

## FOOD SECURITY IN INDIA: ISSUES AND CHALLENGES

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### ABSTRACT

The World Food Conference 1974 resolved that the food security ensures adequate supplies and availability. Food security has become a significant issue across the world predominantly in developing countries like India. In a report of International Food Policy Research Institute's Global Hunger Index, 2011, has declared India's 67<sup>th</sup> rank of the 81 countries of the world with the worst food security status. Food security in the United Nation's (UN) Development Programmes original concept of human security has been considered as one of the important factor along with economic, health, environmental, personal, community, and political security. The Purpose of the present joint paper is to emphasize the policies, issues and challenges for the food security in relevance to India.

**KEYWORDS:** Food Security in India: Issues and Challenges, Element of the Millennium, United Nation's (UN)

### INTRODUCTION

Security (Food and Human) is one of the major challenges confronting the world today. Food security, along with poverty eradication and ecological conservation, is one of the most significant element of the millennium development goals. The thought of food security is delineated as that take account of both physical and economic admittance to food that congregate people's dietary needs as well as their food predilection (FAO, 2009). Food security exists "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life" (The World Food Summit, 1996). Food Security is pedestal on three essential pillars of Food availability on a consistent basis, Food access for appropriate nutritious diet and Food use for basic nutrition and care as well as adequate water and sanitation. For accomplishing the objective of self-sufficiency in the developing countries, the main concern is specified to food stability and availability (Arya, 2009).

Over one billion Populations in each of the country of China and India have generated a challenge and pressure for both. Research indicates that these countries hold about half of the world's reserves of wheat and the largest reserves of rice (Rice Market Monitor, 2009). India experienced a bumper harvest in year 2010, however, owing to inadequate storage facilities has demolished almost one third of food grains. Thus the government has strong-willed to save rather than to sell the stocks in the market (International Business Times, 2010). India is the world's largest food security puzzle as the country vestiges enormously significant in the global food and nutrition security equation.

### Schemes for Food Security in India

Achieving food security through enhancing agricultural production has been the major focus in most developing countries. Several countries have succeeded, to a noteworthy extent, in achieving this objective. However, nutritional adequacy has not been addressed effectively. In India, an emphasis on initiatives has been taken by introducing subsequent schemes in order to boost the food security in country:

### **Public Distribution System**

Public distribution system (PDS) is one of the instruments for ensuring household level food security. The prime objective of PDS is to ensure adequate and equitable distribution of essential items of consumption to households at socially moderate prices through a regulatory mechanism. This will not only contribute to attaining a sort of self sufficiency in food production and procurement , but will also keep prices in balance. The PDS mechanism was used before independence to control food prices and shortages but since then now it is deployed as a tool of inclusive economic policy – for the twin goals of equality and social justice.(DFPD 2010). Wheat, rice, sugar and kerosene are provided to a target of 330 million people estimated to be nutritionally at risk through 499,000 ‘fair price shops’.

### **National Food Security Mission**

This scheme was launched in 2007-08 during Eleventh Plan with the target to increase the production of 10 million tones, 8 million tones and 2 million tons of rice, wheat and pulses respectively. The objective of the scheme is to boost the production through area expansion and productivity; creating employment opportunities and also schemes to restore the confidence of farmers. This scheme has been presently implemented in 17 states of the country.

### **National Horticultural Mission**

Government of India constituted the National Horticulture Board in 1984 to augment the quality of food security in the country. The Board introduced the National Horticultural Mission with the objective to develop hi-techcommercial horticulture in identified belts, modern post-harvest management infrastructure as integral part of area expansion projects or as common facility for cluster of projects, energy efficient cold chain infrastructure for fresh horticulture product, promoting applied R & D for standardizing PHM protocols, Setting up Common Facility Centers in Horticulture Parks and Agri-Export Zones and Carrying out The Board carries out studies in order to identify weak areas in horticulture development and devise strategies to strengthen horticulture development by providing technical services and consultancy services to developers.

### **National Project on Management of Soil Health and Fertility**

To reinforce the soil fertility and productivity by improving the soil nutrients , the GOI instituted the National Project on Management of Soil/Health and Fertility Project, The Project aims at strengthening the Soil Testing Laboratories , promoting the use of integrated Nutrient Management and Fertilizer Quality Control Labs.All these institutional arrangements have been brought in force to promote the balanced use of chemical fertilizers and farmyard manure, based on soil test and demonstrations.

### **National Scheme on the Promotion & Strengthening of Agricultural Mechanization through Training, Testing and Demonstration**

The scheme is implemented through four Farm Machinery Training and Testing Institutes located at Budni (M.P), Hissar (Haryana), Garladinne (A.P), and BiswanathChariali (Assam) and the Department of Agriculture and Cooperation with the objective to demonstrate new and technologically advanced equipments at farmers field for induction of new technology in agricultural production system,to assess suitability of machines.

### **Support to State Extension Programs for extension reforms**

This scheme is a centrally sponsored scheme and being implemented since 2005-06. This Scheme is now operational in 591 rural districts of the country. The scheme has features to provide training and HRD needs of extension functionaries coordinate and manage the agricultural extension related work in the District, providing innovative support through a 'Farmer Friend' at Village Level, creating essential infrastructure and also providing services to RashtriyaKrishiVikasYojana.

### **RashtriyaKrishiVikasYojana**

The RashtriyaKrishiVikasYojana was launched in 2007-08 with an outlay of Rs 25,000 crores during Eleventh Plan with the objective to boost public investment in the states so as to achieve the target of 4 percent growth rate in agriculture and allied sectors. During this scheme several package of technologies has been provided in states of Assam, Bihar, Chhattisgarh, Jharkhand, Orissa, Eastern UP, and West Bengal for increasing crop productivity.

### **The Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM)**

This Scheme was launched on April 1, 2010, being implemented in 14 major states for the production of oilseeds, 15 for maize and 10 for oil palm. The component of pulses was merged with NFSM. This scheme is act as a valuable approach for crop diversification. The objective of the scheme is to provide assistance for the purchase of breeder seed, production of founder seed, production and distribution of certified seeds, plant protection incentives that includes chemicals, equipments, and weedicides. This scheme has been implemented in the state of Andhra Pradesh, Karnataka, Tamil Nadu, Gujarat, Goa, Orissa, Kerala, Tripura, Assam, and Mizoram.

## **ISSUES RELATED TO FOOD SECURITY**

The rising global food prices of 2007-08 inflicted chaos in millions of families, led to political unrest and contributed to switching the complacency of governments around the world regarding the unconscionably high levels of chronic hunger (FAO, 2013). Soaring food costs along with other shocks such as drought, floods and economic crises can have a major impact on food and nutrition security as these push the most vulnerable households further into poverty and weaken their ability to access adequate food. These sufferings can force poor people to sell off assets or forgo other essentials that create a long lasting poverty trap that becomes even harder to escape (Gustafson, 2011).

In its quest for inclusive growth, food security for the people of India adorns the centre stage of economic planning since independence. Though India manages to ostensibly achieve self-sufficiency in food grain production during 1970, yet average food availability per head continued to decline. Not only adequate food intake posed an issue, but more serious was the spectre of nutritional consumption --- causing human deficiencies and diseases—adversely impacting capacity and efficiency to produce Over 22 crore people in India remain malnourished and since 2000, over half of the rural children suffer from chronic energy deficiencies. This is an abysmal wastage of human resource. (Akoijam, 2011). Large proportion of India's population still does not have access to safe drinking water and primary health care. In India, 21.9% of the population in 2011-12 is below poverty line and is exposed to conditions of adverse hygienic environment according to a Planning Commission estimate (Arya, 2009).

Food security is concerned with the art of managing supplies especially in agricultural economies to counter balance the normal cyclical shortages and thus dependence on external assistance. There can be two ways of achieving

food security. One can be to increase the production of basic food products i.e. food grains at the domestic level. And second possible approach is to indulge in World food trade. So, food security becomes a basis for improving human welfare, achieving social justice, securing democracy and saving the pride of nation by preventing humiliating dependence on foreign food (Kaur and Kaur, 2009). Access to food at the household level and nutrition are interrelated. Access to food depends on increase in purchasing power due to increase in employment and social protection programmes (Dev, 2010). But on the other hand, there are certain issues related to food security. These are:

**Hunger, Malnutrition and Poverty:** Hunger is referred to food deprivation and it is caused by insufficient food energy consumption. Malnutrition results deficiencies, excesses or imbalances in the consumption of macro and micro nutrients. Malnutrition may be outcome of food insecurity or it may be related to non food factors such as:

- Inadequate care practices for children,
- Insufficient health services and
- An unhealthy environment.

While poverty is undoubtedly a cause of hunger, lack of adequate proper nutrition itself is an underlying cause of poverty (FAO, 2003). Following diagram show that food security, malnutrition, hunger and poverty are interrelated.

**Urban Food Insecurity:** Urban centres have expanded and proliferated haphazardly. Due to larger opportunities in industrial urban areas, there has been phenomenal expansion of national population growth, as well as rapid rural- urban migration. This has caused a large stress on the fragile socio-economic infrastructure in the cities. Consequently, congestion, chaos, pollution is the order of the day in cities. Slums and congested habitations have caused epidemics and other health hazards including infections. Safe and uncontaminated food and water has become luxuries in cities and has added a new dimension to food insecurity in urban areas.(Atherya, 2010). ESCAP (2007) notes that the urban poor often suffer health problems as a result of unhealthy living condition and this prevents the proper utilization of food, in particular the absorption of the necessary nutrients.

### **Rural Food Insecurity**

In spite of rising food production and availability, the intake of nutritious food and minimum caloric intake in the rural population has declined. Despite declining absolute poverty in most regions of the country, deprivation and misery and squalor have risen causing food security in rural regions.(Ali, Rehman and Husain, 2012).In studies of Swaminathan (2000), and Dubey (2001), evidence shows that almost 46 % of rural families have deficient caloric intake which necessitates recalculation of the new poverty line.

**Failure of Public Distribution System (PDS):** Khera (2011) presented in her paper that the Public Distribution System of India is not without its defects. With coverage of around 40 crores BPL (Below Poverty Line) families, a review of the PDS has discovered the following structural shortcomings and disturbances:

The major snag in PDS system has been the delivery of poor quality food grains in the ration shops. Superior quality food grains are sold in the open market at a premium through the back door. Unscrupulous and bogus fair price shop owners have issued duplicate and illegal ration cards in the open market and so the deserving underprivileged customers are denied.

Many FPS dealers resort to malpractice, illegal diversions of commodities, hoarding and black marketing due to the minimal salary received by them. Numerous malpractices make safe and nutritious food inaccessible and unaffordable to many poor thus resulting in their food insecurity.

It has been difficult to identify and specify the deserving and rightful consumers to be covered under PDS system. Though the AADHAR – UID Card schemes have generated enough scope for discreet identification yet some fraudulent practices circumvent the efficacy of PDS. Direct cash transfer has also helped in reducing mal practices of PDS.

## **MAJOR CHALLENGES FOR FOOD SECURITY**

The Climate change is a crucial factor affecting food security in many regions of India. The sky-scraping investment in research and infrastructure requires technological innovations for escalating crop yield in special areas of agriculture . Crop production techniques have also undergone transformation , having implication for food security in India.

### **Crop Diversification**

Owing to remarkable approaches by ICAR, the objective of food security has been achieved by the nation in the successive years of green revolution. Further the agricultural scientists has accentuated on implementation of crop diversification as by motivating the farmers for bringing in the cultivation of cotton, chili and sunflower and also diversifying the production of rice and wheat to oilseeds and pulses that would yield less quantity of irrigation, high profits as compared to field crops.

### **Bio-fuel and Medicinal Plant Cultivation**

The another challenge for the country is the diversification in the cultivation of field crops like maize, wheat to Bio-Fuel and Medicinal Plants like Ashwagandha, Sarpogandha and Jatropha. The concept of diversification primarily came from United States and other European, Asian and African Countries of the world. The cultivation of sugar and other field crops for the production of ethanol is undoubtedly considered to be a gigantic challenge in case of food security. In several instances it has been observed that in South part of India, the state Tamil Nadu is enthraling an alarming step in this case. The recorded cultivation has found to be increased from 46ha to 9020 ha from year 2000 to 2010(Dev and Sharma, 2010).

### **Climate Change**

The changing climate is the another challenge that came forward in case of food security , as it has unusual consequences on the production of food grains in the country. The stumbling blocks like the low/ heavy rainfall, extreme high/low temperature has it influence in form of drought (due to less moisture) or floods (due to high moisture) and all this hazardously effect the crop production and vis-à-vis farm net income of the country. The climate change has vital effect on both good production and socio-economic aspects through the remarkable changes in land utilization pattern and also water resource availability. These critical upshots can be removed only through the integration of bio-physical and socio-economic aspects of food system.

### **Mismatch between Water Demand and Availability**

The major constraint in the path of future agricultural growth and food security is the negative relationship between demand and supply of water. Globally it has been observed that annual demand for water is about 2.4 percent as compare to supply. About 20% of the globally cultivated area is irrigated, utilizing an estimated 70% of the global water use for fulfilling the expectation of high yields. But this is not proved as a relevant step in this case, as it cause lesser yield owing to the access of squat quality seeds (Brahmanand 2013)

### **Agricultural Prices**

The lack of remunerative prices for the end products, distress sale, high cost of cultivation accompanied by the unreasonable market prices, alliance of all these act as a challenge in the lane of food security. Yes, it is true that the thought of globalization has brought openness in trade, but it is incapable to ensure healthier market prices. Thus, there is a need to regulate agricultural price policy for the welfare of marketing community that would helpful in facilitating food security in India (Ghosh, 2013).

### **Production of High Yielding Varieties**

With the changing climate scenario, the new varieties of field crops are another big confront for food grain production. The poor harvest index has been computed in case of pulses and oil seeds (Gustafson, 2011) This challenge can be achieved by introducing plant breeding programmes, employing modern biotechnology techniques and also by making farmers attentive for availing the information and utilizing the new techniques of production.

### **New Trends of Globalization**

The introduced new trends of globalization akin to technology of faster communication, transport, high growth in service sectors, has resulted in challenges of inequity among various sections of the society, unenthusiastic competition among entrepreneurs. As a consequence these restrict the poor farmers to access the available facilities and also discouraged the globalised world and this indirectly have amplified the food insecurity in the country.

### **Special Economic Zones**

Special Economic Zones have been promoted to stimulate industrial and economic activities. In SEZs many advantages and inducements are given to firms, but setting up of SEZs have displaced farming activities. Land and farmers are dislocated having deleterious consequences for food security of the country. No doubt, the concept of SEZ in India, have resulted in generation of additional economic activity and also endorsed the exports of goods and services. But some initiatives like Land Acquisition Bill of the government, on the one hand promotes industrialization in the country and on the other hand create tribulations in the conduit of food security. The Polepally SEZ of Andhra Pradesh has set an example of food insecurity as out of 358 farmers 166 lost their farming occupation due to such proposal of SEZ back-up( Kumar, 2013).

### **Capital Investment**

The percentage share of capital investment in GDP for agriculture has been stagnant in recent years. Although, in Five Year Plans, the capital expenditure has shown improvement, however it has been noted that from year 2007-08 to 2009-10 the agriculture sector giving firm contribution to GDP( Economic Survey, 2010-11). The real challenge is to enhance the capital investment both from public and private sector.

**Encouragement to Horticulture Products:** For ensuring the food security, it is not only important to increase per capita availability of food grains but also providing right quantities of food items in the plate of common man. An encouragement is required for horticulture products for increasing per capita availability of food items and also ensuring food security (EconomicSurvey, 2010-11).

**Infrastructure Requirements:** The facilities of ware houses, roads and transports and markets should be on priority for the government. In agriculture sector encouragement to PPP model will ensures faster development of infrastructure.

**Conservation:** The emerging challenge is the policy of conservation. The laws related with Climate flexibilities, agriculture, management of agricultural waste, building carbon sequestration of soil and overall natural resource management is immediately desirable.

## CONCLUSIONS

Over the two decades of rapid growth of the Indian economy, the urban economy is generally perceived as having done very well. However, high urban economic growth need not by itself imply improved living standards for all urban residents. In particular, the recent and continuing phenomenon of rising food prices reminds us that considerable sections of the urban population may face serious food insecurity even while the urban economy grows rapidly.

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