



## Food Security

As per the Economic Survey (2018-19), India needs to take big initiatives to improve its food security as it faces supply constraints, water scarcity, small landholdings, low per capita GDP and inadequate irrigation.

### What is Food Security?

- Food security, as defined by the United Nations' Committee on World Food Security, means that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.
- Food security is the combination of the following three elements:
  - **Food availability** i.e. food must be available in sufficient quantities and on a consistent basis. It considers stock and production in a given area and the capacity to bring in food from elsewhere, through trade or aid.
  - **Food access** i.e. people must be able to regularly acquire adequate quantities of food, through purchase, home production, barter, gifts, borrowing or food aid.
  - **Food utilization:** Consumed food must have a positive nutritional impact on people. It entails cooking, storage and hygiene practices, individuals health, water and sanitations, feeding and sharing practices within the household.
- Food security is closely related to household resources, disposable income and socioeconomic status. It is also strongly interlinked with other issues, such as food prices, global environment change, water, energy and agriculture growth.

### Why Food Security is Important for a Nation?

- For boosting the agricultural sector.
- For having a control on food prices.
- For economic growth and job creation leading to poverty reduction
- For trade opportunities
- For increased global security and stability
- For improved health and healthcare

### Food Security in India

- Food security concerns can be traced back to the experience of the **Bengal Famine in 1943** during British colonial rule, during which about 2 million to 3 million people perished due to starvation.
- Since attaining independence, an initial rush to industrialize while ignoring agriculture, two successive droughts in the mid-1960s, and dependence on food aid from the United States exposed India's vulnerability to several shocks on the food security front.
- The country went through a **Green Revolution** in the late 1960s and early 1970s, enabling it to overcome productivity stagnation and to significantly improve food grain production.
  - Despite its success, the Green Revolution is often criticized for being focused on only two cereals, wheat and rice; being confined to a few resource abundant regions in the northwestern and southern parts of the country that benefited mostly rich farmers; and putting too much stress on the ecology of these regions, especially soil and water.

- The Green Revolution was followed by the **White Revolution**, which was initiated by **Operation Flood** during the 1970s and 1980s. This national initiative has revolutionized liquid milk production and marketing in India, making it the largest producer of milk.
- Of late, especially during the post-2000 period, [hybrid maize for poultry and industrial](#) use and [Bacillus thuringiensis \(Bt\)](#) cotton have shown great strides in production, leading to sizeable exports of cotton, which made India the second largest exporter of cotton in 2007–2008.

## Concerns vis-a-vis Food Security in India

- India, currently has the **largest number of undernourished people in the world** i.e. around 195 million.
- Nearly 47 million or 4 out of 10 children in India do not meet their full human potential because of **chronic undernutrition or stunting**.
- Agricultural productivity in India is extremely low.
  - According to World Bank figures, cereal yield in India is estimated to be 2,992 kg per hectare as against 7,318.4 kg per hectare in North America.
- The composition of the food basket is increasingly shifting away from cereals to high-value agricultural commodities like fish, eggs, milk and meat. As incomes continue to rise, this trend will continue and the indirect demand for food from feed will grow rapidly in India.
- According to [FAO](#) estimates in ‘The State of Food Security and Nutrition in the World, 2018’ report, about 14.8% of the population is undernourished in India.
  - Also, 51.4% of women in reproductive age between 15 to 49 years are anaemic.
  - Further according to the report 38.4% of children aged under five in India are stunted (too short for their age), while 21% suffer from wasting, meaning their weight is too low for their height.
- India ranked 76<sup>th</sup> in 113 countries assessed by The Global Food Security Index (GFSI) in the year 2018, based on four parameters—affordability, availability and quality and safety.
- As per the [Global Hunger Index, 2018](#), India was ranked 103rd out of 119 qualifying countries.

## Challenges to Food Security

- **Climate Change:** Higher temperatures and unreliable rainfall makes farming difficult. Climate change not only impacts crop but also livestock, forestry, fisheries and aquaculture, and can cause grave social and economic consequences in the form of reduced incomes, eroded livelihoods, trade disruption and adverse health impacts.
- **Lack of access to remote areas:** For the tribal communities, habitation in remote difficult terrains and practice of subsistence farming has led to significant economic backwardness.
- Increase in **rural-to-urban migration**, large proportion of informal workforce resulting in unplanned growth of slums which lack in the basic health and hygiene facilities, insufficient housing and increased food insecurity.
- **Overpopulation, poverty, lack of education and gender inequality.**
- **Inadequate distribution of food** through public distribution mechanisms (PDS i.e. Public Distribution System).
  - Deserving beneficiaries of the subsidy are excluded on the basis of non-ownership of below poverty line (BPL) status, as the criterion for identifying a household as BPL is arbitrary and varies from state to state.
- **Biofuels:** The growth of the [biofuel](#) market has reduced the land used for growing food crops.
- **Conflict:** Food can be used as a weapon, with enemies cutting off food supplies in order to gain ground. Crops can also be destroyed during the conflict.
- **Unmonitored nutrition programmes:** Although a number of programmes with improving nutrition as their main component are planned in the country but these are not properly implemented.
- **Lack of coherent food and nutrition policies** along with the **absence of intersectoral coordination** between various ministries.
- **Corruption:** Diverting the grains to open market to get better margin, selling poor quality grains at ration shops, irregular opening of the shops add to the issue of food insecurity.

## Recent Government Initiatives

- **National Food Security Mission**
  - It is a Centrally Sponsored Scheme launched in 2007.
  - It aims to increase production of rice, wheat, pulses, coarse cereals and commercial crops, through area expansion and productivity enhancement.
  - It works toward restoring soil fertility and productivity at the individual farm level and enhancing farm level economy.
  - It further aims to augment the availability of vegetable oils and to reduce the import of edible oils.
- **Rashtriya Krishi Vikas Yojana (RKVY)**
  - It was initiated in 2007, and allowed states to choose their own agriculture and allied sector development activities as per the district/state agriculture plan.
  - It was converted into a Centrally Sponsored Scheme in 2014-15 also with 100% central assistance.
  - Rashtriya Krishi Vikas Yojana (RKVY) has been named as **Rashtriya Krishi Vikas Yojana-Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR)** for three years i.e. from 2017-18 to 2019-20.
  - **Objectives:** Making farming a remunerative economic activity through strengthening the farmer's effort, risk mitigation and promoting agri-business entrepreneurship. Major focus is on pre & post-harvest infrastructure, besides promoting agri-entrepreneurship and innovations.
- [Integrated Schemes on Oilseeds, Pulses, Palm oil and Maize \(ISOPOM\)](#)
- [Pradhan Mantri Fasal Bima Yojana](#)
- **E-marketplace:** The government has created an electronic national agriculture market (eNAM) to connect all regulated wholesale produce markets through a pan-India trading portal.
- **Massive irrigation and soil and water harvesting programme** to increase the country's gross irrigated area from 90 million hectares to 103 million hectares by 2017.
- The government has also taken significant steps to combat under- and malnutrition over the past two decades, through
  - The introduction of **mid-day meals** at schools. It is a Centrally-Sponsored Scheme which covers all school children studying in Classes I-VIII of Government, Government-Aided Schools.
  - **Anganwadi systems** to provide rations to pregnant and lactating mothers,
  - **Subsidised grain** for those living below the poverty line through a public distribution system.
  - Food fortification
- **The National Food Security Act (NFSA), 2013**, legally entitles up to 75% of the rural population and 50% of the urban population to receive subsidized food grains under the Targeted Public Distribution System.
  - The eldest woman of the household of age 18 years or above is mandated to be the head of the household for the purpose of issuing of ration cards under the Act.

## International Organizations involved in ensuring Food Security

- **Food and Agricultural Organization (FAO)**
  - Established as a specialized agency of the United Nations in 1945.
  - One of FAO's strategic objectives is to help eliminate hunger, food insecurity, and malnutrition.
- **World Food Programme (WFP)**
  - Founded in 1963, WFP is the lead UN agency that responds to food emergencies and has programmes to combat hunger worldwide.
- **International Fund for Agricultural Development (IFAD)**
  - Founded in 1977, IFAD focuses on rural poverty reduction, working with poor rural populations in developing countries to eliminate poverty, hunger, and malnutrition.
  - It is a specialized agency of the United Nations and was one of the major outcomes of the 1974 World Food Conference.
- **World Bank**
  - Founded in 1944, the World Bank is actively involved in funding food projects and

programmes.

- **United Nations Environment Programme (UNEP)**

- It was established in 1972 as the international arm providing guidance and governance to environmental issues. One of the topics that UNEP addresses currently is food security.

## International Initiatives

- The **High-Level Task Force (HLTF) on Global Food and Nutrition Security** was established by the UN Secretary-General Ban Ki-moon in 2008.
  - It aims to promote a comprehensive and unified response of the international community to the challenge of achieving global food and nutrition security.
- Formulation of the **First Millennium Development Goal (MDG 1)**, which included among its targets cutting by half the proportion of people who suffer from hunger by 2015.
- The United Nations Secretary-General launched the **Zero Hunger Challenge** in 2012 during the Rio+20 World Conference on Sustainable Development. The Zero Hunger Challenge was launched to inspire a global movement towards a world free from hunger within a generation. It calls for:
  - Zero stunted children under the age of two
  - 100% access to adequate food all year round
  - All food systems are sustainable
  - 100% increase in smallholder productivity and income
  - Zero loss or waste of food
- **SDG Goal 2.** End hunger, achieve food security and improved nutrition and promote sustainable agriculture

## Steps to be Taken to Ensure Food Security

- The government policy needs to adopt an integrated policy framework to facilitate agriculture productivity.
  - The measures should focus mainly on rationale **distribution of cultivable land, improving the size of the farms** and providing security to the tenant cultivators apart from providing the farmers with improved technology for cultivation and improved inputs like irrigation facilities, availability of better quality seeds, fertilizers and credits at lower interest rates.
  - **Aeroponics** and **hydroponics** are systems that allow plants to be grown without soil. Plants grown in this way take in water and nutrients efficiently. These methods can be used in the areas of poor soil quality and soil erosion.
  - **Adoption of crops and techniques with lower water requirements**, such as the System of Rice Intensification (SRI) method of rice production, contributes to resilience by enabling equal or better yields to be achieved with less water withdrawal.
  - **Planting crops with lower water requirements and agricultural practices that maintain soil moisture**, such as maintaining vegetative cover between crops, can also contribute to resilience.
  - **Crop diversification:** Higher profitability and stability in production highlight the importance of crop diversification, e.g. legumes alternative with rice and wheat. Growing of non-cereal crops such as oilseeds, fruits and vegetables etc need to be encouraged.
- Strategies for **better food storage** should be adopted.
- **The Blue Revolution:** Sea, lakes and rivers can be used to provide food and nutrition. Fish are a very good source of protein and do not require good soil.
- **Biotechnology and appropriate technology:** Selective breeding or genetic modification (GM) of plants and animals can be done to produce specific features and **adaptations**.
  - For example, selective breeding has been used on dairy cows to increase milk yields. GM has been used on wheat to produce crops that are disease **resistant**.
- **Existing direct nutrition programmes should be revamped** to enable management by women's Self Help Groups (SHGs) and /or local bodies along with orientation and training of community health workers, Panchayati Raj Institution (PRI) members, other opinion leaders, caregivers and other stakeholders can be another area.
- Efforts should be made by the concerned health departments and authorities to initiate and supervise the functioning of the nutrition related schemes in an efficient way.
  - Annual surveys and rapid assessments surveys could be some of the ways through which

program outcomes can be measured.

- Focus needs to be shifted to the workers in the informal sector by providing decent wages and healthy working conditions.
- **Local community education on key family health and nutrition practices** using participatory and planned communication methodologies will be helpful.
- The **cooperatives** play an important role in food security in India especially in the southern and western parts of the country. The cooperative societies set up shops to sell low priced goods to poor people. The cooperatives should be encouraged.
- **Fostering rural-urban economic linkages can be an important** step towards ensuring food security by-
  - enhancing and diversifying rural employment opportunities, especially for women and youth,
  - enabling the poor to better manage risks through social protection,
  - leveraging remittances for investments in the rural sector as a viable means for improving livelihoods

## Way Forward

- Food security of a nation is ensured if all of its citizens have **enough nutritious food available**, all persons have the **capacity to buy food of acceptable quality** and there is **no barrier on access to food**.
- The right to food is a well established principle of international human rights law. It has evolved to include an **obligation for state parties to respect, protect, and fulfil their citizens' right to food security**.
- As a state party to the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights, India has the obligation to ensure the right to be free from hunger and the right to adequate food.
- India needs to adopt a **policy that brings together diverse issues such as inequality, food diversity, indigenous rights and environmental justice** to ensure sustainable food security.