



## India's Role in Food Security

This editorial is based on [A CLIMATE QUESTION FOR G20](#) which was published in The Indian Express on 04/09/2023. It talks about Food Security and how India could help ensure food security for itself and the world as well.

**For Prelims:** [G20](#), [Chandrayaan-3](#), [World Food Programme \(WFP\)](#), [World Bank](#), [Universal Declaration on Human Rights](#), [International Covenant on Economic, Social and Cultural Rights \(ICESCR\)](#), [Biofortification](#), [Global South](#), [Minimum Support Price \(MSP\)](#), [Digital public goods](#)

**For Mains:** Food Security: Significance, Reasons and how could India Contribute to address food security challenge.

[Chandrayaan-3's](#) successful landing on the moon, and this quarter's (Q1FY24) GDP growth rate of 7.8%, will bolster India's image as a global leader. **India can showcase not only its scientific prowess in space technologies but also the management of its economy**, which looks set to clock the highest growth rate amongst [G20](#) countries for two successive years. This will surely be lauded by many, and Prime Minister is likely to announce India's emergence on the global stage during this Amrit Kaal up to 2047, making science and economy deliver for humanity at large under the philosophy of '**Vasudhaiva Kutumbakam**' – One Earth, One Family, One Future.

### What is the Status of Food Security Globally?

According to the [World Bank](#), **approximately 9.2% of the world's population faced hunger in 2022**, compared with 7.9% in 2019. Moderate or severe food insecurity affected 29.6% of the global population (2.4 billion people) in 2022, with 11.3% being severely food insecure.

In 2023, the [World Food Programme \(WFP\)](#) estimates that **more than 345 million people face high levels of food insecurity**. This is more than double the number in 2020.

### Some of the Causes of Food insecurity:

- **Russia-Ukraine War:** [Russia-Ukraine war](#) has disrupted the Global supply chain. Moreover, following Russia's invasion of Ukraine, trade-related policies imposed by countries have surged. The **global food crisis has been partially made worse by the growing number of food trade restrictions put in place by countries** with a goal of increasing domestic supply and reducing prices.
  - As of June, 2023, twenty countries have implemented 27 food export bans, and 10 have implemented 14 export-limiting measures.
- **Domestic Inflation:** Domestic food Inflation in many countries have added fuel to the fire and further aggravated the problem of food insecurity in the world. For Example, India has imposed a ban on wheat and rice exports to support its domestic population.

- **Climate Variability and Extremes:** Climate change has affected the availability and quality of water, land, and biodiversity, which are essential for food production. It has also altered the patterns and intensity of pests, diseases, and natural disasters, which has reduced crop yields and livestock productivity. [Climate change](#) has also increased the volatility of food prices and reduced the purchasing power of vulnerable households.
  - According to the [Global Report on Food Crises](#), **weather and climate extremes were the primary driver of acute food insecurity in 12 countries in 2021**, affecting nearly 57 million people.
- **Economic Slowdowns and Downturns:** They have reduced the income and employment opportunities of poor and marginalized people, who have spent a large share of their income on food. **Economic shocks have also affected the supply and demand of food, leading to higher food prices and lower food quality.** Economic crises have also undermined the provision of public services and social protection, which are crucial for food security and nutrition.
  - As per EU Science Hub report, **in 2023, economic shocks are expected to be the main driver of acute food insecurity in 22 countries.** These shocks are expected to affect up to 153.3 million people.

## Why is Food Security Crucial?

- **Health and Nutrition:** Food security improves the health and well-being of individuals by preventing malnutrition and its associated health problems, such as stunting, cognitive impairment, and disease susceptibility.
  - [Malnutrition](#) is responsible for the death of **3.1 million children a year**, which is nearly half of all deaths in children under the age of 5.
- **Economic Stability:** [Food security](#) enhances the economic stability of individuals and nations by enabling them to be more productive, generate income, and participate in trade. Food insecurity, on the other hand, can reduce productivity and cause economic instability.
  - A study by the [World Bank](#) estimated that **the global cost of undernutrition in terms of lost productivity and human capital was USD 3.5 trillion per year.**
- **Social Stability:** Food security promotes social stability by preventing food-related conflicts, violence, and migrations. Food insecurity can spark social unrest and instability due to food shortages, price hikes, and unequal access.
  - A report by the United Nations found that food insecurity was a key factor in 58% of the conflicts that occurred between 2017 and 2019.
- **Reduced Poverty:** Food security contributes to poverty reduction by allowing people to afford and access nutritious food and invest in other essential needs, such as education and healthcare. These can help them escape the cycle of poverty.
- **Environmental Sustainability:** Food security **supports environmental sustainability by encouraging the adoption of [climate-smart agricultural](#) practices** that conserve natural resources, protect biodiversity, and mitigate climate change. Unsustainable agricultural practices can damage the environment and threaten food security.
- **National Security:** Food security **strengthens national security by ensuring a reliable food supply that is not dependent on external factors**, such as global food prices or supply chain disruptions. Food insecurity can make nations vulnerable to these factors and compromise their sovereignty.
- **Human Dignity and Equity:** Food security **respects human dignity and equity by recognizing food as a basic human right that should be accessible to all people** regardless of their socioeconomic status or geographical location. Food insecurity can violate this right and create disparities among people.
  - The **right to food is a legal right that is recognized in the [Universal Declaration on Human Rights](#) and the [International Covenant on Economic, Social and Cultural Rights \(ICESCR\).](#)**
- **Resilience to Crises:** Food security builds resilience to various crises, such as natural disasters, economic downturns, and pandemics, **by providing adequate food reserves and distribution systems that can cope with these challenges.** Food insecurity can exacerbate the impact of these crises and hinder recovery.
  - Distribution of free foodgrains by the Indian government to the poor and vulnerable during [Covid-19](#) lockdowns is a fine example of this.
- **Sustainable Development:** Food security advances sustainable development by achieving one

of its main goals (**Goal 2: Zero Hunger**) and supporting other related goals, such as poverty reduction, good health, gender equality, and environmental sustainability. These goals are interlinked and mutually reinforcing.

## How can India help the World ensure Food Security?

- **Developing Cost-Effective Technologies:** India has shown the ability to achieve technological marvels at a very minimal cost after the success of [Chandrayaan 3](#). Following the same track, it can also develop technologies to help farmers overcome challenges of extreme weather events. It could then share these technologies with other countries of the [Global South](#).
  - This is feasible and can be done cost-effectively, provided it's on the government's priority list and there is a time-bound action plan.
- **Leveraging Technology for Agri Transformation:** The ultimate goal is to **enhance the efficiency and resilience of agri-value chains and promote digitisation as a catalyst for agricultural transformation**. This can be done through establishment of standardized agricultural data platforms as [digital public goods](#) and harnessing novel digital technologies to revolutionize the agri-food sector.
  - **Sensor-equipped drips, drones and LEOs (Low Earth Orbits)**, for instance, can be used in agriculture to get "more from less", saving the planet's scarce resources.
- **Increasing Investment:** India spends only **0.48% of agri-GDP on agri-R&D**. This needs to be doubled, if the country has to play the role of a leader. Higher investment in agri-R&D, especially [biofortification](#). Encouraging research in biofortification and disseminating information on fortified crop varieties to farmers is key to achieving nutritional security.
  - ICAR scientists have already demonstrated that even basic staple crops such as wheat, rice, maize, and millet can be bio-fortified with enhanced iron, zinc, and even [anti-oxidants](#).
  - ICAR has created 87 varieties of climate-resistant and nutritious crops. For example, India has released zinc-rich rice and wheat, which can be shared with countries of the Global South.
- **Establishing a Sustainable Multilateral Trading System:** Strengthening a rules-based, open, predictable, transparent, non-discriminatory, inclusive, equitable and sustainable multilateral trading system is the need of the hour. India should also improve its food systems by strengthening local, regional, and international agri-food value chains. This can lead to affordable and accessible food, agricultural inputs, and products.
  - **A sustainable multilateral trading system with the WTO at its core, can increase market predictability** and boost business confidence.
- **Promoting Millets:** India aims to promote millets globally, even among [G20](#) members, but it requires significant efforts in terms of product innovation and dissemination to make it a staple food like quinoa.
- **Re-thinking Agri-Policies:** India needs to re-purpose agri-policies to a more environmentally sustainable and nutritious food system. Current policies of open-ended and assured procurement with [Minimum Support Price \(MSP\)](#) for say paddy and wheat, coupled with massive subsidies on fertilizers, power, and irrigation, have caused damage to our natural resources, especially soil, water, air, and biodiversity.
- **Developing a Sustainable Agri Model:** So far, India has not come up with a major move in this direction, nor have the US or China. [G20](#) countries can come up with a model and time frame to make agriculture less damaging to the planet
  - Time is running out and the [G20](#) needs to work closer, faster, and smarter with demonstrable results by 2030 to feed this world and also save the planet, by making it green and clean.

### **Drishti Mains Question:**

Food security is a pressing global issue, with millions of people around the world facing hunger and malnutrition. In this context, discuss the role that India could play in addressing the global food security challenge.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### **Prelims**

**Q.1 In the context of India's preparation for Climate-Smart Agriculture, consider the following statements: (2021)**

1. The 'Climate-Smart Village' approach in India is a part of a project led by the Climate Change, Agriculture and Food Security (CCAFS), an international research programme.
2. The project of CCAFS is carried out under Consultative Group on International Agricultural Research (CGIAR) headquartered in France.
3. The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in India is one of the CGIAR's research centres.

**Which of the statements given above are correct?**

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Ans: (d)**

**Q.2 With reference to the provisions made under the National Food Security Act, 2013, consider the following statements: (2018)**

1. The families coming under the category of 'below poverty line (BPL)' only are eligible to receive subsidised food grains.
2. The eldest woman in a household, of age 18 years or above, shall be the head of the household for the purpose of issuance of a ration card.
3. Pregnant women and lactating mothers are entitled to a 'take-home ration' of 1600 calories per day during pregnancy and for six months thereafter.

**Which of the statements given above is/are correct?**

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 3 only

**Ans: (b)**

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### **Mains**

**Q.1 In what way could replacement of price subsidy with Direct Benefit Transfer (DBT) change the scenario of subsidies in India? Discuss. (2015)**