Bank and the EU's Food Facility – Rapid Response) would not be sufficient. The global food market remained extremely fragile, with prices staying high despite the dampening effect on global food demand of the 2008–2009 financial crisis. This impression was confirmed in 2011 when global food prices reached a **new peak** [read more on food crises]. It was only around 2014 that prices began to sustainably decrease, although they remained 15 to 20% above pre-crisis levels (see **diagram 3**).



Diagram 3 - Evolution of FAO's food price indexes between 1961 and 2019

#### Source: <u>FAO</u>.

This diagram shows the evolution of the FAO food price indexes (nominal or current prices, and real or deflated prices) from 1961 to 2019. It highlights two peaks corresponding to the food crisis of 2008 and the shocks of 2011, as well as another peak in the mid-1970s resulting from the first oil crisis.

The impact of the food price surge on food insecurity has been the subject of controversy. As soon as the price increase was confirmed and riots started in some low- and middle-income countries (approximately 25 countries were affected), international organisations competed in estimating the impact of the food price spike on food insecurity and poverty. The President of the World Bank announced an additional 100 million poor people in low-income countries in April 2008, and the Director-General of the FAO spoke of an additional 50 million people suffering from hunger in July 2008, before an estimate of 963 million undernourished people was published in December 2008, which can be compared to the 923 million projected in 2007.

During the post-crisis period, **food and agriculture saw a renewed interest** from both governments and the private sector [read]. Numerous initiatives were launched to boost agricultural and food production and reduce the dependence of national supply on the world market that had proven to be both unstable and unreliable. Several countries introduced programs aimed at self-sufficiency for certain basic food products, and agricultural investments significantly grew [read], often with negative consequences for food security. The focus was primarily on **increasing production** and on the **role of businesses and private investors** attracted by higher agricultural prices [to know more read <u>here</u> and <u>here</u>].

However, this reaction essentially rested on the simplistic belief that if global food production could be boosted, everything would fall into place. World leaders seemed to think that the manner in which this additional production was achieved did not matter as long as the operation was efficient—with efficiency being, in their eyes, the prerogative of the private sector. This was undoubtedly an opinion stemming from an oversimplified view of food security reduced to its most traditionally emphasised dimension – availability –, while overlooking all the other conditions that determine food security, as will be detailed in the Third part of this text, and especially forgetting that food insecurity persists even in a world of abundance [read].

Eventually, this period resulted in a reversal of the long-term historical trend. Starting in 2014, it was observed that the **number of people experiencing food insecurity** in the world **began to slowly and unevenly increase**, as illustrated by **diagram 4** which is based on the graph published by the United Nations in their report on the State of Food Security and Nutrition in the World in 2021 [read].

At the regional level, Africa saw the most impressive progression of food insecurity (195 million people in 2005, 235 million in 2019), while the situation in Asia continued to improve slowly (554 million in 2005 and 361 million in 2019) with a slightly negative trend starting from 2017. Latin America and the Caribbean followed a similar trend [read].

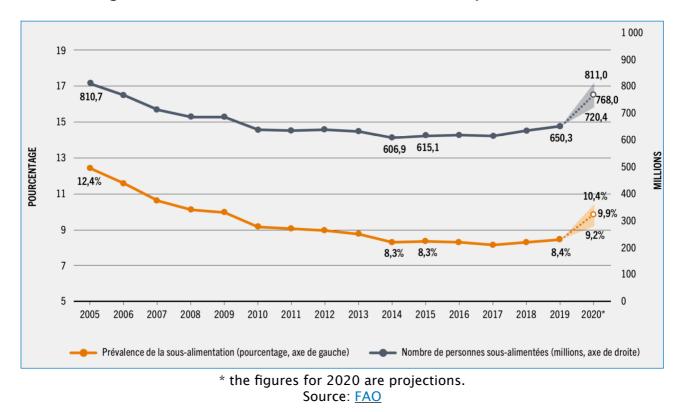


Diagram 4 - Evolution of chronic food insecurity (2005-2019)\*

In the results of national surveys using the <u>Food Insecurity Experience Scale</u> (FIES) conducted by the FAO since 2014, it is clear that everywhere in the world (except in high-income countries), the number of people who had experienced food insecurity – whether severe or moderate – increased between 2014 and 2019 (see **Table 3**).

Region	Severe food insecurity		Moderate food insecurity	
	2014	2019	2014	2019
Africa	192	249	342	675
Asia	350	422	501	1027
Latin America and the Caribbean	44	62	98	205
Oceania	1	2	3	6
North America and Europe	15	12	88	76
World	602	746	1032	1254

Table 3 - Number of people experiencing severe or moderate food insecurity
in 2014 and 2019 (in millions)

Source: <u>FAO</u>.

The list of most frequently mentioned causes to explain this worrying trend generally includes the following:

- The proliferation of **conflicts**, whether internal to the countries concerned or regional or international.
- Climate disruption and the extreme weather events it tends to multiply.
- Various plagues such as locust invasions, processionary caterpillars, and the spread of diseases like rust or mosaic, which can cause considerable damage to crops.
- **Growing income inequalities**, low productivity, and ineffective food supply chains.
- Global, regional, or national economic crises and recessions.

This list of causes, however, may give the impression that the increase in food insecurity is somewhat due to 'bad luck', whereas in reality most – if not all – of the cited causes and observed weaknesses **are the result of human decisions** related to agricultural and food policies, investments and programs, and to the underlying power balances that determine them [read <u>here (box p. 6)</u> and <u>here</u>].

### 4. Between 2020 and 2024: the COVID-19 pandemic and the war in Ukraine

After 2020, a **series of crises** showed the great fragility of the global food system. These crises accelerated the transformation of this system and caused a resurgence of food insecurity worldwide. This regression meant that in 2023, food insecurity affected as many people as in 2006 and reached a level of prevalence similar to that observed in 2009, taking into account the increase in the total world population (see **diagram 5**).

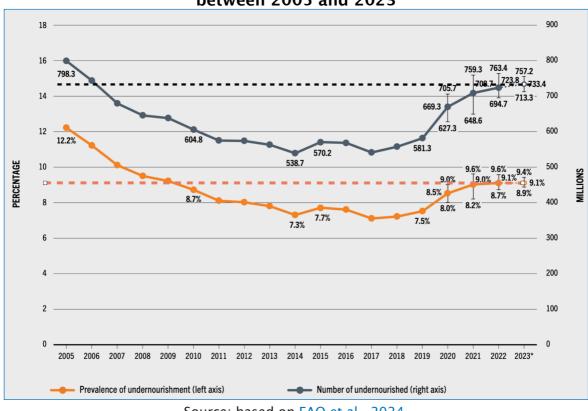


Diagram 5 - Evolution of global chronic food insecurity between 2005 and 2023

Source: based on FAO et al., 2024.

For months, the **pandemic** deeply changed the lives of almost the entire global population: **lockdowns**, **economic slowdown**, **disruption** of food supply chains, consumer **panic**, worsened food **losses and wastage**, great **difficulty** in continuing informal activities essential for the lives of hundreds of millions of people worldwide, massive **migrations** to rural areas in certain countries [read].

The **increase in food prices** and the **decrease in incomes** threw tens of millions of people into a severe food insecurity situation [read], hitting urban areas and **women disproportionately** [read]. Consumption habits and practices also underwent profound changes, promoting an accelerated digitisation of the economy, especially, but not exclusively, in middle- and high-income countries.

The controversies around the **causes** of the pandemic highlighted some characteristics of the global economy that are likely to increase the occurrence of such crises in the future:

- massive deforestation observed in several parts of the world,
- growing mobility of people and goods facilitating the spread of disease vectors,
- ageing population contributing to making societies more vulnerable [read].

Barely had the pandemic lost its strength when the invasion of Ukraine by Russia disrupted the markets of agricultural commodities (especially for cereals) and agricultural inputs (particularly nitrogen fertilisers), as well as the market of energy that plays an increasingly important and diversified role in the agricultural economy, reigniting the surge in food prices and propelling them to unprecedented levels (see **diagram 6**).

### Diagram 6 - FAO food price indexes peaks between 2006 and 2024 (2014-2016=100)



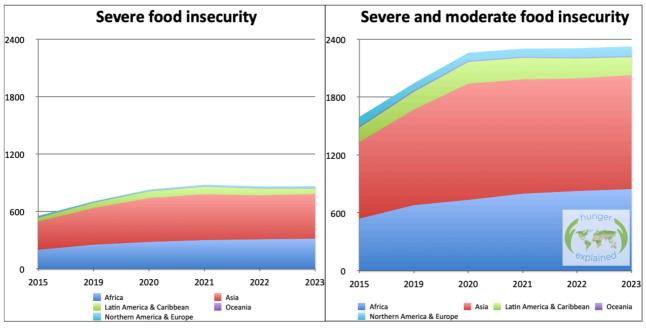
The war in Ukraine affects two of the main global cereal producers who supply 28% of the wheat and 18% of the maize traded on the world market. These two countries are also crucial suppliers of sunflower oil (65% of global sunflower oil exports) and mustard (29% of global exports). For nitrogen fertiliser, the two countries supply around 16% of the global market [read].

The most impacted countries in terms of their **food supply** are primarily located in the Middle East and North Africa, and in the Horn of Africa [read pp.2-6].

The results of national surveys using the <u>Food Insecurity Experience Scale</u> (FIES) show a continued increase in the number of people experiencing severe and moderate food insecurity until around 2021, followed by a stabilisation at a very high level: approximately 860 million people for severe food insecurity, and 2.3 billion people for both severe and moderate food insecurity (**Diagram 7**).

Between 2019 and 2023 (latest available data at the time of drafting this document), the number of people experiencing severe food insecurity increased by over 60 million in Africa, nearly 75 million in Asia, and 8 million in North America and Europe. For moderate food insecurity, the numbers rose by over 100 million in Africa, about 130 million in Asia, and over 10 million in North America and Europe [read].

## Diagram 7 - Evolution of severe and moderate food insecurity in the regions (in millions) (2015-2023)



Source: based on FAO data.

## 5. Urbanisation of food insecurity

One of the major transformations observed during the period between 1970 and 2024, which fundamentally changes the food issue, is the shift from food insecurity being primarily a rural phenomenon in the past to nowadays being mainly an **urban** and **peri-urban** matter. While initially 75% of those suffering from hunger were estimated to live in rural areas, the proportion has now reversed, making today food insecurity a primarily urban and peri-urban concern [read].

This transformation had already manifested itself, during the food crisis of 2007–2008, through the violence of what was then called 'food riots', which had occurred in major cities of low– and middle–income countries,<sup>6</sup> sometimes even threatening political stability [read].

On hungerexplained, we had also noted, more recently, how much the consequences of the COVID-19 pandemic had been stronger for city dwellers than for those living in rural areas [read].

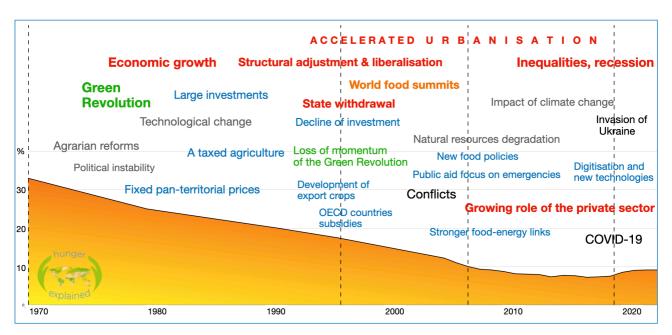
This change **shifts the issue of food insecurity**, with production aspects (technologies, yields, weather conditions, etc.) being only **indirect** factors determining the food security of the most at-risk population groups. The most **direct** causes are now the level of food prices in markets, the opportunities to find properly paid jobs, or to benefit from food assistance in any form, in case of difficulty.

This implies that in this third decade of the 21st century, food security programs must give central importance to these issues, without neglecting, of course, the proper functioning of food production and supply chains that ensure transit of the food produced to the mass of consumers in urban and peri–urban areas, or the crucial relationships between producers and consumers and their organisations that need to be developed or strengthened [read].

<sup>&</sup>lt;sup>6</sup> Such as Bangladesh, Burkina Faso, Cambodia, Cameroon, Côte d'Ivoire, Egypt, Indonesia, Mauritania, Sénégal and Yemen.

## 6. Conclusion

Le **diagram 8** sums up the main features of the five last decades seen from the point of view of food security.



## Diagram 8 - Five decades of food insecurity (1970-2023)

Materne Maetz (December 2024)

## Also read:

- Food security First part: definitions.
- Food security Third part: Third part: dimensions of food security and their drivers.

To know more :

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- FAO, IFAD, UNICEF, WFP and WHO, <u>The State of Food Security and Nutrition in</u> <u>the World 2024 – Financing to end hunger, food insecurity and malnutrition in</u> <u>all its forms</u>, Rome, 2024.
- OCDE, <u>Agricultural Policy Monitoring and Evaluation 2024 Innovation for</u> <u>Sustainable Productivity Growth</u>, 2024.
- Alvi E. and W-C. Huang (eds.), <u>Emerging Giants and Lessons for Development –</u> <u>China, India, and Their Different Paths to Progress</u>, W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan, 2024.

- FAO, IFAD, UNICEF, WFP and WHO, <u>The State of Food Security and Nutrition in</u> <u>the World 2021 – Transforming food systems for food security, improved</u> <u>nutrition and affordable healthy diets for all</u>, Rome, FAO, 2021.
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- Brown, M., <u>Rapid Assessment of Aid Flows for Agricultural Development in Sub-</u> <u>Saharan Africa</u>, FAO Investment Centre, 2009.
- Anderson K. and W.A. Masters, <u>Distortions to agricultural incentives in Africa</u>, World Bank, 2009.
- FAO and WFP, <u>The State of Food Insecurity in the World: Economic crises</u> <u>impacts and lessons learned</u>, 2009.
- FAO, <u>Soaring Food Prices: Facts, perspectives, impacts and actions required</u>, High-Level Conference On World Food Security: The Challenges Of Climate Change And Bioenergy, 2008.
- J. Graziano Da Silva, Políticas de Seguridad Alimentaria: Panorama General en América Latina y Caribe, Tercer Encuentro de Ex-Presidentes, FAO, 2008 (in Spanish).
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- Timmer, P., Food Security and Economic Growth: An Asian Perspective, Center for Global Development, Working Paper Number 51, 2004.
- FAO, <u>The state of food insecurity in the world</u>, Food and Agriculture Organization of the United Nations, 2000.
- FAO, <u>Poverty Alleviation and Food Security in Asia</u>: <u>Lessons and Challenges</u>, FAO Regional Office for Asia and the Pacific, Bangkok, 1999.
- World Bank, <u>The East-Asian Miracle Economic Growth and Public Policy</u>, Oxford University Press, 1993.

Consulted websites :

- FAO, The Food Insecurity Experience Scale.
- FAO, World Food Situation.
- FAOSTAT, Food and agriculture data.

Selection of articles published earlier on <u>hungerexplained</u> referred to in this text:

- Our view of hunger is changing, ... so should the way we combat it (urbanisation of hunger), 2024.
- World food insecurity back to what it was 15 years ago Lack of food and money not a valid reason, 2024.
- Opinion: Land Grabs Squeeze Rural Poor Worldwide by Jomo Kwame Sundaram, 2024.
- Energy and food, 2023.

- Inequality in food systems. Is it realistic to believe that food systems could become more equal in an unequal society? 2023.
- Ukraine war and food crisis: facts and debates, 2022.
- Investment in agriculture, 2022.
- Opinion: <u>Personal reflections on food summitry</u> by A. MacMillan, 2021.
- <u>Facts and figures on world food insecurity and malnutrition The impact of the</u> <u>COVID-19 pandemic</u>, 2021.
- The COVID-19 pandemic hits harder urban areas and women, 2021.
- <u>COVID-19</u>: Is agriculture the main culprit?, 2021.
- <u>COVID-19 and food crisis: the main operating mechanisms</u>, 2020.
- <u>COVID-19 and food: the economic and food crisis hits the more vulnerable -</u> some insights, 2020.
- Why famines in a world of plenty? 2017
- Water and Hunger The "all-out irrigation" strategy has led to a fragile, wasteful and inegalitarian system, 2013.
- <u>Exclusion</u>, 2013.
- Insufficient support to agricultural development, 2013.
- Food crises: A consequence of disastrous economic policies, 2012.

Thematic pages of <u>hungerexplained</u> mentioned in the text:

- Energy and food.
- Food crises.
- <u>New Alliance for Food Security and Nutrition</u>.