

# The Role of Food Security in Ensuring a Sustainable Future for India

Mala Sharma<sup>1,\*</sup>,

## Abstract

*Food security is pivotal in shaping a sustainable future for India, a nation grappling with rapid population growth, environmental challenges, and resource constraints. This paper investigates the integral role of food security in promoting sustainable development across the Indian subcontinent. The study delves into the interplay between food security and various sustainability dimensions, including agricultural practices, climate resilience, and equitable distribution of resources. It evaluates current policies and programs aimed at enhancing agricultural productivity, reducing food waste, and building robust food supply chains. The research highlights innovative approaches and technological advancements that can bolster food security while supporting environmental sustainability. By analyzing recent trends and case studies, the paper illustrates how effective food security strategies can drive broader goals of sustainable development, such as poverty alleviation, health improvements, and ecological balance. The findings underscore the necessity of a holistic approach that integrates food security with broader environmental and social policies to foster long-term resilience. Ultimately, this paper provides actionable insights for policymakers, practitioners, and stakeholders on navigating the complex landscape of food security to achieve a more sustainable and equitable future for India.*

**Keywords:** Food security, sustainable development, agricultural productivity, climate resilience, resource management

## INTRODUCTION

The concept of food security has gained diversified dimensions after the first World Food Conference of 1974 held in Rome by the United Nation under the auspices of the UN Food and Agriculture Organisation (FAO). Food security is the ability of food to be affordable, available, and available to everyone at all times. Availability, accessibility, utilisation, and vulnerability are the four pillars that make up the larger idea of food security, and how these interact to determine a country's level of food security. Substantial progress and multiple initiatives has been taken to reduce food insecurity among the masses since the organisation of the first World Conference in 1974. However, ensuring household and national food security remains a significant concern for India, affecting political stability as well as the welfare of the populace. In its efforts to improve food security, the Government of India has adopted a number of strategies which include concerted efforts to increase foodgrain production, intervention in the grain markets and their modernisation, institution of public distribution system (PDS) and

### \*Author for Correspondence

Mala Sharma  
E-mail: sharmamala1411@gmail.com

<sup>1</sup>Assistant Professor in Chemistry, Sidharth GDC Nadaun, Hamirpur, Himachal Pradesh India

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and maintenance of reserve stocks for major foodgrains. The promulgation of the National Food Security Act (NFSA) in the year 2013 ensures targeted population in rural and urban strata for safe and nutritious food supplied through a chain of fair price shop throughout the country, so as to overcome the hunger and malnutrition of huge population of India. For the most populous and developing country like India, the undernourished people poses a great threat and the same is countered by the Government through incorporation of fortification of food grains as per

FSSAI norms and effective distribution of the fortified food grains among masses. India has gained self sufficiency in food grain production after the advent of Green Revolution, insertion of modern technology in farming, use of fertilizers and various modern irrigational schemes. India is currently among the world's top producers of cereals including wheat and rice thanks to an increase in the production of some grains there. When there is very little food available for the household member, it is called food insecurity. In such a scenario, the shortage of money in the household causes the members to eat less and disturb their regular eating schedule [1].

### The Concept of Food Security

The concept of Food Security evolved over time which generally caters for its four pillars.

1. *Availability*: means the food outreach by the individuals, whether through increased food production of country or enhancing imports for particular food stuffs.
2. *Accessibility*: means, the food is well within the reach of every person irrespective of any region.
3. *The ability*: to purchase enough food that is safe, nourishing, and sufficient to meet one's nutritional demands is implied by affordability.
4. *Stability*: To ensure food security, the household or individual must always have access to adequate and nutritious food throughout the year and the same should not be affected by any economic, climatic, seasonal, regional instability [2].

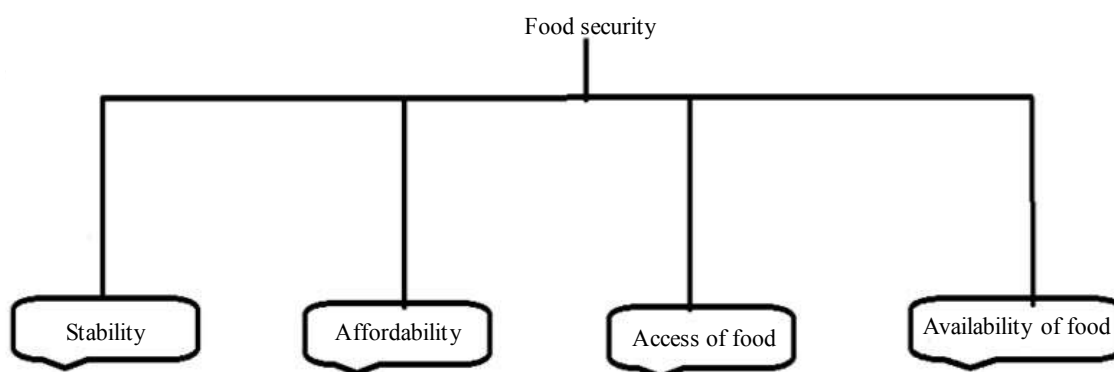


Figure 1.

### Food Safety in Food Security

Food safety is beneficial and is important component of food security so as to check the foodborne ailments and food adulteration. These days, consumers are very conscious of the production, processing, and sale of food, and they are putting more and more pressure on their governments to assume greater responsibility for food safety. This resulted in the formation of Food Safety and Standard Act, 2006 which governs the matters related to ensure availability of safe and wholesome food for human consumption. Food safety and food quality are terms that are sometimes used interchangeably. Food safety pertains to any potential risks associated with food, whether they are acute or chronic, that could negatively impact the health of the consumer. Food quality takes into account every other aspect that affects a product's perceived value by customers. In 2022, India's food quality and safety index stood at 62.1. Also, India was rated 88.7 as the score for nutritional standard. Figure 1

### INDIAN GOVERNMENT ACTIONS FOR NATIONAL FOOD SECURITY

The food grain output has consistently increased from 257 million tonnes in 2012-13 to around 316 million tonnes in 2021-22 and the same increase in foodgrain output has been realized from the year 1950. India has now shed its image of a food reliant nation and has moved towards food exporter nation. [3-4].

### Public Distribution System (PDS)

The Food Corporation of India (FCI) purchases food for its warehouses, which is then delivered to the nation's impoverished population through a network of government-mandated fair pricing stores. The Public Distribution System is the name of this system (PDS). Fair Price shops commonly called

Ration shops are present in almost every localities, villages, towns and cities. Food grains are made available to the consumers and specially to the targeted group under controlled price and the price is much lower than the market price. In any family with a ration card, food grains are issued as per the entitlement of their ration card. Numerous household/beneficiaries are selected under BPL ration card category, Antyodaya cards and 35 kg of ration is ensured to these families every month. With the advent of NFSA, 2013 act, a new category, priority household ration card are provided ration under subsidised rates. Following a severe food scarcity in the 1960s, before the Green Revolution, India brought back the rationing system. The Public Distribution System (PDS) for food grains (which had been in place earlier but was strengthened thereafter), Integrated Child Development Services (ICDS), which was introduced in 1975 on an experimental basis, and Food-for-Work (FFW), which was introduced in 1977–1978 are three significant food intervention programs that were implemented in the middle of 1970.

The Public Distribution System (PDS) is the most crucial element in ensuring national food security. PDS was initially universally covered, but as time went on, the system improved in efficiency and made a strong effort to serve the needs of the targeted population or home. In order to implement the idea, the Targeted Public Distribution System (TPDS) was introduced in June 1997.

The chain of FPS throughout the country and food grain distribution through them has also countered inflation throughout the years.

### **The 2013 National Food Security Act (NFSA)**

The National Food Security Act is a groundbreaking effort to provide food and nutritional security to the Indian populace, hence legitimizing access to food. Important aspects of the act include: • This act provides a monthly ration of rice, wheat, and coarse grains at heavily subsidized prices of Rs. 3, Rs. 2, and Rs. 1 per kg to up to 75% of the rural population and up to 50% of the urban population. But the government has introduced Pradhanmatri Garib Kalyan Ann Yojana (PMGKAY) for last couple of years where ration has been issued free of cost for population/household covered under NFSA act, 2013 [5]. Recently the government has announced to carry with the scheme PMGKAY for the next five years.

In addition to receiving wholesome meals that meet recommended nutritional criteria, expectant mothers and nursing moms are also eligible to maternity benefits worth at least Rs. 6000. According to the recommended dietary criteria, children between the ages of six months and fourteen years old are entitled to take-home rations or hot prepared food. Information and communication technology (ICT) has been applied to the Food Security Act in order to facilitate its effective implementation. Examples of these reforms include digital ration cards, end-to-end computerization, the introduction of point-of-sale systems at fair price shops, and the diversification of products covered by TPDS. Fortification of food grains as per FSSAI norms has been started in recent years. There is a provision of Food Security Allowance to the beneficiaries in the event of non supply of food grains [6-10]. Number of beneficiaries under NFSA Act was 81.35 crores as on dated 13<sup>th</sup> July, 2022.

### **Minimum Support Price (MSP)**

The MSP aims to ensure remunerative prices to the farmer for their agriculture product, in case some change in the prices of the crop might affect them directly. MSP encourages crop diversification and improved security to farmer. Because MSP stabilizes agricultural product prices, customers benefit from the avoidance of excessive price increases during periods of scarcity and the assurance of readily available, reasonably priced food. The Department of Agriculture, Government of India (GOI), announces the minimum support price for different crops based on the Commission for Agricultural Costs and Prices' recommendations. The national government increased the MSP for Rabi crops, which include chana, wheat, mustard, rapeseed, and masoorial, on September 9, 2021.

### **Buffer Stock**

Acquired by the government via the Food Corporation of India (FCI) and kept in its bare houses, buffer stock consists primarily of wheat and rice reserve stock. In states with excess production, the FCI

buys rice and wheat directly from farmers. The farmers are paid MSP for a particular crop and buffer stock is created. Buffer stock is created to distribute foodgrains in the crop/food grain deficit areas and among the poor strata of the society at subsidized rates. In addition to preventing food shortages during inclement weather and pandemics, buffer stock also helps control inflation and preserve the public distribution system. Wheat and rice stocks under the Central Pool have consistently been higher than buffer norms. As of October 1, 2022, there were about 227 lakh tonnes of wheat and 205 lakh tonnes of rice available, compared to the corresponding buffer norm requirements of 205 lakh tonnes of wheat and 103 lakh tonnes of rice.

### **Plan Executed**

A strategy to increase the nation's production in agriculture and related sectors includes the National Food Security Mission, the Rashtriya Krishi Vikas Yojana (RKVY), the Integrated Schemes on Oilseeds, Pulses, Palm Oil, and Maize (ISOPOM), the Pradhan Mantri Fasal Bima Yojana (PMFBY), the e-marketplace, and a sizable irrigation and soil and water harvesting scheme. Over the past 20 years, the government has launched several significant programs to combat undernutrition, such as midday meals in schools and Anganwadi networks that provide rations to expectant and nursing mothers.

### **Plans for the intended audience**

*Women's empowerment:* In accordance with the NFSA Act of 2013, the eldest male member of the family is to serve as the head of the household when issuing ration cards to women who are eighteen years of age or older. If the eldest woman is not accessible. During Corona Pandemic food grains were issued to migrant labourers by Government of India, free of cost for two months in the year 2020 under Aatam Nirbhar Bharat Yojana (ANBY). With the implementation of One Nation One Ration Card (ONORC), the labourers working in other states can withdraw their monthly entitlement of food grains under NFSA through interstate portability in the state where they are residing to earn their livelihood. Pregnant women, lactating mothers and school children are benefited through nutritional support schemes carried out through anganwadis and midday meal scheme at school.

## **CHALLENGES FOR FOOD SECURITY IN INDIA**

1. *Adverse climatic conditions:* Adverse climate change affects not only crops, but also has major social and economic implications, including lowering of income, trade disruptions with supply chain disruption and low production of crops.
2. Huge population living below poverty line, lack of education, gender inequity are all factors which contribute towards unawareness of the community towards various schemes to promote food security.
3. Since the standard for determining whether a household is below the poverty line (BPL) is arbitrary and varies by state, the process of distributing food through the Public Distribution System to legitimate beneficiaries targeted under the NFSA can be a little laborious at times.
4. With the introduction of the concept of biofuels and contract farming, the farmers are setting themselves apart from the cultivation of traditional food crops.
5. Nutrition programmes, fortification of food grains need to be more efficient so as to redress the cause. (6) Food instability is exacerbated by diversion of food grains to the open market, higher margin of profit and undue hoarding of food grains.

## **CONCLUSION**

With the growing population, the issue of food security is becoming more and more pressing. Food security and safety will continue to be major worldwide issues in this period. Although there are many important problems that fall under the umbrella of "food security," the concepts of food security, its effects, and government initiatives are the main subjects of this study. Food security and sustainable food production methods are affected by a variety of stakeholders, including farmers, consumers, researchers, government organizations, and consumer protection associations. India's approach to food security and agricultural growth has proven effective in the wake of multiple food crises in the mid-1960s as well as in the wake of economic liberalization and globalization during the early 1990s. Over the past few decades, Indian agriculture has experienced a remarkable shift. the last fifty years.

Technological advancements, institutional innovations, public involvement, and the launch of several programs and initiatives for the delivery of agricultural inputs and output commercialization were the driving forces behind the transformation. The National Agricultural Policy (2000), which was declared by the Indian government, introduced the novel idea of contract farming, which involves the private sector's involvement in farming. The new approach aimed to maximize the production of food grains and cereals. It also required laying the groundwork for food security by providing farmers with access to modern farm inputs, improved agricultural technology, and technical knowledge. For achieving these objectives, several policies/schemes have been launched and implemented to attain the spirit of food security. So as to feed 150 million people, research, policy, and communication operations must aid the economic well-being of the farmer. New farming techniques and technological advancements are required to guarantee that natural resources will be available to our future generations. India is now the world's greatest producer of cereals including wheat and rice due to a rise in grain output in the nation. The largest problem facing agriculture today is not only increasing yield but also providing food grains to the underprivileged and destitute. The idea of food security would present India with a chance to realize the Sustainable Future under such circumstances. This essay concentrated on the obstacles India must overcome to achieve food security and the several steps done to do so.

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