

Pillars of Food Security in India

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Abstract

Food security is one of the global challenges. India is a home to one-third of world's undernourished children, almost half of the Indian children are stunted and 40% are underweight. At the same time, India is second fastest growing economy in the world. The paradox of high economic growth and slow decline in number of food insecure persons needs to be understood in proper perspective. In spite of all the concentrated efforts by Government, problem of food security continues to persist in India. In this backdrop, this paper examines the issue of food security in India in terms of main pillars of security viz, availability, accessibility and utilization.

Introduction

Of many global challenges, providing food security is the most significant one. According to Food and Agricultural organization (FAO), food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for active and healthy life. Thus, food security is a multi-dimensional phenomenon.

Food security in India emerged from a concern to ensure adequate supplies of foodgrain (mostly cereals) at reasonable prices. Thus, India's policy has evolved from a focus on national aggregate availability of foodgrain to concentrating on household and individual level nutrition security.

The beginnings of food policy in India can be traced to the results of the Bengal Famine in 1943. Several contemporary features of India's food policy find their origins in this period.

In January 1965, the Food Corporation of India (FCI) was set up in order to secure a strategic and commanding position for the public sector in the foodgrain trade. An Agricultural Prices Commission (subsequently renamed Commission on Agricultural Costs and Prices, CACP for short) was also set up to recommend procurement prices based on an analysis of costs of cultivation. India's foodgrain position turned precarious in 1965 – 66 following two successive monsoon failures. Statutory rationing was introduced in towns with more than one lakh population from 1965 – 66 to 1966 – 67, following a severe drought. Public distribution, crucially based on food imports, played a major role in mitigating the disastrous consequences of the drought (Chopra, 1981). India resorted to wheat imports from the USA under Public Law 480, leading to a situation described by an eminent agricultural scientist as 'a ship-to-mouth' existence.

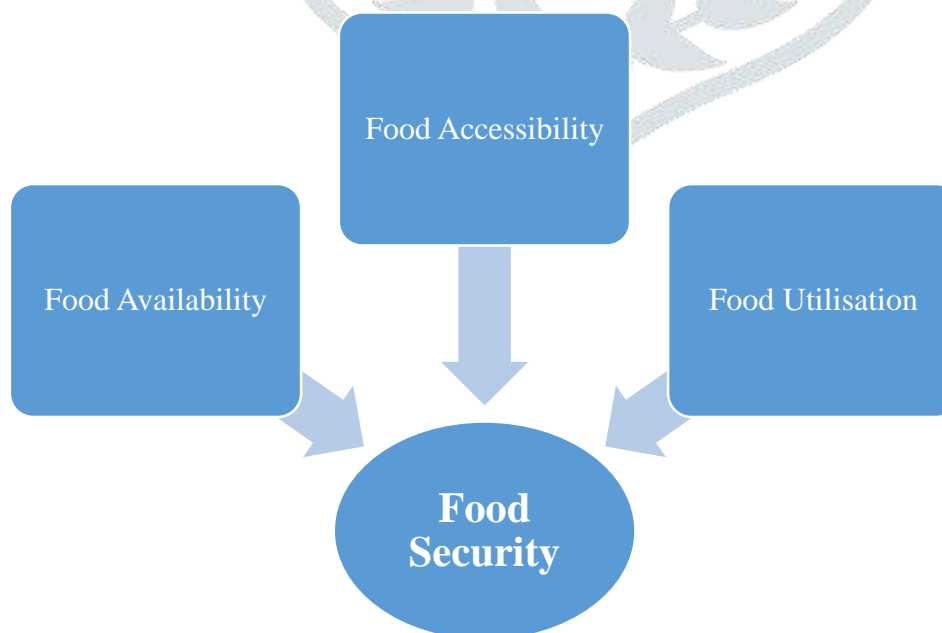
This had repercussions on India's pursuit of an independent foreign policy. This development brought the issue of national self-reliance in foodgrain prominently on the political agenda. The response of the State to the foodgrain crisis of 1965 – 66 eventually took the shape of a new agricultural strategy, which has come to be known as the Green Revolution in popular parlance. High yielding seed varieties, combined with chemical fertilisers, pesticides and agricultural extension efforts, marked the new basket of inputs. All these efforts were made to achieve food security by increasing food grain production. Also, government adopted several strategies to improve food security. In spite of all these concentrated efforts, problem of food security continues to persist in India. In this backdrop, this paper examines the issue of food security in India in terms of main pillars of security viz, availability, accessibility and utilization.

Data Sources

The data for the proposed study has been drawn from secondary sources. NSS reports have been accessed to collect data for per capita production of major commodities. Eleventh Five Year Plan, 2007 – 2012, Volume II report has been considered to collect data for poverty. Also, several journals have been accessed to study the issue of food security in India.

Main Pillars of Indian Food Security

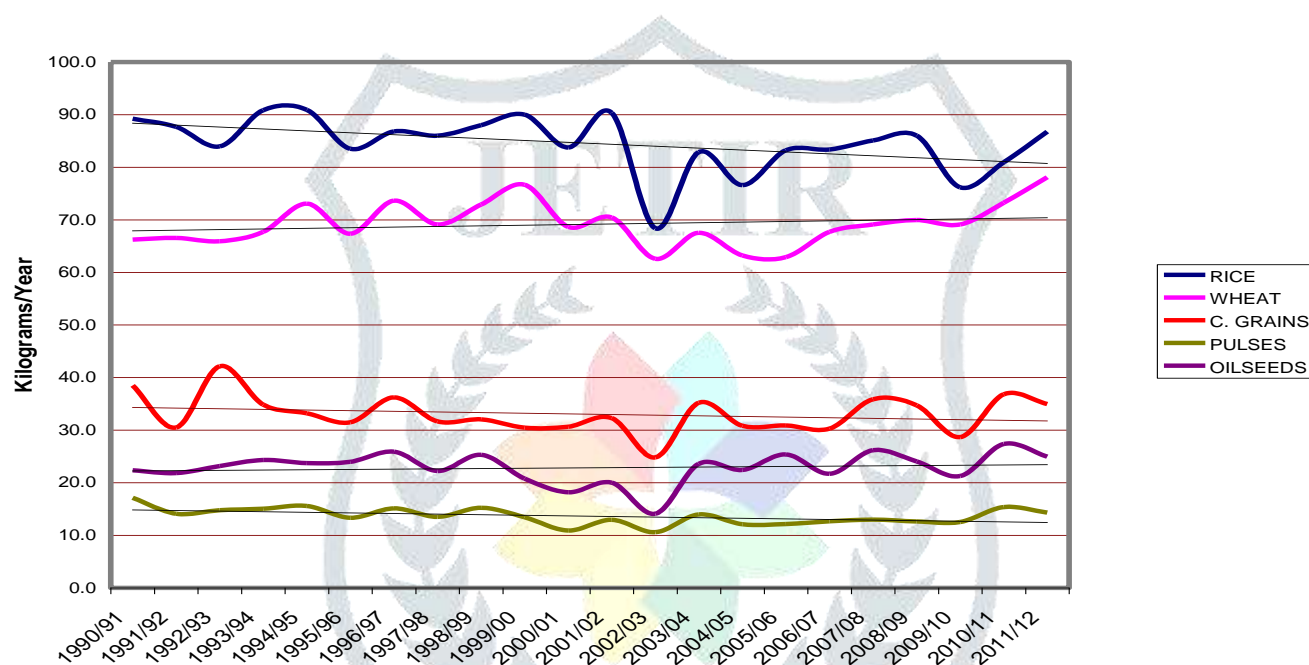
There are three fundamental pillars in achieving food security. The first is food availability, the second food access – economic and physical, and the third food utilization that ensures the nutritional outcomes of every individual in the household are adequate. These three pillars of food security in the Indian context are discussed below.



1. Food Availability:

Sufficient food must be grown to ensure that everyone can be adequately fed. Despite an increase in agricultural production during the post-Green Revolution period, per capita production of all major staples such as has declined during the past two decades except for the two most recent years (Figure 1). Furthermore, these crops are subject to high volatility in production due to its monsoon dependence.

Figure 1: Per Capita Production of Major Food Commodities



Some of the volatility in production is mitigated through imports, particularly in the case of vegetable oils and pulses.

The per capita consumption of cereals and pulses (major source of protein in Indian diet) has declined over the years, although there was an improvement in the situation in most recent years. The share of non-grain food consumption has not grown to compensate for the decline in grain availability. As a result the overall intake of calories and protein has declined consistently in the average Indian diet over the last three decades, further confirmed by data compiled by the National Sample Survey Organization (Table 1).

Table 1: Per Capita Intake of Calorie and Protein

	Calorie (K cal/day)		Protein (gm/day)	
	Rural	Urban	Rural	Urban
1983 (NSS 38 th Round)	2,221	2,089	62.0	57.0

1993-94 (NSS 50 th Round)	2,153	2,071	60.2	57.2
1999-2000 (NSS 55 th Round)	2,149	2,156	59.1	58.5
2004-05 (NSS 61 st Round)	2,047	2,020	57.0	57.0
2009-10 (NSS 66 th Round)	2,020	1,946	55.0	53.5

Source: NSS Report No. 540. Nutritional Intake in India, 2009-10

http://mospi.nic.in/mospi_new/upload/nss_rep_540.pdf

2. Food Accessibility

The next pillar of food security is access to food - economic and physical -, critical both at the national and household levels. Adequate supply of food alone does not guarantee household level food security. Food access depends on incomes, expenditure, markets and prices in achieving food security objectives. The economic accessibility implies there should be adequate purchasing power in the economy, especially at the lower strata of the society, to buy adequate quantity of food to lead a healthy life. The market and distribution system should be adequate and efficient to ensure that food is available at all marketplaces, both at local and household level. .

Although India has successfully reduced the share of the poor from 54.9 percent of the population in 1973 to around 21.9 percent in 2011 but more than 350 million people still remain poverty ridden even after independence.

The Planning Commission's Eleventh Five Year Plan document¹ states that the number of persons below the poverty line was 301.7 million in 2004 (Table 2). Using the Tendulkar methodology² (which is not directly comparable with the earlier methodology), around 354 million people believed to be below poverty line in 2009-10.

¹ Eleventh Five Year Plan, 2007 – 2012, Volume II

http://planningcommission.gov.in/plans/planrel/fivevr/11th/11_v2/11th_vol2.pdf

² http://planningcommission.nic.in/reports/genrep/Press_pov_27Jan11.pdf

Table 2: India: Population Below the Poverty Line

Year	% of People Below Poverty Line			People Below Poverty Line (million)		
	Rural	Urban	Total	Rural	Urban	Total
1973-74	56.4	49.0	54.9	261.3	60.0	321.3
1983-84	45.7	40.8	44.5	252.0	70.9	322.9
1993-94	37.3	32.3	36.0	244.0	76.3	320.4
1993-94*	50.1	31.8	45.3			
2004-05	28.3	25.7	27.5	220.9	80.8	301.7
2004-05*	41.8	25.7	37.2			
2009-10 *	33.8	20.9	29.8	278.2	76.5	354.7

*Tendulkar Commission Methodology

Source: Eleventh Five Year Plan Document, Planning Commission

The report further states that the assumed poverty line (Rs. 356 monthly per capita consumption for rural areas and Rs. 539 for urban areas in 2004-05) in India is much too low, and continues to be based on a consumption basket that is too lean. If the poverty line was higher, the share of population below poverty line would be much greater.

India is home to almost one-third of the world's poor. India currently ranks 65th in the Global Hunger Index compiled by the International Food Policy Research Institute (IFPRI)³, even below the neighboring countries such as Sri Lanka and Pakistan and most African countries. The state of food insecurity and hunger in India therefore figures prominently in global food security discussions.

One factor contributing to the food insecurity is the fragmented supply chain and poor infrastructure such as warehouses and cold storage, which adds to the final cost to consumers. The number of intermediaries involved in Indian food chain is large adding to the inefficiency in the food marketing system. Anecdotal evidences suggest that food wastage in the distribution system is very high in India due to poor infrastructure.

³ <http://www.ifpri.org/sites/default/files/publications/ghi12.pdf>

3. Food Utilization

The third pillar of food security is food utilization. It refers to households' use of the food to which they have access, and individuals' ability to absorb nutrients. Food utilization by households depends on: (a) the facilities they have for food storage and processing; (b) their knowledge and practices in relation to food preparation, the feeding of young children and other dependent individuals including sick and elderly people which may be impaired by low education of mothers and care givers, cultural beliefs and taboos; (c) how food is shared within the household; and (d) the state of health of each individual which may be impaired by disease, poor hygiene, water, sanitation, lack of access to health facilities and health care. This is the pillar that ensures the nutritional outcomes of every individual in the household are adequate.

A gender divide exists in India as far as food utilization is concerned. Girls and women in poor households often receive less food than they need even though the household has sufficient amounts. India also has one of the highest numbers of underweight children, below the age of five, and one third of 'wasted children' -- those facing a greater chance of death -- in the world. As many as 46 per cent of Indian children below the age of three are reportedly underweight even after three decades of the government implementing the Integrated Child Development Services. Every third woman in India is undernourished (35.6 per cent have low Body Mass Index) and every second woman is anemic (55.3 per cent). Given the high food price inflation in recent years, the number of malnourished is likely to have increased further. Improving gender equality is crucial for food security.

Going by the above criteria it appears India has a long way to achieve food security, although the country might have achieved "self-sufficiency" in some staple grains such as wheat and rice, that too when the rainfall distribution is good.

Success and Pitfalls of India's Food Security

The Indian government has used various programs and policies to insure the country's food/nutrition security with limited success. Some of these policies and programs, instead of contributing to food security, had a detrimental impact on assuring food security to its people. This impact can be studied as follows:

1. Achieving Grain Self Sufficiency

Food security at both the national and household levels has been the focus of India's agricultural strategy since the mid-1960s, when two consecutive droughts significantly pushed up India's import dependence for staple grains. The new strategy launched at that time, aimed at achieving "self sufficiency" in foodgrains

(mostly wheat and rice), was providing farmers an improved technology package, consisting mainly of high yielding seed varieties, modern farm inputs and credit, and assurance of a remunerative and fixed price, popularly known as “Green Revolution”. However, the over-emphasis on wheat and rice production has led to a decline in area planted to other nutrition rich crops such as pulses, coarse grains and oilseeds, making the country increasingly dependent on imported pulses and vegetable oils. Furthermore, over exploitation of natural resources particularly irrigation water, indiscriminate use of farm inputs, and a continuous wheat-rice rotation in major growing areas has waned the impact of green revolution, prompting policy makers now to look for a sustainable “Ever Green Revolution”.

2. Public Distribution System (PDS)

The Public Distribution System (PDS) is the most important intervention made by the government towards assuring food security to all its citizens, especially the poor. Under the PDS, wheat and rice procured by the government under the price support operation and in some years through imports are distributed in through a network of fair price or ration shops at highly subsidized prices. It essentially continues to remain a food intervention programme. The Food Corporation of India procures foodgrains from the farmers at an administered price at harvest time and then ensures availability of these commodities to consumers at subsidised prices by allocating foodgrains to different states, who in turn manage their respective PDS.

Although in the beginning the PDS was a universal program, later the government made it a targeted program, categorizing the PDS clientele into three categories, namely the Above Poverty Line (APL), Below Poverty Line (BPL), and the “Poorest-of -the Poor” (Antyodaya) with differential entitlement and pricing for the wheat and rice distributed to these categories.

Over the years, the efficacy of the PDS in insuring food security has eroded due to high inclusion and exclusion errors in the BPL category, non-viability of the fair price shops, failure in fulfilling the price stabilization objectives by reducing the state allocations and high leakages. Furthermore, the subsidy burden in operating the PDS has skyrocketed reaching around Rs. 730 billion in FY 2011-12. The Supreme Court-appointed Central Vigilance Committee (CVC) had slammed the PDS as one of the most corrupt sectors, saying the root cause of its failure in several states is political interference.

With a view to maximize government purchase, the government in the past had imposed various restrictions on private trade under the Essential Commodities Act, which include limiting stocks holding of essential food commodities by private trade, indirect restriction on private trade buying of wheat and rice, etc. Although this helped to increase government procurement, it discouraged private investment in warehousing and processing infrastructure.

3. Procurement and Buffer Stock of Foodgrains

Buffer stock is a price policy for agricultural commodities seeks to ensure remunerative prices to the farmers for their produce with a view to encouraging higher investment and production, and at the same time, safeguarding the interest of the consumers by making available supplies at reasonable prices.

Building up and maintaining a buffer stock for two major commodities - wheat and rice is another strategy adopted by government. Recent experience shows that maintaining a large buffer stock of grains alone is not a sufficient condition to achieve food security. In fact the government policy of maintaining large grain stocks had an adverse impact on food availability. By offering high support prices to farmers the government mopped up a major share of the market surplus thereby significantly lowering the open market availability and contributing to higher open market prices. As the government had no efficient mechanism to effectively deliver these stocks to the needy in its PDS, this in effect resulted in reduced grain availability and high open market grain prices accentuating food insecurity.

4. Nutrition Programs

The Integrated Child Development Scheme (ICDS)⁴, which among other things focuses on increasing the nutritional and health status of children has been in operation for over three decades. However according to the 11th Five Year Program document, it had only a limited impact to address the problem of child and maternal malnutrition mainly due to limited coverage.

Another popular nutritional program, the Mid-day Meal Scheme⁵, is a school meal program, which involves provision of lunch free of cost to school-children on all working days. The key objectives of the program are: protecting children from classroom hunger, increasing school enrolment and attendance, improved socialization among children belonging to all castes, addressing malnutrition, and social empowerment through provision of employment to women. Roughly hundred and twenty million children are covered under the Mid-day Meal Scheme, which is the largest school lunch program in the world.

The Food & Nutrition Board (FNB), set up in 1964, is an attached office of the Ministry of Women & Child Development and has a countrywide set up. Originally with Ministry of Food, the FNB was shifted to Ministry of Women and Child Development (then Department of WCD) in 1993. Activities of Food & Nutrition Board include: (a) Nutrition Education and Training, both for the masses and for ICDS functionaries; (b) Mass Nutrition Awareness Campaigns; (c) Development, production and distribution of

⁴ <http://wcd.nic.in/icds.htm>

⁵ http://india.gov.in/sectors/education/mid_day_meal.php

nutrition education/training material; (d) Training in Home Scale Preservation of Fruits and Vegetables and Nutrition; (e) Development and Promotion of locally available Nutritious Foods; and (f) Food Analysis and Standardization.

Initiatives taken by Government

The government in recent years has initiated several new programs to achieve and enhance food security. The flagship National Rural Employment Guarantee Program (now renamed as the Mahatma Gandhi National Rural Employment Scheme)⁶, conceived as the largest rural employment guarantee program in the world, legislatively guarantees 100 days of paid employment per year for one member in a rural family. The annual budgetary allocation for this program in IFY 2010-11 is Rs. 401 billion.

Other programs which aim to contribute to national food security include (a) National Food Security Mission targeted towards increasing the production of wheat, rice, and pulses, in selected districts with an outlay of Rs. 48.8 billion for five years⁷; (b) the *Rashtriya Krishi Vikas Yojana* (National Agricultural Development Program)⁸ with a five year outlay of Rs. 250 billion, which aims to incentivize the state governments (agriculture is a state subject in India) to increase their share of investment in agriculture; (c) approval of the National Policy for Farmers⁹, which focuses on economic well being of farmers; and (d) a farm loan waiver program of Rs. 710 billion to provide relief to 40 million farmers to make them eligible for fresh loans.

The government is now embarking on implementing an ambitious Food Security Act¹⁰, the main features of which are:

- Legal entitlement to subsidized foodgrains to be extended up to 75% of the country's rural population and 50% of the urban population
- The priority households (46% in rural areas and 28% in urban areas) to have a monthly entitlement of 35 Kgs (equivalent to 7 Kgs per person) at a subsidized price
- Government of India to specify the criteria for categorization of population into priority and general households
- Legal entitlements for child and maternal nutrition, destitute and other vulnerable Groups
- Reform of the Public Distribution System

Although the implementation of the provisions of this act will be a challenge considering the ambiguity regarding the number of BPL families, the problem in delivering the grain to targeted families, the additional government subsidy involved, etc., the government is giving topmost priority to this program.

⁶ <http://nrega.nic.in>

⁷ <http://nfsm.gov.in/>

⁸ <http://agricoop.nic.in/Rkvy/Rkvyfinal-1.pdf>

⁹ <http://www.agricoop.nic.in/NPF/npff2007.pdf>

¹⁰ <http://dfpd.nic.in/fcamin/FSBILL/food-security.pdf>

Conclusion and Policy Recommendations

India's food security has a laudable objective to ensure availability of foodgrains to the common people at an affordable price and it has enabled the poor to have access to food where none existed. The policy has focused essentially on growth in agriculture production (once India used to import foodgrains) and on support price for procurement and maintenance of rice and wheat stocks. The responsibility for procuring and stocking of foodgrains lies with the FCI and for distribution with the public distribution system (PDS).

There is a need to shift from the existing expensive, inefficient and corruption ridden institutional arrangements to those that will ensure cheap delivery of requisite quality grains in a transparent manner and are self-targeting. To ensure this government may follow following suggestions:

1. Futures market and free trade

The present system marked by input subsidies and high MSP should be phased out. To avoid wide fluctuations in prices and prevent distress selling by small farmers, futures market can be encouraged. Improved communication systems through the use of information technology may help farmers get a better deal for their produce. Crop insurance schemes can be promoted with government meeting a major part of the insurance premium to protect the farmers against natural calamities.

To start with, all restrictions on foodgrains regarding inter-State movement, stocking, exports and institutional credit and trade financing should be renounced. Free trade will help make-up the difference between production and consumption needs, reduce supply variability, increase efficiency in resource-use and permit production in regions more suited to it.

2. Food-for-education programme

To achieve cent per cent literacy, the food security need can be productively linked to increased enrolment in schools. With the phasing out of PDS, food coupons may be issued to poor people depending on their entitlement.

3. Modified food-for-work scheme/ direct subsidies

With rationalisation of input subsidies and MSP, the Central Government will be left with sufficient funds, which may be given as grants to each State depending on the number of poor.

The State government will in turn distribute the grants to the village bodies, which can decide on the list of essential infrastructure work the village needs and allow every needy villager to contribute through his labour and get paid in food coupons and cash.

4. Community grain storage banks

The FCI can be gradually dismantled and procurement decentralised through the creation of foodgrain banks in each block/ village of the district, from which people may get subsidised foodgrains against food coupons. The food coupons can be numbered serially to avoid frauds. The grain storage facilities can be created within two years under the existing rural development schemes and the initial lot of grains can come from the existing FCI stocks. If culturally acceptable, the possibility of relatively cheap coarse grains, like bajara and ragi and nutritional grains like millets and pulses meeting the nutritional needs of the people can also be explored. This will not only enlarge the food basket but also prevent such locally adapted grains from becoming extinct. The community can be authorised to manage the food banks. This decentralised management will improve the delivery of entitlements, reduce handling and transport costs and eliminate corruption, thereby bringing down the issue price substantially. To enforce efficiency in grain banks operation, people can also be given an option to obtain foodgrains against food coupons from the open market, if the rates in the grain banks are higher, quality is poor or services are deficient. A fund can be set up to reimburse the food retailers for the presented coupons. This competition will lead to constant improvement and lower prices. It must also be mandatory to maintain a small buffer stock at the State level, to deal with exigencies.

5. Enhancing agriculture productivity

The government, through investments in vital agriculture infrastructure, credit linkages and encouraging the use of latest techniques, motivate each district/ block to achieve local self-sufficiency in foodgrain production. However, instead of concentrating only on rice or wheat, the food crop with a potential in the area must be encouraged. Creation of necessary infrastructure like irrigation facilities will also simulate private investments in agriculture.

The focus on accelerated foodgrains production on a sustainable basis and free trade in grains would help create massive employment and reduce the incidence of poverty in rural areas. This will lead to faster economic growth and give purchasing power to the people.

Thus, in this way, India can achieve food security in the real sense and in a realistic timeframe.

References

- [Ashok Gulati, Economic Times, June 15, 2009](http://mospi.nic.in/mospi_new/upload/nss_rep_540.pdf)
http://mospi.nic.in/mospi_new/upload/nss_rep_540.pdf
- Eleventh Five Year Plan, 2007 – 2012, Volume II

- Dev, S.Mahendra (2003), “Right to Food in India” Working Paper no. 50, Centre for Economic and Social Studies, Hyderabad
- Joshi, P.K., Suneetha Kadiyala and S. Mahendra Dev (2011), “*India’s Economy Roars Ahead but Nutritional Improvement is Stalled*”, Global Food Policy Report, International Food Policy Research Institute, Washington, D.C., U.S.A.
- NSS Report No. 540. Nutritional Intake in India, 2009-10. Central Statistical Organisation <http://mospi.nic.in>
- <http://nfsm.gov.in/>
- <http://agricoop.nic.in/Rkvy/Rkvyfinal-1.pdf>
- <http://www.agricoop.nic.in/NPF/npff2007.pdf>
- <http://wcd.nic.in/icds.htm>
- http://india.gov.in/sectors/education/mid_day_meal.php
- <http://nrega.nic.in>
- <http://dfpd.nic.in/fcamin/FSBILL/food-security.pdf>
- <http://www.ifpri.org/sites/default/files/publications/ghi12.pdf>
- http://planningcommission.gov.in/plans/planrel/fiveyr/11th/11_v2/11th_vol2.pdf
- http://planningcommission.nic.in/reports/genrep/Press_pov_27Jan11.pdf

