



CURRENT AFFAIRS



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GLOBAL HUNGER INDEX 2023

This article covers "Daily Current Affairs" and the topic details "Global Hunger Index 2023". This topic has relevance in the Social Issues section of the UPSC CSE exam.

For Prelims:

*Index Overview?
Indicator Components?*

For Mains:

*GS 2: Social Issues
Key Findings for India?
Global Scenario?*

Why in the news?

In the Global Hunger Index (GHI) for 2023, India's ranking has fallen to 111 out of 125 countries. This represents a decline from its position of 107 out of 121 countries in 2022.

Index Overview:

The Global Hunger Index is a comprehensive tool for measuring and tracking hunger globally, regionally, and nationally. It relies on four key indicators to calculate a Global Hunger Index (GHI) score on a 100-point scale, where lower scores indicate less hunger.

Indicator Components:

- Undernourishment based on caloric intake.
- Child stunting based on height. (under age five)
- Child wasting based on weight. (under age five)
- Child mortality (before age five).

The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels. GHI scores are based on the values four indicators:



Undernourishment: the share of the population with insufficient caloric intake.



Child wasting: the share of children under age five who have low weight for their height. reflecting *acute* under nutrition.



Child stunting: the share of children under age five who have low height for their age. reflecting *chronic* under nutrition.



Child mortality: the of children who die before their fifth birthday. partly reflecting the fatal mix of inadequate nutrition and unhealthy environments.

These four indicators are aggregated as follows:



GHI Severity of Hunger Scale

Extremely alarming GHI ≥ 50.0	Alarming GHI 35.0-49.9
Serious GHI 20.0-34.9	Moderate GHI 10.0-19.9
Low GHI ≤ 9.9	

100-point scale

Key Findings for India:

- India had the highest child wasting rate in the world, standing at 7% during 2018–22, indicating acute undernutrition.
- The rate of undernourishment in India was 6%, and under-five mortality was 3.1%.
- The prevalence of anemia in women aged 15-24 was reported at 1%.

- India's overall GHI score was 7, categorized as a serious level of hunger.
- In comparison to neighboring countries, Pakistan (102), Bangladesh (81), Nepal (69th), and Sri Lanka (60) performed better on the index.

Global Scenario:

- The 2023 GHI score for the world is 3, considered moderate and slightly lower than the world's 2015 GHI score of 19.1.
- Since 2017, the prevalence of undernourishment, one of the GHI indicators, has been on the rise, with the number of undernourished people increasing from 572 million to about 735 million.

The Global Hunger Index (GHI) reveals that several factors have contributed to exacerbating social and economic inequalities and reversing efforts to reduce hunger in many countries:

- **Climate Change:** Environmental changes, such as droughts, floods, and irregular weather patterns, have disrupted agriculture and food production, leading to food insecurity.
- **Conflicts:** Ongoing conflicts and wars in various regions have resulted in the displacement of populations, disrupted supply chains, and hindered access to food and humanitarian aid.
- **Economic Shocks:** Economic crises and shocks, including currency devaluation and inflation, have made it difficult for vulnerable populations to afford basic necessities, including food.
- **Global Pandemic:** The COVID-19 pandemic has strained healthcare systems, led to job losses, and disrupted food distribution networks, affecting access to food and nutrition.
- **Russia-Ukraine War:** The conflict has added to global uncertainties, affecting international trade and potentially leading to higher food prices and supply disruptions.

These factors combined have posed significant challenges to addressing hunger, particularly in vulnerable and marginalized communities.

SOURCE:

[India ranks 111th on Global Hunger Index 2023; 'erroneous measure of hunger', says govt | India News - The Indian Express](#)

Q.1 In the context of child nutrition, what does the term "child wasting" refer to?

- (a) A condition where a child is shorter than the average height for their age group.
- (b) A condition in which a child has a low weight-for-height ratio due to rapid weight loss.
- (c) A condition characterized by a child's chronic malnutrition and inadequate calorie intake.
- (d) A condition that leads to a higher risk of infectious diseases in children.

ANSWER: B

Q.2 Consider the following statements regarding the Global Hunger Index (GHI):

1. GHI is calculated based on four primary indicators, including child stunting, undernourishment, child wasting, and child mortality.
2. A GHI score of 100 indicates the highest level of hunger, while a score of 0 implies no hunger.
3. According to the 2023 GHI report, India had the highest child wasting rate in the world during 2018-22.

How many of the above statement/s is/are correct?

- (a) Only one
- (b) Only two
- (c) All three

(d) None

ANSWER: C

Q.3 Analyzing the Global Hunger Index (GHI) as a critical tool for assessing food security, discuss the specific challenges that India faces in addressing child undernutrition and food insecurity.

Rishabh

OZONE HOLE

This article covers "Daily Current Affairs" and the topic details "Ozone Hole". This topic has relevance in the "Environment and Ecology" section of the UPSC CSE exam.

For Prelims:

What is an Ozone Hole?

For Mains:

GS2: Environment and Ecology

Why in the news?

Satellite data from the European Space Agency's Copernicus Sentinel-5P has identified a massive ozone hole over Antarctica, measuring 26 million square kilometres, about three times the size of Brazil, as part of the EU's environmental monitoring program.

About Ozone

- Ozone (O₃) is a triatomic molecule composed of three oxygen atoms, and it is a dynamic component of Earth's atmosphere.
- Most ozone resides in the stratosphere at altitudes ranging from approximately 10 to 50 kilometres above the Earth's surface.
- Its critical role lies in absorbing and filtering out most of the harmful ultraviolet (UV) radiation, specifically UV-B and UV-C, emitted by the sun.
- This function is vital for protecting life on Earth from the harmful effects of excessive UV radiation, including skin cancer, cataracts, and damage to the DNA of living organisms.

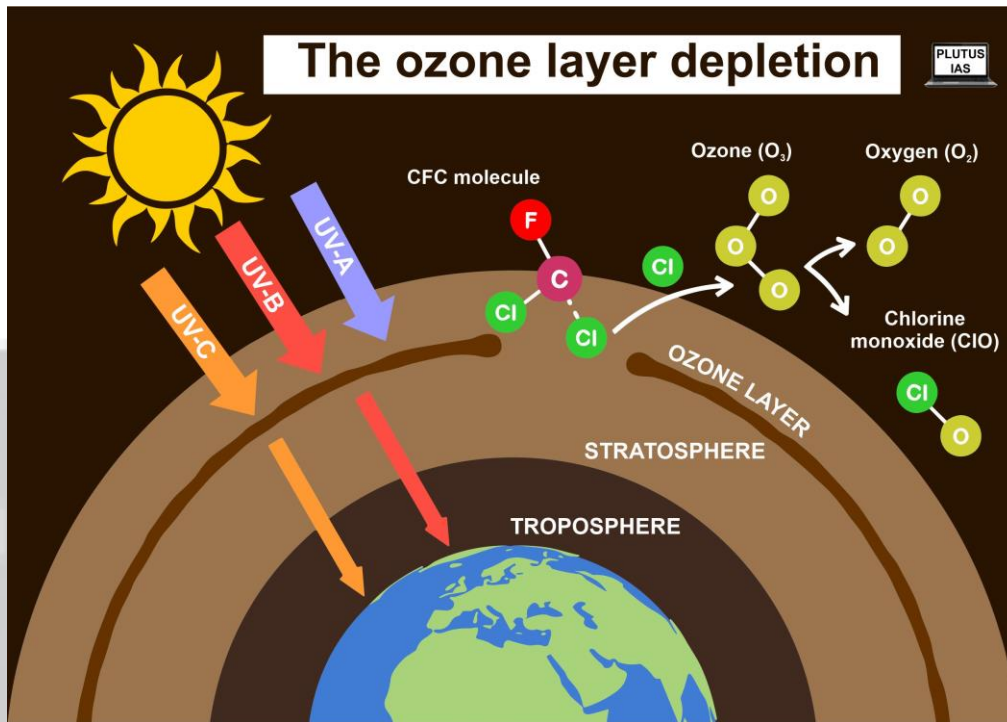
Production of ozone

- Ozone is primarily produced in the stratosphere through a complex photochemical process. Ultraviolet (UV-C) radiation, which is more energetic and prevalent in the upper stratosphere, photodissociates molecular oxygen (O₂), resulting in the formation of atomic oxygen (O).
- The atomic oxygen then reacts with molecular oxygen to produce ozone. This ozone production occurs most efficiently in the upper stratosphere, where UV-C radiation is the most intense.
- The ozone layer is in a state of dynamic equilibrium, with production and destruction processes continually occurring.

Ozone Hole

- The term "**ozone hole**" refers to a **localised and severe depletion of ozone concentrations within the stratosphere**, often occurring in polar regions, such as Antarctica.
- Ozone holes are primarily associated with releasing synthetic ozone-depleting (ODS) compounds, including chlorofluorocarbons (CFCs) and halons.

- These ODS are transported to the stratosphere, broken down by UV- C radiation, releasing chlorine and bromine atoms. These atoms catalytically destroy ozone molecules.
- As a result, the ozone layer becomes thinner in these areas, allowing higher levels of harmful UV radiation to penetrate the Earth's surface, leading to detrimental environmental and health effects.



Causes of recent ozone hole over Antarctica

- The giant ozone hole observed this year over Antarctica is believed to be caused by **volcanic eruptions at Hunga Tonga in Tonga** that occurred in December 2022 and January 2023.
- These eruptions released **water vapour into the stratosphere**, which impacted the ozone layer through chemical reactions and changed its heating rate.
- The water vapour also contained elements like **bromine and iodine**, which can deplete ozone.
- Although human activities have been responsible for ozone depletion in the past, there isn't much evidence to suggest that this year's ozone hole is due to human causes.

Climate Change and Ozone

- **Impact of Rising Temperatures and Ozone Holes:** While ozone depletion isn't a primary cause of climate change, rising global temperatures can affect ozone hole formation and dynamics, leading to complexities in atmospheric conditions.
- **Unusual Ozone Hole Behavior:** Recent anomalies like the extended 2020 ozone hole are linked to factors like wildfires and increased stratospheric smoke from more intense and widespread fires.
- **Ozone Depletion Due to Climate Change:** With the ongoing climate crisis, more frequent and severe global wildfires could intensify ozone depletion, posing ozone management and mitigation challenges.
- **Ozone Holes' Impact on Earth's Climate:** Ongoing research suggests that ozone holes may have cooling effects by reducing the greenhouse gas effect. However, their interactions with climate dynamics remain intricate.

- **Altered Season Duration:** Ozone depletion, primarily in polar regions, can prolong winter seasons by maintaining the polar vortex, influencing ecosystems and atmospheric circulation patterns.

Sources:

[Large ozone hole detected over Antarctica: Is it a matter of concern? | Explained News - The Indian Express](#)

Q1. With reference to Ozone holes, consider the following statements:

1. Ozone holes majorly occur in the equatorial regions due to high insolation.
2. They are primarily associated with chlorofluorocarbons (CFCs) and halons.
3. The ozone layer is in a dynamic equilibrium state, with production and destruction processes occurring continuously.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) None

Answer: (b)

Q2. Huga Tonga volcano is located in which of the following seas/ oceans?

- (a) Atlantic Ocean
- (b) Indian Ocean
- (c) Pacific Ocean
- (d) Black Sea

Answer: (c)

Q3. Examine the role of ozone in Earth's atmosphere, the processes involved in its production, and the ozone depletion phenomenon.

Gaurav