

COMMITTEE : FAO (Food and Agriculture Organization of the United Nations)

ISSUE : How can we meet rising global food needs while respecting environmental limits and sustainability imperatives ?

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PRESENTATION OF THE CHAIR



Hi everyone ! My name is Hanaë Schwebel and I'm 15 years old. I'm in the english-euro-section at the Lycée International of Ferney-Voltaire on the Saint-Genis campus. I'm from Singapore and France. I spent my childhood in Paris before moving to the Pays de Gex. During my free time, I like spending time with my family, listening to music and swimming. This year, it will be my second MUN conference, having made my debut last year as a logistics admin. For this 2026 edition, I will have the pleasure of being one of the three

chairs of the FAO committee (Food and Agriculture Organization of the United Nations). The FAO's mission is to prevent famines proactively by creating food systems that are more efficient, resilient, and aligned with the principles of sustainable development. It aims to take long-term action toward building a global food system that is both prosperous and sustainable. Our committee will tackle the following issue: *How can we meet rising global food needs while respecting environmental limits and sustainability imperatives ?*

Indeed, food production is placing increasing pressure on our resources-arable land, water, biodiversity, and climate. It is therefore urgent to rethink our food systems to feed without destroying.

I wish you fruitful research, and I look forward to seeing you all for an unforgettable conference ! See you very soon, dear delegates !

KEY WORDS

Food needs: This refers to the amount of dietary energy required to meet a person's energy needs based on their physiological condition (age, maternity, sex, etc.), to sustain vital functions, maintain good health, and support normal activity levels.

Environmental limits: These refer to the thresholds beyond which human activity can disrupt an ecosystem or a natural process, potentially leading to irreversible or hazardous degradation.

Sustainability imperatives: These refer to the requirements that must be met to ensure sustainability. This means that proposed solutions should meet the needs of current generations without compromising the ability of future generations to meet theirs.

Arable land: According to the FAO (Food and Agriculture Organization of the United Nations), arable land refers to all land used or suitable for growing seasonal crops that is, annual crops such as wheat, beans, or rice. This definition excludes land designated for grazing, forestry (tree cultivation), and permanent plantations such as vineyards, orchards, palm groves, or plantations of coffee, cocoa, and rubber trees.

Developing countries: These are countries whose GDP (Gross Domestic Product) per capita, level of industrialization, and standard of living such as limited access to quality healthcare and education are significantly lower than those of developed countries. (Examples: Afghanistan, Niger, Myanmar...)

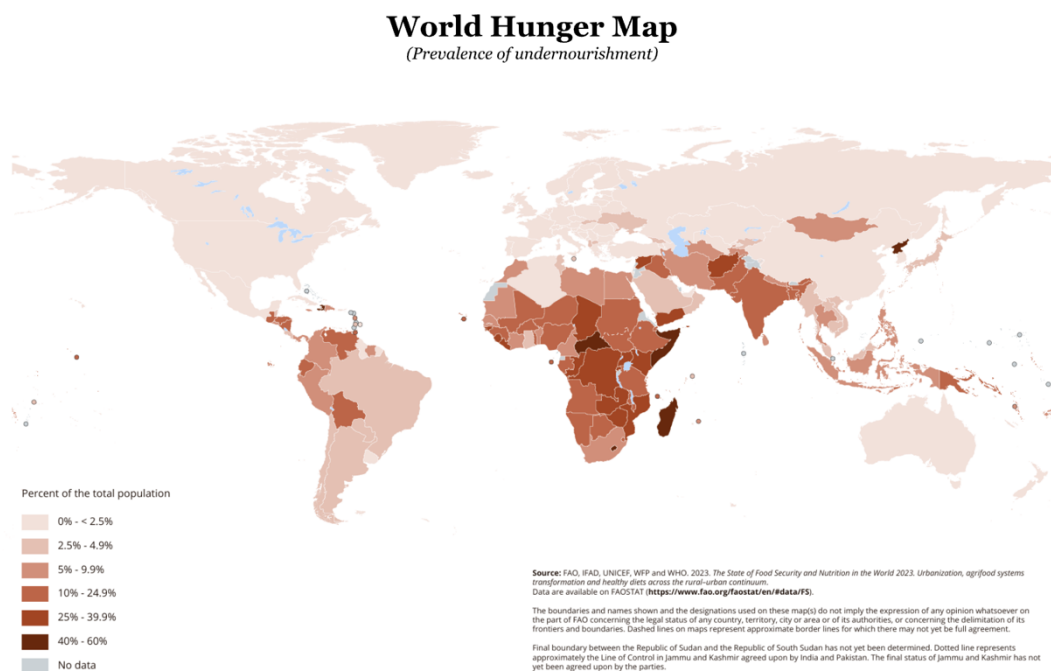
Emerging countries: These are countries whose GDP per capita remains lower than that of developed nations, yet they experience rapid economic growth. Their standard of living, as well as their economic and social structures, are gradually approaching those of developed countries. (Examples: Brazil, India, China, South Africa)

OVERVIEW

I) Global Food Needs

Each person requires approximately 2,200 kcal per day to survive¹. This caloric intake comes from consuming foods that contain carbohydrates, fats, proteins, as well as essential vitamins and minerals. Currently, more than 700 million people suffer from **undernutrition***, meaning their food intake is quantitatively insufficient to meet their daily energy expenditure.

Over 2.3 billion people are affected by **food insecurity**, which means they lacked access to food for at least one day during the year. Food insecurity has increased by 30% in recent years due to the COVID-19 crisis, armed conflicts, and climate change.



Source: [FAO Hunger Map](#)

II) Population Growth

Over the past 50 years, the global population has seen a dramatic increase, rising

¹ [Alimentation | Nations Unies](#)

* Malnutrition is intentionally excluded, as our focus will be more on the quantitative aspect of food needs.

from 2.5 billion people in 1950 to 8.1 billion in 2024. This surge has led to a significant rise in demands related to food, education, healthcare, and transportation.

This phenomenon is especially evident in **developing** and **emerging countries**, which are most affected by this growth.

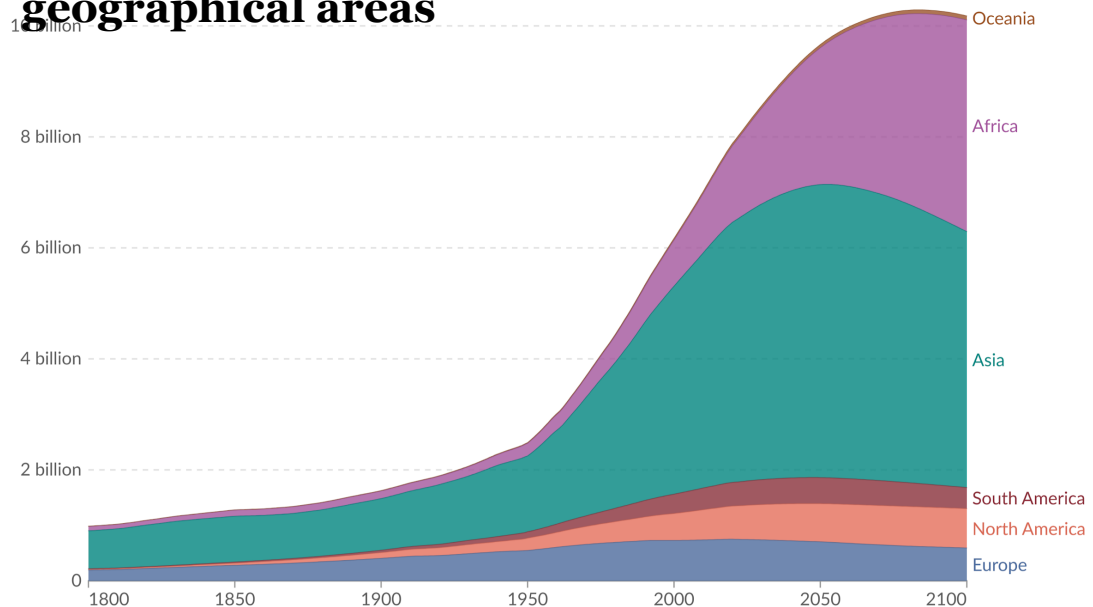
Indeed, population growth is unevenly distributed across the globe: **developing countries** still have very high birth rates, while mortality rates are decreasing.

In **emerging countries**, birth rates are stabilizing in line with mortality rates, yet the population continues to grow.

In **developed countries**, both birth and death rates are declining, resulting in very slow population growth or even a decrease.

In conclusion, by 2050, the global population driven by demographic growth in developing and emerging nations is expected to reach 9.7 billion people, according to the UN. This is why food needs will become even more critical, and likely multiply in these rapidly growing regions.

Evolution of the world population by geographical areas



Data source: HYDE (2023); Gapminder (2022); UN WPP (2024)

OurWorldinData.org/population-growth | CC BY

Note: Historical country data is shown based on today's geographical borders.

1. UN projection scenarios The UN's World Population Prospects provides a range of projected scenarios of population change. These rely on different assumptions in fertility, mortality and/or migration patterns to explore different demographic futures.

[Read more: Definition of Projection Scenarios \(UN\)](#)

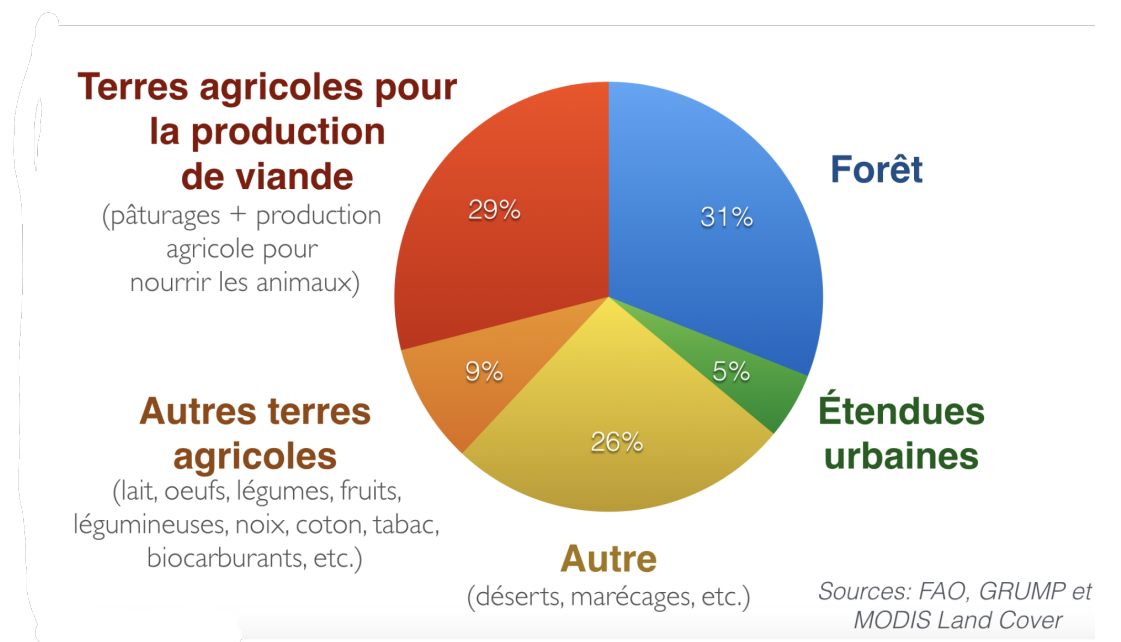
Source: [Population by world region](#)

III) Environmental Limits

The exponential population growth in recent decades has led to a sharp increase in food demand, requiring greater agricultural productivity. For example, crop production rose by 36% in volume between 1980 and 2020. To achieve this, mechanization expanded, along with the intensive use of chemical products. Industry developed fertilizers to nourish plants, fungicides to protect them from disease, and pesticides to shield them from harmful insects.

However, intensive land exploitation has resulted in soil degradation, increased pollution, and a decline in biodiversity. Demographic explosion has also led to the artificialization of many **arable lands**, meaning the transformation of agricultural or natural soils into urbanized, industrial, or infrastructural zones (such as parking lots, roads, or buildings). It has also intensified deforestation, as illustrated in the graph below.

Agricultural lands composition



Source: [Viande et végétaux: comprendre les impacts environnementaux de nos choix alimentaires | LeSceptique.ca](#)

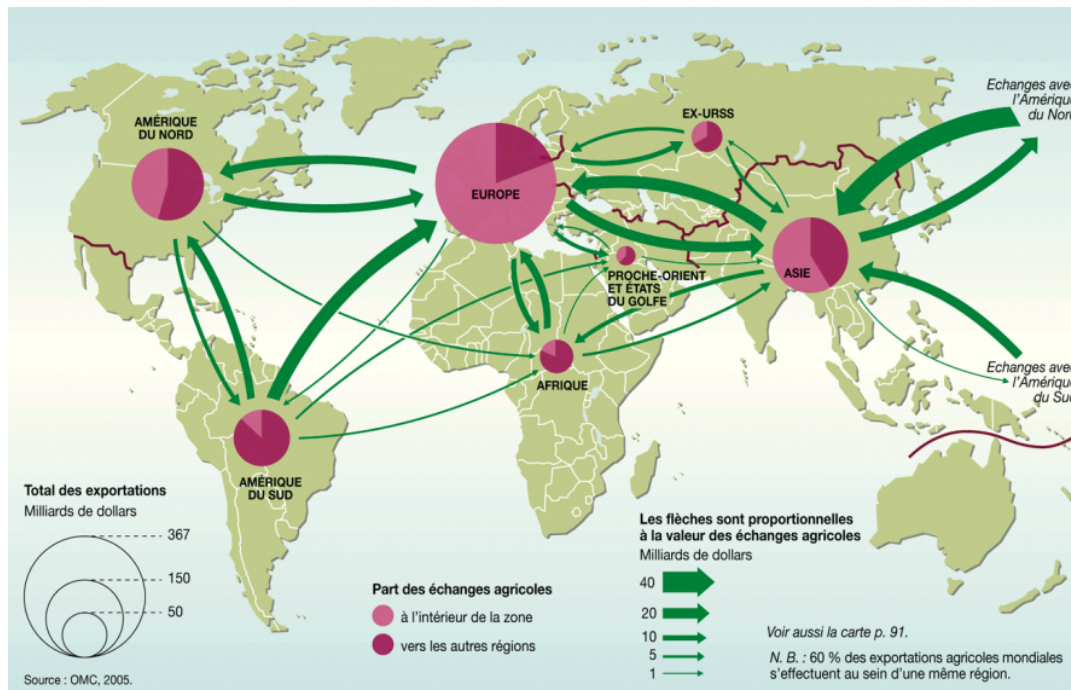
Cultivable farmland accounts for less than 10% of the Earth's total land surface. It is therefore essential to learn how to preserve it.

IV) Sustainability Imperatives

The effects of climate change are already being felt, with an increase in the frequency of droughts, floods, and natural disasters.

Tomorrow's agriculture must therefore be resilient. Crops need to be adapted to future climate conditions, and production methods must become less polluting.

Globalization has led to monocultures and the specialization of certain geographic areas, which has enabled leaps in productivity but has also necessitated the long-distance transport of food products.



Source: [Pres de far international sur l'agriculture](#), par Jacques

Paradoxically, continents such as South America and Africa export more outside their geographic region than within it.

TREATIES AND MAJOR EVENTS

1996

- **Rome Declaration on World Food Security by the FAO ([ici](#))** : It establishes that access to food is a fundamental human right. The signatory governments therefore commit to achieving food security for all and pledge not to use food as a means of political or economic pressure.

2015

- **Sustainable Development Goals (SDGs)** ([here](#)) : These are the 17 goals on sustainable development established by the UN to be achieved by 2030. The one that concerns us most here is Goal 2, “Zero Hunger,” which aims to eradicate hunger worldwide by 2030.

17 December 2018

- **United Nations General Assembly Resolution (73/165) on the rights of peasants and other people working in rural areas** ([here](#)) : The declaration includes 28 articles, the most important of which are the rights to land, water, seeds, and biodiversity.

15 June

- **World Hunger Day established** by the FAO ([here](#))

16 October

- **World Food Day established** by the FAO ([here](#))

17 October this year

- **World Food Forum organized** by the FAO since 2021 ([here](#)) : It will be held on the occasion of the FAO’s 80th anniversary.

POSSIBLE SOLUTIONS

Global agricultural production is currently unbalanced between countries that produce a lot and those suffering from food insecurity. The population growth expected in the coming decades is likely to worsen these disparities by putting additional pressure on ecosystems.

But there are potential solutions, such as:

- Setting up agricultural production capacities near the areas with the greatest needs can prove to be a more realistic approach to avoid dependence on consumer countries and to reduce the environmental impact of transporting food products.

- Creating small farms while promoting localism. This would help develop subsistence agriculture, which would reduce rural exodus and maintain people's connection to their land. In this way, farmers would no longer leave the countryside to look for work in the city but would stay in rural areas and feed themselves through their own production.
- Raising awareness about food waste, knowing that in developed economies nearly 30% of food is wasted, according to the FAO (for example, "ugly" vegetables).
- Educating children to promote the importance of a healthy diet based on locally grown, seasonal foods. Developing their critical awareness of the environmental consequences of their food choices.
- Reducing meat consumption in developed countries, particularly beef, which requires a lot of resources (water, farmland, energy, cereals...). Therefore, production quantities should be decreased while improving the quality of livestock farming, which would have the dual benefit of reducing environmental impact and limiting the risk of disease emergence.

QUESTIONS TO CONSIDER :

1. Is your population tending to increase or decrease ?
2. What proportion of your population is food insecure ?
3. Do you have a policy to reduce this food insecurity ?
4. What percentage of food do you estimate is wasted ? And how do you plan to reduce it ?
5. Is your country self-sufficient in the production of staple foods (cereals, fruits, vegetables, milk, oils...) ?
6. Does your country still have unused agricultural land ?
7. Does your agriculture have an impact on the environment ? If so, what kind ?
8. What is the proportion of staple foods in your agricultural production ?
9. What types of raw agricultural products do you export ?
10. Does your country promote sustainable agricultural practices ?
11. Do you have awareness campaigns on eating practices and their environmental consequences ?

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