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Rapporteur's Report on Food and Nutrition Security: Failure and Governance

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I

BACKGROUND

In the classical development economics paradigm, sustained availability of food was considered crucial for achieving higher economic growth as food insecurity was likely to impede the development of non-agricultural sector through higher wages and low investible capital available from the agricultural sector. Over time, with greater integration of economies and globalisation, it has been observed that availability of capital is no more a constraint for development of manufacturing sector which can be attempted independently of growth in the agricultural sector. It is for the reason that now investible capital resources can be increasingly sourced from outside the domestic economy. Notwithstanding, sustained availability of food and its effective distribution to poor people is important and it continues to dominate the development agenda of most of the developing countries. It was supposed that trade liberalisation would bring stability in the world agricultural market, which in turn will help to stabilise the prices. But, available evidence showed that international price of agricultural commodities was volatile and it had been predicted that global food prices which spiked in 2007-08, would remain high at least for a decade (OECD/FAO, 2011). Further, there is high level of uncertainty on food supplies in the world market and dependence on imports for meeting domestic food security will be costly. Therefore, strengthening domestic production may contribute to long term food and nutrition security with adequate stocking and efficient distribution of food to the needy people.

India has made tremendous progress in increasing production of staple grains like wheat and rice since the introduction of yield improving technology in the 1960s. A combination of policy measures like subsidisation of inputs, output price, external trade and marketing support were introduced to encourage the farmers to produce these important cereals. This has ensured self-sufficiency in domestic production and accumulation of foodgrains for supplying to the vulnerable sections of the society through the public distribution system. Although self-sufficiency in the production of wheat and rice could be achieved through adoption of yield improving technology under favourable policy environment, a similar success could not be realised in pulses

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and oilseeds, and their domestic requirements are increasingly met through imports. Nevertheless, there are ecological threats to regions, which predominantly contribute to national foodgrains production, experiencing stagnation in yield, fall in water table, decline in soil fertility and pest-diseases build up. These threats have actually emanated from a persistent policy bias (like operation of procurement system, minimum support price for wheat and rice) towards these regions with the intention of securing continuous supply of foodgrains to the central pool. Such policy bias has led to achieving only cereal security from irrigated regions, while it neglected the dryland regions where pulses and coarse cereals are predominantly cultivated. In fact, coarse cereals like ragi, jowar and bajra are highly nutritious, and pulses are the important source of protein.

In recent years, government introduced various agricultural developmental programmes like Rashtriya Krishi Vikas Yojana, National Food Security Mission, and Pulses and Oilseed Villages Programme to ameliorate the situation and improve the production of foodgrains and oilseeds. It has been pointed out that after experiencing low growth rate through 1990s to the early 2000s agricultural sector has witnessed revival of growth since mid-2000s (Chand and Shinoj, 2012). However, concrete evidences on the impact of these developmental programmes on revival of agricultural growth are yet to come. There are concerns with respect to increasing diversion of agricultural land to non-agricultural purposes, declining area under foodgrains and their impact on domestic food supplies. These concerns will get aggravated if crop productivity does not increase considerably. There are also attempts to augment the production of horticultural products like fruits and vegetables (through National Horticulture Mission) and livestock products in the light of diversification of food consumption basket. These so called high value products are income elastic and their prices are highly volatile. As a result, they remain unaffordable to poorer sections of the society. Further, these products seldom enjoy from the government marketing support programme to stabilise prices in market and thus affect the interests of the producers and consumers in the event of either fall or rise in the prices.

In spite of achieving self-sufficiency in food production, the problem of chronic hunger and malnourishment remains at very high level. According to the 2005-06 National Family Health Survey, 42.5 per cent of children under 5 years were malnourished. The prevalence of anaemia among children and pregnant women had not declined over time. In this context, it is important to assess the efficacy of various food based programmes implemented by the government over time and identify the governance problems for devising better design and strategies for effective implementation. The Government of India implements the largest food intervention programme called public distribution system (PDS) through which primarily foodgrains are distributed at subsidised rate to all eligible households. The eligible households are given ration cards to buy fixed rations of foodgrains. Prior to 1997, a universal system of PDS was implemented and foodgrains were made available to all

registered households in the rural and urban areas. But, the introduction of targeted public distribution system with dual pricing since then has run into serious problems with exclusion of eligible/deserving households and inclusion of non-eligible households. Many studies have also pointed out huge diversion of wheat and rice meant for PDS to black markets, thus depriving the poor households accessing the cheap grains. In fact, NSS consumption data shows that for the Below Poverty Line households and Antyodaya households the consumption of foodgrains purchased from the PDS was much higher than other sources. Further, an important objective of implementing targeted PDS was to reduce the food subsidy, but it had not declined over time leave alone the low reach of subsidy to poor. The other notable food intervention programmes are Integrated Child Development Services (ICDS) and Mid-day Meal Scheme. Despite implementation of these schemes considerably for long time, nutritional outcomes are not encouraging. A few states have performed better, while most states showed poor record in nutritional standards. Therefore, an in depth analysis need to be carried out to better understand the issues in terms of adequacy of funding, quality of food, training to staff and other administrative problems. It is also important to deliberate how the poor performance of these developmental programmes has contributed to nutritional insecurity among the disadvantaged groups of the population and how the proposed National Food Security Bill will help to solve the existing problems.

The papers on these important issues pertaining to India's food and nutrition security were invited to deliberate and devise better strategies for overcoming the failure and governance problems in the implementation of agricultural and food based developmental programmes. A detailed outline on this theme was circulated to the paper-writers to facilitate them focus on various issues raised. Accordingly, a large number of papers were received for discussion and the issues covered by these papers are highly interrelated. The major findings of these papers are summarised under different areas in the following sections.

II

CHALLENGES OF FOOD AND NUTRITION SECURITY: MICRO AND MACRO DIMENSIONS

Issues Related to Food Production and Availability

For ensuring long term food security, sufficient amount of foodgrains should be made available domestically in a sustainable manner. The favourable economic conditions are necessary for the agricultural sector to enhance the food production and to keep pace with growing demand for different types of foods. There are 18 papers which have focused on the issues related to performance of agricultural sector, growth in food production and availability as the central theme. However, these papers had only limited coverage of issues. A. Narayanamoorthy and P. Alli have discussed the seriousness of crop holiday (non-planting of paddy in *kharif* 2011)

declared by the farmers in Andhra Pradesh. The authors argued that fall in the profitability of paddy cultivation had forced the farmers to refrain from growing paddy. Paddy occupied significant proportion of gross cropped area and there was not a remarkable rise in productivity during the last one decade. Hence, crop holiday in the cultivation of paddy in protest against the low support price will significantly affect its production in the country. This in turn, will affect domestic availability and price in the market.

The papers by S.C. Srivastava and S.S. Kalamkar have highlighted that there was significant increase in foodgrains production, but over time the net availability of cereals and pulses had declined. This indicated that the incremental food production did not keep pace with rising population. In this context, Debisree Banerjee and Uttam Kumar Bhattacharya noted that between 1951-52 and 2010-11, foodgrains production increased only by five times, while population increased by 34 times. The viable option to raising the foodgrains production is to increase the productivity as the scope for expanding the area is limited. The authors expressed concern over fall in area under foodgrains with no dramatic improvement in productivity. They suggest that credit flow from institutional sources and effective crop insurance will help the farmers to adopt new technology and achieve higher production. While discussing the poor performance of agriculture that led to rise in price of food articles, A.N. Shukla *et al.* argued that public investment in agriculture had declined over time leading to fall in crop productivity. The authors contended that a cut in public investment was sharp with the launching of economic reforms in 1990s.

Among foodgrains, coarse cereals and pulses did not receive much attention in technology development and its dissemination. As a result the productivity of these crops remains at low level and they are predominantly cultivated in dry land regions. With low output and high demand for cash force the farmers to sell whatever is produced to private traders at low price, thus exposing themselves to food and nutrition insecurity. The marginal and small cultivators are the worst affected groups. In this context, V.R. Kiresur *et al.* argued that the consumption of pulses was much lower for rural households because the farmers-producers sell most of the quantity produced. Therefore, they should be educated on the nutrition front for appropriate use of farm produce for balanced nutrition. Further, the issues related to production of pulses (Shalendra *et al.*; A.K. Sharma and Brahm Prakash; S. Angles *et al.*) and coarse cereals (Deepa B. Hiremath and R.L. Shiyani) have been mentioned in their papers.

M.H. Wani *et al.* showed that agricultural diversification in the mountainous regions of Jammu and Kashmir had created additional employment and income generation to the farmer households. Within the diversified households, there was evidence of sufficient intake of nutritious foods. The level of nutrient intake was significantly higher for highly diversified groups than low diversified groups. The authors suggest strengthening of value chains, promotion of farmers-market linkages through public-private partnerships in infrastructure development and reducing

domestic and international trade barriers for enhancing agricultural diversification in the state. The importance of crop diversification in the different regions of Uttar Pradesh was also highlighted by Rooba Hasan and H.P. Singh. In the paper by Shiv Raj Singh and K.K. Datta the problems related to food availability and accessibility at the household level has been analysed by using NSS data. The authors argued that accessibility to food is determined by access to land and type of income. The income earned through livestock rearing and labour had greater impact on accessibility to food.

The limited empirical evidence showed that domestic production and net availability of foodgrains had not kept pace with rise in population. There is a need to increase the production and productivity of pulses and coarse cereals through targeted programmes. It also emerged that diversification of agricultural enterprises helped to secure higher level of food and nutrition security. However, bottlenecks in the value chain of agricultural commodities need to be removed through investment in infrastructural facilities.

Issues Related to Nutrition

Various rounds of NSS data on consumption showed that there was shift in the food consumption pattern from cereals based on animal products and vegetables, and fruits based. Although the households spend over 50 per cent of their income on food, cereals as source of calorie has come down and non-cereals like milk and milk products, and oil and fats have gained importance. Only eight papers discussed the issues related to food consumption and changes in nutrition intake. There was overlapping of issues discussed by a few papers on changes in food consumption pattern and persistent nutritional deficiency among poor people. S.K. Goyal *et al.* examined the changing profile of food consumption in India. They found that there was growing dependence on livestock products and vegetables for calorie and protein intake. However, the authors expressed concern over sharp increase in fat intake along with the rise in income levels.

Anjani Kumar *et al.* noted that during 1983 to 2009-10 there was a decline in calorie and protein consumption in the rural areas, while it showed more or less increasing trend in urban areas. For poor households, the calorie intake was two-thirds less than that of rich households. The authors showed that the level of calorie consumption for poor households was much below the prescribed standards. Accordingly, the nutrient deficiency measured in terms of undernourishment was high among the poor in rural and urban areas. About a quarter of rural population suffered from energy and protein deficiencies. These nutritional deficiencies were glaring at 51 per cent and 62 per cent, respectively for poor households. The regression results showed that education, household size and land ownership, income, price of food articles and access to PDS determined the level of nutrition intake at the household level.

In fact, the level of nutrition intake, assuming the other things remaining constant, depends on the type of work done by the individuals. While examining the type of farm technology on nutritional intake, Arjinder Kaur and Amarpreet Kaur found that the pattern of food composition did not vary much across bullock operated, semi-mechanised and mechanised farm households. However, the amount of food expenditure was higher for mechanised and semi-mechanised farm households than non-mechanised households because of higher income received by the former categories. Similarly, the papers on Maharashtra by M.N. Waghmare and S.N. Tilekar and on Himachal Pradesh by S.P. Saraswat *et al.* have found that diet diversification increased with increase in land holdings and income. The authors suggest that for improving nutritional status of cultivators and income, dairy enterprises should be given importance for the overall diversification of agriculture.

Issues Related to Food Stock Management

The operation of public distribution system entails important functions like procurement and storage of foodgrains by the public agencies. Due to increased level of procurement over time, the buffer stock norms for holding foodgrains are often crossed. There are reports of rotting and wastage of foodgrains because of lack of sufficient scientific warehouses in the country. Only a few papers touched on the issues related to procurement and storage of foodgrains. S. Maji *et al.* argued that the excess food stocks or food surplus was due to unequal distribution and inaccessibility to food by large sections of the population. The authors have stated that proper implementation of employment guarantee programmes would create purchasing power in the hands of food starved people and it will help to reduce undernourishment. The targeted programmes are necessary in the dry land areas for not only increasing availability through rise in the agricultural productivity, but also accessibility through public distribution system.

Jayanti Kajale and Sangeeta Shroff discussed the efficacy of buffer stock operations in terms of its impact on containing rise in the price of foodgrains. The authors argued that increase in the foodgrains stock beyond the buffer stock norms was mainly due to higher level of procurement, which in turn was attributed to higher minimum support price announced by the Government of India. The Food Corporation of India hold about one-third of the foodgrains produced, but its weakness in storage management and distribution had resulted in undesired level of price rise since 2009. Limited evidences indicate that there is a need for detailed deliberation of the problems in the existing storage systems and the kind of modernisation should be introduced in warehousing and transportation of foodgrains.

III

ISSUES RELATED TO WORKING OF PUBLIC DISTRIBUTION SYSTEM

The public distribution system (PDS) plays a very important role in the distribution of foodgrains to the poor and disadvantaged sections of the society. But, there are problems in the efficient functioning of the PDS in different parts of the country. Some argue that universal PDS works better without discriminating the households who likes to buy the food rations supplied through the network of ration shops at subsidised rates. The inclusion of deserving households is much better in this system of PDS than the targeted PDS. There are also issues related to the quality of foodgrains distributed and financing of food subsidy bill. Only a limited number of papers touched upon these issues related to the PDS. While discussing the broader issues of food intake and nutritional deficiency, Anjani Kumar *et al.* argued that the share of PDS in total rice consumption increased from 9.9 per cent in 1993-94 to 21.7 per cent in 2009-10. The corresponding figures for wheat were 0.4 per cent and 12.7 per cent. There are differences in the share of PDS grains in total consumption across the states with a relatively higher share reported from Tamil Nadu, Jammu and Kashmir, Himachal Pradesh, Chhattisgarh, Karnataka, Andhra Pradesh and Kerala. Although the penetration of PDS in other states is low, it is instrumental in preventing from widespread hunger and famine. But, the PDS faces the criticism of large scale leakages and diversion of foodgrains. The extent of diversion of foodgrains was reportedly high in Bihar, Assam, West Bengal, Rajasthan, Punjab and Uttar Pradesh. The leakages are found to be low in better performing states, in fact, T. Ponnarasi and K. Sita Devi found in Tamil Nadu that PDS was utilised by all type of households effectively. Similar results were also reported from Chhattisgarh by A.K. Gauraha *et al.* with better access and fair quality foodgrains distributed to the needy households. A. Pouchepparadjou *et al*. revealed that the share of PDS purchases was higher for low farm income and non-farm households than their corresponding high income households in the Union Territory of Puducherry.

In order to prevent leakages and to reach the subsidised foodgrains to the poor through PDS various reforms have been mooted. One such measure was the introduction of the food coupon, which would enable the household members to buy foodgrains from any recognised dealer. The Government of Bihar introduced such a system in 2007. Examining the working of food coupon system in Bihar, Hem Chandra Lal Das argued that food coupon system failed to regulate the supply of grains to the poor. There was collusion of government officials and dealers, which led to more corruption and leakages of foodgrains to black market. Based on their field survey in Chhattisgarh A. K. Gauraha *et al.* reported that households preferred food in kind rather than cash transfer. The limited number of studies therefore, indicates that the present system of PDS is bereft with problems of reaching the subsidised foodgrains to the poor and even the reform measure like food coupon does not seem to be working well due to governance issues.

IV

IMPACT OF AGRICULTURAL, FOOD AND EMPLOYMENT BASED INTERVENTIONS

Apart from the PDS, there are other important agricultural related and food based interventions made to strengthen food and nutrition security in the country. The impact of these interventions deserves special attention on improving the agricultural productivity and nutritional standards. There are several developmental programmes implemented by the central and state governments. But, the reach of benefits of these programmes to the intended beneficiaries is very much limited. In this regard, Channaveer *et al.* examined the benefits from the developmental programmes to farmers in Karnataka. The authors found that out of 56 developmental programmes, the farmers in peri-urban areas received any kind of assistance from 25 per cent of the programmes, while rural farmer households received benefit from about 32 per cent of programmes. The rural farmer households incur more transaction cost than peri-urban households to receive benefits from the programmes. The authors showed that for every one per cent increase in transaction cost, the benefit would increase by 0.34 per cent.

On the agricultural related interventions, Deepak Shah analysed the impact of National Food Security Mission (NFSM) on the pulses (moong, tur and gram) production in Maharashtra. He has argued that in the NFSM district the net profit from the cultivation of these pulses increased substantially in 2008-09 as against the reference years 2006-07 and 2007-08. The rise in profitability of pulses was attributed to a combination of factors like increase in yield resulted from the adoption of improved package of practices and higher prices. The study has mentioned that the initiation of NFSM in pulses is highly promising as it focuses on increasing seed replacement and the replacement of older varieties by newer ones.

Two papers discussed the impact of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) on household income, consumption pattern and nutrition intake. T. Sivasakthi Devi and R. Balasubramanian found that MGNREGS contributed about 35 per cent of the total income of participant households in Tami Nadu. The average daily calorie per capita intake was higher for MGNREGS participants than the non-participants because of higher purchasing power infused by the assured employment programme and availability of regular wages. Similarly, Khem Chand and Shalander Kumar revealed the positive impact of the employment guarantee programme on disadvantaged groups like the landless, marginal farmers, small farmers and women. Because of regular cash income, poor households could purchase some green vegetables and fruits, which otherwise were rarely used by these households. The authors argued that about 56 per cent of the income from MGNREGS was utilised for the purchase of food. The limited evidences on the impact of the developmental programmes showed that some benefits have been obtained by poor households. However, there are drawbacks in the

implementation these programmes in terms of corruption, high transaction cost and elite capture.

V

GENDER DIMENSIONS OF FOOD AND NUTRITION SECURITY

The household food and nutrition security largely depends on the extent of participation of women in the decision making process and handling of cash income. Various studies point out that children and women are the vulnerable groups facing high level of malnourishment and anaemia. The level of education, traditions and other social factors affect balanced intake of nutritious food by men, women and children. Only a few papers have contributed on the issues related to gender and food security. These papers have only limited coverage of gender dimensions of food and nutrition security. In a paper by Jatinder Sachdeva *et al.* found that the female headed households suffered from higher level of food insecurity than male counterparts in rural Punjab. The authors argued that female heads had low levels of education and occupational skill. As a result, their employment rate and annual earning was much lower, which in turn led to less spending on food items. Similarly, Anindita Sengupta and Panchanan Das revealed in their paper that the probability of staying hungry was significantly higher for female headed households. Education of women and access to assets play a crucial role in securing food security for household members. However, given the limited empirical evidences it was difficult to draw any meaningful conclusions about female headed households, their ability for better intra-household resources allocations and overcoming food and nutrition insecurity.

VI

ISSUES FOR DISCUSSION

The contributed papers have focused on the multidimensional aspects of food and nutrition security, and its challenges in India. Although a large number of papers have been submitted on this theme for discussion in the conference, their coverage is very much limited. Some papers discussed the domestic agricultural production constraints and a few analysed the issue of widespread nutritional deficiency among the rural households and problems in the working of PDS. However, there are several other related issues raised in the conference outline which remain unaddressed. Therefore, the following issues have been proposed for further discussion and research in this field.

1. To what extent the recent agricultural developmental programmes like RKVY and NFSM have contributed to growth in foodgrains production in the country? What are the different components of the programmes and which of them are being implemented successfully? What are the financial

implications of these programmes? What are the problems that the farmers face in the adoption of technologies promoted through these programmes?

2. Is diversion of agricultural land for non-agricultural purposes posing threat to food and nutrition security? What are the implications of increasing shift in area under foodgrains to non-foodgrains? What are the ways through which revolution in the production of coarse cereals, minor millets and pulses can be brought out?

3. Can India depend on world market for meeting domestic food requirements? What are the experiences of the net food importing countries on world food supplies and prices after the trade liberalisation in the mid-1990s? How effective is the WTO in regulating the world trade in agricultural products? What are the implications of increased diversion of food crops for bio-fuel production?

4. How can the larger inefficiency in the functioning of public distribution system be removed? What kind of technological solutions or modernisation can be introduced to strengthen the working of fair price shops? What are the alternative methods through which subsidised foodgrains (not only rice and wheat, but also millets and pulses) can be reached effectively to the poor? Will the proposed National Food Security Bill provide solutions to these problems?

5. What are the lessons learnt from the states that achieved better nutritional outcomes and how possibly they can be replicated in poorly performing states? What are the governance problems faced in the implementation of food based interventions like ICDS and Mid-day meal scheme and how can be they rectified with workable solutions?

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