

ENSURING FOOD SECURITY OF RURAL PEOPLE : SOME POLICY INTERVENTIONS

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ABSTRACT

Food security is not only physical and economic access of minimum quantity of food for survival but includes the nutritional aspects also. While addressing the issue of food security it is necessary to consider food security in a much broader perspective. Food security is directly related to poverty and inequality in productive resources. The rate of growth of population, economy, inflation, agricultural sector and development of human resources equally affect the overall quality of life of rural people, whether in rural or sub-urban and urban areas. Semi-urban people face the problem of food insecurity mainly because most of them do not own any productive resource, except their own labour. A few of them, who own productive resource like land, face the problem of indiscriminate use of land for other purposes than cultivation due to expansion of cities and small towns. Proper identification of poor as a target group suffering from malnutrition and food insecurity itself is the main problem in cost-effective food management system. Export-led growth of agricultural commodities is necessary to avail the benefit of access to international market but food security can not be compromised with export-led growth. It is necessary that agriculture, which supports majority of people, must focus on increasing food production. Broad-based agricultural growth with wide coverage and focus on increasing labour productivity as well as labour use intensity would be more useful strategy for increasing economic access of food to the rural poor. Agriculture should be diversified with product-mix based on the crop suitability of region that can have value addition. Moreover, non-price factors such as public irrigation, human resource development, and yield-increasing technologies are equally important in improving agricultural as well as labour productivity. Often it is reported that food for poor people through public distribution system does not reach to them and also the quality of food products is very poor. In addition, the transaction cost for procurement and distribution of food is often too high. This requires proper management and active participation of private sector also. The bureaucratic hurdles and administrative cost substantially increases the food subsidy. Hence, food management system should be redesigned and responsibility of procurement and distribution should be entrusted to local people at local level by their greater involvement. This is the essence of this paper.

Key Words : Food security, Rural People, Policy Interventions, Food Management, Poverty, Hunger.

INTRODUCTION

Food insecurity in India is not a new phenomenon. People have been suffering from the hunger and malnutrition since long. Public as well as private interventions have been always made to reduce the food insecurity and hunger.

Thanks to the green revolution that hunger and famine-a worst kind of food insecurity in India has now reduced to a large extent. However, still after a huge buffer stock of foodgrains at national level, food insecurity and hunger is prevalent in rural areas. One must not forget that earlier

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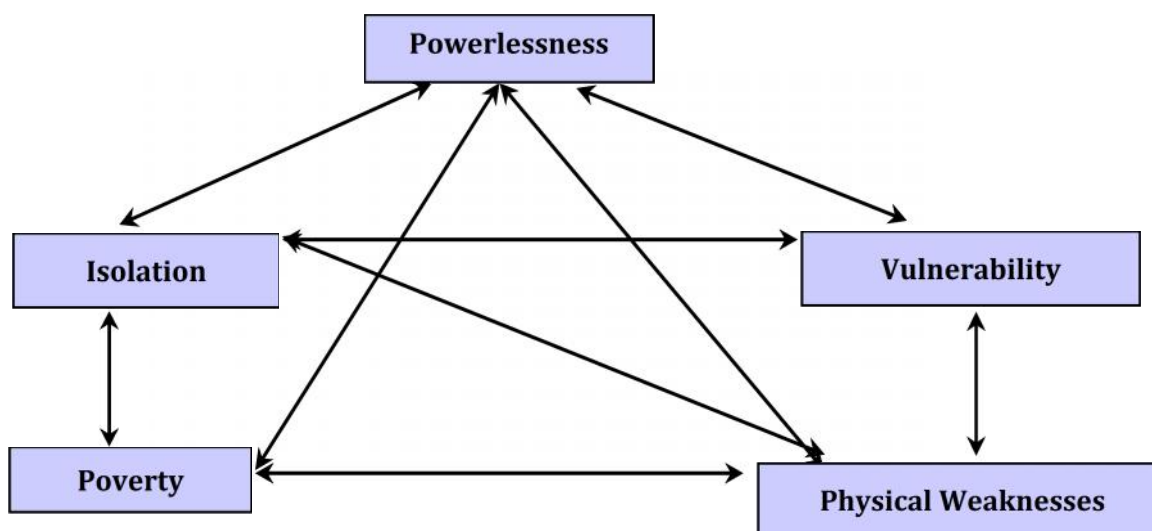
deaths due to famine in various parts of India were not mainly due to shortage of food but it was more due to lack of purchasing power of people. Food was available in adequate quantity but rural people were not able to purchase this.

DEFINITION OF FOOD SECURITY

Food security has been defined by various agencies/organization in different ways. But, almost all of them focus on physical and economic access of adequate food for an active and healthy life. This shows that issues of food security should be seen in a broader perspective and should include nutritional aspects also. FAO in this regards has defined food security "A secure food system should be equitable, meaning, as a minimum, dependable access to adequate food for all individuals and groups both now and in the future". It has been rightly said that lack of dietary security means reduced capacity to cope with shocks to the economic and/or biological environment. Thus, human and biological

resource degradation is both a symptom and cause of food insecurity.

The concept of food security has been changing with time bringing under its scope nutritional, social and economic aspects. New concept also distinguishes between national and household food security. Similarly, the Bali Declaration of the Non-Aligned Movement and Other Developing Countries defined food security as "access to food for a healthy life by all people at all times" (NAM, 1994). It recognized that, in spite of a substantial increase in the world's food output, the number of people suffering from hunger and malnutrition has increased during the last decade in many developing countries. Hence, the Bali Declaration reaffirmed that "food security should be a fundamental goal of development policy as well as a measure of its success". It is possible that a country may be rich in food production or surplus in food, but people who do not have adequate income may not have access to food because of lack of purchasing power (The World Bank).



Food security and employment however are vital issues not only for India alone but for the Third World in general, where more than 70 percent of people are engaged in agriculture sector. Experience shows that food insecurity, job and income insecurity, financial volatility,

crime, threats to health, loss of cultural diversity, community disintegration and environment degradation have all increased. More than 1.3 billion people (over a fifth of the world's population) live below the international poverty line of \$1/perday and a further 1.6 billion (another

quarter of the world's population) survive on between one and two dollars. In the latter half of the 1990s, one third of the world's willing-to-work population was either unemployed or under-employed.

Food security becomes important because population growth rate is still very high and total population is increasing while agricultural production, especially foodgrains production is stagnating. The issue of food security needs to be addressed with long-term perspective because it may be chronic or transitory. Chronic food insecurity is the continuously non-availability of adequate diet caused by poverty and instability in income as well as poor purchasing power and inefficient functioning of public distribution system. While, transitory food insecurity (Farm based and Welfare based) is temporary decline in a household's access to enough food. This arises primarily because of fluctuations in agricultural output, which is caused mainly due to uncertain weather, drought, natural calamities, man-made calamities, price stabilization, etc. All these require strong intervention by the state machinery.

IMPACT OF POLICY ON POVERTY (HUNGER)

Food security is closely related with poverty and inequality in productive resources. Food security has to be seen in a much broader perspective rather than meeting the calories norm alone. India has followed basically two approaches to resolve the problem of poverty and hunger: (1) Large reliance on "Trickle down" or "spread effect" of rapid growth, and (2) Public intervention. The first approach was based on the assumption that overall growth in the economy and particularly in agriculture sector will have spread or trickle down affect and poor would be automatically benefited. This is partly true and in general poor benefits when the growth in the economy is very high i.e. 8 to 10 per cent per annum or poor have asset base (not only physical asset like land but also the skills, physical stamina and knowledge base). If poor do not have the asset base they

might not be able to respond to growth stimuli. Hence, not only growth per se but the composition of growth that matter most (Vyas 1991).

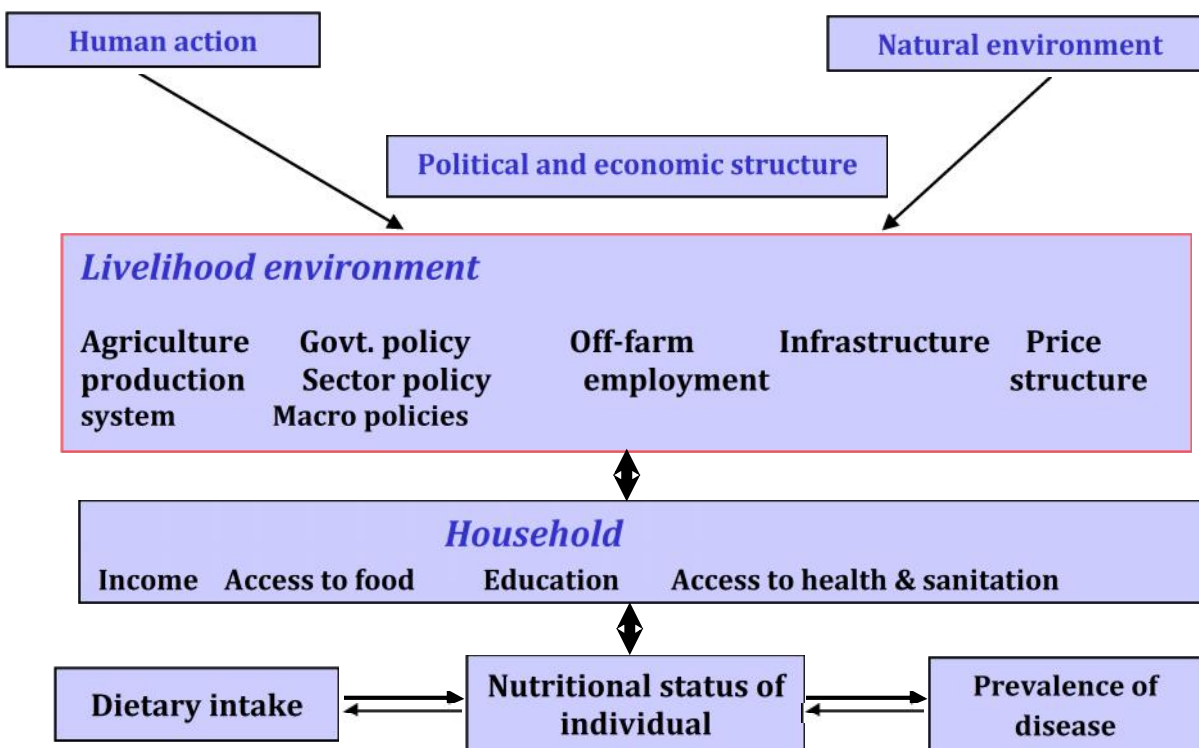
FACTORS LINKING ENVIRONMENT AND HUMAN NUTRITION

The rate of growth of population, economy, inflation, agricultural sector and development of human resources equally affect the overall quality of life of rural people, whether in rural or suburban and urban areas. Semi-urban people faces the problem of food security mainly because most of them do not own any productive resource, expect their own labour. A few of them who own productive resource like land face the problem of indiscriminate use of land for other purposes than cultivation due to expansion of cities and small towns.

GLOBAL FOOD SCENARIO

The food security and nutritional security is not only a household phenomenon but this can be seen at the national and global level also. In a comprehensive study by IFPRI, it has been estimated that even at global level too hunger and malnutrition persists in developing countries. To day more than 800 million (one out of six) people in developing countries are food insecure and do not have access to sufficient food to lead healthy and productive life. At least two billion people suffer from malnutrition (vitamin and mineral deficiency) i.e., hidden poverty. About more 180 million children are underweight and as many as 500,000 pre-school going children become blind each year as a result of vitamin A deficiency. More than 1.1 billion people are poor in developing countries and they account for nearly half in South Asia (50%); 19 Per cent in Sub-Sahara Africa; 15 per cent in East Asia; 10 per cent in Latin America. More than 200 million children (nearly one-third of all pre-school going children) are malnourished and more than 40,000 children die every day due to malnutrition and hunger.

Income gap between developed nations and developing nations as well as between poor and rich (non-poor) in the rural areas is widening. As



per some estimate, the share of poorest 20 per cent of the world people in global income has declined from 2.3 to 1.4 percent in the last 30 years. During last five years, income gap between rich and poor has further widened from a ratio of 30:1 to 61:1. The increasing income gap is quite a serious challenge for the nations and especially for India because this leads to social tension and political instability and misuse/overuse of resources. It has also been observed that there is excessive degradation of basic productive resources i.e. land and water.

The per capita food availability, especially the pulses, which provides protein- an important nutrient to body, is declining continuously. Though the income level of different groups of rural people has marginally improved but their purchasing power has declined. Nearly more than 1.3 billion people still live on less than one U.S Dollar (equivalent to about Rs 45 Indian rupees).

EMERGING TREND

It has been estimated that by the end of 2010, considering the existing growth rate of population, the world population would reach to

the level of more than 10 billion from the present level of about 5.6 billion. About more than 700 million people would be added every year and most of the increase (97%) in additional population would be in the developing countries. There will be considerable increase in the population in urban and peri-urban areas as well cities, mainly due to migration from rural areas.

It has to be kept in mind that due to increase in population and changing consumer behaviour, demand of various foodgrains, especially superior cereals is likely to grow at the rate of 3.5 to 4 per cent per annum compared to population growth rate of 2.9 per cent. The prices of tradable agricultural commodities including foodgrains vis-à-vis manufactured products are also rising. Growing commercialization and high-tech agriculture has increased the input costs and at the same time opening of international markets due to globalization and WTO Indian agriculture has become much more competitive. To gain from this increased access to international market and at the same time meeting the growing demand of food at household level will require

improvement in availability of food, both in the quantity and quality terms.

IMPACT (International Model for Policy Analysis of Commodities and Trade) from IFPRI (International Food Policy Research Institute, Washington, USA) projects that 150 million children in developing countries (1 out of 4 pre-school children) would be malnourished in 2020. Moreover in South Asia this number of malnourished children would decline by more than 30 m between 1993 and 2030. Even with this reduction, 2 out of 5 children would remain malnourished in 2020. During 1993 - 2020 global demand for cereals would increase by 41% and for meat 63% and that too mostly in developing countries. There will be food gap (difference between production and demand for food) would be more than double in the developing world in next 25 years. Moreover, the grain prices may be more volatile in future even though long term trend for cereal prices continues to decline. The policy decisions as well as changes in lifestyles and income levels would affect food security even for the whole world. Many countries would quickly switch from being net importer to significant net exporters.

It was also estimated that out of 117 developing countries, 64 would be unable to feed their population adequately. About 47 developing countries would be able to support less than half of their projected population. Recent estimates by the World Bank shows that over a billion people in the world have problem of food security as per capita income is likely to increase sharply in the next decade. The world supply and stocks of cereals are likely to register notable decline due to withdrawal of subsidies. In the absence of technological breakthrough, the world food prices are bound to increase.

CAUSES FOR FOOD SECURITY AND HUNGER

It is to be noted that the carrying capacity of supporting ecosystem is over-exploited and large part of prime cultivated land near cities and

smaller towns is becoming unsustainable due to conversion of prime land into non-agricultural uses like industries and residential complexes. In India, the net cultivated area has remained almost stagnant during last two to three decades and there is bleak possibility of expansion of net cultivated area. Though, the intensity of cropping has increased due to increase in the gross cropped area, mainly because of increase in the access to irrigation- both private and public investment. However, more and more marginal area has been brought under cultivation reducing the area under forest, and pastures as well grazing land. Cultivation of these marginal lands has adversely affected the foodgrains production. Besides, a large part of productive land is becoming unsustainable due to indiscriminate use of irrigation water, chemical fertilizers, and pesticides. The human carrying capacity of land has been adversely affected and demographic as well as cattle population on per unit of land has far exceeded its capacity.

In general, the world commodity market for basic food grains is significantly more volatile than the domestic food grain market in most of the developing countries like India. International price fluctuations, if transmitted to the domestic economies of developing countries, will seriously affect the prices of food grains and food entitlement of the poor. The inadequate physical and institutional infrastructure for managing large quantities of import of food grains and their distribution particularly in rural areas will further make it undesirable for the India to depend on imported food for meeting their domestic requirements.

WTO AND FOOD SECURITY

The social and economic vulnerability of agriculture in India is generally reflected by substantial contribution of agriculture to their GDP, low level of commercialisation of agriculture, low productivity, weak market orientation, preponderance of small and marginal

uneconomical operational landholdings, lack of infrastructure, dependence on monsoon, susceptibility to natural calamities, and dependence of a very large percentage of population on agriculture for their livelihood etc. Such vulnerability fully justifies the extension of special provisions to the developing country members for ensuring their food and livelihood security concerns. It would not be possible for developing countries, especially India to provide alternative sources of employment for the rural poor. Hence, food security is not only has great economic relevance but also a very important socio-political concern.

In the context of food security, one may be concerned about the adverse impact of WTO on the existing Public Distribution system. In general, one can say that this fear is not genuine because operations of PDS in India are not subsidies to the farmers or the producers, but are consumer subsidies meant for the rural and urban poor to meet their food requirements. Such consumer subsidies are exempt from WTO discipline, and this is clearly written in the Agreement. Further, India has stated in its Schedule of Commitments in WTO that concessional sales of foodgrains through the PDS and other schemes with the objective of meeting the basic food requirements as a social safety net are in conformity with the provisions of the Agreement. The Schedule has been verified and accepted by our trading partners. Hence, the apprehension is, therefore, baseless.

Another related issue is interference of WTO provisions with India's ability to follow its own agricultural policies and programmes. In this regard also, the simple answer is no because all our developmental schemes can be continued under the WTO Agreement on Agriculture. These include our subsidies for research, pest and disease control, marketing and promotion services, infrastructural services, including capital expenditure for electricity, roads and other means of transport, marketing and port facilities,

irrigation facilities, drainage systems and dams etc. For developing countries like India, there are some agricultural subsidies which are also permissible and need not be reduced. These are investment subsidies which are generally available to low income and resource poor farmers. The types of subsidies mentioned above account for the bulk of the agricultural subsidies provided in India.

The trade reform measures like withdrawal or reduction of subsidies in agriculture sector may further lead to increase in the prices. Most of the farmers (nearly 75 percent) in rural areas operate marginal and smaller land holding of less than 1 to 2 hectare. Often they lack adequate resources and new technologies like access to irrigation, improved seeds and fertilizer due to their low income and poor purchasing power. Besides farming, they are often engaged as labourer on other's farm and take loan/credit from them at a much higher rate of interest. They are both the producer as well as consumer of foodgrains. They are mostly small producer and hardly have any surplus to sell in the market. But to repay the loan and credit taken from moneylenders and landlords, they are forced to sell their farm produce, just after harvest, at lower rate than prevailing market price. The increase in the prices, especially foodgrains prices adversely affect these groups of households like landless, marginal and small farmers, artisans, etc.

FAO in its paper on 'Issues at stake relating to Agricultural Development, Trade and Food Security' has concluded that "significant progress in promoting economic growth, reducing poverty and enhancing food security cannot be achieved in most of these countries without developing more fully the potential capacity of the agriculture sector and its contribution to overall economic development". Given the diverse conditions and varying stages of agricultural development in developing countries, the need for making relevant provisions to enable them to pursue

policies aimed at increasing agricultural production and productivity is thus necessary. From the present structure of the Green Box it is observed that most of the provisions are not widely used by the developing world, tailored, as they have been to the conditions prevalent in the developed countries. It is therefore, imperative that the Green Box should have provisions for the general development of agriculture including its diversification in developing countries, which in turn would help them to take care of their rural employment and food security. For instance, input subsidies given by developing countries for crops wherein productivity levels are below the world average should be covered under the Green Box. Sufficient flexibility should, therefore, be allowed to developing countries to administer such policies.

There are several factors that affect the food security, hunger and malnutrition in any country. However, one must note that declining access to size and quality of land and water resources as well as distortions in the agricultural and food policy adversely affect the food security of any country. Rural poor are worst affected by decline in the food production and heavy dependence on market for food. Besides, the new technological advancements increase the income gap among small and large farmers and also reduce the resilience and coping ability of resource-poor farmers. Low income, the absence of any alternative income opportunity and lack of purchasing power adversely affect the food security of rural poor. In the better monsoon period with good harvest, resource-poor farmers get less price of their produce due to increase in the supply and at the time of low production due to drought or other risks, they have to pay more for purchase of food due to short supply. In fact, the rural poor are affected in both ways due to low and higher production.

POVERTY

India achieved political independence in 1947 but at the same time inherited a serious problem of rural poverty when almost half of its population was poor. From the beginning of planned era several efforts has been made for eradication of poverty and promotion of economic growth with social justice but, except some isolated success, still after more than 50 years poverty and food security have remained a major challenge before the policy makers. During last five decades, poverty at the national level has considerably reduced but not with the same pace in all the regions. Still many regions suffer from severe poverty, unemployment and lack of access to adequate food security. This regional imbalance was more due to unequal growth in the agriculture and region specific problems (Table 1).

LEVEL OF DEVELOPMENT AND POVERTY

Level of development, measured in terms of per capita income/GDP in different states of India indicates large variability. Table 2 indicates that the per capita income, at 1996-97 prices, indicates that there is large variation across states. It varies between Rs 6245 in Bihar to Rs 29,548 in Goa. However, there seems to be no consistency in per capita income and poverty ratio. Some of the states even with higher per capita income have also high poverty ratio. For example, Madhya Pradesh with average income of Rs 10,783 has 37.4 per cent poor while with more or less same income level of Rs 11,320, West Bengal has considerably low poverty (27.0%). Similarly, Maharashtra with such a higher income of Rs 21,541 also has poverty to the extent of 25 per cent. In contrast, Punjab even with less income of Rs 20,908 has extremely low poverty (6.3%).

This suggests that the size of state and distribution of income as well as initial condition of growth are important in describing the extent of poverty (Table 2). However, this suggests that there is a further need to examine the level of agricultural development and level of productivity as well as agro-industrial development in different states.

Table 1. Incidence of rural poverty (Head count ratio) in major states of India.

State	Rural poverty (%)				
	1973-74	1977-78	1983	1987-88	1993-94
Andhra Pradesh	48.4	38.1	26.5	20.9	15.9
Assam	52.7	59.8	42.6	39.4	45.0
Bihar	63.0	63.3	64.4	52.6	58.2
Gujarat	46.4	4.8	29.8	28.7	22.2
Haryana	34.2	27.7	20.6	16.2	28.0
Himachal Pradesh	27.4	33.5	17.0	16.3	30.3
Jammu and Kashmir	45.5	42.9	26.0	25.7	30.3
Karnataka	55.1	48.2	36.3	32.8	29.9
Kerala	59.2	51.5	39.0	29.1	25.8
Madhya Pradesh	62.7	62.5	48.9	41.9	40.6
Maharashtra	57.7	64.0	45.2	40.8	37.9
Orissa	67.3	72.4	67.5	57.6	49.7
Punjab	28.2	16.4	13.2	12.6	11.9
Rajasthan	44.8	35.9	33.5	33.2	26.5
Tamil Nadu	57.4	57.7	54.0	45.8	32.5
Uttar Pradesh	56.4	47.6	46.5	41.1	42.3
West Bengal	73.2	68.3	63.1	48.3	40.8
ALL INDIA	56.4	53.1	45.6	39.1	37.3

Source: 1. Report of the Expert Group on estimation of proportion of poor and number of poor (Planning Commission, July 1993) 2. Press note from CSO

Percentage of People Below Poverty Line in India (1973-2004)

Years	Rural	Urban	Combined
1973	56.4	49.0	54.9
1983	45.7	40.8	44.5
1993	37.3	32.3	36.0
2004	28.3	25.7	27.5

Source: Planning Commission

Number of Persons Below Poverty Line in India (1973-2004) (in Lakh)

Years	Rural	Urban	Combined
1973	2612.90	600.46	3213.36
1983	2519.57	709.40	3228.97
1993	2440.31	763.37	3203.68
2004	2209.24	807.96	3017.20

Source : Planning Commission.

Table 2: Per capita income and poverty in different states.

State	Per capita Income (Rs) 1996-97	Poverty ratio (%), 1999-2000
Orissa	8,141	47.2
Bihar	6,245	42.8
Madhya Pradesh	10,783	37.4
Assam	8,406	36.1
Uttar Pradesh	8,950	31.2
West Bengal	11,320	27.0
Maharashtra	21,541	25.0
Tamil Nadu	15,929	21.1
Karnataka	13,968	20.0
Andhra Pradesh	12,791	15.8
Rajasthan	12,010	15.3
Gujarat	18,330	14.1
Kerala	15,197	12.7
Haryana	19,707	8.7
Himachal Pradesh	13,750	7.6
Punjab	20,908	6.2
Goa	29,548	4.4
Kashmir	11,063	3.5

Source: *The Times of India, Lucknow, July 15, 2001*

Considering the growth in income, population and Gross Domestic Product (GDP) in different regions of India indicates that BIMARU states (Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, including Uttranchal) though account for 41 per cent of the country's population have very slow growth rate in per capita GDP during 1990-2000. Besides, the share of these states in total GDP indicates that it has declined from 32 to 26 percent and also the variability in income increased from 42 to 49 per cent during the same period (Table 3). All these indicators show that the performance of economy in these states

require attention on priority basis to minimize the existing regional disparities.

INEQUALITY

As has been mentioned earlier that despite considerable decline in the poverty and improvement in the quality of life of rural people, still many states have remain deprived of the development process. The main reason for such high incidence of poverty is the inequality in the resources base and employment opportunities. Inequality is not specific to India alone but is a global phenomenon. Inequality measured in terms of consumption expenditure clearly indicates that in India the share of lowest 20 percent of households is merely 8 percent while the share of top 20 percent is about 43 percent (more than 5 times higher than the poorest households). This seems to be a very high gap but comparison of a few other countries indicates that inequality is not so bad in India. There are many developing countries where the difference in the share of lowest and highest 20 percent households is quite high. In this regard, it is closer to USA, U.K., Indonesia, Pakistan and Sri Lanka.

Table 3: Relative growth in income, population, and per capita GDP in different regions of India during 1990-2000.

Region	Growth rate (%) per annum in		
	Population	Income	GDP/capita
Northern	2.5	5.3	2.8
Central	2.2	3.9	1.6
East	2.0	4.8	2.7
North eastern	1.9	3.9	2.1
West	2.0	7.8	5.6
South	1.3	6.6	5.3
INDIA	1.9	5.8	3.8
BIMARU states	2.3	3.7	1.3

Source: *Handbook of Statistics, Reserve bank of India and census, 2001*

KEY CHALLENGES FOR ERADICATION OF FOOD INSECURITY AND HUNGER

As has been said earlier that physical and economic access to nutritive food is basic necessities of life for any person. For any country to focus on the problem of food security it is necessary to ensure availability of adequate nutritive two-square meals a day for all the family members. The survival of a person is important but the quantity of food must meet the nutritional requirement of a healthy and working life of a family member so that the adult working men and women can actively participate in the productive activity and children should not suffer from malnutrition. The issue of food security is equally important both at the national and household/individual level. Often the food security issue is not adequately addressed at the household level. At the national level, higher economic growth and higher production of foodgrains can ensure the food availability. But at the household level, intra-household distribution of food requires different approach because all the family members do not require similar type food and in the same quantity.

A number of researchers have made several estimates about the production and shortage of foodgrains at the national as well as global level, but most of them indicate that food security needs proper attention. There are conflicting views about the food security at the national level and it was mentioned in Food Security Summit and Expo 96 held at Chennai that India can produce enough food to feed the entire world Hence we need not worry. But at the same time it was also mentioned in a study of FAO "Agriculture:Towards 2010" that demand for world cereals will increase by 36 per cent from 1,721 million tonnes in 1989 to 2,342 million tonnes in 2010 while the production of cereals in developing countries is expected to be only 1,314 million tonnes and there will be a gap of 162 million tones. However, meeting of this gap will very much depend upon the availability of various new technologies like improved seeds, chemical fertilizer, etc. In general, it has been found that 15 kgs of grains can be produced per kg use of fertilizer nutrients but this seems to be quite low

and India is still operating at low level of response.

The basic question arises that can we ensure easy accessibility of foodgrains to the rural poor. It will very much depend upon at what consumption level we consider this demand. Lester R. Brown of World Watch Institute, Washington has estimated that by 2030 with 8.9 billion people and 2.2 billion tones of foodgrains production at current level of consumption can feed about 2.75 billion Americans; 5.5 billion Italians; and 11.0 billion Indians.

Moreover, it is to be noted that consumption behavior is changing due to increase in the level of income, even in rural areas. But at the same time purchasing power of rural people is declining. As per some estimates the value of a rupee in January 1997 was 37 compared to 30 paisa in 1982 lowest in Mumbai {26 paisa} and highest in Ludhiana {32 Paisa}.

Per capita availability of food has increased, especially during last two decades but the proportion of per capita income required to buy food has considerably declined. During seventies, to buy a quintal of wheat was 12.9 percent of income, which reduced to only 7 percent by 1980. This also raises a question that what is actual need and whose needs we focus our attention. Also, whether one should focus on luxury needs or survival needs.

Experience shows that despite enough food production and buffer stock, not more than 30 to 40 percent people are able to process or purchase minimum food requirement. Hunger, lack of income, government relief measures are all part of a holistic picture of corruption and exploitation. Several Food Summits have assured and made number of commitments to end hunger but it seems that often there are More Commitment and Less Action. Despite all these promises and commitments, still poverty and hunger is on the increase. UNDP report 1996 clearly pointed out that "the world has become more polarized and gulf between rich and poor has widened".

FOOD MANAGEMENT SYSTEM

There may be several issues relating to food management but the main issue is how to ensure adequate nutritional food to everyone at

affordable price. Considering the production of foodgrains, export and import, the net availability of foodgrains indicate that at the aggregate level there seems to be no problem as the country has sufficient buffer to meet any eventuality. The experience shows that in the past several interventions have been made to ensure adequate nutritive food to poorest of poor in rural areas, but it has been observed that public distribution system focus mainly distribution of fixed quantity of food, especially cereals. Changes in level of

income and composition of diet (food basket) require different type of food.

Maintaining adequate buffer stock does not necessarily ensure food security. Such policies of stocking of buffer in dealing with transitory food insecurity are clearly reflected in the stability of foodgrain consumption and prices. It is becoming increasingly evident that stabilization operations involving physical handling of foodgrains are fiscally expensive {see World Bank (1999) among other recent studies}.

Table 4: Net Availability, Procurement and Public Distribution of Foodgrains (million tonnes)

Year	Net production of foodgrains	Net imports	Net availability of foodgrains	Procurement	Public distribution	Col. 3 as % of Col. 4	Col. 5 as % of Col. 2	Col. 6 as % of Col. 4
1	2	3	4	5	6	7	8	9
1951	48.1	4.8	52.4	3.8	8.0	9.2	7.9	15.3
1956	60.7	1.4	62.6	Neg.	2.1	2.2	Neg.	3.4
1960	67.5	5.1	71.2	1.3	4.9	7.2	1.9	6.9
1965	78.2	7.4	84.6	4.0	10.1	8.8	5.2	11.9
1970	87.1	3.6	89.5	6.7	8.8	4.0	7.7	9.9
1975	87.4	7.5	89.3	9.6	11.3	8.4	10.9	12.6
1980	96.0	-0.3	101.4	11.2	15.0	-0.3	11.6	14.8
1985	127.4	-0.4	124.3	20.1	15.8	-0.3	15.8	12.7
1990	149.7	1.3	144.8	24.0	16.0	0.9	16.0	11.0
1995	167.6	-2.6	166.7	22.6	15.3	-1.6	13.5	9.0
2001	171.4	-2.9	156.2	42.7	13.2	-1.9	24.9	8.5

Neg. ⇒ Negligible

Notes:

1. Production figures relate to agricultural year: 1951 figures corrected to 1950-51 and so on
2. Net imports from 1981 to 1984 are only on government account and from 1995 onwards the Net imports are total Imports and Export of the country

Figures for procurement and public distribution relates to Calendar years

Source: Department of Food and Public Distribution

DIRECTORATE OF ECONOMICS AND STATISTICS, DEPARTMENT OF AGRICULTURE & COOPERATION

The caring cost of buffer stock has been rising at the rate of 15 per cent per annum in the 1990s. Storage losses are quite high. There is shortage of good quality storage facilities in rural areas. Also, there seems to be mismatch in requirement of food, grain allocation and off-take of foodgrains to states. This results in rotting of grains in godowns. Besides, increasing procurement/support price to farmers leads to mounting grain stocks causing a drain on the government's resources. The procurement incidentals, distribution and administrative costs, and carrying cost all put together form a high percentage of the actual purchase cost of grain. Increasing public expenditure on food subsidy may not be sustainable in the future (Srinivan and Jha 1999).

There are two diametrically opposite approaches to the policies for Food Management & Food Security i.e. Market approach and interventionist approach. Market strategy leaves most of the decisions to the free play of demand and supply, including imports and exports without interference and intervention by the public authorities. However, it is felt that market strategy puts higher reliance on price instruments for increasing production and is a high cost risk strategy because it ignores lack of infrastructure in agriculture. It is known that agriculture is characterized by low supply elasticity and food production may not respond to price and rise in output price. Higher prices would benefit large farmers and adversely affect marginal and small farmers, agricultural labourers, artisans, etc. India can export large scale foodgrains or agricultural commodities only if it is able to generate large surplus through a significant acceleration in its agricultural growth.

Studies have shown that higher growth rates in farm yields and lower rates of inflation lead to higher rates of progress in raising average consumption and reducing poverty. However, without taking into account the differences in initial conditions, it is hard to explain why some

states perform so much better than others. Starting endowments, higher literacy and lower initial infant mortality all contributes to higher long-term rates of consumption growth and poverty reduction in rural areas (Dutt and Ravallion 1996). It has been also found that higher per capita real non-agricultural output contributes to rural poverty reduction only in so far as it exceeds the trend level. A higher rate of inflation adversely affects average real consumption (elasticity of -0.23) and increases the poverty. State intervention in the form of increased per capita expenditure and higher female literacy positively influence the living standards of rural people.

Export-led growth of agricultural commodities is necessary to avail the benefit of access to international market but food security can not be compromised with export-led growth. It is necessary that agriculture, which supports majority of people, must focus on increasing food production.

In India, where a significant percentage of the population is dependent on the agricultural sector for its livelihood and is also surviving just around the 'poverty line', a purely market oriented approach may not be appropriate. Instead, a 'market plus approach', will be more useful where non-trade concerns such as the maintenance of livelihood of the agrarian peasantry and the production of sufficient food to meet domestic needs are taken into consideration. Ensuring food security including nutritional requirements should be the basic objective of governmental policies.

POLICY INTERVENTIONS

1. Development of agriculture alone may not be sufficient condition for food security unless it enhances purchasing power of rural poor. Hence in a country like India, focus of agriculture development should be more on increasing labour productivity as well as labour use intensity rather than increasing the agricultural productivity alone. However, agriculture should be diversified with product-mix based on the crop suitability of

- the region that can have value addition (Singh & Binswanger 1993).
2. Food security issues cover not only issues related to the availability and stability of food supplies but also to issues of access to this supply i.e. related to the resources that may be needed to procure the required quantity of food. Hence, India must have certain degree of autonomy and flexibility in determining their domestic agricultural policies. These policies would naturally be geared towards improving productivity, enhancing income levels, reducing vulnerability to market fluctuations, ensuring stability of prices etc.
 3. Basic food security has to be ensured through domestic production. Besides, there is also a strong need for strengthening the domestic market for industrial and service sectors. So long the farm sector remains starved of capital, all the talk of alleviating rural poverty and food security is nothing but hypocrisy (Singh Bhanu Pratap 1995).
 4. There is need to properly understand the rural poor and empower them to strengthen civil society to deal with equity and justice. In this regard, Ismail Serageldin, the Vice President of the World Bank has rightly said that "the issue of poverty and hunger are not technical, the core issue has an ethical dimension".
 5. Recognising the higher percentage of small farmers in India, a major part of the financial burden of increased inputs would have to be met through governmental subsidies. This will be necessary because small farmer would not be able to meet his principal responsibility without adequate support from the government. There is thus a need to look for alternatives that impose minimal burden on public funds. It is also equally important to examine the effectiveness of buffer stock policies as Indian foodgrains markets are opened to world trade
 6. With the advent of WTO and focus on export-led growth, food security has to be given priority. Self-sufficiency in food production should be seen with a specific developmental perspective as opposed to a purely commercial perspective. India need to be allowed to provide domestic support in the agricultural sector to meet the challenges of food security and to be able to preserve the viability of rural employment, as different from the trade distortive support and subsidies presently permitted by the Agreement under WTO.
 7. Often it is reported that the quality of food products is very poor and the transaction cost for procurement and distribution of food is often too high. Reduction in transaction cost, including storage cost, transport charges, administrative cost, etc. are equally important. The bureaucratic hurdles and administrative cost substantially increases the food subsidy. Food management system should be redesigned and responsibility of procurement and distribution should be entrusted to rural people at local level by their greater involvement. Similarly, the food should be made easily accessible to the poor people at affordable cost, especially cheaper than market prices. This requires proper management and active participation of private sector also.
 8. The defective and inefficient functioning of public distribution system for foodgrains and lack of proper targeting deprive the real rural poor to benefit from this. This is mainly because, in general, the rural poor are politically not so much empowered to raise their voice. Hence, proper identification of poor as a target group suffering from malnutrition and food insecurity itself is the main problem in cost-effective food management system. Moreover, food insecurity badly affects the women, especially pregnant and lactating women, children and elderly people. Hence, food security needs to

be examined at the household level considering inter and intra-households disparities in the family size, composition of family and the age structure of family members.

9. It may be worthwhile to empower rural poor and strengthen Village Panchayats for their greater involvement in procurement as well as distribution of food. Local committees of villagers may be able to effectively monitor these activities to ensure availability of food to needy people. Initially, it seems to be not workable but it may empower people and later stage it may work well. However, this does not mean that government can become completely free from such responsibilities. This can be done gradually in a phased manner.
10. Finally, it can be said that food security including nutritional security, require consideration of five major aspects of "Panch Sutra" such as People, Policy, Protection, Productivity, Permanency, and Partnership.

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