payments by the central to the state governments for famine & drought relief. The second stream took the form of programs specifically targeted to employment & asset-creation for poor constituencies. They included the Small Farmer Development Agency (SFDA), the Marginal Farmers and Agricultural Labours scheme (MFAL), the Drought Prone Areas Program (DPA), Rajasthan’s Antyodhya Program, the Crash Rural Employment Scheme, Maharashtra’s Employment Guarantee Scheme & the Food for Work Program. The centre of Janata’s development strategy in 1977 was said to be investment in the agricultural sector & the employment, income & demand such investment would generate.\textsuperscript{11} During the Janata regime agrarian politics were for the first time transposed from the state to the national level. However inspite of the Janata’s much publicized ‘rural tilt’ & its rhetorical claim as the defender of all kisans, in reality it offered little more than broad platitudes to the poor. As the 1980s unfolded, the forces of new agrarianism not only became better organized, forging closer link with each other, but also experimented with new political strategies & tactics.\textsuperscript{12} Sharma points out that the leadership of the new agrarianism pressed for remunerative agricultural prices, loan waivers, concessions in electricity dues & higher levels of subsidies for green revolution inputs but it has hardly pressed for the implementation of minimum wages & pro-poor programs with the same vigour.\textsuperscript{13}

The 1980s witnessed the following

- A notable acceleration in output growth as a consequence of the extension of new technology towards the east, resulting in increasing incomes in the densely populated eastern region of India.

- Another important development was the increasing diversification of the cropping pattern & large-scale shifts from coarse cereals to oilseeds & superior crops like wheat and rice.\textsuperscript{14}

However, since the 1980s, public investment in agriculture has been declining. Also S. Hirahima states that this ‘trend was not offset by an increase in private

\textsuperscript{11} Rudolph and Rudolph, \textit{op.cit.}, pp. 328-329.

\textsuperscript{12} Sharma, \textit{op.cit.}, pp. 200-203.


investment; thereby the overall level of investment in agriculture in terms of GDP & GDP of agriculture has continued to decline'.15

- Post 1991 Developments

Two recent developments in the national scenario necessitate serious rethinking on Indian agriculture. One is the economic liberalization programme launched in India in 1991 and India’s signing of the Uruguay Round Agreement (URA) of General Agreements on Tariff and Trade (GATT) in April 1994.16 These economic changes need to be taken into account for making any strategy for the agricultural sector. C.H. Hanumantha Rao and Ashok Gulati comment that ‘a desirable strategy would be one that can make Indian agriculture a vibrant and cost effective sector, boosting production of food & fibre, raising consumption levels through domestic production & exchange (exports / imports), generating productive employment and thereby acting as an effective safety net and poverty-alleviation programme, while also protecting the environment’.17 In order to put Indian agriculture and the economy growth on a sustainable path such strategies are needed. Vandana Shiva points out that ‘agriculture which is the foundation of food security and national security was redefined as an issue of trade & commerce alone during the Uruguay Round of General Agreements on Tariff and Trade (GATT) with agribusiness MNCs as the determining force in the shift’.18

The innumerable national and sub-national level debates in India on the AOA since the year 2000 have raised serious concerns on the impact of globalization on Indian agriculture. The virtual removal of Quantitative Restrictions, the decline in commodity prices since 1999-2000 and a number of suicides by farmers in Punjab, Rajasthan, Karnataka and Andhra Pradesh have contributed to widespread apprehensions on the AOA among farmers groups. State governments have been apprehensive of the AOA disciplines on member countries particularly market access.

18 Shiva, Vandana (2003), Will Cancun go the Seattle way, New Delhi, Navdanya, March, p. 1.
This has led to as A. Damodaran says to two forms of response on the part of the Government of India

(1). Formulation of renewed negotiation positions on the AOA

(2) Measures to address the immediate impact of Quantitative Restrictions removal on the Indian economy in general and the Indian agriculture in particular.

One notable emphasis in the government’s recent negotiation position on the AOA has been on the issue of ‘food & livelihood security’.19

Simultaneously, at the national level with a view to addressing the situation arising from the virtual removal of Quantitative Restrictions on agricultural commodity imports, the Exim Policy of 2001-02 set up a ‘war room’ to track import trends for nearly 300 sensitive items, including a wide range of agricultural commodities. The canalization of 27 sensitive items through state trading enterprises and requirement of security certification by the ministry of agriculture for imported primary products of plant & animal origin have been additional measures designed to address the immediate fall-out of Quantitative Restrictions removal.20

Utsa Patnaik argues that the main causes for the current agrarian crisis emerging in India are (1) sharp cut-back in government’s development expenditures in the 1990s especially in rural areas leading to falling growth rates of employment and incomes and (2) trade liberalizing policies entailing the removal of Quantitative Restrictions and exposure of our producers to unfair trade and to global recessionary trends. She further points out that the agrarian crisis is likely to be prolonged as long as the current policies of openness to the world market continue to be followed. This is because the global conditions of trade in primary commodities are extremely unfavourable and are likely to continue to be unfavourable. The depression in the global markets in primary products is being imported into the Indian economy by opening up at this juncture through liberalizing trade.21

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20 Ibid., p. 3634.
Utsa Patnaik points out further that economic reforms have led to a phenomenal rise in input costs, the cost of credit has increased enormously and farmers have been forced to turn more and more to private moneylenders who obviously charge high rates of interest, and are much more inflexible in rolling over of debts than an institutional lender would be. Also since 1990s, global prizes of commercial crops (rubber, cotton) were rising, farmers switched to exportable commercial crops that led to farmers to take loans and the amounts were much higher than before which in turn led to a scenario of rising indebtedness. However, things went wrong when world prices crashed from the end of 1996 onwards and by 2001 it was practically at half the level it was in 1995.22

Prabhat Patnaik argues that there is no world state to stabilize international agricultural prices, on the other hand the domestic state is too small to do anything about world market price fluctuations. Hence globalization or opening up agriculture to unrestricted international trade is extremely damaging to the interests of both the domestic producers and the domestic consumers.23 The real crisis in agriculture is the lack of a public system that delivers. Abhijit Sen remarks ‘Systems built over the decades have crumbled in the 1990s, the extension system is defunct, a) credit system is under stress and the cooperative system is non-operative, b) There is a mismatch between farmers’ perception of what is needed to revive agriculture and that of the policy makers’.24

Vyas and Reddy argue that a distinguishing feature in the case of agricultural output has been the sharp year to year fluctuations. Also agriculture’s share in work force is not declining despite its declining importance in GDP, it still employs nearly two thirds of the country’s work force. This coupled with declining share of agriculture in GDP indicates low labour productivity and or adverse terms of trade

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faced by the sector.\textsuperscript{25} Thus performance in agriculture is critical not only from output point of view but also from the employment point of view. Y.V.Reddy says ‘Agriculture is one sector where there is convergence of all the three main objectives of economic policy namely output growth, price stability & poverty-alleviation but the sector seems to have been relegated to the background in the process of economic reform’.\textsuperscript{26}

The 10\textsuperscript{th} Five Year Plan points out that the three pronged strategy envisaged for the 9\textsuperscript{th} Plan will be continued. This strategy involved a) increase in overall employment and incomes by raising farm productivity and the growth of other economic activities in the rural areas. b) Provision of gainful supplementary employment through poverty-alleviation schemes and c) distribution of foodgrains through the PDS at subsidized prices to those living below the poverty line.\textsuperscript{27} The experience of the first three years of the Plan suggests that both the overall growth target as well as the agriculture sub-target will not be achieved and these targets for the plan period as a whole have to be scaled down significantly. This can have serious implications on the food security of the country. If one looks at the agriculture’s performance then one finds that the following aspects of agriculture have a direct impact on food availability. These include the following –

- Growth

As per the Mid Term Appraisal of the Tenth Five year Plan, the GDP growth in agriculture and allied sectors during the first three years of the 10th Plan averaged only 1\% per annum. The 10th Plan target of 4\% growth is therefore far from being realized. In fact per capita agricultural GDP shows no significant upward trend after 1996-97, only fluctuations.\textsuperscript{28} As per the Economic Survey 2004-2005, the average annual growth rate of value added in agriculture including allied sectors declined from 4.7\% during the Eighth plan (1992-1997) to 2.1\% during the Ninth Plan (1997-2001).

\textsuperscript{27} Tenth Five Year Plan, (2002-2007), Planning Commission, Government of India, New Delhi, p. 528.
\textsuperscript{28} The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), Planning Commission, Government of India, p.187.
Agricultural growth rate in the first year (2002-2003) of the 10th Five Year Plan was negative (-6.9%) due to severe drought of 2002. With favourable monsoon, growth was an impressive 10% in 2003-04. But deficit rainfall in 2004-05 again caused a decline of foodgrains production as well as rate of growth of agriculture & allied sectors to 0.7%. The advance estimates of National Income for 2005-2006 released by the CSO on February 7, 2006 estimated a growth rate of 2.3% for the agriculture and allied sectors based on the New Series (at 1999-2000 prices). Low productivity has afflicted growth of Indian agriculture. Enhancement of agricultural growth is essential for achieving an overall GDP growth rate in the range of 8 to 10% and improved productivity is critical for achieving accelerated agricultural growth.30

The Tenth Plan’s allocation for agriculture & allied sectors was relatively modest. The proposed Plan outlay on these sectors at Rs.58,933 crore for Centre, states and Union Territories combined was 39% higher than the Ninth Plan outlay in nominal terms, compared to corresponding increase of 89% between the Eighth & Ninth Plans. The share of agriculture and allied sectors was only 3.9% of total Tenth Plan outlay as against 4.9% in the Ninth. The total share of agriculture, irrigation and rural development stood reduced from 20.1% in the Ninth Plan to 18.7% in the Tenth Plan. This was because the Tenth Plan had assumed that the incremental capital-output ratio (ICOR) for agriculture and allied activities which had more than doubled in the Ninth Plan from the Eighth Plan could be halved. Implicit in this was the view that sufficient capacity had been built up for agricultural production to respond quickly to policy reform and to well directed Plan spending.31

The decline in the share of the agricultural sector’s capital formation in GDP from 2.2% in the late 1990s to 1.7% in 2004-2005 ( both at 1999-2000 prices) is a matter of concern. This declining share was mainly due to the stagnation or fall in public investment in irrigation, particularly since the mid 1990s. However there is an indication of a reversal of this trend with public sector investment in agriculture reaching its highest level of Rs.12,591 crores in 2004-2005 since the early nineties. The share of public investment in gross investment increased by over 11 percentage

31 The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), op.cit.,p.187.
points to reach 29.2% in 2004-2005 relative to 1999-2000. It needs to be noted in this context that private sector investment has decreased from 82.2% in 1999-2000 (at 1999-2000 prices) to 70.8% in 2004-2005 (quick estimates – at 1999-2000 prices).32 The Reserve Bank’s report on Currency & Finance 2000-01 observed that the declining capital formation in agriculture has been compounded by decline in the share of public investment in the share of public sector investment in agriculture to total public sector investments. The lack of new capital assets has slowed down the pace & the pattern of technological change in agriculture.33 The deceleration in the growth of agriculture in the 1990s is generally attributed to inadequate investment. This is supported by the fact that the share of agriculture in total gross capital formation (GCF) had progressively come down.

However the Centre in 2006 projected a growth rate of 8.1% for the current fiscal, much beyond the expectations of the Finance Ministry & the RBI. The gross domestic product (GDP) grew at 7.5% in 2004 – 05. Manufacturing sector with a robust growth of 9.4% & the booming services sector with a growth of 8% would drive the GDP growth.34 The agriculture sector in 2006 too was projected to fare better, growing 2.3% in 2006 against 0.7% in the last fiscal. Despite abundant rain the performance of the farm sector is expected to be below the 4% level that the government is striving for.35 In keeping with the higher growth, the per capita income of the average income of an Indian was expected to go up in 2006 by 5.9% to Rs. 20.813 from Rs 19, 649 a year ago.36 The Approach paper to the XI Five Year Plan has proposed that the target growth rate for the Eleventh Plan be placed at 8.5% per annum. With population growing at 1.5% per year, this would ensure that the real income of the average Indian would be double in ten years.37 The CPI(M), however, commented that the GDP growth should be considered as a means to expand

34 “8.1 % GDP growth projected” (2006), The Hindu, Delhi, February 8.
35 “At 8.1%, growth surpasses expectation” (2006), The Times of India, New Delhi, February 8.
36 The Hindu, (February 8, 2006), art.cit.
employment, alleviate poverty & improve social sector indicators rather than being viewed as an objective in itself. 38

Gross Domestic investment grew from 27.2% in 2003-2004 to 30.1% in 2004-2005 mainly on account of private investment growing at 19.7%.39 Investment as a proportion of GDP (at current prices) increased steadily from 23% in 2001-2002 to 30.1% in 2004-2005.40 In contrast to the sharp fluctuations in agriculture, industry & services have continued to expand steadily. Indeed, since the beginning of the Tenth Plan in 2002-2003, with annual growth of 7% or more, industry & services have acted as the twin engines propelling overall growth of the economy. Over a somewhat longer horizon, in the six years between 2000-2001 & 2005-2006 (Advance Estimates), on average, services with a share of 52% of GDP, contributed 65% of GDP growth and increased its share in GDP from 49.8% to 54.1%. During the same reference period, on average, with a share of 25.8% of GDP, industry, by contributing 28% of GDP growth, increased its share in GDP from 25.9% to 26.2%.41 The Approach paper to the XI Five Year Plan points out that the acceleration from the base line 7% growth to say 9% would require an increase in the total investment rate to 35.1%.42 However the CPI(M) has commented that the Approach Paper for the XI Plan continues with the similar approach as that of the X Plan i.e. misplaced perceptions of fiscal constraints that prevented the Central Government from increasing much needed public investment despite favourable macroeconomic conditions.43

- Foodgrain Production & Yield

As per the Economic Survey of 2005-2006, the production of foodgrains has gone down and yields of major crops decelerated. The total foodgrains production has declined from 212.9 million tonnes in 2001-2002 to 204.6 million tonnes in 2004-2005 (4th advance estimates) triggered off by a decline in the production of both rice and wheat (Rice – 93.3 million tonnes in 2001-2002 to 85.3 million tonnes in 2004-

40 Ibid., p.17.
41 Ibid., p.3.
43 CPI(M)'s Comments on Planning Commission's Approach Paper to the XI Plan, op.cit.
For wheat, the production in 2001-2002 was 72.8 million tonnes, which increased to 72.0 million tonnes in 2004-2005 (4th advance estimates). Total foodgrains production was estimated to increase marginally in 2005-2006. The output of foodgrains is expected to be 209.3 million tonnes, which is about 5 million tonnes more than in the previous year. Graph 2.1 given below gives the production of foodgrains in India from 2000-2001 to 2004-2005.

**Graph No.2.1**

<table>
<thead>
<tr>
<th>Year</th>
<th>Rice</th>
<th>Wheat</th>
<th>Coarse Cereals</th>
<th>Pulses</th>
<th>Total Foodgrain Production in India</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>196.8</td>
<td></td>
<td></td>
<td></td>
<td>250.0 million tonnes</td>
</tr>
<tr>
<td>2001-02</td>
<td>212.9</td>
<td></td>
<td></td>
<td></td>
<td>220.0 million tonnes</td>
</tr>
<tr>
<td>2002-03</td>
<td>174.8</td>
<td></td>
<td></td>
<td></td>
<td>188.0 million tonnes</td>
</tr>
<tr>
<td>2003-04</td>
<td>213.5</td>
<td></td>
<td></td>
<td></td>
<td>201.5 million tonnes</td>
</tr>
<tr>
<td>2004-05</td>
<td>204.6</td>
<td></td>
<td></td>
<td></td>
<td>239.0 million tonnes</td>
</tr>
</tbody>
</table>


- When one does analysis of the production figures in agriculture then one finds that the Tenth Plan aimed to meet a requirement of 230 million tonnes in 2006-07. Actual performance is well below this. Drought caused foodgrains output to fall to 174.2 million tonnes in 2002-03 and then there was subsequent recovery to 213.5 million tonnes in 2003-04. The fourth advance estimate for 2004-05 placed kharif production at only 103.3 million tonnes about 11.6% lower than in 2003-04. Rice production was at 85.3 million tonnes (4th advance estimates) in 2004-2005, ie down from 88.3 Million tonnes in 2003-2004. The delayed monsoon & its somewhat uneven distribution over time and space had some limited adverse impact on the kharif crops. However loss of kharif crop is expected to be compensated by the rabi output. Rabi production in 2004-2005 was at 101.3 million tonnes (4th advance estimates), a rise from 2003-2004 when it was at 96.6 million tonnes. The first

advance estimates of foodgrains production for 2005-2006 released by the Ministry of Agriculture on September 19, 2005 put kharif production at 105.3 MT, up by 2 MT from the previous year’s level. Production of rabi foodgrains was expected to be around 2004-2005’s level of 101.3 MT.46


**Graph No.2.2**

![Graph showing Yield per Hectare of Major Crops from 2000-2001 to 2004-2005](image)

* 4th Advance Estimates


The yield growth of rice & wheat decelerated throughout the 1990s to only about 1% per annum from 3% during the 1980s indicating a potentially serious exhaustion of technological progress.48 This decline in production of foodgrains and

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in yields specially that of cereals is going to affect the food availability aspect of food security.

• Also the decline in the rate of growth of foodgrains has been sharper. During the period 1989-90 to 1998-99 the growth rate of production for both foodgrains and non foodgrains crops taken together declined to 2.35% per annum from 3.72% per annum achieved during 1979-80 to 1989-90. The decline in the rate of growth for foodgrains was sharper from 3.54% to 1.80% per annum. One finds that in terms of the percentage distribution of the area under food and non-food crops, the percentage area under food crops have reduced from 80.3% in 1985-1986 to 77.3% in 1990-1991 (with a corresponding increase in the non food crops from 19.7% in 1985-1986 to 22.7% in 1990-1991). As per the Economic Survey 2005-2006, the gross area under foodgrains have reduced from 122.8 million hectares in 2001-2002 to 120.2 million hectares in 2004-2005 (4th Advance Estimates). The gross area under cereals have declined from 100.8 million hectares in 2001-2002 to 97.7 million hectares in 2004-2005 (4th Advance Estimates). The gross area under oilseeds and cotton have increased. Graph 2.3 below gives the gross area under Foodgrains.

Graph No.2.3

* 4th Advance Estimates

The per capita availability of food grains declined from 179.7 kgs per year in 2002 (Prov) to 159.2 kgs per year in 2003 (Prov). The per capita availability of cereals declined from 166.9 kgs per year in 2002 (Prov) to 148.6 kgs per year in 2003 (Prov). Since cereals are the basic ingredients of an Indian diet, this is a disturbing trend in terms of food security. However as per the Economic Survey 2005-2006, the net availability of cereals after declining in 2003 has marginally gone up in 2004 (according to provisional estimates).

Diversification away from food grains has resulted in the decrease in the area and in the production of major food grains hence affecting food availability. The production of fruits and vegetables have increased. Fruits have increased in production from 45.2 million tonnes in 2002-2003 to 53.1 million tonnes in 2004-2005 (estimated) to 57.6 million tonnes in 2005-2006 (estimated). Production of vegetables have gone up from 84.8 million tonnes in 2002-2003 to 91.6 million tonnes (estimated) in 2004-2005 to 99.4 million tonnes (estimated) in 2005-2006, with an increase in the area covered by major horticultural crops (from 16.3 million hectares in 2002-2003 to 18.6 million hectares (estimated) in 2005-2006.). Acreage under horticulture – which includes fruits, vegetables, spices, floriculture & coconut – increased to 17.8 Million hectares (estimated) or about 10% of gross cropped area of the country in 2004-2005. With a production of 164 million tonnes in 2004-2005, the sector contributed 28% of GDP from agriculture. Estimated production figures for 2005-2006 are 178.1 million tonnes for major horticultural crops.

The Tenth Plan had projected that fruits and vegetables would grow and contribute very significantly to an upturn in overall agricultural growth. It also proposed to focus on doubling horticulture production by 2011-12 through the National Horticulture Mission (NHM). The targeted growth rate during the 10th Five Year Plan for the horticulture sector is 8-9%. The National Horticulture Mission (NHM) was launched in May 2005 as a major initiative to bring about diversification in agriculture and augment income of farmers through cultivation of high value horticultural crops. The programme has a target in the Tenth Plan of bringing an

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54 The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), op.cit.,p.192.
additional area of 5.4 lakh hectare under horticulture, besides taking up programmes of rejuvenation, quality planting materials, high tech cultivation, post harvest management, processing & marketing. Total outlay is Rs.2300 crore for the 10th Plan and action plans for 18 states & 4 National level agencies have been approved. Rs.579.7 crore has been released to operationalise these action plans.55

Moreover there has also been a shift from foodgrains to cash crops. Production of commercial crops like jute, tea, coffee, oilseeds & sugarcane is also expected to increase although at a lower rate. Output of jute and mesta & sugarcane was also lower in 2004-2005 than in 2003-2004. (Jute & mesta production was 10.5 million bales of 180kgs each (4th advance estimates) in 2004-2005 as compared to 11.2 million bales of 180kgs each in 2003-2004, sugarcane production was at 232.3 million tonnes (4th advance estimates) in 2004-2005 as compared to 237.3 million tonnes in 2003-2004). Prospects of cotton production in 2005-2006 are not considered better than in 2004-2005. Horticulture, floriculture, fishery, poultry & animal husbandry which account for 30% of production in agriculture & allied sectors are expected to achieve a growth rate of 6%. Overall value added in the primary sector was expected to increase by 3% in 2005-2006.56 The Government has taken steps to establish the following

- A Central Institute of Horticulture will be established in Nagaland
- The National Fisheries Development Board will be constituted
- It has been proposed to set-up a Special Purpose Tea Fund. For 2006-2007, the contribution is expected to be Rs.100 crores.57

- Ecology

Concerns have been raised/expressed about the ability of the country to feed itself in the future. Long term food insecurity can arise if we do not take care of the environment & the ecology. The Food Insecurity Atlas of Rural India states that environmental degradation, soil degradation & climatic change are longer term threats to sustained productivity. Potential food insecurity may arise out of unsustainable

55 Economic Survey, 2005-06. op.cit.,p.158.
56 Ibid.,p.157.
livelihood & production practices. These lead to deforestation & degradation, soil erosion etc. Sustainability is not limited to food production but also includes environmental sustainability. Practices which make a state food secure at present may lead to food insecurity in future if there is over-exploitation of non-renewable natural resources.\textsuperscript{58} Level of ground water exploitation, percentage of area under forests, total degraded land etc needs to be looked at when one is considering ecology. The national average of forest cover is 23\%. The forest cover needs to be protected in order to guard against depletion of topsoil, allow percolation of water into the soil & stop desertification. The forest area has declined over time due to the cutting of trees & sometimes due to degradation.\textsuperscript{59}

Ground water has been constantly depleting with the water level going down day by day. As per the Food Insecurity Atlas of Rural India, some of the reasons for the overexploitation of ground water are the availability of cheap electricity for agriculture & lack of alternative sources of water for households & industries. Also water management has been poor in India.\textsuperscript{60} Conserving and enhancing the ecological foundations essential for sustainable advances in production & productivity are of utmost importance. Any policy on land, water or forests cannot be viewed in isolation. One finds that in recent years, prime agricultural lands have degraded for a number of reasons. Lucrative commercial enterprises lead to change in land use & subsequent degradation. Agricultural land also shifts to non-agricultural uses in the vicinity of urban areas. There should be laws guiding land use. The Tenth Plan allocation to watershed management is also woefully inadequate.\textsuperscript{61}

More than half our cultivable area is rainfed & much of it is under severe water-stress. As per the Mid Term Appraisal, programmes for the wastelands & degraded lands including steps at water conservation are extremely important for these areas. Also these programmes are being implemented by several departments with similar objectives but different operational guidelines and also different cost

\textsuperscript{58} Food Insecurity Atlas of Rural India, \textit{op.cit.}, pp.16-17.
\textsuperscript{59} \textit{Ibid.}, p.17.
\textsuperscript{60} \textit{Ibid.}, p.18.
\textsuperscript{61} Atlas of the Sustainability of Food Security in India (2004), World Food Programme and M.S.Swaminathan Research Foundation, Chennai, p.215-216.
norms which is not conducive to operational efficiency. Moreover CPI(M) pointed out that it is necessary to strengthen the laws & regulations meant to safeguard the environment. However the Approach Paper to the XI Five Year Plan suggests the opposite when it calls for a dilution of the existing procedures of environmental clearances in order to facilitate large investments in order to accelerate growth.

- Foodgrain – Export & Import

Closely linked to production is the impact of import and export policies on the food availability of a nation. Export of rice as a percentage of total agricultural exports have gone up from 12% in 2003-2004 to 19.2% in 2005-2006 (April – October). However in absolute terms it has marginally gone up from US$ 907.1 Million to US$ 936.6 Million during the same period. Wheat export on the other hand in 2003-2004 amounted to US$ 520.4 Million (6.9% share of the total agri-exports). This declined to US$116 Million (2.4% share of the total agri-exports) in 2005-2006 (April – October). It is interesting to note that there is a sharp decline in agri-exports as a percentage of total exports from 11.9% in 2003-2004 to 9.6% in 2005-2006 (April-October). Import of cereals & pulses have reduced from US$19.4 Million and US$ 497.2 Million respectively in 2003-2004 to US$15.1 Million and US$281.8 Million in 2005-2006 (April-October). The agri-imports as a percentage of total imports reduced from 4.7% to 2.8% during the same period. Low imports are a positive indicator as to the domestic availability of foodgrains. Although the Foreign Trade Policy 2004-09 has emphasized the importance of agricultural exports & announced a number of measures to boost them, these do not really address the fundamental problem of competitiveness which essentially depends on higher productivity, better quality & lower cost of exportable agri-products. Interventions are also needed to educate farmers to enable them to upgrade their skills, to improve the quality so that they conform to the strictest sanitary and phytosanitary standards.

The Union Cabinet is slated to clear a new foodgrain export policy that would provide ‘WTO compatible’ export subsidy of up to Rs.900 per tonne and exporters

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62 The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), op.cit., p.6.
63 CPI(M)s Comments on Planning Commissions Approach Paper to the XI Plan, art.cit.
undertaking direct grain purchases from mandis and claiming reimbursement which
would be subject to their exporting the grain and furnishing documents. However
exporters feel that the extent of re-imbursement being proposed would be inadequate
at current international prices. Abhijit Sen speaking at the Grain Asia 2005 conference
however made it clear that trade should not be asking to subsidise export and that they
should devise their own means to develop markets and face challenges. The future
will only show whether this new policy would work out in India’s interests or not.
The government seems to be following a cautious approach as far as export of
foodgrains is concerned since the total grain stocks with FCI as on December 1, 2004
was nearly 15% lower than the 25.4 mt of December 2003.\(^{65}\)

### 2.3. Procurement and Buffer Stock

Stocks of foodgrains reached a record level of 64.7 million tonnes in June
2002 with the attendant problems of high carrying costs and food subsidies. With the
drought of 2002-03 and the stock level gradually reducing through the year, the
problem of surplus stock took a back seat. The year 2003-04 a normal agricultural
year saw good procurement of foodgrains and the decline in stocks continued during
2004-05.\(^{66}\) Stocks of foodgrains at 19 million tonnes as on December 1, 2005, though
lower than the stocks of 21.8 million tonnes in December 2004 were comfortable &
higher than the buffer stock norms. The main reason for decline of stocks was due to
lower stocks of wheat. The total procurement of wheat reduced from 167.95 lakh
 tonnes in 2004-2005 to 147.85 lakh tonnes in 2005-2006 indicating a sharp decline of
11.9%. Procurement of rice on the other hand has increased from 228.28 lakh tonnes
in 2003-2004 to 246.83 lakh tonnes in 2004-2005 indicating an increase of 8.1%.

Higher level of stock built up leads to higher subsidies through higher carrying
costs. The buffer stock policy of the government should ensure that the foodgrain
stocks do not cross the norms for that year beyond a reasonable margin. Actual stocks
of wheat & rice have consistently remained higher than the buffer norms during 2001-

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\(^{65}\) “Grain Exporters apathetic to proposed subsidy” (2005), New Delhi, January 16.

2002, 2002-2003, 2003-2004 and the first three quarters of 2004-2005. During July 2005 the actual stock of foodgrains fell short of the buffer norms by almost 2.4 million tonnes. This figure comes down to 1.1 million tonnes in October 2005 subsequently. Maintaining the buffer stock is a must for ensuring self-sufficiency at all times. However the present shortfall in the stock over the buffer norm, according to the Economic Survey, 2005-2006, is not to be considered alarming since it appears to be sufficient to meet the requirements under TPDS, Welfare schemes & open market sales.\(^\text{67}\) However Brinda Karat points out

- the government has not come clean on the fact that it preferred to export foodgrains like the previous NDA government and did so until July 2005 instead of using the stock to expand the PDS.

- The buffer stock shortfall was also due to the fact that the procurement of wheat was less by as much as 4 million tonnes in 2006 compared with four years ago. The Government wants to move towards a regime whereby the entire food economy is left to market forces. It wants to end open-ended procurement and replace it with a minimum quota regime, thus leaving foodgrain farmers to the mercy of big traders. This will have an adverse impact on the food security and self-sufficiency.\(^\text{68}\)

- As the FCI's role in procurement and distribution of foodgrains is being curbed, the ability of the government to intervene in the market to control prices is also reduced. In India, where there is uneven foodgrain production (large number of states are food deficit), weakening the FCI would mean weakening food security.\(^\text{69}\)

Meanwhile in 2006 the Centre decided to import 35 lakh tonnes of wheat to build up a buffer as stocks fell to 19 lakh tonnes on April 1 against a norm of 40 lakh tonnes. Procurement in wheat had been below par in Punjab, Haryana and almost nil in Uttar Pradesh till early 2006.\(^\text{70}\) Gargi Parsai comments that foodgrain stocks in FCI godowns not only determine the availability of grains for subsidized sale to APL & BPL beneficiaries under the TPDS but also determines the price farmers would get for


\(^{68}\) Karat, Brinda (2006), "Some Questions raised by the Budget", The Hindu, Delhi, March 7.

\(^{69}\) Karat, Brinda (2006), "The PDS and eroding food security", The Hindu, Delhi, June 6.

\(^{70}\) Parsai, Gargi (2006), "Centre to give incentive bonus on wheat price", The Hindu, Delhi, April 22.
the Rabi wheat they contribute to the Central Pool. Speculation had been rife in the international market about India going in for wheat imports following a drop of about 20 lakh tonnes in wheat procurement last season. To make good the shortfall in wheat procurement for the TPDS, the Government resorted to several measures, one of them being redistribution of the ratio of foodgrains to states. The quantity of wheat & rice to wheat-consuming states was redistributed in the 70:30 ratio. Another step in this direction was the recent decision to hike the CIPs of foodgrains distributed under the TPDS, through ration shops & the cut in the allocation for the APL, the BPL & Antyodaya. The measure had a dual purpose: to reduce the food subsidy burden which had risen from Rs.9200 crore in 99-2000 to Rs. 26000 crore in 2005 and to save stocks in case the wheat production dwindled. However this move/measure has been postponed following the hue & cry raised by various political parties including the Left & the Congress & several Chief Ministers. Foodgrain stocks fell to 151 lakh tonnes in October 2005 & the export of foodgrain from FCI stocks was banned. Wheat stocks dropped to 62 lakh tonnes on January 1 2006 (20 lakh tonnes short of the buffer norm). Rice procurement position was, however, quite comfortable with Rice procurement having improved in Chattisagarh, Orissa and West Bengal in 2006.

What has been worrying the Government is the tight wheat situation it would have to face to meet it’s commitments for the TPDS as well as the Food-for-Work, Sampooran Grameen Rozgar Yojna, Mid-day- Meal, AAY & the proposed Grain Bank scheme. Also the demand on foodgrain stocks on account of natural calamities is unforeseen. At the same time imports in huge quantities will hit farmers because of the price differential.

M Raghavan comments that ‘India has a history of wheat imports guided more by political considerations than by food security concerns’. Wheat was last imported in 1998-99. Of the 2.5 million tonnes contracted, only 1.5 million tonnes was

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72 Ibid.
73 Parsai, Gargi, (April 22, 2006), art.cit.
74 Parsai, Gargi, (February 6, 2006), art.cit.
ultimately imported. With the decision in June 2006 to import an additional 10 lakh tonnes of wheat, government would have imported 45lakh tones of wheat. Finding the additional quantities may not be easy considering the shortage of grain globally and it may have to be contend with a further price increase in international markets. In June 2006 the government cut import duty on the foodgrain from a scheduled rate of 50% to 5%. The government subsequently has allowed the private sector to import duty free wheat till February 2007. The government has also agreed to allow the import of sugar and has banned the export of pulses. The BJP criticized the government’s decision to import by saying that it was the direct result of mismanagement of stocks & failure to procure adequate quantities to maintain a buffer. The import would cost the exchequer more than what it would have paid Indian farmers at the MSP. The BJP alleged that the government had allowed private and multinational traders to play on the foodgrain market & this had resulted in hoarding even as the FCI was unable to meet the demands of the PDS. Brinda Karat points out that the government’s procurement policy has been completely marginalized, the clout and the manipulating capacity of private trade has increased and import of wheat signals a dangerous erosion in food self sufficiency and self reliance. Moreover the CPI(M) leader pointed out that the standards of wheat imported had been lowered to specifically suit the foreign companies. M.S. Swaminathan specified that the decision to import wheat was a ‘wake-up’ call for the nation as it was the outcome of complacency that had implications for both food and national security.

2.4 Food Accessibility

The Food Insecurity Atlas of Rural India states that food availability by itself does not ensure adequate access to food, though adequate food availability is necessary for food accessibility. If people have access to livelihood, they would in

77 “Rising prices force govt to ban export of pulses, import sugar” (2006), The Times of India, New Delhi, June 29.
78 “Govt slashes wheat import duty to stem rising prices” (2006), The Times of India, New Delhi, June.
79 “BJP criticizes wheat import” (2006), The Hindu, Delhi, February 6.
80 “Clarifications sought on wheat imports” (2006), The Hindu, Delhi, May 16.
general have access to food and nutrition. Food accessibility does not mean just physical accessibility, which is provided to people by the government supported PDS, but more importantly it means economic accessibility i.e. purchasing power to buy the food. Agriculture provides food accessibility as majority of people are employed in agriculture and it helps in influencing the incomes and hence the purchasing power. Therefore we need to look at the aspects of rural employment, rural poverty and the sources of livelihood (land and non-farm sector) in order to assess the second parameter of food security i.e. food accessibility.
community, social and personal services. At the all India level, the growth of real agricultural wages declined from about 5% per annum in the 1980s to 2.5% per annum in the 1990s.86

Jayati Ghosh also argues on the same line by saying that rural employment (all types of employment) grew at 0.58% (between 1993 and & 99-2000) i.e 1/3rd of the rate of growth of rural population. This has been because of fall in agriculture and fall in non-agriculture.87 Utsa Patnaik points out that the falling crop output growth and rising unemployment is not surprising given the strongly contractionary deflationary nature of the neoliberal economic reforms which led to rural development expenditures being cut from a high of 14.5% of GDP (1985-90) to less than 8% by 1994 and further to below 6% by 1999-2000.88

The unemployment rate went up between 1993-1994 to 2004. On the basis of current daily status during the reference period, unemployment rate for males increased from 5.6% to 9.0% in the rural areas & from 6.7% to 8.1% in urban areas. Similarly the unemployment rate for females increased from 5.6% in 1993-1994 to 9.3% in 2004 in rural areas & from 10.5% to 11.7% in urban areas. Furthermore, unemployment rates on the basis of current daily status were much higher than those on the basis of the usual implying a high degree of intermittent unemployment. This could be mainly because of the absence of regular employment for many workers.

As per the Economic Survey, 2005-2006, states where wages are higher than in neighbouring ones because of strong bargains or social security provisions such as high minimum wage had high incidence of unemployment, in general.89 Results of the 60th Round of NSSO survey on employment & unemployment situation conducted in January – June 2004 shows that about 72% of households belonged to rural India & accounted for nearly 75% of total population. Also in the rural areas about 66% of

87 As per interview with Prof. Jayati Ghosh, Centre for Economic Studies and Planning, JNU, New Delhi, May 2005.
usually employed males and 84% of the usually employed females were engaged in the agricultural sector.\textsuperscript{90} According to the CPI(M), there is hardly any concrete strategy in the Approach Paper to the XI Five year Plan, which would ensure greater employment generation. Instead several policy initiatives suggested in the Approach Paper such as liberalizing the entry of foreign players into retail trade & reducing the list of industries reserved for small scale sector at an accelerated pace would actually diminish employment opportunities even further. The XI Plan needs to work out employment generation targets concretely, sector & sub-sector wise employment targets should be adopted to improve the quality of jobs & increase the share of organized workforce to total workforce.\textsuperscript{91}

Amit Bhaduri argues that moving rapidly towards a sustainable full employment society is the only way available to attain the goal of participatory development. Its by-product would be elimination of poverty and sustained pro-poor growth where everybody has a right to live like a human being with dignity.\textsuperscript{92}

- Poverty

Regarding poverty figures in India, there are two contrasting views. On one side there are those who believe that there has been a decline in the incidence of poverty during 1990s, but feel that it is difficult to assess the extent of this decline, as there has been considerable debate regarding comparability of data due to changes in the methodology adopted by the NSSO between 1993-94 and 1999-2000.\textsuperscript{93} The rural poverty incidence in 1999-2000 is now officially put at 27.1\% and urban poverty incidence at 23.6\% as against the official estimates of 37.3\% and 32.4\% in rural and urban areas respectively during 1993-94. Graph 2.4 given below gives the figures of poverty in India from 1973-1974 to 1999-2000 for rural, urban and combined.

\textsuperscript{90} Ibid.
\textsuperscript{91} CPI(M)'s Comments on Planning Commission's Approach Paper to the XI Plan, \textit{art.cit.}
\textsuperscript{92} Bhaduri, Amit (2005), \textit{Development with Dignity - A Case for full employment}, New Delhi, National Book Trust. p.47.
\textsuperscript{93} The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), \textit{op.cit.},p.237.
These results are however a matter of controversy. During Round 55, the NSSO made a major deviation from the technique it had been using so far to establish household consumption levels, in terms of the reference periods used in the questions on consumption. Questions on consumption of clothing, footwear, education, health and durable goods were asked only for the ‘past 365 days’ and for food, tobacco and intoxicants, all sample households were asked both the ‘thirty days’ and ‘one week’ questions. These changes were considered significant by the Planning Commission which, while releasing official poverty estimates, added the important caveat that these ‘may not be strictly comparable to earlier estimates of poverty.\footnote{Sen, Abhijit, \textit{art.cit.}, in Ramachandran,V.K. and Swaminathan, Madhura, (eds), \textit{op.cit.}, pp. 419-420.}

Rohini Nayyar points out that it is very difficult to arrive at a definition of poverty which could separate the poor from the non-poor without introducing a certain degree of arbitrariness, depending on how stringently or leniently one defines poverty. Thus poverty is not an objective but a normative concept. She further argues that estimates of poverty based on actual consumption would be superior to those based on a poverty line in terms of a minimum level of living. Food is only one part
of a subsistence package. Besides food, other items such as clothing, shelter, fuel and lighting are also essential. Moreover there are other consumption goods and services like education, healthcare, leisure and entertainment which should be included in any definition of a poverty line although for these items it seems difficult to stipulate a minimum.95 Abhijit Sen argues that between 1993-1994 and 1999-00 there has been a drop in poverty but the extent of this actual decline has been open to debate and discussion. The decline in poverty is not, according to him, significant.96 C.P. Chandrasekhar further argues that the rate of reduction of incidence of rural poverty has been lower in 1990s than in 1980s97. On the other side there are others who feel that the poverty figures are much higher figures. Utsa Patnaik argues that the poverty calculation method is incorrect and non-transparent and in reality poverty figures are much higher than 27%.98

A. Deaton and Jean Dreze show a decline of 6.7 percentage points while K. Sundaram and S.D.Tendulkar show 5.3 percentage points decline during the same period i.e. between 1993-1994 to 1999-2000. Abhijit Sen and Himanshu show a decline of only around 3 percentage points in the 1990s. The share of six states (Bihar, UP, MP, WB, Orissa and Assam) in all India rural poor increased between 1993-94 and 99-2000. In 93-94 their share was 68.8% but increased to 74.4% in 1999-2000. Poverty can be reduced if growth increases employment potential (quantity & quality). Similarly the extent to which the working poor are able to integrate into the economic process also determine the impact of growth on poverty.99

Trends in urban poverty in percentage and numerical terms show some encouraging signs, though the urban poor still face certain persistent problems at the ground level. Along with a fall in the proportion of the urban poor, there is also a reduction in terms of absolute numbers100. Although there is no one-to one inverse correspondence between the HDI and poverty, yet HDR 2004 by UNDP provides some evidence about a possible decline in poverty between 1995 and 2002. The HDI for India

96 As per interview with Prof. Abhijit Sen, Planning Commission, New Delhi, July 13, 2005.
97 As per interview with Prof. C.P.Chandrasekhar, Centre for Economic Studies, JNU, New Delhi, May, 2005.
98 As per interview with Prof. Utsa Patnaik, Centre for Economic Studies, JNU, New Delhi, May 2005.
100 The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), op.cit.,p.247.
improved from 0.548 (95) to 0.579 (2000) to 0.595 (2002). However Kamal Mitra Chenoy says that almost 74% people in rural areas actually fall in the BPL category. Mohan Guruswamy & Ronald Joseph Abraham point out that a poverty line that takes into account calorie consumption & does not include other basic needs is unacceptable. According to them, there is clearly an imperative need to redefine the poverty line in tune with basic needs such as proper nutrition, drinking water availability, shelter, clothing & education. As per the Economic Survey, 2005-2006 the targeted reduction of poverty by 2007 is aimed at 19.3%. However preliminary estimates are now available from the NSS thick sample conducted in 2004-2005 which provides data that are fully comparable to 1993-1994. This shows that the percentage of population below the poverty line in 2004-2005 was almost 28% which is higher than the official figure for 1999-2000 because of the non-comparability of 1999-2000 data. The reduction in poverty between 1993-1994 & 2004-2005 is 0.74% points per year rather than 1.66% points per year implied by the earlier 1999-2000 data. However the Approach Paper to the XI Plan points out that poverty continues to reduce. The percentage of poverty in 2004-2005 that is roughly (but not strictly) comparable to 1999-2000 is about 22% implying that poverty decreased over 1999-2000 to 2004-2005 at the rate of 0.79% points per year. CPI(M) has commented that figure of 28% for 2004-2005 cited in the Approach Paper to the XI Plan implies that there has been reduction of poverty by only 8% over an 11 year period, which is about half the rate of poverty reduction achieved between 1977 & 1990. The Approach Paper does point out that the outcomes would have been much better had agricultural growth been faster. However there had been a modest rate of decline as agricultural GDP growth had only just about kept pace with population growth during the last decade.

Thus one finds that rural employment has declined and rural poverty continues to be high – hence affecting the food accessibility aspect of food security in an

106 CPI(M)'s Comments on Planning Commission's Approach Paper to the XI Plan, art.cit.
adverse manner for many households. Land and non-farm sector needs to be examined as they are the two principal sources of livelihood and on this income depends the living standards of the poor.

- Land

The living standards of the poor in rural India depend on their access to land or employment which are the principal sources of income and on the purchasing power of this income in terms of food. Landlessness has been identified as the route cause of rural poverty by several authors and also the proportion of agricultural labourers in the rural workforce explain in part differences in the degree of rural poverty between states. Upto 31st March 2003, only 2.12 million hectares of ceiling surplus land had been redistributed. This accounts for just 1.5% of the total cultivable land in the country. Given the poor record in detection and distribution of ceiling surplus land, it is unlikely that large tracts of land would become available for distribution to the poor.

The NSS data on landholdings as expressed in the data collected in the 59th Round of the survey indicates a significant increase in landlessness among rural households. According to the data, the proportion of landless rural households had been broadly stable for three decades from the early 1970s at around 28% and had come down to 22% in 1991-92. But the data relating to 2002-03 indicates a very sharp increase to nearly one-third of rural households. Financial stress including the inability to repay loans taken for cultivation and other purposes has forced many farmers to sell their lands and join the landless population. However one finds that discussion of land-reforms find no place in the Approach Paper to the Eleventh Plan. The number of large holdings has declined and the average size of landholdings of 80% of the cultivators is less than 2 hectares. Therefore the case for reduction in land ceilings is weak. Measures need to be taken to detect concealed lands and acquire them for distribution to the rural poor. Moreover Restrictive tenancy laws have prevented optimum allocation of land resources and denied the

108 Nayyar, Rohini, op.cit, pp. 6-7.
rural poor access to land. They have also led to concealed tenancy that is widespread. In such cases the tenant has no protection. As per the Mid Term Appraisal of the Tenth Five Year Plan, the fear of reverse tenancy is also unfounded as small and marginal farmers account for over 80% of the total leased land in the country. Prohibition of tenancy by law in many states has only driven the practice underground.  \(^{110}\)

One finds that the percentage of cultivators have declined from 71.9% in 1951 to 54.4% in 2001. At the same time agricultural labourers have increased from 28.1% in 1951 to 45.6% in 2001.  \(^{111}\) Table No.2.1 below gives the details of the population and the agricultural workers.

Table No.2.1 - Population and the Agricultural workers (1951-2001)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Population</th>
<th>Average Annual Exponential Growth rate (%)</th>
<th>Rural Population</th>
<th>Cultivators</th>
<th>Agricultural Labourers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>361.1</td>
<td>1.25</td>
<td>298.6 (82.7)</td>
<td>69.9 (71.9)</td>
<td>27.3 (28.1)</td>
<td>97.2</td>
</tr>
<tr>
<td>1961</td>
<td>439.2</td>
<td>1.96</td>
<td>360.3 (82.0)</td>
<td>99.6 (76.0)</td>
<td>31.5 (24.0)</td>
<td>131.1</td>
</tr>
<tr>
<td>1971</td>
<td>548.2</td>
<td>2.22</td>
<td>439.0 (80.1)</td>
<td>78.2 (62.2)</td>
<td>47.5 (37.8)</td>
<td>125.7</td>
</tr>
<tr>
<td>1981</td>
<td>683.3</td>
<td>2.20</td>
<td>523.9 (76.7)</td>
<td>92.5 (62.5)</td>
<td>55.5 (37.5)</td>
<td>148.0</td>
</tr>
<tr>
<td>1991</td>
<td>846.4</td>
<td>2.14</td>
<td>628.9 (74.3)</td>
<td>110.7 (59.7)</td>
<td>74.6 (40.3)</td>
<td>185.3</td>
</tr>
<tr>
<td>2001</td>
<td>1028.7</td>
<td>1.95</td>
<td>742.6 (72.2)</td>
<td>127.3 (54.4)</td>
<td>106.8 (45.6)</td>
<td>234.1</td>
</tr>
</tbody>
</table>

- The data on workers in columns 5-7 exclude J&K
- Figures in parentheses represent percentages to the total.
- Population figures for 91 of J&K have been worked out by interpolation on the basis of 2001 final population
- The 1981 census could not be held in Assam. The figures for 1981 for Assam have been worked out by interpolation.


\(^{110}\) The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), op.cit., pp.252-253.
One finds that many of the agricultural labourers have shifted to the non-farm sector. Also one finds that the average size of operational holdings has declined from 1.57 hectares in 1990-1991 to 1.41 hectares in 1995-1996. Marginal holdings have increased from 59.4% in 1990-1991 to 61.6% in 1995-1996. Medium and Large holdings have on the other hand declined from 8.7% in 1990-1991 to 7.3% in 1995-1996. Since majority are small farms, increasing production through application of technology is difficult but one needs to remember that there is no alternative to technological upgradation and bringing this to the benefit of small farms will increase the productivity which in turn will lead to better incomes. The Draft of the Fifth and Final Report submitted by the National Commission on Farmers points out that the first and foremost task would be in the area of land reform with particular reference to tenancy laws, land leasing, distribution of ceiling surplus land and wasteland, providing access to common property and wasteland resources and the consolidation of holdings. Prime farmland must be conserved for agriculture and should not be diverted for non-agricultural purposes and for programmes like the special economic zone. Wherever feasible, landless labour households should be provided with at least one acre per household as ownership of a small plot of land will go a long way in helping improve household income and nutrition security.

- Diversification and Non-Farm Sector

The Mid Term Appraisal of the Tenth Five Year Plan points out that agricultural diversification has to be a major element in the strategy for accelerating agricultural growth. Ideally there should be a shift of land from cereals to non-cereals (in the process increasing both farm income & employment) combined with an increase in productivity in cereals to ensure the per capita availability of cereals does not decline. Diversification also means a shift from crop agriculture to animal husbandry/dairy & fisheries. However the initiatives taken to promote cash crops have not been all that successful in generating additional income through exports. This is mainly due to the fact that global commodity prices have been falling, leading

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112 Ibid.
114 The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), op.cit.:p.207.
to a lot of distress for the farmers growing cash crops along with low production yields and cheap imports. The government is still trying to promote agricultural exports and has emphasized its importance through the following policy measures.

- A new scheme called the Vishesh Krishi Upaj Yojana for promoting the export of fruits, vegetables, flowers, minor forest produce and their value added products has been introduced.

- Funds have been earmarked under ASIDE (Assistance to states for Infrastructure Development of Export) for development of Agri Export Zones (AEZ)

- Capital goods imported under EPCG shall be permitted to be installed anywhere in the AEZ.  

The Draft of the Fifth and the Final Report of the National Commission on Farmers has also pointed out that the agri export zones should be further strengthened and should become places where farmers will get the best possible price for their produce.  

Non-farm sector and its growth is very important from the employment point of view. As a part of long-term strategy of employment for the rural households, non-farm avenues are a must. G.K. Chadha comments that the prospects of non-farm growth also critically hinge on the performance of their agriculture.

1. increase in farm income stimulates demand for a wide variety of consumer goods, some of which might be produced by local non-farm economy
2. a growing agriculture demands production inputs that is either produced or distributed by local non-farm enterprises
3. rising agricultural productivity & wages raise the opportunity cost of labour in non-farm activities, inducing a shift in the composition of non-farm activities out of very labour-intensive low return activities into more skilled, higher investment, high return activities.

Chadha also comments that there seems to be an intimate relationship between fast agricultural growth & high non-farm expansion. Chadha also comments that the 'army' of self-employing non-agricultural workers cannot grow beyond specified limits, larger reliance on wage paid jobs would be inevitable in any future scheme of non-farm expansion & thus education is a crucial input for employment planning in India. Rural non-farm activities have the following points in its favour:

1. rural non-farm activities could utilize local talent & local 'slack' resources.
2. a planned strategy of rural non-farm development may prevent many rural people from migrating to urban industrial & commercial centers, contributing to easing urban congestion
3. rural-urban economic gaps are bound to get narrower when the economic base of the rural economy extends beyond agriculture.
4. rural industries are generally less capital-intensive & more labour absorbing.
5. most of the empirical studies testify that rural income distribution is much less unequal in areas where a wide network of non-farm avenues of employment exists.
6. a real dent into rural poverty is reported to come more readily through a wide network of non-farm activities, most ostensibly because, in general, for people without a land base of their own, per worker productivity & earning are higher in non-farm than in farm employment.

For the total of non-farm activities, the employment growth during 1993-94/1997 did not improve at all, compared with 1987-88/1993-94. In rural India, only 16.8% of male workers were pursuing non-agricultural activities way back in 1972-73, this percentage increased steadily to 19.4% in 1977-78, to 22.5 in 1983 & then to 25.5 in 1987-88 but then it stayed on at nearly the same level in 1993-94 & then faced a decline between 1993-94 and 1997. A similar trend is discernible for female

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119 Ibid., p.209.
120 Chadha, G.K , art.cit., in Sen and Chatterjee, op.cit., p.246.
workers as well. Employment levels in the nonfarm sector appear to be growing, at least up to the 1990s, although much of the employment growth is of a causal nature rather than permanent. As per the Mid Term Appraisal of the Tenth Five Year Plan, non-farming rural activities, which are synergistically related to agriculture, have seen a secular decline in recent years.

G.K. Chadha notes that rural workers are tending to fall back upon agriculture, both because the pre-existing workers in the non-farm sectors are being relieved from there, and because the new aspirants from rural areas are finding it difficult to compete for workplaces outside agriculture. Rural India is thus looking back in terms of it's employment structure. It seems rural workers are being pushed out of their traditional manufacturing activities (e.g. Agro-based industries as a whole, textiles & textile products, cotton textiles etc.) presumable because the higher competitive domestic & international market cannot be effectively catered to by their unskilled labour & low product quality & so on.

There has been an impact of liberalization on the rural non-farm sector. The non farm sector industries (diary, handloom, khadi and village industries, poultry etc.) have been providing subsistence income to millions of rural households but with the exposure of globalization, the domestic market is flooded with cheap & low priced products. Also Indian farmers/workers have not being able to benefit much by way of exports on account of lack of infrastructure & capital. Raw material subsidies, public fund support for technology upgradation, skill improvement, market development support from the government for the rural & small entrepreneurs are no longer coming forward. These enterprises are now required to operate on market viability considerations & the result is that hundreds of small & micro enterprises are getting closed. The process of liberalization is placing heavy demands on non-farm sector micro-enterprises on their marketing abilities. The provisions of AoA pertaining to

121 Ibid., pp.253-254.
123 The Mid-Term Appraisal of the Tenth Five Year Plan (2002-2007), op.cit. p.31.
125 Ibid., p.267.
market access and domestic support may result in problems in future. There are
government projects aimed at promoting higher-value agriculture such as the World
Bank funded National Agricultural Innovation Project & the US-India Agriculture
Knowledge Initiative. Although the benefits of the US-India Agriculture Knowledge
Initiative are higher food productions in India, increase in technology transfer in areas
like biotechnology & the focus areas would include capacity development & water
management, there is an apprehension of involvement of several US MNCs (Walmart,
Monsanto & Archer Daniel Midland group) which are on the Knowledge Initiative in
Agriculture (KIA) board. Also the fear is that research by Indian state owned
institutions like ICAR will be controlled by the private sector, mostly US firms.

The National Commission on Farmers has recommended that the agriculture
year 2006–07 be designated as the ‘Year of Agricultural renewal’ & that it address the
issues of the small farmers, women in farming & the landless labour. The
Commission has suggested the setting up of an Indian Trade Organisation (ITO) and
India’s own boxes for domestic agricultural support on the model of the WTO. The
modest support extended to farmers should be classified, that which is of the nature of
life & livelihood saving support to small farm families & the other which could be
considered trade distorting in the global market. The commission in its report has
underscored the need for initiating an integrated package to increase farm productivity
& profitability in perpetuity without associated ecological harm & the programmes
should cover all major agro ecological regions.\(^{127}\)

Meanwhile the Budget 2006-2007 has attempted to tackle one of the most
important problems facing farm productivity & profitability – Lack of adequate
Credit. The total ground level credit flow for agriculture & allied activities increased
from Rs.46,268 crore in 1999-2000 to Rs.86,981 crore in 2003-2004 & further to
Rs.1,25,309 crore in 2004-2005. The target of agriculture credit flow for the year
2005-2006 was fixed at Rs.1,41,000 crore. The achievement on December 31, 2005
was 83.6% with such credit at Rs.1,17,899 crore. Around 58.3 Lakh new farmers have
been financed by all the banks. An amount of Rs.2939 crore was provided as debt
relief by all agencies to farmers in distress, farmers in arrear and under One Time

Settlement (OTS) during 2005-2006 upto November 30, 2005. Commercial banks have provided Rs.14 crores as advances to 4,074 farmers to enable them to redeem their debts from moneylenders. The corresponding figures for Cooperative Banks and Regional Rural Banks are Rs.1.30 crore & Rs.4.44 crore respectively. The Budget 2006-2007 points out that the farm credit is again expected to cross the target of Rs.141,500 crore set for the current year. The Finance Minister has proposed to ask the banks to increase the level of credit to Rs.175,000 crore in 2006-2007 & also add another 50 lakh farmers to their portfolio. He further added that we would not only achieve but exceed the target of doubling farm credit in three years. Also the budget has talked about asking the banks to open a separate window for Self-Help Groups or joint liability groups of tenant farmers & ensure that a certain proportion of the total credit is extended to them. Moreover the government has decided to ensure that the farmer receives short-term credit at 7% with an upper limit of Rs.300,000 on the principal amount.

The Kisan Credit Card Scheme has made rapid progress with the banking system issuing more than 556 lakh cards (November 30, 2005). The scope of KCC scheme has been enlarged to include term loans for agriculture & allied activities along with a component to meet the consumption needs. The credit delivery mechanism is being simplified with more flexibility in the use of KCC. The improved availability of credit for agriculture & liberalized trade for agricultural products should enhance public investment in agriculture. However there are problems in this sector as well. It is not clear whether small and marginal farmers are getting the credit. It is also not clear whether the entire credit increase that has taken place is real or banks are making book adjustments. Moreover mechanisms should be developed to provide credit to tenants. There is also a need to revive the Cooperative banks. The year 2005 was declared 'Microcredit Year' by the United Nations and the G8 member states have also reaffirmed the crucial importance of microfinance as a development tool. The National Commission on Farmers has pointed out the need

129 The Economic Times, (March 1, 2006), art.cit..
for an agriculture credit policy. It further says that the credit must be in time, in required quantities and at appropriate interest rates (the interest rate should be as low as possible). The delivery system has to be proactive and NABARD should ensure convergence between credit availability and credit absorptive capacity of the farmers and other rural borrowers, and an efficient delivery system. It also stresses on the need for both credit and insurance literacy in villages. Gyan-Choupals could help in this task. 133

UNDP’s Global Human Development Report (HDR) for 2005 ranks India at 127 out of 177 countries of the world in terms of a composite Human Development Index (HDI) for 2003. Between 2000 & 2003, while the absolute values of HDI & Gender Development Index (GDI) consistently improved for India, its ranking remained invariant at 127 consecutively for three years in a row. On the other hand some of India’s neighbours not only improved their HDIs & Gender Development Index (GDI) values but also improved their relative ranks. 134

India’s rural economy cannot grow without agricultural development. The slower rate of growth of agriculture has serious implications for the rural – urban relationship. In the Human Development Index prepared by the Planning Commission, there is a significant divide. The value for rural areas is 0.340 and for urban areas it is as high as 0.511. The index is a composite of variables capturing attainments in three dimensions of human development, economic, educational and health. The same is the situation in respect of the Human Poverty Index: rural 42.25 and urban 44.8. 135 Not only are there differences between the rural and urban areas but also between different regions. Two states in two different regional belts are being taken to examine the various aspects of food security. Punjab in the Northern belt and West Bengal in the eastern belt are being studied.

2.5 Punjab

2.5.1 Food Availability

Punjab, which spearheaded the Green Revolution in India, is now at the crossroads. It is faced with the problems/impact of Globalization, liberalization and privatization of agriculture under the WTO regime.\(^{136}\) Punjab, which was until recently the most prosperous state of the country, is according to H.S. Sidhu, in deep economic crisis with agricultural production and crop yields nearly stagnated. Profit margins of the farmers have come down drastically and farmers are resorting to suicides. Excessive use of chemical fertilizers and growing the same crops over and over again has led to sharp deterioration of the soil resource, which is a critical requirement for sustainable development. Underground water table is going down at an alarming rate and it has one of the lowest forest covers in the country.\(^{137}\)

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R.S. Bawa points out that the rural economy in the state before the Green Revolution i.e. between 1947 to early 1960s had been in an equilibrium or a static state in terms of the socio-economic relationship amongst various categories of people as also the political equation. The rural scene showed that all the groups i.e. farmers (landowners), commerce people, artisans and other groups provided various services and the labourers (working mostly in agriculture but without any land) were in some kind of harmony with a kind of understanding which would result in lesser tensions. Primitive Agriculture was practiced in a traditional mode of production characterized by total dependence on rain and canal water for irrigation, traditional seed varieties, traditional technology, low productivity and hence low production, lower incomes and farmers also had lower standard of living. For their financial and business needs including marketing of their produce and funds for various socioeconomic activities, the farmers were dependent on commerce people and agricultural labourers were considered a part of the farmer’s household and they were a party to all the decisions


and activities of the rural sector. The year 1966 is considered benchmark and signal to
the advent of Green Revolution because in this year almost 75% of area under wheat
cultivation was put under new varieties and new technology. With the success of
the HYV wheat seeds in Punjab, the Punjab Agricultural University started its rice-
breeding programme and soon they developed new dwarf rice varieties with good
yield potentials and short duration ripening. With the availability of high yielding rice
varieties the farmer in Punjab brought more area under rice.

During the Green Revolution period (1966-1973) all farmers were applying
the latest technology (including HYVs, commercial fertilizers, tubewells, pumping
sets and machinery for farm operations) and these led to a number of changes like
major increase in productivity and consequently production of wheat and paddy,
substantial increase in incomes of farmers, availability of some of the basic
infrastructure like banks, communication in rural areas, changes in socio-economic
structure of the rural areas, less dependence on the moneylender but more on traders/
arhtiyas, decreasing dependence on men (relationship between farmers and
agricultural labourers changed).

However as Lahiry points out the Green Revolution created serious regional
imbalances in the production of cereals, growing and partial pauperization of the
marginal and poor peasants, increase of class conflict between landowners and
landless labourers, sharpened social cleavages i.e. clash between Jat-Sikh
landowners and Hindu backward and Scheduled Caste landless agricultural
labourers, structural imbalances in the economy by inducing heavy influx of migrant
labour into agriculture from Eastern Uttar Pradesh, Bihar, Rajasthan etc. The
Green Revolution is known to be non-neutral with the biggest gainers being the
large farmers, medium farmers gaining marginally and the small and marginal farmers
gaining almost nothing. There was a shift in the people in commerce to the marketing
places of semi urban/urban areas and the worst hit were the marginal farmers and

138 Bawa, R.S (2000), "Agrarian Prosperity in Punjab and its Socio-political Implications" in Bawa,
Department, pp. 36-37.
139 Ibid., pp. 37-38.
agricultural labourers who could neither migrate to urban areas nor could find themselves in a gainful position in the rural areas.

The number of marginal farmers decreased and the number of medium and large farmers went up. The trickling down of the gains of the Green Revolution largely did not happen.\textsuperscript{141} However agricultural development through its backward and forward linkages created additional incomes and employment opportunities in non-agricultural activities. Regarding backward linkages, Chadha points out that agriculture in Punjab was getting increasingly linked with non-agricultural sectors for the supply of its inputs. While increasing demand for irrigation equipment, implements and machines, electricity, repairs and services were met very largely through local expansion, the increasing demand for diesel, pesticides and partly of chemical fertilizers etc necessitated 'imports' from outside the state. In addition forward linkages were forged through the marketing of agriculture produce. Chadha notes that in Punjab the locale of many rural activities has shifted to urban centres, one observes he says a semi-urbanized rural pattern in Punjab because of the development of village link roads and the consequent shortening of rural-urban time distances. The share of tertiary sector activities such as construction, trade and commerce, transport, storage and communication in total rural as well as urban employment went up dramatically between 1961 and 1981. In fact, what sustained an increase in real wages in Punjab despite growing mechanization of farm activities was an increase in off-farm employment in agro-based industry (eg dairy, poultry), services and manufacturing. The diversification of the rural economy had positive impact on agriculture as well.\textsuperscript{142} Around the late 80s there was also a gradual opening up of the industrial sector. Making use of this opportunity, a para-statal (Punjab Agro Industries Corporation) got into the promotion of fruit and vegetable processing and marketing activity, brought Pepsi (a US MNC) in 1988 as a joint venture partner to procure and process certain fruits and vegetables.\textsuperscript{143}

\textsuperscript{141} Bawa, \textit{art.cit.}, in Bawa and Raikhy, \textit{op.cit.} pp. 38-40.
During the 1980s, the momentum of the Green Revolution could not be sustained and there was stagnation in yields accompanied by increasing costs of cultivation (the cost increase came largely from over mechanization, labour and irrigation costs and input use efficiency being low). It is only 35-50% in nitrogenous fertilizers due to imbalanced application of various nutrients as well as methods of application and the capacity utilisation of tractors has been only 60% of that required for their viability. The evidence of declining viability of small holdings was found in the fact that the number of operational holdings in 1980-81 declined as compared to those in 1970-71 due to a phenomenon of reverse tenancy under which small and marginal farmers started leasing out land on cash terms to the medium and large farmers who had sufficient capital and family labour and had made investments in machinery and irrigation structures. Due to this phenomenon and the non farm work to some extent, by 1987-88, 34% of the holdings in the state had leased in land as compared with only 26% in 1971-72. The leased in area as percentage of total operated area increased from 9% to 13% during this period. The proportion of marginal holding in total decreased from 37% to 26% during 1970-71 to 1990-91 and those above 10 hectares increased significantly. About 20% of the total farming population, 24% of the small farmers and 31% of the marginal farmers had incomes below poverty line.

Also in 1991, agricultural workers accounted for as much as 73.5% of total rural workforce of the state. The cultivators were 58% of the total agricultural workers, the rest being agricultural labourers. The percentage of cultivators among total agricultural workers in the state declined from 68.4% (1971) to 58.2% (1991). On the other hand the percentage of farm labour increased from 31.6% to 41.8% during the same period. Sukhpal Singh points out that the unemployment rate among rural males (2.9%) in the late 1980s was marginally above that at the national level (2.8%) and that among rural females more than double (7.4%) that of the national level (3.5%). Another source puts the overall unemployment rate in the state at 4.04 in 1987-88 as compared to 3.77 for the country as a whole. The index of

144 Ibid. p. 1889.
unemployment rate for the state was thus higher at 107 as against 100 for the country. 145

Further the state’s farming sector has ended up growing only two crops - wheat and rice - which accounted for as much as 71% of the gross cropped area. The intensive production has also led not only to monocultures in general in the state due to rice and wheat rotation and within these two crops in particular, but also higher incidence of pests and diseases. This has further led to ecological problems: decline in water table, waterlogging, soil salinity, toxicity, micronutrient deficiency and pollution due to burning of crop residues of paddy and wheat after mechanical harvesting of these crops. Also the demand for wheat and rice produced in Punjab is declining within the country as other states are now producing more and more of these commodities.

Realizing the problems in 1985, the state government appointed the Johl committee to recommend policy changes and this committee recommended diversification within farming away from wheat - paddy rotation to the extent of 20% in favour of fruit and vegetable, fodder and oilseeds crops. At that time fruit and vegetable crops accounted for less than 2% of the total cropped area as they were not competitive in terms of their relative profitability as compared with that of wheat and paddy. In fact, no other crop in the state has been able to compete with wheat and paddy on assured profitability grounds. 146

If one looks at the statistics of the Punjab’s economy, one can make the following observations. Till 1978-79, Punjab continued to record higher growth rates in the gross state income compared to growth rates of gross national income of India as a whole. The annual compound growth rate of the state’s gross income was 3.6% between 1960-61 and 1965-66 compared to growth of gross national income of the country at the rate of 2.7% during this period. The state recorded a growth rate of 8.4% compared to all India annual growth rate of 4%. Also Punjab’s per capita income had growth to more than double of the all India average in 1979-80. But in 1998-99 the per capita income was only 44.30% higher than the all India average.

145 Ibid., p. 1890.
146 Ibid.
Punjab's growth performance was higher than the all India average between 1960-61 and 1978-79. State policy in the 1980s was concentrated on the fight against insurgency and development policies took a backseat. Consequently the growth performance slowed down with an annual compound growth rate of 5.23% (All India growth rate of 5.66%) in 1980-81 to 1984-85 and 5.98% in 1985-86 to 1989-90 (All India average - 5.79%). Thus on an average Punjab's growth rate roughly matched the all India average for the entire decade of the 80s.\textsuperscript{147} Thus one finds in pre 1991 Punjab saw a decline in cultivators, increase in agricultural labourers, the beginning of ecological and unemployment problems, shift to non-farm sector, but the growth rate of the economy roughly matched the national average.

- Post 1991 Developments

For assessing the impact on Food Availability the following aspects have been considered.

- Growth

One observes that the percentage contribution of the Primary Sector to the Net State Domestic Product has declined over the years in Punjab from 48.23% in 1993-1994 to 41.48% in 2001-2002.\textsuperscript{148} This decline may have contributed to a reduction in the State economy. Between 1992-1993 and 1996-1997 the average annual compound growth rate of gross state/national income was 4.81% compared to national average of 6.76%. Infact during 1997-98 to 1998-99 Punjab’s growth rate had fallen to 3.58% against 5.91% of India as whole. The Primary Sector has declined from 3.08% (in 1992-1993 to 1996-1997) to 1.84% (in 1997-1998 to 2001-2002)\textsuperscript{[Prov]}. Further the share of the state domestic product of Punjab used for capital formation has been either stagnating or declining. It stood at 22.98% in 1993-94 but varied between 20.21% and 23.71% upto 2000-01 except for the year 1995-96 when it rose abnormally to 32.41%. This rise was experienced largely in the manufacturing sector. The share of development expenditure in the total government expenditure which stood at 75.85% in 1991-92, declined to 54.46% in 1997-98.

\textsuperscript{147} Human Development Report 2004, Government of Punjab, India, pp. 31-32.
\textsuperscript{148} Ibid., p.198.
The primary sector of Punjab's economy is agriculture and livestock. The contribution of other components such as forestry and logging, fishing, mining and quarrying has always been negligible in the gross state domestic product. The combined share of the three components has been less than 1% (0.56% in 2000-01) of the gross state domestic product since 1960-61. On the other hand, the combined share of agriculture & livestock is more than 40% (41.93% in 2001-01) of the gross state domestic product. In the primary sector, the share of agriculture increased marginally till the 1970s but has since been continuously on the decline. Contrary to this, the share of livestock in the state domestic product continuously increased till early 1990s after which it stagnated. The higher growth rate of the livestock sector has contributed to an increase in the rate of growth of the primary sector and increased the share of the livestock sector in the state domestic product.  

- Foodgrain Production

- There has been a decline in the foodgrain production, which is primarily on account of the reduction in total cereals. Cereal Production has gone down from 25279 (000 tonnes) in 2000-2001 {Prov} to 23458 (000 tonnes) in 2002-2003 {Prov}. The area under total food grain production has also gone down from 6277 (000 hectares in 2000-2001{Prov}) to 6132 (000 hectares in 2002-2003{Prov}). Punjab contributes 12.2% of the total rice production in India and as much as 21.78% of the total wheat production. 

- Not only production but also crop yields have been affected. As per the Punjab Human Development Report, 2004, wheat, rice and cotton account for nearly 80% of the gross cropped area and there has been a decline/stagnation in the yield of these crops affecting adversely the cultivators. With the existing levels of technology the per hectare yield of wheat and paddy have reached their peak and have stabilized around 4000 kg in case of wheat and around 3350 kg in case of rice. The per hectare yield for wheat has declined from 4696 kg in 1999-2000 to 4563 kg in 2000-
2001. Singh argues that as far as yield is concerned, a large proportion of cultivators have reported a decline in crop yields during the past few years. Singh and Kolar have argued that in spite of increase in prices of agricultural products, the input prices have also gone up with almost the same speed. The crop productivity on the other hand has stabilized resulting in slower increase in monetary returns. G.K. Chadha points out that crop yields have slumbered and there has been no fresh round of technological breakthrough.

- There has been a shift from Food crops to Non-food crops in Punjab in the last few years. R.S. Bawa points out that The State government proposed to divert 10% of the area under Eighth Five Year Plan (Govt of Punjab – 1995-96) and laid emphasis on sunflower cultivation. Maize and soyabean are said to have been seriously tried for replacing paddy. Area based contract farming approach is being followed where areas will be selected for particular crops, the specific technologies are to be propagated and extension agencies are to be re-organised for the purpose. However the target has not been achieved except in case of sunflower because no crop at the existing level of production technology and prices competes with wheat – paddy rotation. The FCI pays Punjab a massive cess in exchange for acquiring 85% of the state’s foodgrain output. So half hearted were the state government’s efforts to liberate farmers from the wheat paddy trap. Even those who moved to alternative crops went back to producing cereals. In fact there has been a decrease in the area under Non Food crops from 1732 (000 hectares) in 1980-1981 to 1369 (000 hectares) in 2002-2003 (Prov). Correspondingly the area under food crops has gone up from 5031(000 hectares) to 6457 (000 hectares) in the same period. However during 1999-2000 to 2001-2002 a reverse trend was noticed wherein area under food crops declined from 6544 (000 hectares) in 1999-2000 (Revised) to 6449 (000 hectares) in 2001-2002 (Prov) with the area under Non-Food crops increasing from 1303 (000 hectares) to 1492 (000 hectares) in the same period.

53 ibid., p.200.
54 Singh, Sukhpal, art. cit., p. 1891.
56 As per interview with Prof G.K. Chadha, New Delhi, October 5, 2005.
57 Bawa, R.S, art. cit., in Bawa and Raikhy, op.cit., p.35.
58 Kang Bhavdeep (2004), “Green Revocation”, India today, New Delhi, November 9, p. 34.
In terms of shift to cash crops the state is showing a mixed trend. Area and production of cotton has declined and production of oilseeds has stagnated. Only sugarcane has shown a positive trend in area and production. Also the area under fruits and vegetables has increased. Area under fruits has increased from 34209 hectares in 2000-2001 to 40489 hectares in 2002-2003. Similarly for vegetables the increase during the same period has increased from 110266 hectares to 111705 hectares.\(^{159}\) The market uncertainties in case of sugarcane, potatoes and vegetables and long waiting period along with market uncertainties in case of horticulture have prevented the farmers from going in for diversification.\(^{160}\) By the early 1990s, Pepsi had got into contract production & processing of tomatoes. The contract system was in place by the mid 90s with the entry of Pepsi into tomato, chillies and potato, Nijjer into tomato and the selling off by Pepsi of its tomato facility to Hindustan Lever Limited which brought another MNC into the state in 1995.\(^{161}\) G.K.Chadha points out that contract farming has produced mixed results with uneven gains and farmers have been at the receiving end.\(^{162}\)

Rajesh Ramachandran & Chander Suta Dogra have made certain observations:

- 64% farmers are dissatisfied by contract farming
- Commitments made of lifting produce at an agreed price are being dishonoured
- PAFC (Punjab Agro Foodgrains Corporation) as the nodal agency meant to monitor contracts does not intervene when farmers are shortchanged.
- Companies default/delay payments\(^{163}\)

The Central Government’s Commission for Agricultural Costs and Prices (CACP) confirmed farmers’ woes in a field study done in 2005 September. It revealed a distinct lack of accountability on Punjab Agro Foodgrains Corporation’s part. In

\(^{160}\) Bawa, art.cit., in Bawa and Raikhy, op.cit., p. 35.
\(^{161}\) Singh, Sukhpal, art. cit. p. 1890.
\(^{162}\) Refer fn no. 152.
another study commissioned by the state government in 2004, the Punjab Agricultural University (PAU) noted an alarming 60% of the contract farmers saying no to further contracts. Most of the produce is rejected on grounds of quality, than bought outside on low rates. The threat of blacklisting and the uncertainties of market rates in the next season force the farmer to forego the higher market rate.\textsuperscript{164}

Meanwhile President Kalam has exhorted Punjab farmers to usher in second Green Revolution by making use of technological advancements, value addition and extensive marketing network to achieve the target of producing 400 metric tonnes of foodgrains by the year 2020. He said that the second revolution should focus on matching the food production with agro-processing to make it more technology and knowledge intensive.\textsuperscript{165}

- Ecology

In order to ensure sustainability of agricultural production including foodgrain production for ensuring food availability, ecology has to be maintained. However Punjab has been facing ecological problems due to overexploitation of resources. The indiscriminate and uncontrolled use of underground water may not also be desirable in several areas of the state from the long run-point of sustainable use of this scarce and precious resource. P.S. Rangi and M.S. Sidhu comment that a stage has been reached when the state needs to have a very careful look at the available ground and surface water resources and plan its cropping pattern in a manner which ensures a clear balance between the available surplus of water and its potential demand. The future production strategy should be based on maximization of output per unit of water used per unit time.\textsuperscript{166}

The state is facing not only the problem of falling water level over vast areas in the central Punjab but water-logging in some parts of south western districts whereas underground water is brackish.\textsuperscript{167} The waterlogging has had its impact on the

\textsuperscript{164} Ibid., pp.24-26.
\textsuperscript{165} "Kalam asks Punjab Farmers to usher in second green revolution" (2005), The Hindu, Delhi. December 12.
\textsuperscript{167} Ibid., p. 19.
cropping pattern in this belt. Cotton which was the principal kharif crop of south western region is being replaced by paddy at a very fast rate. This problem of waterlogging has its social, economic and political implications in the region. There are press reports from time to time that many well-off farmers have become daily wage earners due to the menace of waterlogging. Above all, the quality of ground water varies a great deal from place to place. The water quality ranges from fit to unfit for irrigation. Actually variations in the groundwater quality are to such an extent that even in the same village zones of fit, marginal and unfit water categories can be observed. The agricultural scientists, policymakers, administrators and farmers have to take this problem seriously and any delayed action in this regard will be suicidal for the agrarian economy of the state.\textsuperscript{168} Ground water is dropping by 30 cm every year. The falling water table has nudged out centrifugal pumps in favour of submersible pumps which are 5-6 times more expensive than the first. To lift the same quantity of water from 10 meter depth twice the power, for lifting water from 15 meters three times more power is required.\textsuperscript{169}

Punjab also has abnormally low forest cover of 5.5%. Punjab has 10.5 million acres of cultivable land – 93% is irrigated and its cropping intensity is 210%. Lahiry points out that the poor economic situation has led to a cropping pattern with grain affecting soil nutrition which can best be explained by the fact that at the start of the Green Revolution in the last 1960s, one unit of fertiliser produced one unit of wheat or rice whereas today 1.3 units are required to produce the same quantity. With the imbalance of the micronutrients and an excessive drain on the sub-soil water, Punjab’s soil is getting tired and the texture deteriorating. This has now reached critical proportions as Punjab is removing more subsoil water than are being replenished.\textsuperscript{170} According to G.K. Chadha, Punjab has been suffering from land degradation, soil depletion (due to monoculture) and decline in water table. Out of 118 development blocks, 85 blocks have witnessed sharp decline in water table.\textsuperscript{171}

\textsuperscript{168} ibid., p. 15.
\textsuperscript{170} Lahiry, art.cit., p. 18.
\textsuperscript{171} Refer fn no.152.
2.5.2 Food Accessibility

From an accessibility point of view, the following need to be considered for Punjab -

- Employment

The 55th round survey conducted by the NSSO recorded a labour participation rate of 29.2% for rural Punjab and 32.5% for urban areas using the Usual Principal Status Approach. In rural areas labour participation rate is considerably lower than the all India average of 38% and is equal to the all India average 32.4% in urban areas. Rural female participation is abnormally lower at 4% (All India – 23.1%) and rural male participation rate is 52.6% (All India average 52.5%). The utilisation of the workforce is less than the All India average. The unemployment rate in Punjab stood at 2.3% for rural males and 6.2% for rural females and 2.6% for rural persons compared to all India average respective rates of 2.1%, 1.5% and 1.9% for males, females and persons during 1999-2000. The Planning Commission of India projected an alarming state of unemployment in Punjab. It was estimated that the rate of growth of employment per annum during 1997-2002 would be 0.73% compared to a per annum growth rate of the labour force at 2.27% during this period. Along with unemployment which is fairly widespread among the youth, there is a high level of underemployment among those engaged in agriculture.172

Since agriculture is highly mechanized, it generates seasonal activities which are partially supplemented by dairy as a subsidiary occupation. There has been a considerable decline in the labour absorption in agriculture. Per hectare wheat – paddy labour absorption stood at 153.78 days triennium ending 1983-84 and declined to 106.16 days triennium ending 1996-97. With half of the work being done by hired labour, a cultivator with 2 hectares of land would be working for 106.16 days if he/she were not engaged in dairy as a supplementary activity. Even if dairy activity is duly accounted for, it is estimated that on an average cultivators/farmers get work for only half the year. This indicates a very high level of underemployment for cultivators. The situation is not much better for causal labour engaged in agriculture

particularly in the districts away from the Amritsar-Delhi railway line and in villages which are distant from the major towns in the state. 173

Sukhpal Singh argues that the high mechanisation of agricultural operations (combine harvesters do the entire harvesting of paddy and a large proportion of wheat crop) has cut down the number of days a farm worker can be gainfully employed in the farm sector and has led to the problems of rural unemployment. The labour requirements are also increasingly met from migrant labour. On the other hand educated rural youth do not find the occupation of farming a profitable one. Almost all (95%) the unemployed want jobs within Punjab and therefore what is required is not simple employment generation but of a relevant kind which suits the needs of farming family youth, preferably self-employment or non farm jobs. 174

The industrial sector (dominated by small scale industry) does not offer many skilled jobs and depends on migrant labour for manual work (workers are available for lower wages, have less political clout and bargaining power and therefore do not create trouble). On the other hand, urban people are preferred for skilled jobs as they are more tuned to industrial or corporate work culture. The problem of rural unemployment is compounded by the fact that rural youth do not possess any special skills and do not have an aptitude to work in conventional industries owned by local capital. The only industries they can be more familiar with are agro-processing ones which have recently roped in some rural youth but the job are few as the operations are highly mechanized and few manual jobs remain. 175

As per the Human Development Report of Punjab, 2004 the Intercensus data from 1961 to 1991 shows that while the percentage of agricultural labourers compared to total main workers for the entire country increased from 16.70% to 26.15%, in Punjab it increased from 9.65% to 23.31% during the same period. 176 Information from census of 2001 says that the number of agricultural labourers in the state is 16.4% of all workers in the state. This is not strictly comparable to the data table from the earlier Census (includes only main workers) while Census 2001

174 Singh, Sukhpal, art.cit., p. 1891.
175 Ibid.
pertains to both main & marginal workers. At present agricultural labourers are suffering because of the death of unions and because of the withdrawal of the state from enforcement of minimum wages. In the post reform period, the real wages of casual agricultural labour declined by 3.69% between 1991 and 1996. There is an urgent need to devise special programs for their economic upliftment and upward mobility.\textsuperscript{177}

A significant proportion of Punjab’s agricultural labour force consists of migrant labour from Eastern UP & Bihar (one third of the total agricultural labour is made up of migrants from other parts of the world). During the peak agricultural season the share of migrant labour increases considerably and migrants have begun to replace local labourers in peak agricultural operations specially as attached labourers.\textsuperscript{178} Although Human Development Report of Punjab, 2004 says that Punjab is the only state where wage rates have not declined during the period 1961-84. But from the mid 1980s there has been a gradual decline in the status of agricultural labour as a) mechanization of farms increased reaching its pinnacle in 1990s and plough labour was reduced\textsuperscript{179} b) Increase in real wage rates was an important variable in reducing the demand or labour for wheat and paddy crops in Punjab. Since the 1980s wage rate has tended to rise faster than commodity prices, machine use prices and prices of herbicides, forcing substitution of labour by machine and herbicides.\textsuperscript{180} As on 30.06.2003 the daily rates of minimum wages for agricultural workers fixed by the state was Rs.82.65 per days as under the Minimum Wages Act, 1948. The minimum wages also includes the variable dearness allowance.\textsuperscript{181}

Unlike certain states where farmers’ movements have impacted the lives of farmers and labourers, the same has not occurred in Punjab. As per Sucha Singh Gill, the long period of non-mobilisation of farmers (1984-92) followed by a split (1989-94) in the farmers movement led to fragmentation and marginalisation of the organized movement. The latter period was also synchronous with the process of

\textsuperscript{177} \textit{Ibid.}, pp. 45-46.
\textsuperscript{178} \textit{Ibid.}, pp. 168-169.
\textsuperscript{179} \textit{Ibid.}, p. 173.
opening up of Indian agriculture to global trading system under WTO. With the organized movement of farmers becoming weak and fragmented, the farmers in distress have received little attention/protection from the state. As a result farmers became alienated, frustrated and started committing suicides (farmers facing mounting debts, falling yields and increasing costs of production). The state government being faced with financial crisis has been a silent spectator to the whole tragedy. There are signs of revival of the movement of farmers. This could ultimately lead to better bargaining power in the long run – thereby improving their standard of living.

- Poverty

Punjab continues to have only a small percentage of people below poverty line (6.16% - Rural plus Urban combined in 1999-2000). Inspite of poverty levels being low, Punjab is gripped with the problem of growing indebtedness amongst the farmers and the labourers. The Green Revolution resulted in raised consumption standards in rural areas particularly among the cultivators. Withdrawal of family labour from manual agricultural work was also noticed. However with the increase in the cost of production which continued to increase and a stagnation in the productivity/hectare, the cultivators found themselves cash strapped. Farmers have had little surplus cash at their disposal and have been forced to borrow huge amounts. Thus they have been increasingly dependent on loans to finance their costs of production. As per the Human Development Report of Punjab, 2004 it is estimated that the debt burden of farmers in Punjab is to the extent of Rs. 5700 crores. In per acre terms the incidence of indebtedness is highest among small and marginal farmers. Economic hardship, high incidence of debt burden and harassment by bank officials and moneylenders have triggered instances of suicides by many cultivators. This phenomenon started during the second half of the 1980s and gathered momentum during the 1990s. The number of suicides has now increased to several thousand. Government of Punjab has recognized this fact and in the budget session (March 2001) announced a programme of rehabilitation of the families in which members committed suicide.

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due to economic distress and indebtedness. It was stated that Rs.2.5 lakhs would be given as compensation by the government to the suicide victim’s family. 183

Small farms owned Rs.10,105 per operated acre compared to Rs.4230 owned by big farmers. About 70% of small farms failed to completely clear their short term loans. About 14% of small farms were forced to take the extreme step of mortgaging their land. It was found that 24% of small farmers & 31% of marginal farmers were living below the poverty line in 1979-80. The proportion of marginal farmers below the poverty line increased to 34.07% by 1990-91. 184

H.S. Shergill in his study of Rural Credit and Indebtedness in Punjab state argues that ‘although agricultural production had been growing at a very high rate in the state, per capita income of the farmers have not grown at the same high rate’. Only a few were left with any surplus of their own (growth in consumption having absorbed almost the entire increase in the real income of the agrarian population). As a consequence farmers had to regularly and routinely borrow huge amount to finance the modern agriculture. This is why the growth of agricultural output in the state has been accompanied by an even faster growth of agricultural credit.

Shergill argues that a significant proportion of the short term borrowings by all categories of farmers were from the commission agents in the grain markets, the arhtias. The Primary Cooperative Credit Societies came next. Commercial Banks were more popular when it came to long term loans for investments in farm machinery. The only other source from where long term investment loans were available to the farmers was the Cooperative Land Development Banks. 185 The study by Iyer and Manick treats the crisis of the agrarian economy and the growing indebtedness as the foremost causes of the increase in suicides. The IDC study of suicides in Rural Punjab (coordinated by Pramod Kumar and S.L. Sharma) tends to treat the social factors (family discord, alcohol & illicit drug use) as being much more determining while explaining the rural suicides in contemporary Punjab. However a

184 Ibid., pp.175-176.
crucial factor identified by both was the general break down of the ‘community and kinship’ support system in the rural Punjab. The economic development, dominance of the capitalist value system, emergence of consumerist culture and the role of mass media had contributed jointly to the degeneration of the traditional value system and was being overtaken by the value of individualism. Moreover the role of traditional institutions like the Biradari, village panchayat, religious and other humanitarian institutions which were providing mutual help and social security were now under great stress.  

Further among the farmers, the penetration of material culture led to overspending and the culture of keeping up with the neighbours led to unnecessary purchase of tractors and other farm equipment and building of costly houses. Tractors have become a status symbol for farming families consequently Sukhpal Singh argues that today there are only about 30% farming households, which are not into an economic crisis because either they are large land holders, practise joint farming, have one or two family members in paid employment, have some non-farm occupation along with farming or have someone working and living abroad.

As per Singh and Kolar, the farmers of Punjab have been spending beyond their capacity in order to keep pace with the consumption trends in society. Thus they are forced to take loans or sell their assets mainly land. Moreover with the decline in profitability in agriculture, the rental value of land has gone down causing further decline in income. Therefore, it becomes difficult for the farmers to repay the debt even by selling land. On the other hand casual labourers are invariably indebted to moneylenders, landowners and relatives and most of these debts are incurred to meet social obligations such as illness, marriage, house construction and death. Their indebtedness makes agricultural labourers further dependent on money lenders and their local employers. As per the 59th Round of the NSS, the percentage of farmer households indebted in Punjab is 65.4% which is higher than the national average of

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186 Ibid., pp. 123-124.
187 Singh Sukhpal, art.cit., p. 1891.
48.6%. West Bengal on the other hand stands at 50.1%. Moreover average outstanding loan per farmer household was the highest in the state of Punjab.\(^{190}\)

Land and Non-farm sector need to be examined to see which one has performed better to keep the poverty level still low inspite of high unemployment rate and problems of indebtedness.

- Land

One finds that the percentage of agricultural workers (cultivators and agricultural labourers) has declined from 55.2% in 1991 to 39.4% in 2001.\(^{191}\) The number of small and marginal farms rises every year due to distribution and division of land by inheritance, family partitions and the modes of transfer of rights. A disparity between ownership and operational holdings indicate that better off farmers acquire land from small farmers under lease. This phenomenon is known as reverse tenancy. Small farms of 5 acres or so are non-viable on their own. Even if it is assumed that farmers can cultivate the best possible crops, or combination of crops, the returns remain inevitably small. The Commission for Agricultural Costs and Prices has calculated that during 1997-98 returns from a single hectare of land for paddy and wheat crop in Punjab was only Rs. 7300. If the average size of small farms is taken as 1.61 hectares, the total net return was Rs. 12000 for two crops in a year, which is well below the minimum wages necessary for survival. Thus small farms perse are not viable unless they are supported with additional income from other sources.\(^{192}\) Since agriculture is dependent on capital-intensive technology, it requires massive investment both in fixed as well as working capital and this has resulted in marginal and small holdings fast losing. Marginal and small holdings constituted 56.54% of the total holdings in 1970-71 but declined to 35.43% in 1995-96. The number of medium, large and extra large holdings has increased respectively from 281103, 247755 and 68883 (1970-71) to 320340, 305792 and 79612 in 1995-96. The combined share of these holdings (medium, large and extra large) increased from 43.46% in 1970-71 to 64.57% in 1995-96. Loss in the marginal holdings in number


\(^{191}\) Punjab Human Development Report, op.cit., p.36.

\(^{192}\) Ibid., pp. 173-174.
and proportion is the largest followed by small holdings. Marginal holdings have lost by 18.98 percentage points and small holdings have lost by 2.13 percentage points.

In absolute terms the number of holdings in 1995-96 over 1990-91 was less by 20.53%. This means one fifth of the operational holdings have declined/disappeared from the scene with mainly marginal and small holdings accounting for this disappearance. The cultivators with marginal landholdings are very poor, lack capital resources and have no other skill that can help them join the ranks of labour in rural or urban areas. This leads to lowering of their social status and loss of an assured source of livelihood. In 1995-96 the percentage of marginal i.e. below 1 hectares was 18.65%, small (1-2 hectares) was 16.78% and medium (2-4 hectares) was 29.31%. Large (4-10) was 27.98% and extra large (10 and above) was 7.28%. Liberalisation of the economy in the 1990s has resulted in new problems for the farming community (in particular the small farmers). Farmers are being pulled by the increasing demands of the market and the state, into a nexus of relationships that extend beyond the farm, to the national and international level. What characterises the contemporary situation is the variety of forces with which small farmers must deal. The size, complexity and impersonality of these organizations have resulted in a qualitative change in the nature of small holders’ relationship to the outside world.

Sukhpal Singh comments that ‘the state’s agricultural sector has grown along the capitalist lines of production relations, which has led to the concentration of resources into the hands of certain categories of farmers.’ Reverse Tenancy confirms this practice because of which small and marginal farmers have become non-agriculturalists or labourers and the large ones have grown into agro-businessmen or agro-industrialists and transporters.

Small and marginal farms are not viable unless they are provided with proper technology and supported by additional income from other sources. Inspite of andlessness increasing, poverty has remained low. This is because many of the small and marginal farmers and agricultural labourers have moved to the non farm sector.

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13 Ibid., pp. 41-42.
14 Ibid., p. 174.
15 Singh, Sukhpal, art. cit., p. 1891.
- Diversification and Non Farm sectors.

There is a proposal by the government of Punjab to shift to valued added and water light crops such as fruits and vegetables, maize, oilseeds, sugarcane, floriculture and to revive allied occupation such as dairy farming, poultry, piggery, mushroom cultivation, bee-keeping etc. by launching a programme called 'Second Push in Punjab Agriculture and Allied Sectors'. This is intended to create a shift in the cropping pattern and also to generate more employment/income in the state keeping in mind the available resources and protect the ecology from further deterioration. 196

As part of its diversification programme in agriculture, the Punjab government has set up four Special Purpose Vehicles (SPVs) to promote citrus and fruit juices, value added horticulture, viticulture and organic farming. Separate councils for each category have been set up. The main objective of the councils was to focus on shifting Punjab from primary agricultural and low value produce to high value processed products. The government’s aims are that one third of the state’s farm sector should diversify to citrus and high value horticulture, viticulture and organic farming in next ten years. 197 Punjab has an export surplus of wheat, rice, cotton, milk and livestock products and there is a scope in case of some fruits, vegetables and flowers. But it is being feared that when India is deficit Punjab will not be allowed to export and hence it will not benefit the Punjab farmers.198

From 1980 to 1992, except for 1989, wheat remained uncompetitive in the international market throughout this period. However mainly as a result of sharp devaluation of the currency in 1991, Punjab wheat has become quite competitive during 1992 to 1995. In terms of export competitiveness, rice alternated between being competitive and noncompetitive during 1980 to 1987. However it turns out that during all the years from 1988 to 1995, Punjab rice has remained competitive in price in the international market. In the case of cotton, Punjab has been consistently competitive in the international market in terms of its price. For all the years during 1981-82 to 1994-95 except for 1988-89, the export price of Punjab cotton was

197 "Punjab’s Thrust on Diversification in Farm Sector" (2006), The Hindu, Delhi, January 12.
significantly lower than that quoted by its competitors in the international market. Moreover Punjab is not an efficient producer of sugarcane. Consequently the state does not enjoy a comparative advantage in the export of sugar.

Punjab is internationally competitive in price and can profitably export both rice and cotton to the rest of the world. However the state would have to reduce its production costs in wheat through technological upgradation should it wish to become competitive in the case of wheat, its major crop. In addition certain policy measures would have to be initiated if the state aspires to emerge as an exporter of agricultural products. Diversification leading to exports can benefit the state but it can also be risky for farmers specially small and marginal farmers as it requires proper infrastructure, credit facilities and marketing and extension services and advanced research and development facilities to improve the quality of output. These need to be set up before the state goes in for diversification on a large scale for export. The Punjab Agricultural University is already initiating steps to improve its research programmes in order to be competitive with the outside world.

The role of the non-farm sector in the transformation of a developing economy is crucial. The share of main workers in non farm activities increased from 36.37% (1971) to 43.92% (1991). An average of 2.94 person were usually found to be working for every non-agriculture enterprise. Out of these the number of hired workers per enterprise was 1.70 & that of non-hired workers was 1.24 persons. The income share of the non-agricultural sector in the NSDP is higher than its share of the workforce. Since the income is higher per worker in non-agricultural activities, it is pulling workers out of agriculture. The per worker income in agriculture as a ratio of average per worker income in the state declined from 91.69% (1971) to 82.62% (1991) while that of workers in non-agricultural activities increased from 114.54% (1971) to 123.90% (1991). The Average per worker income in non-agricultural activities in 1991 was 50% more than that of workers in the agriculture sector. However diversification has been facing problems. It was thought that the

system of contracting farming would encourage diversification, which is essential for ecological survival of farming in Punjab.

However, much of the recent area that has come under contract farming has been for Basmati, a rice crop that is extremely intensive in its water usage. The private companies have not provided the required extension services in the contracted areas. This has resulted in inappropriate agronomic practices and poor quality of grains in areas where basmati is not traditionally grown. In Punjab, there is increasing dissatisfaction among the farmers who have entered into contracts with buyers because quality control has been used as means to effectively reduce the output prices. The Punjab Agro Foodgrains Corporation has been forced to buy the basmati rice rejected by the contracting firms. The trend in lower prices has led to loan defaults by farmers. It remains to be seen what options does Punjab Agriculture have to improve its condition. 202

Devinder Sharma says that what makes contract farming questionable is the highly intensive cropping pattern that requires nearly 15 to 20 times more intake of chemical inputs. The more the chemical inputs, the more is the water requirement making contract framing unsustainable. It renders the land unfertile in 4 to 5 years thereby adding on to the farmer’s woes. 203

Meanwhile, Reliance Retail’s operations in Punjab started in the latter parts of 2006, have been extremely contentious. The opposition Akali Dal has opposed the venture, describing it as a ‘total-sell off’ of Punjab’s agriculture to a single company. Reliance has begun a massive retail project involving a planned investment of $ 5 billion over the next 5 years. A significant portion of this investment is being used to develop a food supply chain which would connect retail stores with farmers, beginning with a system of rural procurement centers in Punjab. Agricultural operations in Punjab include the planned opening of 50 ‘rural business hubs’, 300 ‘satellite hubs’ and 20 ‘agro-processing units’. These rural hubs will sell inputs, lease

machinery, offer extension services and procure produce for Reliance retail. The Draft of the Fifth and Final Report of the National Commission on Farmers has also talked of the need for developing firstly a code of conduct for contract farming for major groups of farm commodities and secondly a monitoring committee at the state level consisting of farmers and appropriate officials.

As far as Food availability is concerned, Punjab is a surplus state. However there has been stagnation in the productivity and in the yields in the last couple of years. Better credit facilities along with improved research and development is required from the sustainability point of view. Moreover this has to be done keeping in mind the ecological issues faced by the state specially that of a depletion of the water table. In terms of food accessibility, Punjab with a low poverty level of 6.16% has a good position. Unemployment levels have however risen along with landlessness. However with the focus on nonfarm sector, there has been a positive sign in keeping the poverty levels low. Moreover productivity continues to be high as compared to other states which is instrumental in maintaining the low levels of poverty.

2.6 West Bengal

2.6.1 Food Availability

West Bengal is endowed with rich natural resources (large areas of good alluvial soil, abundant surface water and ground water resources) and climatic conditions (good rainfall). However inspite of many years of these favourable conditions, the growth of agricultural production in the state was low, as in other parts of eastern and north eastern India and lagged behind the national average.

Agriculture - Pre 1991 – Brief History

If one looks at the pre-1991 phase, one finds that in the absence of industrial (and other non-agricultural) development, the agrarian economy remained the mainstay for the overwhelming majority of the rural population and despite

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reasonable agricultural production, output in this sector remained stagnant from the fifties to the early eighties. 207 The crisis in Bengal was not specifically confined to Bengal but it was an integral part of the crisis of the Indian economy. However as Prabhat Patnaik says ‘it appeared in Bengal in a particularly accentuated form because every ‘depressor’ of the Indian economy had a particularly severe impact upon Bengal.’ 208 Bengal had been badly affected by British colonialism (permanent settlement had prevented any investment in irrigation and other yield raising measures and there was high levels of exploitation). Also Independence and the following decades could not overcome this acute agrarian crisis (inadequate investment in irrigation and lackluster agricultural growth). The mid-60s saw an acute food crisis all over the country in which the Eastern region was particularly hard-hit. Also while the Green Revolution raised yields significantly in certain parts of the country, Eastern India including West Bengal remained largely untouched by it. This agrarian crisis was compounded by an industrial crisis. 209

From the mid-1960s, however, the political power of the big landlords was effectively challenged in the late 60s when wide sections of the small and medium sized land owners threw their lot in with the struggle of the landless and the land-poor. Sengupta and Gazdar comment that in terms of area of land vested and redistributed the real breakthrough in West Bengal had occurred well before the Left Front came to office in 1977. Some 625,000 acres of land had been redistributed by then and West Bengal already had a commanding position in the implementation of ceiling laws in comparison with other Indian states. After 1977, a further 287,000 acres representing under a third of the total area redistributed were assigned. The number of beneficiaries however increased by almost a million and more than doubled.210

Two important features of agrarian structure in Eastern India is that

210 Ibid.
210 Sengupta and Gazdar, art. cit., in Dreze and Sen, op. cit., pp. 141-143.
1. the majority of cultivators are small and marginal farmers who operate fragmented landholdings. The average size of a holding in West Bengal in 1980-81 was 0.9 hectares and about 70% of holdings were of less than 1 hectare each.

2. Another notable feature of agrarian structure was the widespread prevalence of concealed tenancy that was associated with insecurity of tenure and created disincentives for increased production.\footnote{Rawal and Swaminathan, art. cit., p. 2598.}

Production on small and fragmented holdings is a constraint to the application of technology and this was evident as D. Bandyopadhyay says when the impact of the Green Revolution of the mid late 1960s was felt in West Bengal over a decade later only after agrarian relations underwent a massive change through two phases of land reform. Land reform in West Bengal took place in 2 phases. The 1st phase was in 1967-70 under the two UF governments. By 1970 about a million acres of good agricultural land vested in the state. The poor peasantry participated as witnesses in the quasi judicial proceedings which were launched to unearth the clandestinely held land strictly according to law. The second important effect was the atrophy of the class of rentier landed gentry. The space they vacated was gradually occupied by middle and upper peasantry who were productive agents.\footnote{Bandyopadhyay, D (2003), "Land Reforms and Agriculture", Economic & Political Weekly. March 1, pp. 879-881.}

Sengupta and Gazdar comment that in contrast to the direct approach to land redistribution of the late 60s, the Left Front redistribution programme has been less dramatic and more institutionalized.\footnote{Sengupta and Gazdar, in Dreeza and Sen, op. cit., p. 145.}

Some critics have decried this shift in West Bengal politics from activism to institutionalization as the failure of the Left Front to uphold the interests of the poor.\footnote{Gazdar, Haris and Sengupta, Sunil (1999), "Agricultural Growth and Recent Trends in Well being in Rural West Bengal" in Rogaly, Ben, Harriss-White, Barbara and Bose, Sugata (eds). Sonar Bangla? -Agricultural Growth and agrarian change in West Bengal and Bangladesh, New Delhi, Sage, p. 69.}

West Bengal experienced a radical change in the late 1970s with the introduction of the left front government. Two important changes that were brought about under this new government brought to an end of what has been called the
'agrarian impasse' in West Bengal. They were land reforms and the revitalization of the Panchayati Raj Institutions. Under land reforms there were two main aspects as Rawal and Swaminathan say Tenancy reforms (Operation Barga) and Redistribution of land.\textsuperscript{215} Under Operation Barga launched in 1978, tenancy was made inheritable, crop shares were fixed at between two thirds and three-quarters depending on the sharing of inputs and clauses in earlier legislation that provided loopholes for eviction of tenants were plugged.\textsuperscript{216} Under Operation Barga by 1990 the names of 1.4 million sharecroppers were registered in the land records. This registration ensured not only security of tenure but it also prevented the eviction of tenants by non-cultivating landlords and made tenurial contracts more transparent. Thus Registration created new rights for tenants (in respect of rent payments and access to credit from the formal banking sector). Moreover non agricultural land has also been redistributed for afforestation, community use etc. and plots for homestead land were distributed to 2,50,000 agricultural labour, artisan and fishing community households.

Also another major change in rural West Bengal was the reorganization of the system of local government in 1977 from a four tier system to a three tier system and the establishment of a gram panchayat at the ‘anchal’ level (an anchal is a group of villages), a panchayat samiti at the block level and a zilla parishad at the district level. A decentralized planning and administration was established with the reorganization of the PRIs.\textsuperscript{217} The political significance of the PRIs in the state is due to the prominence given to them in the agrarian reform programmes of the Left Front and they have been part and parcel of the programme of change including the redistribution of power from landed elites to an alliance of small farmers and the landless poor. During the Left Front era the energies of the peasant and party organizations were channelized through the PRI structure. The PRIs have played an important role of that of mediation in conflicts related to terms of lease and agricultural wages.\textsuperscript{218} A related development and one closely associated with the implementation of land reforms has been the fixing and implementation of minimum wages for agricultural workers (the Kisan Sabha (peasants Union) played an

\begin{itemize}
  \item Rawal and Swaminathan, \textit{art. cit.}, p. 2598.
  \item Sengupta and Gazdar, \textit{art. cit.}, in Dreze and Sen, \textit{op. cit.}, p. 149.
  \item Rawal and Swaminathan, \textit{art. cit.}, p. 2598.
  \item Sengupta and Gazdar, \textit{art. cit.}, in Dreze and Sen, \textit{op. cit.}, pp. 160-162.
\end{itemize}
important role) and there has been substantial increase in agricultural wages in West Bengal in the 1980s.  

West Bengal achieved the fastest rates of growth in the output of food grains among all Indian States in the 80s. Between 1969-70 and 1979-80, total foodgrains production increased at an average rate of 2.5% a year in India as a whole and at 1.7% per year in West Bengal – lagging far behind the rate of increase of population. From 1979-80 to 1989-90 however West Bengal’s foodgrains output grew at an average rate of 3.4% per year compared to India’s 2.7%. This trend has continued into the nineties and for the entire period from 1978 to 1991, West Bengal’s trend growth rate in foodgrains output was 4.6% compared with 2.8% for the country as a whole.

The growth in agriculture occurred due to a combination of changes like redistribution of land, security of tenure, public investment, irrigation, and increased agricultural wages. Moreover the major chunk of this growth can be attributed to the small and the marginal farmers. During the last two decades, some parts of West Bengal have had an unprecedented growth in agriculture (due to expansion of irrigation, high yielding variety seeds, fertilizers and pesticides). They are Burdwan, Hooghli, Nadia and some parts of 24 Parganas. These areas today constitute the 'Green Revolution' belts of Bengal. The agriculturally advanced districts of West Bengal are mostly located in the alluvial gangetic Delta.

However Rawal and Swaminathan point out that though there has been high growth in output and productivity in the 1980s in West Bengal, there does not seem to have been a commensurate increase in the use of fertilizers and in the adoption of high yielding varieties of seeds. Also they argue that organizational support to agriculture in the product and credit markets did not improve significantly in the 1980s. The growth rates of the number of regulated markets per unit of net sown area, the amount of rural advances from commercial banks and the total volume of

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219 Rawal and Swaminathan, *art.cit.*, p. 2598
cooperative credit advanced were lower in the 80s than in the 1970s. Eastern India also received a relatively lower share of financial assistance from NABARD and financial assistance from NABARD per rural household was small as compared to all other states.\(^{223}\) Thus as far as agricultural inputs are concerned, the pace has been rather slow. Dipankar Basu, on the other hand, comments that reverse tenancy did make its appearance in rural West Bengal and by the mid 1980s the moneylenders were back competing and even sometimes replacing banks and co-operative institutions. Moreover he argues that the PRIs were used to create the political hegemony of the ‘middles’. The fact of large transfers, of land from the ‘large’ to the small with the ‘middle’ remaining largely untouched best explains the evolution of agrarian politics in rural West Bengal for the last three decades: the ascendance of the ‘middle’ with the support of the ‘small’ resulting in the near liquidation of the ‘large’. But subsequently as has happened elsewhere in time, and place, this meant, at last for the ‘small’ the mere replacement of one class of rulers (the large) with another (the middle.)\(^{224}\)

While the rate of growth of foodgrains output has been very high, the cropping pattern in most of the districts has noticeably changed in favour of high value non foodcrops. Extension in the area under the cultivation of potato, oilseeds and other non foodgrain rabi crops suggests that the cultivators production decisions are considerably guided by market forces.\(^{225}\) In the 80s, West Bengal witnessed a switch to high yielding varieties, a shift towards cash crops like oilseeds and vegetables and a substantial expansion of multiple cropping.\(^{226}\)

- Post 1991 Developments

For assessing the impact on Food Availability in West Bengal the following aspects have been considered.

\(^{223}\) Ibid., p.2599.
- Growth

In West Bengal, agriculture’s share in Gross state domestic product has been consistent and this could be one of the reasons for the state doing so well. It had a compound annual growth rate of 7% and per capita growth of 5.4% over the period 1993-94 to 2000-01 making West Bengal one of the fastest growing states in India in that period. However, there has been for the past three years a severe crisis in the agriculture sector, as cultivators have been hit by lower or stagnant crop prices because of the threat of import competition from highly subsidized imports, even as they struggled to cope with higher costs because of cuts in domestic input subsidies.\(^{227}\) Agriculture was driving the West Bengal economy, so this naturally created enormous pressure upon the state. In 2000-01, the share of agriculture in gross state domestic product was 25.2%, which reduced to 24.4% in 2001-02.\(^{228}\)

- Foodgrain Production

- There has been a decline in production as the rate of growth of foodgrains in West Bengal slackened in the 1990s to 2.39% from 5.15% in 1989-1990.\(^{229}\) Cereal production rose by 28% between 1985-86 and 1990-91. In the two successive five year periods that followed, this particular growth rate fell to 14% and then 11%. Similarly the growth rate of total agricultural output fell from a high of 15% & 16% (over the periods 1985-86 to 1990-91 & 1990-91 to 1995-96 respectively) to 9% over the period 1995-96 to 2000-01.\(^{230}\) There was a decline in the annual growth rate of rice production from 6.28% (1980s) to 2.19% (1990s). The decline in the growth of total rice production was primarily due to a decline in the growth of yield.\(^{231}\) The total foodgrain production declined in 2002-03 as compared to 2001-02 on account of poor monsoon (from 16501.24(‘000 tonnes in 2001-2002) to 15522.55(‘000 tonnes in 2002-2003). In 2003-2004 despite a successive unfavourable monsoon the production marginally increased to 16009.21(‘000 tonnes) (Pr). This is however lower than the 2001-2002 productions. The total cereal contribution declined

\(^{227}\) West Bengal Human Development Report 2004, Development & Planning Department, Government of West Bengal, pp.5-7.
\(^{228}\) Agricultural Statistics at a Glance, August 2004. op.cit. p.22.
\(^{229}\) Bandyopadhyay, art.cit., p. 883
\(^{230}\) Banerjee, Bardhan, Basu, Dutta Chaudhuri. art.cit., p. 4213.
\(^{231}\) Bandyopadhyay, art.cit., p. 883
from 98.91% of the total foodgrain production in 2002-2003 to 98.67% in 2003-2004.\textsuperscript{232}

Agricultural growth decelerated in 1990s although West Bengal still had the highest rate of growth of foodgrain production in India. Some of this deceleration reflected the fact that boro rice which had expanded extremely rapidly at more than 12% per year in the 1980s slowed down to around 5% per annum largely because of the area under boro expanded much less rapidly. The earlier expansion in crop output has slowed down in the 1990s even though there is still potential for increasing yields in many crops. Many of the adverse features of greater market orientation & external liberalization which have affected farmers across India have also impacted negatively on peasants in West Bengal. Thus cultivators in West Bengal over the 1990s were hit by higher input costs especially for seeds, fertilizers, pesticides, water & electricity, highly volatile, stagnant and even falling farmgate prices of foodgrains and some cash crops, sharp declines in access to formal credit and crop loans, inadequate investment in physical infrastructure such as roads as well as irrigation & water management & declining access to agricultural extension services run by the public sector.\textsuperscript{233} The total area under foodgrain production declined in 2002-2003 as compared to 2001-2002 (from 6807.10('000 hectares) in 2001-2002 to 6539.08('000 hectares) in 2002-2003). In 2002-2004 the area marginally increased to 6611.76('000 hectares). The area under cereal production in 2003-2004 stood at 96.19% as compared to 96.30% in 2002-2003.\textsuperscript{234}

- The average yield of rice in West Bengal in 1999-2000 of 2259 kg per hectare was higher than the national average of 1928 kg per hectare but lower than the better performing states of Tamil Nadu & Punjab.\textsuperscript{235} Also it is not clear that the future of West Bengal lies in growing more and more rice. The demand for West Bengal grown rice is not growing as fast as supply, with the consequence that prices have fallen sharply in recent years.\textsuperscript{236} It is pertinent to note that despite of the poor monsoon in the two successive years (2002-2003 & 2003-2004) the yield rates of major rice

\textsuperscript{233} West Bengal Human Development Report, 2004, \textit{op.cit.}, pp.75-76.
\textsuperscript{235} West Bengal Human Development Report, 2004, \textit{op.cit.}, p.74.
\textsuperscript{236} Banerjee, Bardhan, Basu, Dutta Chaudhuri..., \textit{art.cit.}, p. 4213.
crops have not declined noticeably. The yield of rice in 2002-2003 (2463kg/Ha) continued to be higher in West Bengal than the national average (1804kg/Ha). However it is still lower than Punjab which is at 3510kg/Ha.237

- The non-foodgrains component has expanded substantially. The share of non-foodgrains in total gross area has increased. The increase is estimated at 7% from 12.32 (170-73) to 19.35 (1992-93). The index of production of non-foodgrains rose more than three fold during 1970-71 (100) to 1997-98 (330) whereas the growth in foodgrain was only about 98% during the same period. Oilseeds, potato and vegetables have recorded impressive rates of growth since the early 70s. Fruit production and horticulture also have been rising in importance in recent years.238

Total oilseeds production has increased from 493.74 (‘000 tonnes) in 2001-02 to 651.74 (‘000 tones) in 2003-04 (Pr). Area under oilseeds has gone up and yield too has increased from 816 Kg/Ha in 2001-02 to 951 kg/ha in 2003-2004 (Pr).239 Production of vegetables and fruits went up. Production in vegetables went up from 10635.95 (‘000 MT in 2002-03) to 10918.851 (‘000 MT in 2003-04) & production in fruits went up from 1785.60 (‘000 MT in 2002-03) to 2015.081 (‘000 MT in 2003 – 04). The state government has taken active promotional measures to encourage the cultivation of different horticultural crops in the state. These efforts have resulted in the increase in the area under fruits and vegetables from 871 thousand hectares in 1990-91 to 1281 thousand hectares in 1999-2000 as was reported by the Department of Agriculture & Cooperation, Government of India. The state government is distributing hybrid vegetable seeds to small and marginal farmers in all the districts in the state. The state government operates an incentive scheme for encouraging farmers to set up orchards for fruit plants and distributes fruit plants to small and marginal farmers.240

- Ecology

There is some evidence that in West Bengal the water table is not being replenished and the scope for expanding further the diesel tubewells and canal

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240 Ibid., p.24-26.
irrigation seems to be relatively limited. The switch to high yielding varieties can continue for a few more years but with 60% - 70% of acreage already converted, it will not be for long. Also West Bengal is falling behind the rest of the nation in terms of water management. Panchayats need to be strongly encouraged to build and maintain water-harvesting structures especially in view of the continuing deterioration in the condition of ponds all over West Bengal. Wherever additional water resources are still available, the success of the pilot tubewell groups programme suggests that this may be the way for the future. Also floods have become increasingly frequent in West Bengal with devastating consequences for farmers and the state government needs to be much more concerned with flood control.241

As per the West Bengal Human Development Report, 2004, the relatively small expansion of forest area accompanied by declining area of land under miscellaneous tree groves and permanent pastures and other grazing land (which declined by 46.8% even over the period 1996-97 to 2000-01) may lead to serious environmental consequences such as loss of topsoil, biodiversity, livestock carrying capacity etc unless compensated by growth of forest biomass. As the agricultural land is not available for expansion of forest cover, it is only the cultivable wastelands and part of the fallow land other than current fallows which are the available potential areas on which forest cover can be expanded.242

There are various sources of problems related to soils such as soil erosion, soil salinity, soil depth, drainage and waterlogging. They have important implications for land use planning. Two categories of soil degradation in West Bengal can be identified: (a) soil degradation due to displacement of soil material mainly through water erosion, b) physical and chemical deterioration of soil due to waterlogging, flooding and salination. Forests constitute 14% of the geographical area but the state is still deficient in forest cover compared to the national average of 23%. Moreover the land use pattern in rural and urban West Bengal suggests that the aggregate demand of water may in future far exceed the endowment in a given location. Inefficient use and waste of water are major and common problems encountered in all irrigation command areas. The lack of development of field channels also contributes

241 Banerjee, Bardhan, Basu, Dutta Chaudhuri..., art.cit., p. 4213.
to wastage of water besides large losses of water due to seepage. Many of the irrigation command areas have no facility for draining out excess water and so waterlogging is a common experience. Both surface and ground water resources in West Bengal have been increasingly getting polluted in the rural and urban areas.\textsuperscript{243}

However

(1) Work of assessment of ground water and surface water, augmentation of ground water resources through artificial recharge and delineation of aquifer with saline, arsenic and fluoride contamination or occurrence has been intensified.

(2) Apart from protecting the arable land from floods and waterlogging, the state government has taken up a number of programmes for reclamation areas affected by different type of soil degradation.

(3) Measures like contour and graded bunding, landleveling, bench terracing, gully control, construction of water harvesting structures, vegetative measures like agro forestry have not only increased the water level of treated area through percolation of rain water but also created biomass in unproductive land.

(4) Till the end of 2002-03, an area of 4.576 lakh hectares i.e. 20.49% of the degraded land could be treated under various soil and water conservation schemes under the Natural Resources Management Programme.\textsuperscript{244}

2.6.2 Food Accessibility

- Employment

The rate of employment generation in terms of aggregate main work has been lower than the rate of expansion of the population & substantially lower than the rate of income growth. In West Bengal, much as in the broad all India trends employment growth lagged well behind output growth. However unlike most of rural India, rural West Bengal did not experience absolute decline in agricultural employment which continued to grow, albeit at a slower rate. Rural employment has suffered more than urban employment in the 1990s. In the rural areas, population growth has been more than double the rate of growth in the number of main workers, while the number of

\textsuperscript{243} Ibid., pp.179-183.
marginal workers has increased at a rapid rate. In urban areas main workers grew faster than total population growth and employment picture looks slightly better.

The ratio of main workers to total male population in the rural areas fell quite significantly over the decade (51.18% in 1991 to 46.00% in 2001) & the shift from main to marginal work (0.91% in 1991 to 8.30% in 2001) suggests that fewer days of employment are generally available and that more secure forms of employment are being replaced by less secure forms. West Bengal also has among the lowest recorded rates of female work participation in the country. However female work participation rates in West Bengal have been rising in the recent past, both for main and marginal workers. For male workers, the big shift has been in terms of decline in the share of cultivators (who have also declined in terms of absolute numbers). This may reflect the increase in the share of landless households, which is reported by the NSS, whereby fewer rural men report themselves as mainly working on their own household plots. By contrast, the proportion of male agricultural labourers has remained broadly stable at around 23%. ‘Other Workers’ have increased commensurately. This suggests that those who have stopped cultivating have not become agricultural labourers; rather they have become self-employed people or engaged in other forms of rural paid labour. For women workers in West Bengal, the share of both cultivators & agricultural labourers has declined. In this case, the importance of ‘household industry’ has gone up quite sharply. This is a strong process in rural areas of the state. West Bengal currently shows one of the highest rates of employment diversification out of agriculture in the whole of rural India.

According to the NSS, in terms of usual activity while male employment shows a sharp decline in growth, that for women has actually turned negative over the latest period, i.e. the second part of the decade of the 1990s. In terms of daily status, both men & women experienced a decline in employment after reasonable growth in the earlier period. Since mid 1990s when the broader macro-economic processes such as economic liberalization and reduced per capita government expenditure had their effects across the whole of rural India, it was marked by severe negative effects on employment generation in rural West Bengal. According to the NSS, for rural men the

most significant changes are the decline in regular employment and the increase in casual work. Self-employed men (in both agriculture and non-agriculture) currently account for about half of the rural male workforce while those with casual jobs are more than two-fifths (43.3%) and those with regular employment are only 7.5%. For rural women workers self employment is the dominant form accounting for nearly two-thirds of such work. Rural wages appear to have increased over the entire period but more work is casual in nature. In 1990s the rate of increase in the wages tapered off to some extent but real daily earnings still increased by more than 2% per year for both male and female agricultural labourers in the state.\textsuperscript{246} Kishan Sabhas (peasants union) have played a very important role in the wage negotiations. The daily rates of minimum wages for agricultural workers fixed by West Bengal under the Minimum Wages Act, 1948 is Rs. 108.57 with meals and Rs. 111.77 without meals (as on 30.06.2003). The minimum wages also include the variable dearness allowance.\textsuperscript{247}

Rising agricultural output, associated with the spread of multi cropping, availability of employment in the rural non agricultural sector combined with significant employment generation through government programmes and investments have ensured a rising agricultural wage rate for all the districts (except Purulia where data was not available), average annual wage rate increased in 2003-2004 as compared to those in 2002-2003.\textsuperscript{248}

One sees a paradox in West Bengal i.e. while output growth since 1993 has been quite creditable, rate of employment generation has lagged behind. Such an outcome is surprising in West Bengal since the expansion of economic activity in the state has been dominantly small-producer led in both agriculture and non-agriculture sectors.\textsuperscript{249} Rural employment in the period 1993-94 to 1999-2000 grew at the very low annual rate of less than 0.6% per annum and well below (only 1/3rd) the rate of growth of rural population. Urban employment at 2.3% per annum was also well below that of earlier periods and employment in the formal sector stagnated.\textsuperscript{250}

**Poverty**

According to Planning Commission the incidence of poverty in West Bengal in 1999-2000 at 27% of the population below poverty line was rurally concentrated:

\textsuperscript{246} Ibid., pp.92-95.
\textsuperscript{249} West Bengal Human Development Report, 2004. \textit{op.cit.}, p.112.
\textsuperscript{250} Ibid., pp.6-7.
84% of the absolutely poor population of West Bengal lived in rural areas compared to 74% in India as a whole.251 The wide disparity in terms of the incidence of poverty is an important feature. Poverty is lowest in the Kolkata metropolitan area and its surroundings, to the extent that urban poverty appears to be negligible in Haora & even rural poverty is very low in this district. The district of North 24 Parganas also shows relatively low poverty. However there are some districts with very high poverty which has persisted even to the end of the 1990s. In fact the rural poverty figures for Purulia & Bankura are so high as to be alarming. Other districts with high rural poverty are Birbhum, Murshidabad & Jalpaiguri. However on the whole, the incidence of poverty in West Bengal has come down. While there are some problems of comparability of the 55th Round NSS data for 1999-2000 with the earlier rounds, it is possible to introduce some degree of comparability by making some adjustments. It is evident that poverty has indeed come down over the 1990s (although the decline is slightly less than is suggested by the unadjusted 55th round data). However the variation in incidence of poverty by household occupational category is substantial.252 G.K. Lieten comments that West Bengal stands out for its sharp reduction in poverty levels. The World Bank country study of India concludes that notably Kerala and West Bengal had the fastest rates of poverty reduction over 1978-94 and attributes this to land reforms. By 1997 the share of the population below the poverty line was just about one-fourth.253 However reports of ‘Starvation’ deaths from Amlashol village in West Dinajpore’s Belpahari area in 2004 filtered in. In Amlashol, only 260 km from Kolkata, lack of planned efforts to develop a backward forest area is apparent; though the village falls under PDS umbrella & tribals own ration cards, they have no money to buy the grains & it remains with the local ration dealer. The Sarvasiksha Abhiyan has turned out a farce. Moreover the government has also banned the individual sale of kendu leaves ( which used to sustain them in the past ) & instead formed various cooperative organizations of tribals to collect & sell these leaves in the market – proceeds of such sales have been earmarked for tribal ‘welfare & development’, the evidence of which is little. The deaths are symptoms of an acute deprivation that affects the whole area, not just one village.254

251 Ibid., p.9.
252 Ibid., pp.80-81.
253 Lieten, G.K (2003), Power, Politics and Rural Development, New Delhi, Manohar, pp. 122-123.
The percentage of agricultural labourers to total workers in rural areas has remained marginally increased from 32.3% in 1991 to 33.0% in 2001. Agricultural labourers remain the poorest section of the population and have also experienced the lowest decline in poverty rates. Even in 1999-2000 nearly half of such households were absolutely poor. The groups with the second highest incidence of poverty is that of other labour, the poverty ratio at the end of the decade was less than one-third and also that this group had experienced the largest drop in poverty over the 1990s. The lowest poverty ratio was, for the miscellaneous category ‘others’ although for this group the incidence of absolute poverty seems to have increased marginally. The group of cultivating households showed a broadly stable extent of poverty, at around one-fifth of such households. G.K. Lieten comments that Unlike in the rest of India where a process of depeasantization was on, many areas in West Bengal have witnessed a process of repeasantization. The distributed plots were small, but they helped to increase the bargaining power of agricultural labour households. As a consequence agrarian wages began to rise in real terms together with an increasing labour participation rate and with more income remaining in the hands of the bargadar, rural poverty declined. Income inequality in West Bengal by the end of the century was lower than in any other state of India and increasing employment in the farm sector as well as in the non-farm sector are likely to have augmented the total pay received by the rural poor.

However West Bengal has been facing some problems with relation to credit. Falling access to institutional credit have adversely affected cultivators. By 2002, the credit-deposit ratio of all banks in rural West Bengal (commercial banks, regional rural banks and cooperatives) was as low as 26%. The performance of cooperative banks has been far better than the commercial banks in terms of providing credit to small & marginal farmers, also cooperative banks have significantly improved upon their ability to raise deposits. This suggests that future strategies of the government concerned with improving conditions for agriculturists may now need to focus on

256 Ibid., p.81.
257 Lieten, G.K., op.cit., p. 117.
258 Ibid, pp. 122-123.
these issues especially the revival of rural extension services and credit to agriculture in particular small farmers.259

The West Bengal Economic Review 2004-2005 states that the disbursement of credit to the agricultural sector by commercial banks (CB), regional rural banks (RRB) and the cooperative sector was Rs.1096.10 crore in 2003-04 against Rs.858.27 in 2002-2003. However all categories of banks failed to achieve the targets set for them. Achievement as a percentage of target was lower in 2003-04 compared to 2002-03 for all categories of banks. Specially significant was the sharp fall in the percentage of State Cooperative Banks/Central Cooperative Banks in 2003-2004. The sectors receiving high disbursement of credit is indicative of the growing importance of these sectors in the rural economy. It appears that horticulture and marketing infrastructure sectors are growing in importance in the rural areas. The farm mechanization process is also gathering strength.260

- Land

About 93% of the landholdings in rural West Bengal accounting for about 72% of the land are operated by marginal and small farmers. Access to small plots of land on which they are able to grow a part of the food they need for their subsistence has been an important instrument of food security among the rural poor in West Bengal.261 The percentage of cultivators to total workers in rural areas have declined from 38.4% in 1991 to 25.4% in 2001.262 Also by 2001 cultivators constituted only one-fourth of the rural workforce in rural West Bengal and thus – there is significant decline in the proportion of cultivators. However it is noteworthy that the process of land redistribution continued into the 1990s when it had virtually disappeared from the agenda of all other state governments and certainly from the national policy agenda. Between 1993-1999, around 95,000 acres of land were acquired and 94,000 acres were distributed under the land reform programme. Overall the land reforms programme (both tenant registration and land redistribution) is estimated to have

covered 41.3% of the rural population of the state by 2002. Even in the year April 2002 to March 2003, more than 16,000 acres were distributed to new pattadars.

The average land received by a pattadar is rather small, only 0.39 acre and the ceiling of any holding of a pattadar who receives land is 1 acre. This has resulted in holdings which are very small and is one reason why West Bengal has one of the highest proportions of marginal farmers in India. Joint pattas only started from the mid 1990s, nevertheless the incidence of joint pattas and single pattas to women remained very low while pattas in the name of women as single holders account for less than 6% of the total. The total number of recorded bargadars in 2000 was 1.68 million which accounted for 20.2% of agricultural households and the land covered amounted to 1.1 million acres, 8.2% of arable land in the state. Given the fact that about 18-22% of arable land is supposed to be under sharecropping, this would definitely have affected a significant part of agriculture in the state. The number of bargadars recorded in West Bengal between late 1977 & 2000 amounted to nearly one-third the total cultivators in the state in 2001. This surely is an impressive performance. Also recently allocation of pattas to women holders has kicked up so that most recent data now show 4.85 lakh joint patta holders and 1.5 lakh women patta holders.263 Till Sept 30th 2004, 4.42 lakh hectares of ceiling surplus land was distributed to 27.75 lakh beneficiaries, nearly 56% of these beneficiaries belonged to SC and ST communities. In the same period 15.30 lakh bargadars were provided security of tenure by registering their names in the record of rights.264

On the positive side land reforms helped in unleashing of productive forces leading to expansion in agricultural output, and also that the more traditional forms of oppression by landed groups are no longer prevalent in the state. However there are some disturbing signs too. They are –

a) rapid increase in landlessness. Proportion of landless rural households increased from 39.6% (87-88) to 41.6% (1993-94) to 49.8% (1999-2000) (NSS data).

263 Ibid., pp.31-36.
b) Recent reports of increasing land alienation by pattadars and of eviction of bargadars thus suggesting that the benefits of land reform have been relatively short-lived at least for some rural households.

c) The extent of land alienation of pattadars varies from a low of 5.62% of pattadars in (Medinipur) to a high of 22.35% in Uttar Dinajpur.

Land alienation by pattadars appears to have been highest in those areas where the alternative use of land, typically by large scale operators has become more profitable. Also higher costs of cultivation, reduced access to institutional credit, lower prices resulting from trade opening and general squeezing of cultivators margins – must have been prevalent and could have contributed to the phenomenon of growing landlessness. Extension services have generally been inadequate in West Bengal agriculture despite the involvement of panchayats. Also there could be problems of economic viability of the very smallholdings in terms of land providing full subsistence. Also evident expansion of non-agricultural economic activities along with growing financial difficulties of cultivation has created a situation where a focus on non-agricultural activities has become preferable for many small-holder rural households. Also the economic processes in the countryside that generate inequality still remain significant. Over the last two decades the net sown area and its share in total area have remained more or less the same. There has been an appreciable decline in barren and uncultivable land by 41% which can be explained mainly by the increase of 20% in the area under non-agricultural uses. Several Indian & multinational companies have shown interest in captive farming in the state and have demanded relaxation of land ceiling laws. All over the world the poor have faced the disastrous impacts of captive farming based agribusiness activities. Such a move will be particularly problematic in context like that of West Bengal, where the population pressure on land is very high.

- Diversification and Non-Farm Sector

One very significant shift has been the diversification into non-agricultural activities. According to the NSS, by 1999-2000 nearly half of the women engaged in

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266 Ibid., pp.175-176.
some usual status activity in rural West Bengal were not working in agriculture. By
the end of the 1990s well above one third of all employment in rural West Bengal was
in non-agricultural activities. In many other states of India, the shift away from
agricultural employment has come about because cultivation itself has been with more
and more labour-saving techniques and growing mechanization has reduced the
labour requirement per unit of crop output. Some of this type of change can also be
observed in West Bengal but it has been counteracted by other changes such as the
spread of labour-intensive boro rice cultivation as well as the continued
preponderance of small holders who typically use more labour per hectare. That is
why overall agricultural employment has not declined in West Bengal unlike in rural
India as a whole and most other states. Increase in non-agricultural work has been
very rapid in the past decade increasing by more than 12 percentage points for all of
rural West Bengal. In five districts (Haora, Darjeeling Jalpaiguri, North & South 24
Parganas) more than half the rural workforce is engaged in non-agricultural activity.
The average for the state in 2001 was more than 40% of total rural workers being
engaged in non-agriculture which is well beyond the national average and is one of
the highest such ratios in India. The districts with very high non-agricultural
employment shares are also those that have experienced substantial urbanization and
expansion of the metropolis into the rural hinterland. What is interesting is the very
limited number of districts which have not had very rapid diversification away from
agriculture. The percentage of non-agricultural workers to total workers in rural areas
has increased from 29.3% in 1991 to 41.6% in 2001.

Traditional and new forms of non-agricultural employment co-exist. Most
non-agricultural work is through self employment with very little capital. The very
significant extent of rural employment diversification in West Bengal is obviously
welcome especially since economic diversification remains both the main mechanism
and the end result of the overall process of rural development. But it should be
remembered that this has occurred in the recent context of overall employment
stagnation and even actual declines in rural female employment. Also much of the
increase has occurred in the form of what Census describes as marginal work i.e.
offering less than 183 days of employment in a year. Therefore while jobs in non-
agriculture have been growing, they clearly need to increase at a much faster rate in
order to absorb the available rural labour force productively.
The increase in rural non-agricultural employment that has occurred can be linked with the expansion of output in small scale manufacturing and services. A lot of petty food processing activities, small scale trading and basic production of consumer goods for local markets have also contributed. In addition there has been consciously designed and policy-assisted diversification into a range of activities such as fisheries, poultry and livestock raising & sericulture. There were substantial crop diversification in West Bengal in 1980s and 1990s. Both wheat and potato production increased. It is the second largest producer of potatoes and the highest in terms of yields. Some of the more important crop diversification relates to horticulture. West Bengal now is a major producer of vegetables accounting for around 17% of the total vegetable production in the country. The government is providing cold chain facilities for preservation of perishables in producing areas. To preserve crops like potato, 20 multipurpose cold storages with a capacity of 2 lakh tonnes have recently been set up.

The state government is implementing a crop diversification programme which seeks to propagate new technologies through demonstrations of cultivation of different crops with new technologies in locations selected on the basis of agro-climatic regions, soil test report etc. In order to optimize the potential of a few important horticultural products, five Agri-export zones (AEZ) have been set up in the state. The AEZs are expected to train farmers, build up required infrastructure, encourage the setting up of processed units, ensure the marketing & export of products.

The problem is that many activities that had emerged as important avenues for rural employment in some regions have been facing difficulties or crisis which have thrown employment in such activities into disarray, e.g the tea industry of North Bengal has been facing a major economic crisis in recent years because of the continued fall in international tea prices and therefore a number of tea plantations have been closed down or abandoned by the private managements. Since some food

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269 Ibid., p.75.
271 Ibid., p.27.
forms part of the wage basket in most tea plantations, the abandonment by management typically means there is no food provision for the workers. Also the closure means the electricity supply to the plantation is withdrawn, denying workers access to the common water tanks & forcing them to fetch drinking water from nearby streams which are polluted by waste from upstream cement factories in Bhutan. In other plantations in the area which have not yet closed, there are reports of retrenching of workers, delayed payment of wages & mounting fund and gratuity dues. Women workers not only face poverty and possible starvation but also other forms of exploitation.\textsuperscript{272}

There was a substantial increase in the number of informal sector manufacturing units especially in the rural areas. According to official sources even in the three years from April 2000, more than 11,300 new small scale and cottage industrial units employing more than 36,500 people came up in the state. Therefore it seems plausible that a combination of institutional changes & agricultural growth which occurred over the 80s in particular put greater purchasing power into the hands of rural masses and this contributed to the expansion of rural industrialization.\textsuperscript{273} Also it is not known whether small-scale local manufacturing industry will be able to compete effectively over time with the products of large-scale companies or branded multinational products benefiting from superior marketing and distribution techniques. Also the expansion of alternative activities such as prawn farming and fisheries has ecological implications which cannot be dismissed and which raise questions about the future effects. However the future for a wide range of small-scale services appears to be relatively bright, especially as improvements in rural infrastructure and communication are also bringing a range of previously urban services into the rural areas.\textsuperscript{274}

High agricultural growth has been associated with increasing commercialization of production and development of capitalist production relations. At the same time precapitalist remnants continue to persist in various forms in agrarian relations and production processes. Informal money lending is widespread

\textsuperscript{273} \textit{Ibid.}, p.77.
\textsuperscript{274} \textit{Ibid.}, p.102.
and institutional sources account for a comparatively small share of the debt portfolio of rural households. The post land-reform period in West Bengal has also seen the emergence of a new class of the rural rich. This class of rural rich is neither purely feudal nor capitalist: one may actually find the existence of elements of both precapitalist and capitalist relationships in one and the same person. They have, in the post land reform period invested in the non-farm and service sectors.

West Bengal has always been actively involved in the overall agriculture and WTO issues. In May 21, 2001 at the Conference of Chief Ministers’ on ‘Agricultural Strategies & Food management’ in Delhi, the state finance minister Dr Ashim Dasgupta called for a review of the entire agriculture policy announced by Centre in 2000. He also asked for setting up of a committee with the PM as Chairman & Chief Ministers of all states as members to review the entire issues of WTO. The government of West Bengal demanded inclusion of land reforms in the overall production strategy for agriculture. It called for clearing, within a definite time frame, the statewise targets in terms of vesting & distribution of ceiling surplus agricultural land. Among the suggestions made by the Left Front government were diversification of cropping pattern, expansion of infrastructure for agricultural marketing, making employment-generation also a key target etc.

The finance minister also pointed out that the government of West Bengal had strong reservations about the signing of AOA under WTO. It was totally unacceptable that the Government of India had signed the AOA under WTO on such an important policy issue like agriculture without first arriving at a consensus among the state governments. He also argued that food security of the country was one of our major concerns & indiscriminate import & export of agricultural produce on the pretext of gaining greater market access for our agricultural produce would definitely jeopardize the food security of the country as well as the interests of the major

foodgrain producing states. Consequently both the rural areas and the urban and semi-urban areas of the country will be adversely affected.278

However, in recent times, to aggressively promote its fish and agro-based products including vegetables & fruits, Chief Minister Buddhadeb Bhattacharjee met Union commerce Minister Kamal Nath in December 2004 and urged him to clear the decks for Metro Cash and carry the biggest German retail chain and the fourth largest in the world to start operation in West Bengal. The state-government had hired Mckinsey to work out its roadmap for revamping its agriculture & agro-based sectors. For Bhattacharjee and his colleagues, this will benefit farmers, fishermen and agricultural cooperatives and bring everybody from traders to small businessmen under a single roof. Their logic – a substantial percentage of the profits are pocketed by middlemen who would now be eliminated. However left and RSP leader Abani Roy after a meeting with some CPI(M) leaders & Communist Party of India’s A.B. Bardhan shot off a letter to PM Manmohan Singh saying that the issue of opening up retail to FDI needed ‘far serious consideration’ as it would mean a deathblow to millions of tiny independent stores & some 25 million workers they support.279 Also the policy of establishing Special Economic Zones (SEZs) has become controversial. The rush by the West Bengal state government to set up SEZs has set off opposition to the government which has been indiscriminately using its power to mobilize land. Also there has been not only criticism of the inadequate compensation which is being given to the original owners of land but also concern about the likely transfer of potentially cultivable land away from agriculture to industry, which can have repercussions for the country’s agricultural production potential. Land acquisition has become a political issue with protests by those being dispossessed of their lands and a number of political parties opposing large scale acquisition. West Bengal is required to acquire forty four thousand acres of land for approved projects such as the Tata Motors car project in Singur and Salim Group of Indonesia’s Multi Product SEZ amongst others.

278 Ibid.
279 Majumdar, Diptosh (2004), “FDI in retail: Comrades see red while Buddha waits for green”, The Indian Express, New Delhi, December 25.
The Left in West Bengal has to address three main and inter-related issues on the agrarian front. (1) The first is the impact of the neo-liberal economic reforms. The economic reforms have affected the economy of the state and worsened the conditions of life of its people in multiple ways. Like in the rest of the country, the fiscal capabilities of the state have been undermined to a great extent in the decade of the 1990s. This has put limits on the capacity of the state to undertake large scale development expenditure. As the ruling political force in West Bengal, the left has to tide over these constraints and find innovative ways by which planned expenditure particularly in the areas of infrastructure development, employment generation, poverty-alleviation programmes can be sustained and increased. (2) The economic reforms have also given rise to an important counter-land reform tendency in the form of a demand for relaxation of land ceiling laws for promotion of investment in captive farming-based agri-business. Another important counter-reform tendency is the continuing class tensions in the countryside. These tensions have arisen from conflicts between the neorich and the working people.²⁸⁰

There are four sets of issues relating to agricultural workers in rural West Bengal that the left needs to address:

(1) Access to land.

(2) Agricultural wages & days of employment have stagnated in the 1990s.

(3) Work participation rate of women in rural West Bengal is low.

(4) Deprivation in terms of lack of mass adult literacy, access to public health services etc. The major demand of the peasantry relates to non-land inputs, institutional credit and infrastructure and support in terms of prices.²⁸¹ Also public policy needs to address the issue of changes in cropping pattern in favour of non-foodgrain crops as it can threaten the food security of poor households. An important task in this respect is to organize proactive landuse & crop planning. The state government has initiated consultations in this regard. Another important issue is the lack of adequate state intervention in agricultural marketing. The lack of market regulation has become a cause of great distress to the peasantry in the last few years as a result of opening up of international trade. Moreover the attitude of the neorich to suggestions of investment in small-scale rural industries has not been very positive. It will be

important to devise ways to mobilize this class to make investments in these areas rather than depending on MNCs that are asking for captive lands to invest in agribusiness.  

The Left Front government initiated a programme of provision of mini-kits of seeds & fertilizers which has proved to be quite popular. About 3.8 million mini-kits were distributed in 2000-01. Another major initiative over the years has been to promote marginal and small farmers to come together to form groups for provision of cluster tubewells or lift irrigation pumps. Such programmes too have benefited marginal and small cultivators in a significant way. There is also evidence that in some places marginal and small cultivators have been able to form cooperative tubewell groups to jointly invest in water to irrigate their lands. Moreover a farmers’ commission is to be set up in West Bengal to look into issues of land, agriculture, horticulture, and marketing of produce. Renowned agriculture scientist M.S. Swaminathan will be its adviser.

The Government of West Bengal feels that a public investment led strategy of growth is essential if a government is to fulfill the peoples mandate and meet people’s aspirations for economic growth.

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282 Ibid., pp. 350-352.
283 Ibid., pp. 343-344.
284 "M.S. Swaminathan appointed adviser" (2006), The Hindu, Delhi, June 1.