Agrarian Crisis in India: A National Perspective

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For over a decade, while the Indian economy has been experiencing unprecedented rate of high growth, agriculture has been passing through a phase of deceleration in growth, and there has been widespread distress manifesting in suicides of farmers. There is a wide recognition that the crisis in agriculture is a result of deep-seated malady and that the suicides are only symptoms. The crisis assumes different forms under different conditions. For instance, it is survival crisis in dry regions like northern Karnataka or southern Andhra Pradesh. It is sustainability crisis in prosperous regions like Punjab or plantation sector of Kerala. The economic reforms initiated in early 1990s not only failed to help agricultural growth but have actually aggravated the situation. In general, returns in agriculture did dwindle but it is the small farmers who were trapped in serious crisis in the absence of adequate and appropriate state support services and volatile markets. This has culminated in an ever-increasing incidence of farmers suicides in India. Farmers are striving hard to adjust to the new situations and develop a coping up strategy. Against this background, the present paper examines the different dimensions of the agrarian crisis in India. It addresses the macro explanations of the crisis that is looming over the agricultural situations of India.

Keywords: Crisis, Liberalization, Agriculture, Labour and Employment.

Macro Dimensions of the Crisis

Distinction is to be made between agrarian crisis and agricultural crisis to understand the complexity of the crisis. 'Agrarian Crisis' is structural and institutional in nature as could be seen in growing marginalization and failure of support systems especially as a part of the reforms agenda because of the shift in institutional emphasis from state to market. 'Agricultural Crisis', on the other hand, may be seen in terms of performance of production in relation to the problems associated with access and use of inputs and realization of returns. The complexity of present crisis exists in the interrelatedness between agrarian crisis and agricultural crisis and how one reinforces the other (Reddy and Mishra, 2009).

There has been a distinct slowdown in agricultural growth since the mid-1990s which has adversely impacted the livelihood base of the farming community at large. The slowdown has occurred in all the sub-sectors of agriculture, including livestock and horticulture which were the

main drivers of agricultural growth in the immediate past. Several structural and institutional factors have contributed to the decline in agriculture. Lessening of the developmental role of state in investment in irrigation, flood control, research, extension etc. in the background of liberalization of agriculture is the leading factor contributing to the crisis.

The liberalization of agriculture trade has also exposed commercial agriculture to volatility in the international commodity market. Added to this when agricultural prices in the international market were declining in the latter half of the 1990s, India removed Quantitative Restrictions and slashed the tariff rates. Without sufficient intervention, these structural changes have adversely affected the livelihood of agriculturists especially, small holders. The macro dimensions of the crisis explain the factors contributing to the crisis: the degradation of the environment, dwindling of land holding size, plateauing of the yields from the present farm technology, withdrawal of the state support etc. The following section provides an analysis of the macro dimensions of the crisis.

Structural Changes in the Indian Agriculture

Demographic Pressure on Agriculture

Even at the beginning of the twenty-first century, India has continued to be rural and agricultural in terms of livelihood activities of people. In 1999-2000, 72 per cent of the population and 76 per cent of the workforce in India were rural, accounting for about one-fifth of the national income (NSSO, 2005). Within rural areas, there has been excessive dependence on agriculture. Table 1 shows that even during the period of economic reforms of the 1990s and the much-lauded high economic growth, there was no substantial increase in the share of the rural non-farm sector. The employment status of rural labour tends towards relatively more insecure casual labour, while self-employment and regular employment shows a declining share. The share of hired casual labour increased from 31.49 per cent in 1983 to 37.41 per cent in 1999-2000.

Table – 1

Sectoral Share and Employment Status of Rural Workforce (percent)

Rural employment	1983	1987-88	1993-94	1999-2000	2004-05
Agriculture	81.49	77.46	78.39	76.16	70.08
Non-agriculture	18.51	22.54	21.61	23.84	29.92
Status of rural workforce					
Self-employed	61.37	59.50	57.96	55.76	60.2
Hired-regular	7.15	7.79	6.45	6.83	7.1
Hired-casual	31.49	32.72	35.59	37.41	32.8

Source:

1) Bhalla (2005); 'India's Rural Economy: Issues and Evidence', Working Paper No. 25, Institute for Human Development, New Delhi.

2) National Sample Survey Organization (NSSO), Employment and Unemployment Situation in India (Various Rounds), New Delhi.

The concentration of workforce in the agricultural sector is much higher in rural areas, indicating that the rural economy continues to remain by and large an undiversified economy, particularly dependent on agriculture.

Increasing Marginalization

The high burden of labour force has, in addition, been falling on a slowly contracting cultivable area. This leads to an increased number of holdings and decreased size of holdings. Between 1960-61 and 2003, the number of holdings increased from 51 million to 101 million and the area operated declined from 133 million hectares to 108 million hectares (Table 2).

Table – 2

Key Characteristics of Operational Holdings in India

Characteristics	1960-61	1970-71	1981-82	1991-92	2003
	(17th)*	(26th) *	(37th)*	(48th)*	(59th)*
Number of operational holdings (millions)	50.77	57.07	71.04	93.45	101.27
Percentage increase	-	12.4	24.5	31.5	8.4
Area operated (million hectares)	133.48	125.68	118.57	125.10	107.65
Average area operated (hectares)	2.63	2.20	1.67	1.34	1.06

Note: *indicates NSS rounds

Source: NSSO (Various Rounds), Some Aspects of Operational Landholdings in India.

Consequently, the size of operational holdings declined from 2.63 hectares in 1960-61 to only 1.06 hectares by 2003. The increasing demographic pressure on land has resulted in undue stress on land resources, and reduced the size of holdings to uneconomic levels.

Resource Stress in Indian Agriculture

Increasing Stress on Irrigation Resources

Irrigated land, on an average, triples its productivity and reduces the farmer's susceptibility to drought and crop failure. Irrigation facilities are also a pre-requisite for the optimum use of fertilizers and HYV seeds. The parts of India that benefited most from the Green Revolution such as Punjab, Haryana, Western UP and coastal Andhra Pradesh, were the ones with the most extensive system of canals (Gupta and Dahiya, 2005). Considering the immense importance of irrigation, the area under irrigation has not seen a satisfactory rise over the years (Table 3).

Table – 3

Cropped Area and Irrigated Area (Million Hectares)

Year	Gross cropped area	Gross area irrigated	Gross irrigated as % of cropped area
1951-52	133.2	23.2	17.4
1960-61	152.8	28.0	18.3
1970-71	165.8	38.2	23.0
1980-81	172.6	49.8	28.9
1990-91	185.7	63.2	34.0
1995-96	186.6	71.4	38.4
2000-01	187.0	75.1	40.2
2001-02	188.2	78.7	41.8
2002-03	175.5	73.5	41.8
2003-04	190.0	77.9	41.0
2004-05	191.5	79.9	41.7
2005-06	193.0	82.6	42.8
2006-07	193.2	86.4	44.7
2007-08	195.8	87.3	44.6
2008-09	196.0	88.00	44.89
2009-10	197.2	89.23	45.24

Source: CMIE (2010), 'Agriculture', June.

Even in 2010, almost 55 per cent of our cropped area was rain-fed. This means that millions of our farmers are exposed, year after year, to the vagaries of the weather.

Environmental Stress

A serious source of environmental footprint of agriculture is increasing pollution of river and canal water. Many of the rivers and lakes are getting contaminated from industrial effluents and agricultural run-off, with toxic chemicals and heavy metals, which are hard to remove from drinking water with standard purification facilities. Irrigation undertaken by polluted water can also seriously contaminate crops such as vegetables and fruits with toxic elements.

Soil erosion, water logging and shifting cultivation also cause land degradation in India. Estimates show that around 130 million hectares of land (45 per cent of total geographical area) is affected by serious soil erosion through ravine and gully, cultivation of wastelands, waterlogging, shifting cultivation, etc. The accumulation of salts and alkalinity affects the productivity of agricultural lands in arid and semi-arid regions that are under irrigation. The magnitude of waterlogging in irrigated command is estimated at 2.46 million hectares (Pingali, 2005). Besides 3.4 million hectares suffer from surface water stagnation. Similarly, excessive and unbalanced use of fertilizers and pesticides reduces soil fertility due to soil nutrient depletion (Sahoo, 2010).

Deceleration of Growth in Agriculture

Declining Growth Rate

Growth rates of agriculture have been on the decline, most visibly in the post-reform period. The growth rate by gross product (GDP from agriculture) fell from 3.08 per cent during 1980-81 to 1990-91 to 2.61 per cent during 1992-93 to 2002-03 (Table. 4). Compared with other sectors, the growth rate of agriculture during 2001-02 to 2009-10 is low (8.36 per cent).

Table – 4

Growth of Gross Domestic Product (GDP), Sectoral GDP and Per Capita Income (1999-2000 prices)

Year	Agriculture	Industry	Services	GDP at factor cost	Per capita NNP at factor cost
1980-81 to 1990-91	3.08	5.79	6.54	6.15	2.82
1992-93 to 2002-03	2.61	5.82	7.05	5.85	3.89
2001-02 to 2009-10	8.36	14.01	15.12	13.75	12.13

Note: Growth is Compound Annual Growth Rate, NNP denotes Net National Product

Source: CSO (Various Years), National Accounts Statistics, Government of India.

Deceleration of Growth rate of area, Production and Yield

The growth of agriculture in terms of output has visibly decelerated during the post-reform period compared to the 1980s (Dhas, 2009). The growth of agriculture in terms of area, production and productivity is given in Table.5

Table – 5

Compound Growth Rates of Area, Production and Yield of Principal Crops during 1980-1990, 1990-2000 and 2000-2010 (Base: TE. 1981-82=100) (percent)

Crops	1980-81 to 1989-90			1990-91 to 1999-2000			2000-01 to 2009-10*		
	A	P	Y	A	P	Y	A	P	Y
Rice	0.41	3.62	3.19	0.68	2.02	1.34	-0.03	1.59	1.61
Wheat	0.46	3.57	3.10	1.72	3.57	1.83	1.21	1.89	0.68
Coarse Cereals	-1.34	0.40	1.62	-2.12	-0.02	1.82	-0.76	2.46	3.97
Total Cereals	-0.26	3.03	2.90	0.04	-0.02	1.59	0.09	1.88	3.19
Total Pulses	-0.09	1.52	1.61	-0.60	0.59	0.93	1.17	2.61	1.64
Total Food grains	-0.23	2.85	2.74	-0.07	2.02	1.52	0.29	1.96	2.94
Sugarcane	1.44	2.70	1.24	-0.07	2.73	1.05	0.77	0.93	0.16
Total Oilseeds	1.51	5.20	2.43	-0.86	1.63	1.15	2.26	4.82	3.79
Cotton	-1.25	2.80	4.10	2.71	2.29	-0.41	2.13	13.58	11.22
Jute & Mesta	-2.90	0.16	2.96	1.81	1.81	0.87	-1.56	-0.10	2.28
Non Food grains	1.12	3.77	2.31	1.18	2.69	1.09	2.19	2.86	1.78
All Principal Crops	0.10	3.19	2.56	0.27	2.29	1.33	0.84	1.83	2.82

A- Growth rates of Area, P- Growth rates of Production, Y- Growth rates of Yield

Growth rates are based on fourth advance estimates 2009-10 released on 19.07.2010.

Total oilseeds include nine oilseeds, cottonseed and coconut.

Source: Directorate of Economics and Statistics (DES) (2010), 'Agricultural Statistics at a Glance', Government of India.

The Table 5 shows significantly lower growth rates in yield for most of the crops. The case for concern is not merely the decline in the rate of growth of agricultural production, but also the decline in the growth rate of production of food grains. This was mainly due to the gradual

decline in the growth of yield levels, especially of some food crops. The annual growth rate of production of all food grains together declined from 2.85 per cent in the 1980-81 to 1989-90 period to 1.96 per cent in the 2000-01 to 2009-10 period. Rice area, production and yield decelerated from 0.41 per cent, 3.62 per cent and 3.19 per cent respectively to -0.03 per cent, 1.59 per cent and 1.61 per cent respectively in latter period.

Wide Regional Disparity in Productivity and Growth

State-wise disaggregation of the data shows that the deceleration has occurred in most states except Bihar, Gujarat and Orissa. Even though these states had a low base, the growth rates were very low (Table 6).

Table – 6

Growth of Agricultural GSDP and GSDP across States

State	1993-94 to 2000-01 (at 1980-81 prices)		2000-01 to 2009-10 (at 1999-2000 prices)	
	Agricultural GSDP	GSDP	Agricultural GSDP	GSDP
Andhra Pradesh	12.06	14.30	10.85	12.12
Assam	10.28	14.19	8.73	9.90
Bihar	8.96	15.01	7.63	11.90
Gujarat	9.47	12.16	21.21	15.88
Haryana	8.93	15.68	12.50	15.41
Himachal Pradesh	13.27	18.55	10.70	10.56
Karnataka	10.76	14.74	5.12	12.07
Kerala	8.63	15.26	7.56	12.85
Madhya Pradesh	3.95	11.30	12.33	8.34
Maharashtra	8.17	11.73	13.36	12.71
Orissa	8.20	13.64	13.58	15.03
Punjab	9.72	14.08	10.78	11.16
Rajasthan	10.28	14.37	14.06	11.71
Tamil Nadu	7.01	14.18	8.55	11.06
Uttar Pradesh	9.71	12.64	8.37	10.18
West Bengal	13.43	15.57	6.92	11.61
India	10.15	13.57	8.34	13.22
CV for States	23.48	12.06	35.47	16.44

Note: Growth is Compound Annual Growth Rate. GSDP denotes Gross State Domestic Product.

CV denotes coefficient of variation.

Source: RBI (2010), Handbook of Indian Statistics.

From the Table 6 it is clear that growth of agricultural GSDP of India during 2000-01 to 2009-10 is 8.34 per cent which is lower than 10.15 per cent in the period of 1993-94 to 2000-01. Similarly, there is a large variation in agricultural GSDP across states during 2000-01 to 2009-10 compared with the period of 1993-94 to 2000-01.

The growth rates of agricultural GSDP and GSDP have also decelerated in most states during 2000-01 to 2009-10 periods. Similarly, the regional disparities become sharper at the district level. There are marked inter-district variations in agricultural growth. Only about 20 per cent of about 500 districts in the country contribute substantially to growth. An equal percentage has had stagnant yields for decades (Bhalla & Singh, 2001).

Reforms and its Impact on the Farming Community in Agriculture

Crisis in agriculture, which was well underway by late 1980s because of loss of priority in public provision, was deepened by the economic reform beginning with the 1990s and has become all pervasive. The manifestation of the crisis is felt in different forms in different agro-climatic and institutional contexts.

Trade Liberalization

In 1991, when India officially went along the structural adjustment path and introduced a series of neoliberal economic reforms, there was apparently less reforms in agriculture. But beginning with 1997, international trade in agriculture is liberalized. All Indian product lines are placed under Generalized System of Preferences (GSP). By 2000 all agricultural products are removed from Quantitative Restrictions (QRs) and brought under tariff system. The average tariffs on agricultural products, which stood at over 100 per cent in 1990, were brought down to 30 per cent by 2008 and were targeted to come down further.

Declining Subsidies

Subsidies to any sector are a form of support given to it by the government. Agriculture is just one of the sectors receiving subsidies from the government. Agricultural subsidies take different forms, including food, fertilizers, petroleum and power subsidies. The fertilizer, petroleum and power subsidies reduce the cost of cultivation for the farmers, while the food subsidy benefits both the farmers and the buyers of food. Subsidies for food, fertilizers and petroleum account for about 38 per cent of total government subsidies (Department of Economic Affairs, 2004). In the period of economic reforms, there has been a continuous attack on agricultural subsidies on the ground that these are an unnecessary burden on the government's budget.

Growing Informal Credit

Beginning with 1991, at the behest of pressures from the reform agenda, 'targeted priority lending' or 'directed credit' to agriculture was put on the back burner. The Narasimham Committee on the Financial Reforms (1992) recommended the dilution of priority sector lending,

including lending to the agricultural sector by commercial banks. Instead of expanding rural bank branches, there was actually closure of rural branches.

A nationwide survey (NSS 59th Round, Reports 498 and 501, 2005) also brings out the grave agrarian situation in terms of farmer indebtedness. While almost 50 per cent of the farming households are indebted, the percentage is much higher in Andhra Pradesh (82.0 per cent), Tamil Nadu (74.5 per cent), Punjab (65.4 per cent) and Kerala (64.4 per cent), which are also states with relatively higher investment. More than 50 per cent of the borrowing is for investment in agriculture, the percentage being much higher in Andhra Pradesh (77 per cent), Karnataka (73 per cent), and Maharashtra (83 per cent).

Institutional sources account for about 50 per cent on an average, with the share being much lower at 30 per cent in some states, as for example, Andhra Pradesh, where the rest 70 per cent comes from informal sources. While interest charges on institutional credit are less than 20 per cent in 98 per cent of the cases, interest charges on informal credit are more than 20 per cent in more than 74 percent of the cases. Situation Assessment Survey (SAS) of Farmers (2003) shows that of the total of 148 million rural households, 89.35 million (or 60.4 per cent) were farmer households, of whom 43.42 million (48.6 per cent) were reported to be indebted (NSSO, 2005).

Declining public investment

Investment in the agricultural sector, particularly since the advent of reforms in 1992, has not shown a healthy trend. All indicators lucidly characterize the decline of the government's interest in this sector. This is particularly noticeable in the declining shares of agriculture in total Gross Capital Formation (GCF) in the last few years and the progressive decline of Central and State government's investment in agriculture (Guruswamy, Natarajan and Khare, 2008).

Rising Costs

There has been steep increase in the costs of farming across the country substantially due to reforms. The fertilizer price index increased from 99 in 1990-91 to 228 in 1998-99 at a compound annual growth rate of 11 per cent (Acharya, 2004).

The cumulative impact of the input-intensive technology employed and the domestic reforms in agriculture has been an increase in the costs of cultivation of farmers. In addition to this, the decline in public investment and expenditures on irrigation and rural development has meant that farmers have had to spend for themselves in this respect. The credit policy reforms have brought back the moneylender to the countryside increasing the interest costs of loans for the farmers (Perspectives, 2008).

Low Research and Development

There has been steady decline in public funding for research and education since 1981, which sharpened further in the late 1990s (Pal, 2009). The trend in the funding for extension is rather

stagnant. There is, however, a distinct difference in the sources of funding. While most of the funding for extension was from the state governments, they contributed nearly half to the funding for research and education and the rest was contributed by the Central government.

Increasing participation of the private sector, in the post-reform period, has been a significant trend in agricultural R&D. Private R&D is notable in chemicals, including animal health, food, and of the late, in plant breeding (Pray and Basant, 2001). However, the private sector's exclusive preoccupation with profits restricts its area of interest in a small-farmer dominated agriculture.

Conclusion

To conclude, the macro dimensions of agrarian crisis provide an overview of the dimensions of crisis in agriculture, particularly since the initiation of economic reforms in the early 1990s. Structurally shrinking share of agriculture in the national product with continued concentration of the workforce, and rapid marginalization of holdings with growing productivity distance to non-agriculture are analyzed in macro dimensions of agrarian crisis. Increasing stress on resources, especially irrigation, environmental degradation, and technological fatigue are other factors identified with productivity plateau. The impact of reforms including trade liberalization, decline in public investment in agriculture, shrinking share of formal institutional credit, rising input prices, and volatility in commodity prices also augmented the agrarian distress in India.

Reference

Acharya, S. S. (2004), 'Fertilizer subsidy in Indian Agriculture: Some Issues', in B. Doria and T. Jullien (Eds), Agricultural Incentives in India: Past Trends and Perspective Paths towards Sustainable Development, New Delhi.

Bhalla, G. S. and G. Singh (2001), Indian Agriculture: Four Decades of Development, Sage Publications, New Delhi.

Department of Economic Affairs (2004), Central Government Subsidies in India, A Report, Ministry of Finance, New Delhi.

Dhas, Albert Christopher (2009), 'Agricultural Crisis in India: The Root Cause and Consequences', MPRA Paper No.18930, 30 November 2009.

Gupta, Desh and Shri Bhagwan Dahiya (2005), India in a Globalizing World, Hope India Publications.

Guruswamy, Mohan, Uma Natarajan and Shagun Khare (2008), The Crisis in Indian Agriculture, A Critical Study, Centre for Policy Alternatives, New Delhi.

NSSO (2005), 'Employment and Unemployment Situation in India', NSS 59th Round, Reports No.495, MOSPI, New Delhi.

NSSO (2005), 'Situation Assessment Survey of Farmers: Indebtedness of Farmer Households', NSS 59th Round (January-December 2003), Report No. 498 (59/33/1), Ministry of Statistics and Programme Implementation, GoI, New Delhi.

Pal, Suresh (2009), 'Managing Vulnerability of Indian Agriculture', in D. Narasimha Reddy and Srijit Mishra (eds), Agrarian Crisis in India, Oxford University Press, New Delhi.

Perspectives (2008), Harvesting Despair, Agrarian Crisis in India, The Perspective Team, New Delhi.

Pingali, P. (2005), 'Green Revolution to Gene Revolution', in Vistas in Agricultural Marketing (1997-2005), Vol. 2, India Society of Agricultural Marketing, Nagpur.

Pray, C.E. and R. Basant (2001), 'India' in C.E. Pray and K. Fuglie (eds), Private Investment in Agricultural Research and International Technology Transfer in Asia, AER-805, Economics Research Service, Washington, accessed from http://www.ers.usda.gov/publications/aer805.

Reddy, D. Narasimha and Srijit Mishra (eds) (2009), Agrarian Crisis in India, Oxford University Press, New Delhi.

Sahoo, B.B. (2010), 'Agrarian Crisis: Distress and Suicide', Financing Agriculture, Vol. 42, February.