



Management

NATIONAL FOOD SECURITY ACT: AREAS THAT NEED FOCUSED ATTENTION

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Abstract

The National Food Security Act [NFSA], 2013 aims at covering overall 67% of population (75% of rural and 50% urban) and promising to give them rice/wheat/coarse cereals at Rs.3/2/1/Kg through Public Distribution System [PDS]. The quantity promised is 35kg/month for Antyodaya households and 5kg/per person for priority households. At the current average size of the family of around 5, this will work to 25kg/household per month. The total annual requirement of food grains for beneficiaries of PDS and other welfare schemes is estimated to be 61.2 million tons [MT]. The cost of handling grain by the Government was about Rs.30/kg for rice and Rs.22/kg for wheat in 2014 (including costs of carrying stocks), against an Minimum Support Price [MSP] of rice at about Rs.20/kg (converted from paddy) and Rs.14/kg for wheat. The budgeted food subsidy for FY 2014-15 was Rs.1.15 billion and there were pending arrears of almost Rs.500 billion that need to be cleared on account of food subsidy. Against this background, this development perspective article highlights the current status of hunger in India, aspects of NFSA 2013, current agricultural scenario and specific areas that need focused attention.

Keywords: Food Security; Zero Hunger; Food Productivity.

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1. Introduction

In terms of FAO's definition of the "Food Security" [i] Food output in India in any year irrespective of the occurrence of droughts and floods must be enough to meet the needs of every citizen [ii] Food must be affordable to everyone. This means that income of poor and particularly those who have income generating economic activities must be enabled to improve their income through various farm and non-farm sectors so that they can access food from open markets. Those who are below poverty line including landless labourers, tenant farmers, share croppers,

oral lessees and those residing in tribal, forest, hilly, desert, drought and flood-prone areas and those who have no source of income can be considered eligible under the NSFA. [iii] Food should be nutritious and provide balanced diet to maintain/improve health [not merely comprising cereals] consisting of adequate quantity of pulses, edible oils, fruits, vegetables, milk, meat, eggs, fish etc. [iv] Food system must focus on stability of production and prices.

The FAO in 1974 had declared that by 1984 “*no child, woman or man should go to bed hungry and no human being’s physical or mental potential should be stunted by malnutrition*”. But still after more than three decades 795 million including 385 million children are malnourished. Our former Prime Minister Dr Manmohan Singh had reemphasized in his Independence Day Address that “*nobody will be allowed to go hungry*”. However, in India a sixth of the population is undernourished; a fourth of the children are malnourished; 190 million go hungry daily; 3,000 children die daily due to poor diet-related illness; a third of the children below the age of five are underweight; a quarter of global deaths of kids below five and a third of global neonatal deaths occur in India.

Malnutrition exerts long-term adverse effects on human health, labor productivity and general well-being. Perpetual under-nutrition results in low resistance to infections and increased morbidity. Unfortunately, India could not halve the proportion of hungry people during 15 years [2000 to 2015] as mandated under the United Nations Millennium Development Goals. Now India is committed to “*end hunger, achieve food security and improved nutrition, and promote sustainable agriculture*” by 2030 under United Nations Sustainable Development Goal-2.

2. Global Hunger Index

The global hunger index [GHI] score is a multidimensional index composed of four indicators, viz. [i] proportion of undernourished in the population [ii] prevalence of child mortality [iii] child stunting [iv] child wasting. According to the GHI report of the Washington-based International Food Policy Research Institute (IFPRI) 2016 [i] India has a “*serious*” hunger problem with 15.2% of its citizens undernourished and 38.7% of under-five children stunted [ii] India, which ranked 97 among 118 developing nations, fares worse than all its neighbours such as China (29), Nepal (72), Myanmar (75), Sri Lanka (84) and Bangladesh (90) [iii] India’s GHI score of 28.5 is worse than the average score of 21.3 for developing countries, whereas countries like Brazil and Argentina have a GHI score of less than 5 and ranked the best among developing nations [iv] if hunger declines at the same rate as it did since 1992, more than 45 countries, including India will still have ‘*moderate*’ to ‘*alarming*’ hunger scores in the year 2030, far short of the United Nations Sustainable Development Goal to end hunger by 2030.. While 20 countries, including Rwanda, Cambodia, and Myanmar, which reduced their GHI scores by over 50% each since 2000, India’s GHI score declined by 25.4% during this period

India has one of the world’s highest child malnutrition rates. Despite during eight long years between 2006 and 2014, number of stunted children below five years of age declined from 48% to 39%, still more than 47 million children are stunted today. The proportion of people suffering *chronic hunger* between 1990 and 2015 has dropped from 24% to 15% but still almost 200 million people go to bed hungry every night.

Policies may have ensured overall 'economic growth but there is no real 'social development'. India ranks low in Human Development Index and high on the Global Hunger Index. India has 'growth without equity' and little distributive justice, an important cause of poor nutrition status.

3. National Food Security Act, 2013

Acknowledging the significant need to address the issue of hunger, malnutrition and poverty the National Food Security Act [NFSA] 2013, also known as "Right to Food" Act was enacted on 12th September 2013 [effective from 5th July 2013] which aims at providing subsidized food grains to approximately 67% [(75% in rural areas and 50% in urban areas) of country's 1.2 billion people through PDS.. It also recognizes maternity entitlements. PDS beneficiaries are entitled to 5 kilograms/person/month of cereals at the highly subsidized prices, viz. rice at Rs.3, wheat at Rs.2 & coarse cereals at Rs1 per Kg each. Pregnant women, lactating mothers, and certain categories of children are eligible for daily free cereals. Indeed, in India where almost 40% of children are undernourished the NFSA marks a paradigm shift in addressing the problem of food security, from the current welfare approach to a right based approach. The NFSA has the potential to create significantly positive impact on poor peoples' health if properly implemented in combination with mid-day meal scheme, integrated child development Services scheme & the PDS.

The Parliamentary Standing Committee on Food, Consumer Affairs and Public Distribution estimated a "total requirement of food grains at 61.55 million tons in 2012-13 and allocation of 54.926 million tons. The Committee estimated that the value of additional food subsidies (i.e., on top of the existing PDS) during 2012-13 worked out to be Rs24.09 billion. According to the Commission on Agricultural Costs and Prices (CACP) the economic cost of Food Corporation of India for procuring, transporting, storing and distributing food grains is about 40% more than the procurement price. To support the system and the welfare schemes, additional expenditure is needed for the envisaged administrative set up, scaling up of operations, enhancement of production, investments for storage, movement, processing and market infrastructure etc. The existing complex system of food procurement, stocking and distribution would increase the operational expenditure of the scheme because of inadequate/deteriorated infrastructure, leakages and inefficient governance. The CAPC concluded that the total cost for implementation of the NFSA may be between Rs1.25 to 1.5 trillion. Even after three years, nine States and two Union Territories have yet to implement the NFSA and in other States, the delivery system is not transparent but handicapped in respect of identification of beneficiaries, de-privatizing PDS shops, computerization, separation of transportation and distribution agencies, grievance redressal mechanism, among others.

4. Challenges

Successful implementation of the NFSA is faced with challenges viz. limited resources and exponentially increasing population, lack of infrastructure, operational inefficiencies and poor performance of the PDS, among others. Structural issues in food production include fragmented landholding, frequent occurrences of drought and floods, inadequate irrigation facilities, inadequate access to technology, credit and insurance services, inputs of inferior quality, weak extension services, inefficient marketing facilities and poor state of rural infrastructure. Besides,

land constraints, looming water shortage and climate change are emerging issues. India may be less food insecure today but the signs are ominous.

Current Agricultural Scenario: Assured food output to implement the NFSA is currently constrained by following state of affairs which the Sustainable Development Goal-2 of the United Nations aptly expects India to address.

- Agricultural growth during 2015-16 is just 1.2%. Growth rate continued to be lower than the average growth in the last decade.
- The share of agriculture in gross value addition [GVA] continued to decline from 18.60% in 2014-15 to 17.60% in 2015-16.
- While number of total holdings increased to 138.35 million average holding declined to 1.16 hectare per capita. Share of small and marginal farmers in the total holdings is 85% account for 44.6% of total cultivated area.
- Net sown area was 140.8 million hectares and gross cropped area was 195.25 million hectares in 2011-12.
- Though total agricultural credit has increased substantially during the decade [2006-07 to 2015-16] from Rs.2.29 billion to Rs.8.77 billion, the share of term loan in the total significantly declined from 38.4% to 19.6% affecting capital formation in agriculture.
- Though poverty declined to 21.9% in 2011-12 from 37.2% in 2004-05, rural poverty was higher [25.7%] than urban poverty [13.7%] in 2011-12.
- While share of agricultural employment stood at 48.9% of work force its share in GVA declined from 18.5% in 2011-12 to 15.4% in 2015-16.
- Average growth rate of agriculture and allied activities at 2.3% during 2011-12 to 2015-16 has been below 4% target for 12th plan.
- Though food output [252.23 million tons] in 2015-16 improved by 0.21% over previous year it was significantly lower than 265.04 million tons in 2013-14.
- Percentage change over per hectare yield of rice, wheat, pulses and oilseeds has declined since 2010-11 and negative in 2014-15 as against 2013-14.
- India has significant lower crop yields than a number of countries. For example, average cereal yield in China is above 5800 kg/ha as against less than 3000 kg/ha in India.
- Gross capital formation [GCF] in agriculture as percentage to total GCF declined from 8.6% in 2011-12 to 7.4% in 2013-14 [[2011-12 prices].
- Percentage of GCF in agriculture & allied activities also declined from 18.3% in 2011-12 to 15.8% in 2014-15. Share of public sector in GCF declined from above 20% during 2004-05 to 16.8% by 2013-14 whereas private sector share increased from 78% to 83% during the period.

Harvest & Post-harvest Losses: The Central Institute of Post-Harvest Engineering & Technology [CIPHET] carried out a nation-wide study on the quantitative assessment of harvest and post-harvest losses for 46 agricultural produces in 106 randomly selected districts in India. The study considered the quantitative loss as the material rendered “unfit for human consumption”. The different stages considered for assessment of losses included harvesting, collection, threshing, grading/sorting, winnowing/cleaning, drying, packaging, transportation, and storage depending upon the commodity. The study in 2009 has estimated harvest and postharvest losses of major agricultural produces at national level of the order of Rs.441.43

billion per annum at 2009 wholesale prices Most wastages were in fruits & vegetables, pulses & cereals. At the instance of the Government the CIPHET has conducted a repeat study for 45 agricultural crops in 107 districts to assess the position. This study [2012-13] estimated annual value of harvest & post-harvest losses of major agriculture produce at national level of Rs.926.51 billion using production data of 2012-13 at 2014 wholesale prices[GOI,2015]. In cereals& fruits, major losses occur at farm level during harvest, collection & threshing. Storage losses are 0.75% to 1.21%.

Table 1: Percentage estimates of losses in Production of Major Commodities

Commodity	2009-10	2012-13	Commodity	2009-10	2012-13
Cereals	3.9 to 6.0	4.65 to 5.99	Apple	12.3	10.39
Pulses	4.3 to 6.1	6.36 to 8.41	Grape	8.3	8.63
Wheat	6.0	4.93	Papaya	7.4	7.76
Paddy	5.2	5.53	Banana	6.6	6.70
Bajri	4.8	5.23	Milk	0.8	0.92
Maize	4.1	4.65	Fish-inland	6.9	5.23
Oilseeds	2.8 to 10.1	3.08 to 9.96	Fish-marine	2.9	10.52
Fruits & Vegetables	5.8 to 18.0	4.58 to 15.88	Meat	2.3	2.71
Guava	18.0	15.88	Poultry	3.7	6.74
Mango	12.7	9.16			

Source: Ministry of Food Processing Industries

Need for Focused Attention: NFSA envisages “availability of sufficient food grains to meet the domestic demand as well as access, at the individual level, to adequate quantities of food at affordable prices.” Besides, India is committed to “*end hunger, achieve food security and improved nutrition, and promote sustainable agriculture*” by 2030 under United Nations Sustainable Development Goal-2. To achieve these goals following areas need focused attention.

Implications of NFSA on S&MFs : Agricultural Census [2010–11] revealed that S&MFs [less than two hectares] account for 85% of total 138.35 million operational holdings and 44.46% of the total area), characterizing India’s agriculture a small-scale-farming. Considering average five members in a farm family S&MFs have 585 family-members of whom [75%] 438 members will qualify to be beneficiaries under NFSA. These S& MFs who produce substantial amount of food grains, also consume and use for various purposes a large part of what they produce. According to the Working Group on Agricultural Marketing Infrastructure and Policy Required for Internal and External trade (Eleventh Plan), S&MFs retain more than 60% for family consumption and less than 40% they set aside for market. Apart for their family consumption, which is in excess of a third of their production, they retain the produce for paying permanent and temporary farm labor in kind; for feeding farm animals and using as seeds; for payment in kind for farm equipment, customary dues, repayment of loan and irrigation charges. They produce food more efficiently than medium and large farmers. While their families consume most of the food grains they produce, they also contribute a significant part of the national kitty of food production for others. Now, under the NFSA most of their family-members will qualify for subsidized food grains. And they will get grain supply at less than 1/8 of the price at which they produce and sell grains to the Government. If the Government would supply them grains at 1/8 price, it is likely that they will switch over to other crops rather than producing about 40% of national food using

44.46% of the cultivated area, particularly when their cost of cultivation per hectare as compared to medium and large farmers is higher. Perhaps, providing highly subsidized food grains to S&MFs under the NSFA may dissuade them from producing food grains for their families and the nation.

Incentivizing S&MFs to Produce More: S&MFs contribute more than half the total value of agricultural output in India. They are also actively engaged in raising milch animals and animal husbandry activities. S&MFs have 70%, 55% and 52% share in total production of vegetables, fruits and cereals respectively against their 44.46% share in area whereas they have lower share in pulses and oilseeds than that of large farmers. Their share is 69% in milk production. They deploy lower capital but make higher use of their family labour and family-owned inputs for intensive cultivation of crops, diversification of agriculture, and optimizing use of small holding. According to the FAO, the S&MFs supplied as much as 7.2 million tons of food grains to the national grain market as early as in 1990. Another FAO publication titled, *Smallholder farmers in India: Food security and agricultural policy (March 2002)* concluded: “*India’s agricultural economy and food security depend vitally on the small-holder farmers...It is socially beneficial to the nation that the number of small-holdings should continue to increase. It is therefore incumbent upon the nation to assist the small-holder families to increase their productivity and to augment their assets and entitlements.*” Assist them to produce more and not less, by incentivizing their production and productivity by direct cash subsidies. The Food Bill is bound to encourage the S&MFs to go for easy alternatives like commercial crops and horticulture. Most States are deficient in food production. If in those States S&MFs shift away from food grains, the country will face huge dent in food security. That is precisely what the NFSA is likely to end up achieving by large scale state intervention that threatens to dis-incentivize and turn some 700 million producers of food into consumers of food-dependent Government supplies at subsidized rates.

Adoption of scientific techniques at harvesting & post-harvest stages coupled with adequate processing facilities can significantly reduce losses/wastages and increase farmers’ income and supply to consumers. Incidentally, in five years ended 2013-14, the average annual growth rate of horticulture & food grain production was 5.53% & 2.60%. This necessitates that policy & programs to increase food & fruit production should match with that of corresponding investment in creating processing facilities in order to avoid farmers’ distress & decline in farmers’ income. Improving farmers’ bargaining power necessitates value addition to their produce. Farmers need to be trained to produce according to the market demand & quality standards. This exhibits immense scope for India to reduce the losses through organized FPS. Adequate food processing facilities accompanied by significant improvement in the existing Supply Chain & expanding it and efficient transportation and storage system can substantially minimize wastages in farm produce.

Rural India witnesses protein and energy malnutrition because of policy supporting subsidized provision of calories but not proteins. Availability and consumption of protein-diet has gradually declined in last two decades. Protein-based nutrition status variance is significant across States and agro-ecological regions. NFSA will gradually lead to protein-based nutrition insecurity which will have long-term implications of unbalanced nutrition in view of the age profile of the

population. The poor are the worst affected. Thus, pulses & edible oils should be included in the NFS program. Indeed, access to 'nutritious food' and affordability ought to be a guiding factor. For ensuring sustainable national food and nutrition security there is need to focus attention to [i] include nutri-cereals, pulses, edible oils, milk, poultry and fish [ii] develop and encourage food fortification; and Despite India has a large and growing production base of major protein sources (animal and vegetable), per capita protein availability has declined considerably. This necessitates the program to harness the available potential and addressing the issue of skew in food consumption pattern by appropriate agriculture and food distribution policies.

Implementation of the NFSA should acknowledge the close relationship among food, nutrition and health. Agriculture is a source of food, nutrition and income. Adequate and regular income helps consumers buy nutritious food. Thus, progressive farm policy should enhance food productivity and output, make it available at fairly reasonable prices throughout the year. All available resources and administrative skill should be efficiently utilized to fight hunger and malnutrition.

The per capita availability and thereby consumption of nutri-cereals is very low by the world standards. NFS policy should, therefore, consider adequate production, processing, availability and consumption of cereals, pulses and edible oils through research and investment support.

Minimum Support Price policy has been encouraging continued grain mono-cropping (rice-wheat-rice cycle) in specified regions causing deterioration of soil health and alarming decline in the groundwater table.

A number of schemes across States address malnutrition and hunger, viz. PDS, ICDS, mid-day meal etc. being implemented independently by concerned ministry. Due to lack of effective inter-ministerial/institutional coordination at all levels the implementation is tardy, not result-oriented. Robust monitoring of decentralized implementation at the grassroots level is called for. Reforms in agriculture should, *inter alia*, ensure increased yield per unit of area, resources and investment; uniform quality of produce; steady output and prices. Reforms should also focus on procurement, storage, movement and distribution of food grains and formulate strategies for implementation.

The need is to conduct studies in each State where NFSA is under implementation to identify the factors attributed to satisfactory performance and factors responsible for inhibiting the expected performance. This can help share experiences among other States. Also, studies are required in those States where it is yet not implemented to identify the issues impeding the process of implementation as the NFSA became effective from 5th July 2013.

Since India has now to fulfil the mandated target of achieving "zero hunger" by 2030 under the United Nations SDG-2, a comprehensive study is necessary to understand the short and long-term implications of the sustainability of the NFSA in terms of India's physical, financial and human resources currently available and that need to be mobilized from possible sources in a time frame of five years.

There is need for mapping and auditing of the entire complex value chain of the PDS for implementation of NFSA.

India has the potential and capacity to increase and feed everyone under the National Food Security Act, 2013 if food losses due to huge wastages are substantially minimized and the Food Corporation of India is enabled to execute its mandated food management policies efficiently viz. food procurement, storage, transportation and distribution in particular. FCI has to store food grains for sufficient period to meet the requirements of public distribution system and Government's other welfare schemes. Now the FCI has a significant responsibility under the NFSA, 2013. Against this background this article highlights the issues of food storage management that need to be addressed.

5. Conclusion

To eliminate hunger and malnutrition as envisaged under the NFSA, 2013 India has to demonstrate political leadership, implementing administration committed and accountable and decentralized delivery system transparent involving Panchayati Raj Institutions at all level. Beneficiaries of the NFSA will have to claim their *Right to Food* and print and electronic media should voice beneficiaries' grievances making elected personnel responsible.

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