

GOVERNMENT POLICIES

Measuring hunger across States

In Context: An India-specific hunger index at the level of States and Union Territories helps evaluate the extent of undernourishment at a more localised scale.

India's challenge of hunger & undernourishment

- ✓ Despite being a major food producer with extensive food security schemes and the largest public distribution system in the world, India still grapples with significant levels of food insecurity, hunger, and child malnutrition.
- ✓ The Global Hunger Index (GHI), 2022, ranked India 107 among 121 countries, behind Nigeria (103) and Pakistan (99). The GHI provides a composite measurement and tracks undernourishment and hunger at the national level across three dimensions: calorie undernourishment, child malnutrition, and under-five mortality.
- ✓ According to the State of Food Security and Nutrition in the World report of 2022, India is home to 224.3 million undernourished people. Disparities are evident among States.

About the State Hunger Index (SHI)

✓ **Index Indicators:**

- The GHI is computed using **four indicators** among children below the age of five; and under-five mortality rate.
 1. The prevalence of calorie undernourishment;
 2. Stunting,
 3. Wasting, and
 4. Mortality
- **The State Hunger Index (SHI)** is calculated using the same indicators except calorie undernourishment, which is replaced by body mass index (BMI) undernourishment among the working-age population, as data on calorie undernourishment are not available since 2012.

✓ **Data sources:**

- Data for stunting, wasting, and mortality among children below the age of five are sourced from the fifth round of the National Family Health Survey (NFHS-5)
- The prevalence of BMI undernourishment is computed using NFHS-5 (2019-21) and Wave 1 of the Longitudinal Ageing Study in India (2017-18).

✓ **Calculation of the SHI:**

- The calculation of the SHI score involves combining the normalised values of the four indicators using the techniques recommended by the GHI.
- The SHI scores range between 0 and 100. Higher scores indicating more hunger. Scores below 10 signify low hunger,

Performance of states in India

- ✓ **Alarming:** In the SHI, Bihar, Jharkhand, and Chhattisgarh scored 35, which places them in the 'alarming' category.
- ✓ **States above the national average:** Gujarat, Uttar Pradesh, Assam, Odisha, Madhya Pradesh, Tripura, Maharashtra, and West Bengal all scored above the national average (29). The performance of these States resembles that of African nations such as Haiti, Niger, Liberia, and Sierra Leone.
- ✓ **Moderate hunger:** On the other hand, Chandigarh scored 12, and Sikkim, Puducherry, and Kerala all scored below 16. These States, along with Manipur, Mizoram, Punjab, Delhi, Arunachal Pradesh, Andaman and Nicobar Islands, and Tamil Nadu, fall under the 'moderate hunger' category.
- ✓ **Serious hunger:** All the other States, which scored below the national average and above 20, have a problem of 'serious hunger'.
- ✓ **Low hunger:** No State falls under the 'low hunger' category.
- ✓ **The impact of COVID-19 on the SHI is not captured** here since post-pandemic estimates are not yet available.

Issues & challenges

- ✓ **Dispute over data & methodology:** Over the last half a decade, India's GHI score has deteriorated primarily due to the increasing prevalence of calorie undernourishment.
 - According to the Food and Agriculture Organization (FAO), the proportion of calorie undernourishment in India has been escalating since 2017, reaching 16.3% in 2020, equivalent to the 2009 statistic.
 - The Indian government has disputed these conclusions by raising concerns about the data and methodology used in calculating the GHI.
 - However, it has not been able to provide empirical evidence to support its claims.

- ✓ **Lack of National Sample Survey (NSS) data:** No National Sample Survey (NSS) round on nutritional intake has been conducted by the government since 2011-12, which used to offer insights into the prevalence of calorie undernourishment at national and subnational levels.
- ✓ **Climate change & food insecurity:** Climate change and the increasing frequency of extreme weather events, from heat waves to flash floods, pose a big challenge not only to India's food system but also to poverty alleviation – gains could reverse with these shocks.
- ✓ **Non-communicable diseases:** The rising burden of cardiovascular and other non-communicable diseases in India, particularly among the rapidly growing “middle class”, is strongly linked to diet and nutrition.

Suggestions

- ✓ **Access to nutritious food:** It is time to elevate food intake among young children to be of primary importance, as opposed to being referred to as “complementary” in policies and guidelines related to maternal, infant and young child nutrition. Access to adequate and affordable nutritious food is equally necessary for mothers for healthy breastfeeding.
- ✓ **Need of improved assessments:** To better understand food security for all populations in India, assessments using household-level food insecurity modules developed by the Food and Agriculture Organisation can be adapted to measure the extent of food insecurity among Indian households.
- ✓ **Evidence-based policy:** Measuring the availability, accessibility and affordability of nutritious food, especially for disadvantaged and vulnerable populations such as young children, constitutes the foundation for any evidence-based policy to end hunger and improve nutritional security among Indians.
- ✓ **Pradhan Mantri Garib Kalyan Anna Yojana:** To achieve the SDG of zero hunger, and building on the Pradhan Mantri Garib Kalyan Anna Yojana, India should consider a strategic initiative led by the Prime Minister's Office aimed at eliminating food insecurity in India and ensuring affordable access to sufficient quantity and quality of nutritionally diverse food, with a special and immediate focus on India's youngest children.

Way ahead: One simple answer to these challenges would be to keep focus on accelerating economic growth and making it more inclusive. Fixing the pre-existing schemes is another important solution to addressing India's multi-dimensional nutrition challenge. Getting the already existing schemes right requires greater involvement of local government and local community groups in the design and delivery of tailored nutrition interventions.

ENVIRONMENT

Emerging countries need women-led climate action

In Context: Gender equality and environmental goals are mutually reinforcing and create a virtuous circle that will help accelerate the achievement of the SDGs [Sustainable Development Goals].

Impacts of climate change

- ✓ The impact of climate change is one that has profound consequences for humans and has emerged as one of the biggest global challenges in recent decades.
- ✓ The effects of climate change vary according to location, socioeconomic status, and gender.
- ✓ An International Labour Organization study (2019) said that in 2030, 2.2 percent of total working hours worldwide will be lost to high temperatures, a productivity loss equivalent to 80 million full-time jobs.
- ✓ The United Nations (2009) highlighted that across genders, women are considered to be highly vulnerable and disproportionately affected by climate change than men to the impact of climate change.

Felt more in low-income countries

- ✓ However, women in developing and less developed countries (especially in low-income areas) are more vulnerable to climate change because of their dependence on natural resources and labour-intensive work for their livelihood.
- ✓ Women are more likely to live in poverty than men, which is just one of several social, economic, and cultural variables that makes them more susceptible to the effects of climate change.
- ✓ Women from low-income households are more at risk because they are more responsible for food, water, and other homely unpaid work.
- ✓ Women may be at increased risk for health and safety because they must travel long distances every day to collect water and fuel.
- ✓ This is why climate change has a disproportionate effect on rural women.
- ✓ Women in low-income countries (predominantly South Asia and sub-Saharan Africa) engage in climate-vulnerable occupations such as farming and other labour-intensive work.
- ✓ According to the ILO, over 60% of working women in southern Asia and sub-Saharan Africa are still in agriculture, where they are often underpaid and overworked.
- ✓ Despite being the backbone of the food production system, women own only about 10% of the land used for farming.

Gender-specific issues

- ✓ According to a UN study, most (80%) of those displaced by climate-related disasters are women and girls.
- ✓ When women are uprooted, they are more susceptible to prejudice and exploitation.
- ✓ For instance, after the earthquake in Nepal in 2015, the **United Nations Population Fund (UNFPA)** found women were more exposed to trafficking and exploitation.
- ✓ Separation from social networks, a higher risk of gender-based violence, and decreased access to employment, education, and essential health services, such as sexual and reproductive health care and psychosocial support, are just some gender-specific issues women face.

Impacts on agriculture and food security

- ✓ Climate change impacts agricultural productivity negatively and significantly.
- ✓ Heat stress affects workers a lot in this sector, especially in South Asia and Africa.
- ✓ Changing precipitation patterns and more frequent extreme weather events are just the beginning of the problems.
- ✓ Their effects on crop production and food security fall disproportionately on these people, who already face significant challenges in obtaining resources, expertise, and technology.
- ✓ Women engaged in agriculture do not have access to quality inputs and possess low education and technical knowledge.
- ✓ Various studies also reflect how flooding has increased water scarcity and also violence against and the exploitation of women.

Invest in women's education, training

- ✓ According to estimates, 130 million people could be pushed into poverty by 2050 due to climate change risks, natural disasters, and food inflation, impacting women's inequality.
- ✓ Investments in women's education, training, and access to resources are essential if we are to be resilient to the impact of climate change.
- ✓ Reduce the negative impacts of climate change on people's living standards by teaching them how to practise **sustainable agriculture, water management, and energy generation.**
- ✓ For example, in India, the **Self-Employed Women's Association (SEWA)** teaches women farmers how to respond to shifting climate patterns to support themselves better financially.

Conclusion: Women's participation in climate policy decision-making at all levels is crucial for effective climate change mitigation and adaptation strategies as well as getting decent employment. As women face greater risks in climate change, gender parity in decision-making bodies is essential.

PRELIM FACTS

1. Koraput Kalajeera Rice

In context: Recently, Koraput Kalajeera Rice,' an aromatic rice, has got Geographical Indications status.



About Koraput Kalajeera Rice:

- ✓ The farmers of Koraput district in Odisha have domesticated Kalajeera rice over generations.
- ✓ It is known as the 'Prince of Rice' and is an aromatic variety of rice.
- ✓ The ancestors of the present tribal communities of Koraput district have domesticated the rice in the region for thousands of years, contributing to the conservation of the crop.
- ✓ It is popular among rice consumers for its black colour, good aroma, taste and texture.
- ✓ The ancient text explains that Kalajeera rice improves memory and controls diabetes.
- ✓ It is believed to increase haemoglobin levels and the body's metabolism.

- ✓ This fragrant grain has antispasmodic, stomachic, carminative, antibacterial, astringent and sedative properties.
- ✓ The rice is grown in Koraput district's Tolla, Patraput, Pujariput, Baliguda and Mohuli areas.

2. **M S Swaminathan Award:**

In context: Dr P V Satyanarayana, Principal Scientist at the Agricultural Research Station, Acharya N.G. Ranga Agricultural University, Ragolu, has been recently awarded the prestigious Dr MS Swaminathan Award.

About M S Swaminathan Award:

- ✓ It was instituted in 2004 with the objective to recognise the lifetime contributions of eminent persons who have made great impacts and outstanding contributions to agricultural research and development and to the overall food security and sustainability of agriculture, with special reference to India.
- ✓ It is named after the doyen of Indian Agriculture, Prof. M.S. Swaminathan, Chairman, M.S Swaminathan Research Foundation, Chennai.
- ✓ It is a biennial award constituted by the Retired Indian Council of Agricultural Research Employees Association (RICAREA) and Nuziveedu Seeds Limited (NSL).
- ✓ The award carries a Cash prize of Rs.2 lakhs (Rupees Two Lakhs only), a Medal, and a Citation.
- ✓ The award is open to all, irrespective of his/her nationality.

Who was M S Swaminathan?

- ✓ Mankombu Sambasivan Swaminathan, often referred to as Dr. M.S. Swaminathan, is a renowned Indian agricultural scientist and geneticist.

Green Revolution in India:

- ✓ He is often referred to as the "Father of the Green Revolution in India."
- ✓ His research and work in crop breeding, particularly for wheat and rice, led to the development of high-yielding varieties that significantly increased agricultural productivity.
- ✓ This Green Revolution helped India overcome food shortages and played a crucial role in the country's agricultural transformation.
- ✓ In recognition of his outstanding contributions, he was awarded the first World Food Prize, the Ramon Magsaysay Award and many other national and international honours.

3. **Umiam Lake:**

In context: The Meghalaya government recently adopted AI-enabled robotic technology to keep its tourist hotspot, Umiam Lake, free of pollutants.

About Umiam Lake:

✓ **Location:**

- Umiam Lake, also known as Barapani Lake, is a lake in the state of Meghalaya 15 km (9.3 miles) north of Shillong, the capital of Meghalaya.
- It is encircled by lush green East Khasi hills.

- ✓ It is one of the biggest artificial lakes in Meghalaya, spread over an area of 10 square km,

✓ **History:**

- The lake was formed after a dam was constructed to generate hydroelectric power in 1965.
- The dam was a part of northeast India's first hydel power project called the Umiam Umtru Hydroelectric Power Project.

- ✓ **Source of Water:** The confluence of the two streams, Umkhrah and Umshvrpi, form the Wah Ro-ro stream in the northwest of the town and joins River Umiam, the main source of water for the lake.
- ✓ The principal catchment area of the lake and dam is spread over 220 square km, which includes Shillong and its adjoining areas.
- ✓ It is a popular venue for water sports and adventure facilities.

4. **Kinzhal Missile:**

- ✓ The Kh-47M2, nicknamed "Kinzhal" (Dagger), is a nuclear-capable, Russian air-launched hypersonic ballistic missile.
- ✓ It was one of six "next generation" weapons unveiled by Russian President Vladimir Putin during a speech in March 2018.

Features:

- ✓ The Kinzhal can reach speeds of up to Mach 10 (12,350 km/hr).
- ✓ It can carry both conventional and nuclear warheads with a payload of up to 480 kg and a thermonuclear option with a 10-50 kt warhead.
- ✓ It has a reported range of 1,500-2,000 km.
- ✓ The Kinzhal has a length of 8 m, a body diameter of 1 m, and a launch weight of approximately 4,300 kg.
- ✓ It is designed to be launched from MiG-31 fighter jets at altitudes of about 18 km (59,000 ft).
- ✓ This missile manoeuvres during all stages of its flight to overcome hostile air defence systems.

What are Hypersonic Missiles?

- ✓ A hypersonic missile is a weapon system that flies at least at the speed of Mach 5e. five times the speed of sound and is manoeuvrable.
- ✓ These missiles are extremely fast and far harder for surface-to-air missile defence systems to target.

ANSWER WRITING

Q. "Knowledge is the only virtue" because "once a man knows good from evil, nothing on earth can compel him to act against that knowledge."- Socrates. Comment.

- Socrates was a great Greek Philosopher, Ethics is born out of inquisitiveness of Socrates. He said that an unexamined life isn't worth living. Human should question each & everything in his surrounding on basis of reasoning & rationality. They should have art of questioning. His philosophy was further propagated by Plato & Aristotle.
- Human being has five senses through which it receives information and knowledge. E.g. tongue gives knowledge about taste. We see through eyes and listen through our ears and gather information. The information and knowledge received from senses is understood with the help of previous knowledge and it's understanding.
- The understanding of knowledge and its application in life leads to reasoning ability in human's life. People start to critically question on the basis of understanding of knowledge. This ultimately result in acquiring sixth sense i.e. wisdom and values like truthfulness, selflessness, nonharmfulness.

Wisdom: knowledge+ understanding+ right application

- According to Aristotle, as human progresses in life, he/she improve conduct and moves towards chief good which is wisdom (Indian philosophy of Nirvana or enlightenment). Enlightenment, wisdom brings highest level of happiness and not the materialistic pleasures. E.g. Buddha, Vivekananda achieved wisdom through enlightenment which made them happy or satisfied in life.
- Wisdom extracts meaning and significance from information/knowledge by understanding interrelationships and their implications. Wisdom is a profound understanding of our existence, the human situation, our possibilities, and especially our limitations. Thus when person gets wisdom, nothing in the world can stop him to do right or what is ethical.
- **Example-1:** Socrates was himself punished for speaking his mind to his disciple. He was asked to either leave the territory or face the death. He did not leave the territory and faced death as he considered speaking true knowledge as ethical thing to do and even death could not stop to act against his knowledge.
- **Example-2:** Wisdom helps to build strong character of a person. Person with strong character takes ethical decisions, they have good inter-personal relations, people start appreciating and respecting that person.
- Although there are exceptions when knowledge is used for evil results, the pursuit and acquisition of knowledge is predominantly a positive thing; advanced knowledge is often crucial to success. There are countless examples from history, science, and literature in which having knowledge plays a vital role in success and a lack of knowledge plays a significant role in failure.
- **Conclusion:** People should strive to achieve wisdom in life. It can be achieved through acquiring right knowledge and understanding & applying it for the right cause at right time and place. The Civil Service (Conduct) Rules, 1964 also suggests that Civil Servants should apply their wisdom while taking best possible action when law is not clear about the issue.

MCQs

1. Considered the following statement regarding Kalajeera Rice.
 1. Koraput district in Odisha have domesticated Kalajeera rice.
 2. It is known as the 'Prince of Rice' and is an aromatic variety of rice.
 3. Kalajeera Rice, is not an aromatic rice, has got Geographical Indications status.
 Which of the following statement is/is/are correct?
 - a) **Only 1 and 2**
 - b) Only 3
 - c) Only 2 and 3
 - d) All of the above
2. Consider the following statements regarding M.S. Swaminathan Award:
 1. It is a biennial award instituted to recognize the lifetime contributions of eminent persons in the field of agriculture.
2. Only Indian citizens are eligible to be considered for the award.

Which of the statements given above is/are incorrect?

 - a) 1 only
 - b) **2 only**
 - c) Both 1 and 2
 - d) Neither 1 nor 2
3. Umiam Lake, recently seen in the news, lies in which state?
 - a) Manipur
 - b) **Meghalaya**
 - c) Himachal Pradesh
 - d) Assam
4. Consider the following statements regarding DIKSHA Platform:
 1. It is an initiative of National Council for Education Research and Training (NCERT).

2. It is built on open source technology and provides solutions for teaching and learning. Which of the statements given above is/are incorrect?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2**
5. With reference to Arthropods, consider the following statements:
- They are invertebrates with jointed legs.
 - They make up more than 50% of all animals on Earth.
 - They have a hard exoskeleton and a segmented body.
- How many of the statements given above are correct?
- Only one
 - Only two
 - All three**
 - None
6. With reference to Global Hunger Index (GHI) 2022, consider the following statements
- It is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels.
 - India's ranking in Global Hunger Index 2022 is 107 out of 121 countries.
 - It measures countries' performance on four component indicators – undernourishment, child wasting, child stunting and child mortality.
 - It is released by International Monetary Fund every year.
- How many of the above statements is/are correct?
- Only 1
 - Only 2
 - Only 3**
 - None
7. Considered the following statement:
- Radhakrishnan's birthday, September 5, has been celebrated as Teachers' Day in India since 1962.
 - In 1952, he became the first Vice President of India.
 - In 1962, he was elected as the first President of India, serving until 1967.
- How many of the above statements is/are correct?
- Only 1
 - Only 2**
 - Only 3
 - None
8. Recently C-TAP is in news which of the following statement is/are correct regarding this?
- This agreement is part of the COVID-19 Technology Access Pool (C-TAP).
 - C-TAP was initiated in May 2020 by the World Health Organization (WHO). Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2**
 - Neither 1 nor 2
9. Considered the following statement regarding the "Gujarat Declaration",
- The WHO Traditional Medicine Global Summit 2023 in Gujarat.
 - The Ministry of Ayush co-hosted the First Global Summit on Traditional Medicine with WHO.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2**
 - Neither 1 nor 2
10. Which of the following statements about patulin is correct?
- Patulin is a synthetic chemical used as a food preservative.
 - It is primarily produced by bacteria during the fermentation of fruits.
 - Patulin is a naturally occurring mycotoxin found in some fruits and their processed products.
 - It is commonly used as a flavor enhancer in the food industry.
- Options:
- Only statement 1 is correct.
 - Only statement 2 is correct.
 - Only statement 3 is correct.**
 - None of the statements are correct.