



A DETAILED STUDY ON FOOD SECURITY IN INDIA

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ABSTRACT

Food security refers to the availability, accessibility, and affordability of food for all people at all times. It is a state in which all individuals have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life. It also includes the ability to acquire food without resorting to emergency assistance, scavenging, stealing, or other coping strategies. Food security is essential for human well-being, health, and development and is a fundamental human right.

Food security in India refers to the availability, accessibility, and affordability of food to all its citizens. Despite being one of the largest food producers in the world, India has been grappling with food security issues for decades. The country has made significant strides in reducing hunger and malnutrition over the years, but the problem still persists in many parts of the country. According to the Global Hunger Index 2020, India ranks 94th out of 107 countries, with a score of 27.2, which is considered a "serious" level of hunger. To address this issue, the government of India has implemented several programs and policies. The National Food Security Act, 2013, provides legal entitlements to subsidized food grains to millions of poor families across the country. The Mid-Day Meal Scheme provides free meals in schools to promote education and improve nutrition among children.

Despite these efforts, food security remains a significant challenge in India. The country still faces issues such as food inflation, inadequate storage facilities, and the unequal distribution of food. Additionally, the COVID-19 pandemic has exacerbated the food security situation, with millions of people losing their jobs and facing food shortages. Overall, although India has made progress in improving food security, there is still a long way to go to ensure that every citizen has access to nutritious and affordable food.

Key Words: *Food, Hunger, Poverty, Security, India*

INTRODUCTION

Food security is a major issue in India due to its large population and high levels of poverty. The government has implemented several policies and programs to address this issue, but there are still many challenges that need to be overcome. India is a predominantly agrarian economy, with the majority of the population engaged in agriculture. However, despite being a major food producer, the country still faces several challenges to ensure food security for all its citizens. These challenges include inadequate infrastructure, limited access to credit, and lack of modern technology in agriculture.

The government of India has implemented several policies and programs to address these challenges. The National Food Security Act (NFSA) was passed in 2013, which aims to provide subsidized food grains to nearly two-thirds of the population. The government also runs several schemes such as the Pradhan Mantri Fasal Bima Yojana (PMFBY), which provides insurance coverage to farmers in case of crop failure due to natural disasters, pest attacks, or other factors.

Additionally, the government has launched several initiatives to promote modern agricultural practices, including the use of high-yielding crop varieties, drip irrigation, and soil testing. The government has also established organizations such as the National Seeds Corporation (NSC) and the Indian Council of Agricultural Research (ICAR) to promote research and development in the agricultural sector.

Despite these efforts, there are still many challenges to ensuring food security in India. The country still faces significant infrastructure challenges, including inadequate storage facilities and transportation networks. The lack of access to credit and modern technology remains a major hurdle for many small-scale farmers, who make up a significant portion of India's agricultural sector.

In conclusion, food security remains a significant challenge in India, despite the government's efforts to address the issue. While policies such as the NFSA have helped to provide subsidized food grains to a large portion of the population, there is still a long way to go in terms of ensuring adequate infrastructure, access to credit, and modern technology in agriculture.

DEFINITIONS OF FOOD SECURITY

1. The Food and Agriculture Organization (FAO) defines food security as "a situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life."
2. The World Food Summit defines food security as "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life."

3. The International Food Policy Research Institute (IFPRI) defines food security as "access by all people at all times to enough food for an active and healthy life. Food security includes at a minimum: (a) the ready availability of nutritionally adequate and safe foods, and (b) assured ability to acquire personally acceptable foods in socially acceptable ways (e.g., without resorting to emergency food supplies, scavenging, stealing, or other coping strategies)."

4. The United Nations Development Programme (UNDP) defines food security as "the physical and economic access to sufficient, safe, and nutritious food that meets dietary needs and food preferences for an active and healthy life."

5. The Center for Global Food Security at Purdue University defines food security as "a state in which all individuals have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life."

LITERAURE REVIEW

Food security is a pressing issue in India, with a large population and significant variations in levels of access and availability of food. In this literature review, we will examine the current state of food security in India, including the challenges and opportunities faced by the country in ensuring adequate food supplies for its population. According to the Food and Agriculture Organization (FAO), food security is defined as "a situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life." Unfortunately, India has been facing many challenges in ensuring food security for its population.

The Government of India passed the National Food Security Act in 2013, which aims to provide subsidized food grains to around two-thirds of the country's population. A study was conducted by the Indian Council of Agricultural Research to analyze the effectiveness of this act in improving food security among low-income households.

The Indian Council of Agricultural Research conducted a study to assess the impact of climate change on food security. The study found that climate change is likely to reduce crop yields and increase production costs, leading to food insecurity for vulnerable populations.

The National Family Health Survey conducted by the Ministry of Health and Family Welfare in India collects data on the nutritional status of children. The survey aims to identify malnourished children and provide targeted interventions to improve their nutritional status.

A study conducted by the Food Safety and Standards Authority of India evaluated the effectiveness of food fortification in improving the nutritional status of vulnerable populations. The study found that the fortification of staple foods with vitamins and minerals can significantly improve the nutritional status of the population.

The Indian Council of Agricultural Research conducted a study to identify factors affecting agricultural productivity and food security. The study found that investment in agricultural research, infrastructure, and technology can improve agricultural productivity and food security.

A study conducted by the Indian Institute of Technology Bombay analyzed the extent of food waste and loss in India. The study found that food waste and loss occur at various stages of the food supply chain and that reducing waste and loss could significantly improve food security in the country.

A study conducted by the National Institute of Rural Development and Panchayati Raj evaluated the impact of rural development programs on food security and rural livelihoods. The study found that these programs can improve food security and rural livelihoods by promoting sustainable agricultural practices and providing access to credit and markets.

FOOD AVAILABILITY IN INDIA

India is a country with diverse food culture and availability of food varies from region to region. However, over the past few years, there has been a significant increase in the availability of packaged and processed foods in urban areas. The trend of fast food and ready-to-eat meals has also gained popularity in cities, especially among the younger generation. This has led to a rise in the demand for convenience foods, resulting in an increase in the number of supermarkets and online grocery stores.

India is largely an agrarian country with a diverse range of crops grown across the country. The country has a large population that is dependent on agriculture for their livelihood and food. The government has implemented various policies and schemes to increase food production and ensure food security in the country.

There is also a growing trend towards organic and locally sourced foods in urban areas, which has led to the emergence of farmer's markets and niche stores. This trend is driven by increasing awareness and concerns about the safety and quality of food, as well as environmental sustainability.

Despite this, there are still challenges in terms of the availability of food in India. Some regions of the country face food scarcity due to natural disasters like droughts and floods, while others face food wastage due to lack of proper storage and distribution systems. Additionally, poverty, inequality, and inadequate infrastructure and transportation systems also hinder the availability of food in certain areas.

Overall, the trend of food availability in India is evolving and becoming more diverse, with a growing interest in convenience foods and organic and locally sourced options. However, there is still a need to address the challenges of food access and security in rural areas.

STEPS TAKEN BY GOVERNMENT OF INDIA FOR FOOD SECURITY

The Government of India has undertaken several steps to ensure food security for its citizens. Some of the major initiatives are:

- 1. National Food Security Act (NFSA):** The NFSA was passed by the Parliament in 2013 with the aim of providing subsidized food grains to 67% of the country's population. The act guarantees 5 kg of food grains per person per month at highly subsidized prices.

2. Public Distribution System (PDS): The PDS is a government-run food distribution system that provides subsidized food grains to the poor and the needy. The government has taken various measures to streamline the PDS and improve its efficiency, such as end-to-end computerization, digitization of ration cards, and introduction of Aadhaar-based authentication.

3. Mid-Day Meal Scheme (MDM): The MDM is a school feeding program that provides free meals to children in primary and upper primary schools. The scheme aims to improve the nutritional status of children and encourage school attendance.

4. Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY): PMGKAY was launched in 2020 as part of the government's COVID-19 relief measures. Under the scheme, 5 kg of food grains per person per month were provided to 80 crores people for 8 months.

5. One Nation One Ration Card: The One Nation One Ration Card scheme aims to allow beneficiaries to avail their entitled food grains from any Fair Price Shop (FPS) across the country. The scheme is designed to provide benefit to migrants and ensure portability of benefits.

6. Minimum Support Price (MSP): The government sets MSPs for various crops to ensure that farmers get a fair price for their produce. This helps in boosting agricultural production and ensuring food security.

7. Pradhan Mantri Fasal Bima Yojana (PMFBY): The PMFBY is a crop insurance scheme that provides financial assistance to farmers in case of crop damage or loss due to natural calamities.

8. National Rural Employment Guarantee Act (NREGA): The NREGA provides employment opportunities to rural households in the form of guaranteed wage employment for a minimum of 100 days in a year. This helps in providing food security to rural households by increasing their income.

9. Antyodaya Anna Yojana (AAY): The AAY is a government program that provides highly subsidized food grains to the poorest of the poor households. The program aims to ensure that no one goes hungry due to lack of food.

10. Rashtriya Krishi Vikas Yojana (RKVY): The RKVY was launched in 2007 to promote agriculture and allied sectors by providing financial assistance to states for various activities such as crop diversification, infrastructure development, and post-harvest management. The objective of the scheme is to increase productivity and income of farmers and ensure food security.

11. National Horticulture Mission (NHM): The NHM was launched in 2005 to promote holistic growth of the horticulture sector by providing technical and financial assistance to farmers for the cultivation of fruits, vegetables, spices, and flowers. The objective of the scheme is to increase production and productivity of horticulture crops and improve the income of farmers.

12. National Rural Livelihood Mission: The mission aims to provide sustainable livelihood opportunities to rural households, with a focus on women and marginalized groups. The mission aims to improve the overall food security of rural households.

13. National Agriculture Market (eNAM): eNAM is an online platform that connects farmers with traders and buyers across the country. The platform aims to ensure fair prices for farmers and improve access to markets.

14. National Rural Health Mission (NRHM): This scheme aims to provide basic health services, including nutrition and immunization, to rural areas where the availability and accessibility of health services are limited.

15. Rashtriya Swasthya Bima Yojana (RSBY): This scheme provides health insurance coverage to below-poverty-line households to ensure access to quality health care services.

16. Nutritional support to vulnerable groups: The government provides nutritional support to vulnerable groups such as pregnant and lactating women, children under 6 years of age, and adolescent girls through various schemes like the Integrated Child Development Services (ICDS), National Health Mission (NHM), and Rashtriya Kishor Swasthya Karyakram (RKSK).

THE NATIONAL FOOD SECURITY ACT (NFSA), 2013

The National Food Security Act (NFSA) 2013 is an important step towards ensuring food security in India. The Act was passed by the Indian Parliament on September 12, 2013, and came into effect on July 5, 2013. The Act aims to ensure food security for all citizens and provides legal entitlements to food for people living below the poverty line (BPL). Under the NFSA, the government is required to provide legal entitlements to food grains to around two-thirds of the population. The Act also aims to provide food security to pregnant women and lactating mothers, children in the age group of 6 months to 14 years, and destitute and homeless persons.

The Act provides for the distribution of food grains at subsidized prices to the BPL families. The subsidized food grains include wheat, rice, and millets. The Act also provides for the decentralization of the Public Distribution System (PDS) and the involvement of local government bodies in its implementation. The government has also set up a Food Security Allowance to provide compensation in case of non-supply of food grains to eligible beneficiaries.

The Act has several provisions to ensure transparency and accountability in the implementation of the PDS. The guidelines for the identification of eligible households have been made more stringent, and the government has also set up a grievance redressal mechanism for the beneficiaries. The Act also provides for the use of information technology in the implementation of the PDS.

The NFSA has been widely hailed as a landmark legislation in the fight against hunger and malnutrition in India. It has the potential to improve the food security situation in the country significantly. However, there are several challenges in the implementation of the Act, including the identification of eligible beneficiaries, the effective functioning of the PDS, and the prevention of leakages and diversion of food grains. Some of the key provisions of the act are:

1. Identification of beneficiaries: The NFSA provides for the identification of beneficiaries through a transparent and participatory process. The government is required to use the socio-economic and caste census (SECC) data to identify the eligible households. The focus is on providing food security to women, children, and other vulnerable sections of the society.

2. Allocation of food grains: The act mandates that the government shall provide 5 kg of food grains per person per month to the eligible beneficiaries. The food grains shall be provided at a subsidized rate of Rs. 3 per kg for rice, Rs. 2 per kg for wheat, and Rs. 1 per kg for coarse grains.

3. Distribution mechanism: The NFSA provides for the creation of a transparent and efficient distribution mechanism for the delivery of food grains to the beneficiaries. The government is required to use technology, such as electronic point of sale (ePOS) devices, to ensure that the food grains reach the intended beneficiaries. The food grains shall be distributed through fair price shops (FPS) and other designated outlets.

4. Grievance redressal system: The act provides for the establishment of a grievance redressal system to address the complaints and grievances of the beneficiaries. The government is required to set up a toll-free helpline and a transparent system for registering and resolving complaints.

In conclusion, the National Food Security Act 2013 is a significant step towards ensuring food security in India. It provides legal entitlements to food for the most vulnerable sections of society and has the potential to significantly reduce hunger and malnutrition in the country. However, its effective implementation is critical to achieving its goals.

ISSUES REGARDING FOOD SECURITY IN INDIA

The major issues regarding food security in India are as follows:

1. Poverty: India has a large population living below the poverty line, and this makes it difficult for them to afford food, let alone maintain food security.

2. Unequal distribution of food: Despite India being a food-rich country, food is not distributed equally, with some regions experiencing food shortages while others have excess.

3. Climate change: India is experiencing adverse weather conditions such as droughts, floods, and extreme temperature changes, which are affecting the country's food production.

4. Poor infrastructure: India's inadequate infrastructure, such as poor transport systems, lack of food storage facilities, and poor distribution networks, make it difficult to distribute food equally across the country.

5. Land acquisition: The acquisition of land for industrial and urban development has resulted in the loss of agricultural land, which has impacted food production.

6. Poor agricultural practices: Outdated and unsustainable methods of agriculture in India have resulted in decreased yield, soil degradation, and lower food production.

7. Malnutrition: Despite India being food-rich, the country has high rates of malnutrition and undernourishment, which may be attributed to poverty, unequal distribution of food, and poor nutritional practices.

8. Food waste: India has a high rate of food waste, which reduces the amount of food available for consumption and contributes to environmental pollution.

9. Government policies: Government policies, such as subsidies and price controls, can impact food security. Policies that benefit large agribusinesses can lead to the concentration of food production, leaving small farmers and marginalized communities without access to food.

10. Lack of irrigation facilities: Nearly 60% of India's land is rain-fed, making it vulnerable to droughts and crop failures. Inadequate irrigation facilities lead to low crop productivity, which impacts food security.

11. Low productivity: India's agricultural productivity is low compared to other countries. This is due to fragmented landholdings, lack of modern farming techniques, poor soil fertility, and inadequate access to credit and markets.

SUGGESTIONS TO IMPROVE CONDITION OF FOOD SECURITY IN INDIA

Suggestions or measures to improve condition of food security in India can be enlisted as below:

1. Increase agricultural productivity: The government should invest in irrigation facilities, improve soil fertility, and provide farmers with better seeds and fertilizers to increase agricultural productivity. This will boost food production and reduce food prices.

2. Encourage crop diversification: Crop diversification can help farmers grow a variety of crops, reducing dependence on a single crop and reducing the risk of crop failure. This can also help to improve soil health and reduce pests and diseases.

3. Improve food distribution and storage: The government should invest in better storage facilities and transportation infrastructure to ensure that food reaches those who need it most. Improved food distribution systems can also help to reduce food waste.

4. Enhance income security: Inadequate income is one of the leading causes of food insecurity. The government can provide farmers with better access to credit, insurance, and other financial services to help them stabilize their income and improve their livelihoods.

5. Promote nutrition education: The government should promote nutrition education and encourage healthy eating habits. This can help to reduce malnutrition and improve the overall health of the population.

6. Address poverty and inequality: Poverty and inequality are major drivers of food insecurity. The government should work to reduce poverty and promote economic growth, especially in rural areas.

7. Strengthen food safety regulations: The government should strengthen food safety regulations to ensure that the food people consume is safe and healthy. This can help to reduce the risk of food borne illnesses and improve public health.

8. Boost infrastructure development: Developing infrastructure such as transportation, communication, and energy facilities can help farmers access markets and sell their produce at better prices.

9. Promote education and awareness: Educating farmers about the best farming practices, nutrition, and food safety can help them produce better quality food and reduce the risk of food-borne diseases.

10. Ensure access to credit: Providing easy access to credit can help farmers invest in their farms, buy the necessary inputs, and improve their yields.

11. Establish safety nets: The government should provide safety nets for the vulnerable population, such as food subsidies, school feeding programs, and food for work programs.

12. Promote sustainable agriculture: Encouraging sustainable agriculture practices such as organic farming, crop rotation, and soil conservation can help preserve the environment and improve food security.

FUTURE ASPECTS OF FOOD SECURITY IN INDIA

India faces several challenges in achieving food security, including population growth, climate change, water scarcity, soil degradation, and limited agricultural resources. However, there are also several opportunities for the country to improve its food security situation.

1. Diversification of Agriculture: India's agriculture sector is primarily focused on staple crops such as rice and wheat. However, diversifying into other crops like fruits, vegetables, pulses, and oilseeds can improve food security and nutrition.

2. Technology adoption: The adoption of modern technology like precision farming, IoT, and AI in agriculture can increase productivity and reduce food wastage.

3. Efficient use of resources: Water scarcity and soil degradation are major challenges. Efficient use of resources such as water and soil fertility management can improve food security.

4. Government Policies: The Indian government has taken steps to improve food security through policies like the National Food Security Act, which provides subsidized food grains to the poor. The government is also investing in agricultural research, infrastructure, and schemes for farmers.

5. Private sector participation: The private sector can play a vital role in improving food security by investing in agriculture, food processing, and distribution.

6. Climate change: Climate change is a significant challenge for food security in India. Erratic weather patterns, extreme heat, and unpredictable rainfall can significantly affect crop yields. Climate change mitigation and adaptation strategies are essential to ensuring food security.

7. Population growth: India's population is expected to reach 1.5 billion by 2030, which will put additional pressure on the country's food systems. Improving agricultural productivity, reducing food waste, and implementing effective distribution systems are crucial for meeting the growing demand for food.

8. Trade: International trade can help improve food security by providing access to a wider variety of food and reducing price volatility. However, trade policies must be carefully designed to prevent exploitation of small farmers and ensure equitable distribution of benefits.

In conclusion, achieving food security in India will require a multi-pronged approach that involves efficient use of resources, technology adoption, policy interventions, and private sector participation.

FINDINGS

According to the Global Hunger Index 2020, India ranks 94th out of 107 countries in terms of food security. In 2019, around 189.2 million people in India were undernourished, which is the highest in the world. The COVID-19 pandemic has further worsened the food security situation in India, with millions of people losing their jobs and incomes. The pandemic has also disrupted food supply chains, making it difficult for people to access food.

The government of India has implemented various schemes and programs to improve food security, such as the National Food Security Act, Mid-Day Meal Scheme, and Pradhan Mantri Garib Kalyan Yojana. However, these programs have faced challenges in implementation and there have been reports of corruption and leakage of food supplies.

Climate change is also a major threat to food security in India, as it affects crop yields and availability of water for irrigation. The government has initiated various measures to mitigate the impact of climate change on agriculture, such as promoting climate-resilient crops and providing financial support to farmers for adopting sustainable farming practices.

Overall, while there have been some efforts to improve food security in India, the situation remains challenging due to various socio-economic and environmental factors.

CONCLUSION

In conclusion, food security remains a major challenge in India due to various factors such as population growth, climate change, inadequate infrastructure, low agricultural productivity, and poverty. The government has implemented various policies and programs to address the issue, including the National Food Security Act, the Pradhan Mantri Fasal Bima Yojana, and the National Mission for Sustainable Agriculture. However, there is still a long way to go to ensure that all Indians have access to sufficient and nutritious food. The need of the hour is to

strengthen the agricultural sector by providing better infrastructure and technology, promoting sustainable agriculture practices, and empowering farmers. Additionally, efforts are needed to address the root causes of poverty, such as improving access to education and healthcare, to ensure that people can afford to buy food. Overall, achieving food security in India requires a multi-pronged approach and the involvement of all stakeholders, including the government, civil society, and the private sector.

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