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SCARCE LAND: THE CASES OF ALL INDIA AND WEST BENGAL

Sheila Bhalla

INSTITUTE FOR HUMAN DEVELOPMENT
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SCARCE LAND:
THE CASES OF ALL INDIA AND WEST BENGAL

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This paper is mainly about the physical availability of land for purposes of cultivation. It presents evidence about what has happened to land use in India as a whole and in West Bengal. In particular, it is concerned about what has happened to the physical availability of the land which is cultivated, or can be made cultivable; what factors have contributed to the expansion of cultivated area, and what factors have worked in the opposite direction. In the ultimate analysis, what we are concerned about is the people involved. Given population pressure on the land that is available, what are the implications for the availability of land per agricultural worker? The paper looks at two kinds of outcome. First, with land/man ratios falling, what has happened to the size distribution of ownership and operational operational holdings? Secondly, given that so many households now operate holdings that are too small to provide even a minimum standard of living to the people who cultivate them, how do these people survive? Towards the end of this the paper, some data are presented from an official report on the potential for converting wastelands and degraded land into cultivated land. The paper ends with a few words about the need for a national land policy.

I. UNDERLYING ISSUES

1. There is not enough land

This is keenly felt in countries like India, where population pressure on land has led to a situation where the vast majority of farmers do not earn enough from crop cultivation and animal husbandry combined to cover actual consumption expenditures. The size of the land they cultivate is too small. This is the situation at the grass roots.

At the national level, the failure to take serious steps to raise the productivity of what land there is, now constitutes a threat to national food security, and to the availability of foodgrains at prices which low income households can afford. Imported foodgrains, in a period when international supplies fall short of international demands, are bound to cost more than domestically produced wheat, rice, and other agriculturally produced goods.

At the same time, domestic competition for land for non-agricultural uses has intensified. Accelerated GDP growth demands more roads, dams, airports, industrial and housing estates. Urbanisation, an inevitable concomitant of economic development, also means that increasing areas are no longer available for cultivation. Countries which do not have enough land to grow crops to feed their populations, and therefore have to import most of their food, are increasingly seeking land abroad for crop production. Their efforts to do so often are not welcomed in the host country.

In general, the land purchasers, national or international, are in a much stronger bargaining position than the sellers. Those who are in a position to buy up, expropriate or otherwise acquire land are, to an extraordinary degree, in denial about the domestic implications, economic and political, of what is happening at home, or abroad.

"Buy land," said Mark Twain, "they're not making it anymore." This is a piece of advice which was quoted in several newspaper articles in May this year. A number of countries have been following this advice on an international scale.

The Indian public is accustomed to reading news reports about conflict over domestic land acquisition for non-agricultural uses. Extensive government-backed and/or private land purchases abroad for agricultural uses have hit the headlines only recently.[8] Much of this recent reporting is in response to the publication of an International Food Policy Research Institute (IFPRI) Policy Brief titled "Land Grabbing" by Foreign Investors in Developing Countries.[2] World wide, the demand for land with access to water has increased.

In the wake of the food price crisis of 2007-08, the global scramble for land intensified. However, the purchase of land abroad to grow food is not something new. Japan has been doing it for decades and now holds land abroad that is nearly three times the size of its domestic agricultural land. India and China, both populous countries with food security concerns, are among those seeking land to produce food in Africa "where production costs are much lower and where land and water are more abundant" It is reported that India spent $2 billion to lease land in Ethiopia in 2008 for growing sugar, tea, flowers and other crops. India's investments there are expected to double to $4 billion in 2009. In 2007, China bought 2.8 million hectares in Congo for a biofuel oilpalm plantation, and in 2008 spent $800 million in Mozambique to expand rice production.[5]

India's search for land with access to water in Africa is relatively new. China has been involved in land purchase and long term lease arrangements abroad for more than a decade. Rich, food importing countries with land and water constraints, such as the Gulf States, lead the recent drive to invest in farmland abroad.

At the international level, IFPRI is concerned that the unequal power relations in such land acquisition deals "can put the livelihoods of the poor at risk." The inequality in bargaining power when smallholders whose land is being acquired for foreign investment projects is obvious. As the 2009 IFPRI report put it: the "deals may not be made on equal terms between investors and local communities. The bargaining power in negotiating these agreements is on the side of the foreign firm, especially when its aspirations are supported by the host state or local elites." At a recent, (April 2009), meeting in Addis Ababa, African Union representatives expressed their concerns. They said that vast tracts of land were being taken over without benefit to local people in the world's hungriest continent. Riots have already taken place when local populations were not consulted before land was acquired.

The same logic applies to domestic competition for land with or without access to water. What the IFPRI report suggests is that strong local collective action institutions can correct "these power issues." They say, by "acting collectively the poor can stimulate a shift in

the power relations, which ... can help preserve livelihood options. These efforts can be even more effective when civil society gets involved on behalf of the poor."

In short, in the words of the IFPRI Report: "Land is an inherently political issue across the globe."

II. Land Use in India and West Bengal: Evidence and Analysis

Four key categories of land use

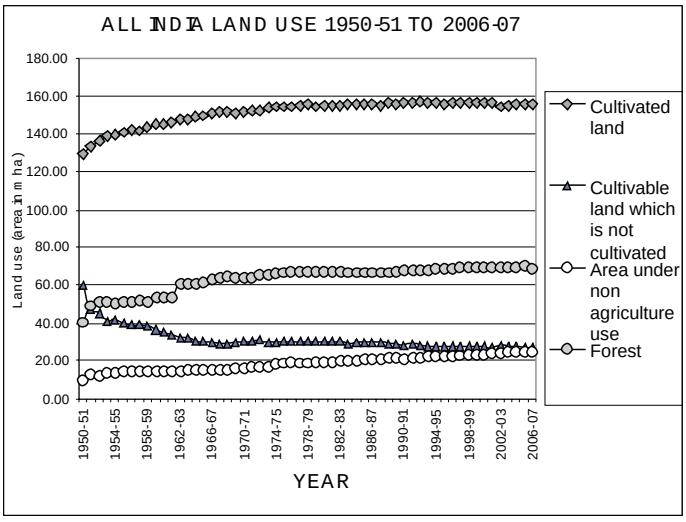
Let us first look at what has happened to four key categories of land use in India as a whole and in West Bengal. They are: (i) cultivated land, defined as net sown area plus current fallows; (ii) cultivable land which is not cultivated; (This consists of land under miscellaneous tree crops and groves, culturable waste land and fallow land other than current fallows.) (iii) area under non-agricultural uses; and iv) forests. The trends, from 1950-51 onwards, are illustrated in figures 1a and 1b.

First, let me say something about what is not shown in figure 1a.

India's geographical area, from the start of land use statistics in 1950-51, has remained unchanged at 328.73 million hectares. However, the reporting area for land utilisation statistics, which is also not shown here, rose significantly from 284.32 to 303.76 ha in the two decades from 1950-51 to 1970-71. Thereafter if rose very gradually, reaching 304.16 ha in 1980-81 and fluctuating between 304.16 in 1980-81 and 305.40 in 2005-06.

The early increases in reporting area have an obvious upward impact on reported area under forests and on reported cultivated area, both shown on the graph. Area under forest as a percent of reporting area rose by 8 percentage points from 14.2 percent in 1950-51 to 22.2 percent in 1980-81. Subsequent gains were more or less continuous, but small and very gradual, reaching a high of 27.9 percent or 69.79 million hectares in 2005.06. These relatively recent small, gradual gains reflect net successful efforts at reforestation.

Figure 1
All India Land Use – 1950-51 to 2006-07



The crucial variable is cultivated area. Cultivated area rose steadily until 1989-90, stabilised for more than a decade at about 156 million hectares, then showed symptoms of tailing off after the drought of 2002-03.

The relative stability of cultivated area from 1989-90 onwards led some people to describe cultivated area in India as fixed, for all practical purposes. But this relative stability is the product of dynamic changes. Cultivable land which was not cultivated contracted, as did area classified as barren and uncultivable. This tended to push cultivated area up. At the same time, the area under non-agricultural uses rose steadily from 19.66 million ha in 1980-81 to 25.03 million ha in 2005-06. That is, more than two million hectares per decade was shifted to non-agricultural uses in the most recent decade.

In short, what appears to have happened is that the persistent shift of land to non-agricultural uses finally cancelled out, and then reversed, the positive impact of the gradual conversion of cultivable wasteland and barren land into cultivated land. Data for the period 1990-91 to 2006-07 shows that, for the first time since land use data has been officially recorded, both current fallows and net area sown have contracted. If the tide has really turned against the expansion of net sown area, and this is not just a temporary trend reversal, then it is a serious matter.

A pessimistic conclusion is supported by NSS 59th Round land ownership data. According to NSS Report No. 491, estimated area owned declined from117 million hectares in 1992 to 107 million ha in 2003, a contraction of owned area in rural areas by 10 million ha in just over a decade! As the NSS Report puts it: "... there is no apparent reason for the decrease in area owned except that some rural land might have been merged in urban land due to urbanisation over the years."

Table 1, showing data for a larger number of land use categories, for triennia centred on 1950-51, 1965-66, 1980-81, 1990-91 and 2006-07 brings out the changes in area under various categories of land use.

The story in table 1 begins with huge reductions in the area which in 1951 was classified as (i) cultivable land which is not cultivated and ii) barren and unculturable land – items 4 and 1 (ii) in table 1 respectively. Cultivated land, and its major component, net sown area, expanded rapidly between 1950-51 and 1980-81. This was the period during which most of the growth in agricultural output was attributable to increases in the area under cultivation. During the same period, there was also a substantial increase in area under non-agricultural uses, which was not much noticed at the time, perhaps because it posed no threat to the area available for cultivation. However, by the early 1980s, the possibilities of extending net sown area were beginning to get exhausted.

Subsequently, additions to cultivated area were more modest. Between 1980-81 and 1990-91, reductions in areas classified as cultivable land which was not cultivated and barren and uncultivable were less spectacular. Area shifted to non-agricultural uses was less in this decade than ever before or since.

But what is most important here is the trend reversals which took place after 1990-91. For the first time since land use records were compiled in independent India, net area sown

and cultivated area as a whole contracted. There was a substantial increase in area under non-agricultural uses which could not be compensated for by reductions in barren land, land under miscellaneous tree crops and culturable wasteland. In this process, while some good quality land has been lost to non-agricultural uses, cultivation has been extended, increasingly, to poor quality land.

Table 1

Changes in Area Under Specified Land Use: All India – 1950-51 to 1965-66, 1965-66 to 1980-81, 1980-81 to 1990-91, 1990-91 to 2006-07, 1990-91 to 2003-04 and 2003-04 to 2006-07

	(000 ha)			
Land Use	1950-51	1965-66	1980-81	1990-91
	To	To	To	To
Categories	1965-66	1980-81	1990-91	2006-07
1.Not Available for Cultivation	238	-9412	1052	1787
i) Area under non-agric. Uses	4300	4305	1642	3760
ii) Barren and un-culturable land	-4062	-13718	-590	-1973
2. Cultivated Land	18490	5039	1501	-783
i) Current fallows	380	1945	-545	-351
ii) Net area sown	18110	3094	2046	-432
3.Cultivable Land	-4873	4989	106	-2563
i) Land under misc. tree crops, groves	-9786	-452	177	-414
ii) Culturable waste land	-6435	-375	-1595	-1910
iii) All fallow lands	-6762	2721	-521	194
a) Fallow lands except current fallows	-7142	777	24	545
b) Current fallows	380	1945	-545	-351
iv) Net area sown	18110	3094	2046	-432
4. Cultivable Land Not Cultivated	-23362	-50	-1395	-1780
5. Categories Not Covered Above	23988	3188	-467	182
i) Forests	17099	5681	227	1098
ii) Permanent pastures, other grazing lands	6890	-2494	-694	-916
6. Reporting Area for Land Utilisation Statistics	19354	-1238	693	390

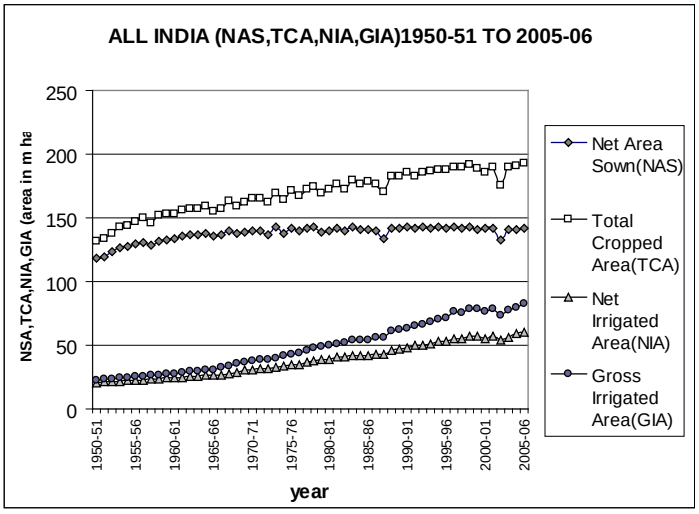
Notes: i) The 2002-03 drought pulled down 3-year averages centred on 2003-04.

ii) Cultivable land which is not cultivated is derived as Cultivable land minus Cultivated land.

Source: Agricultural Statistics at a Glance, Directorate of Economics & Statistics, Ministry of Agriculture, various issues.

Net area sown, however, is not everything. If irrigation can be extended to fresh areas fast enough, the growth of area which is double cropped may compensate, or even more than compensate, for any decline in net area sown. The data behind figure 2, however, shows that matters are not quite so simple. The impact of other factors is such that total cropped area may not go up much despite substantial increases in gross irrigated area. (For example, between 1998-99 and 2005-06, gross irrigated area went up by more than 4 million ha, but total cropped area increased by a mere 110 thousand ha. This was not enough to compensate for the decline in net sown area of 850 thousand hectares.)

Figure 2
Net Sown Area, Total Cropped Area, Net Irrigated Area and Gross Irrigated Area: All India 1950-51 to 2005-06



The West Bengal story for the period from 1980-81 onwards differs from the all-India story in two important respects. The first one – the substantive one – is that cultivated area, (in figure 2), and net sown area, (in figure 3), both went up in recent years. Cultivated area rose from 5.68 million hectares in 1999-00 to 5.94 million ha in 2006-07. Net area sown went up from 5.47 million ha to 5.54 million ha during the same period.

However, there are year-to-year variations in the recorded data which may be traceable in part to variations in reporting area for West Bengal land use statistics. No one can believe, for example, that the area under non-agricultural uses suddenly dropped in 1992-93. (Highways, factories and urban residential colonies, once constructed, do not disappear.) In the all-India data such anomalies are averaged out. In data for individual states, such as West Bengal, they are not. This is the source of the second difference between the all-India results, and the figures from the land use surveys in West Bengal. The anomalies in the raw data have not been ironed out.

However the trends illustrated in figure 4 are believable. We know from independent sources that the extension of area under irrigation has not only pushed up the growth rates of agricultural output in West Bengal, it has also promoted double cropping. In figure 4, this is reflected in a substantial rise in total cropped area which continued, at least up until 2003-04.

Figure 3
West Bengal Land Use 1980-81 to 2006-07

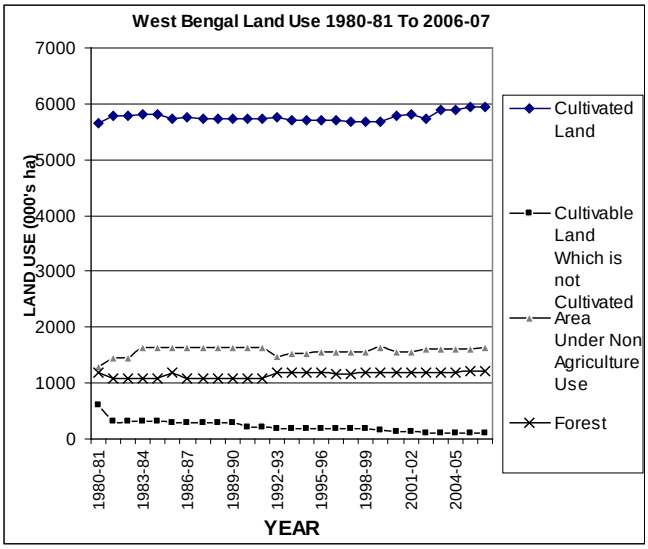
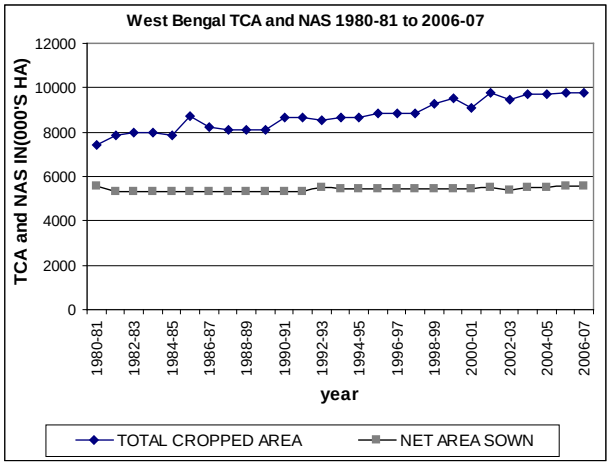


Figure 4
West Bengal: TCA and NAS 1980-81 to 2006-07 Outcomes in terms of land/man ratios



While cultivated area at both the all-India level and in West Bengal changed very little from 1972-73 to 2004-05, the number of agricultural workers increased. In 1971-72, in India as a whole, there were roughly 168 million agricultural workers; in 2004-05, their numbers had increased to 249 million. As a result the all-India land/man ratios fell from 0.9 ha per agricultural worker in 1972-73 to only 0.6 ha per worker in 2004-05.

In West Bengal, the number of rural agricultural workers rose from 11.6 million in 1983 to 14.5 million in 2004-05, with the result that despite the increases in cultivated area

in recent years, the land/man ratios fell from 0.5 ha per agricultural worker in 1983 to 0.4 ha in 2004-05.

In both the all-India and the West Bengal cases, the outcome has been a long term decline in land/man ratios, the most recent period being characterised by an accelerated reduction in land/man ratios, as shown in figure 6, for all-India, and figure 8, for West Bengal.

Figure 5

All India Cultivated Area and Agricultural Workers: 1950-51 to 2006-07

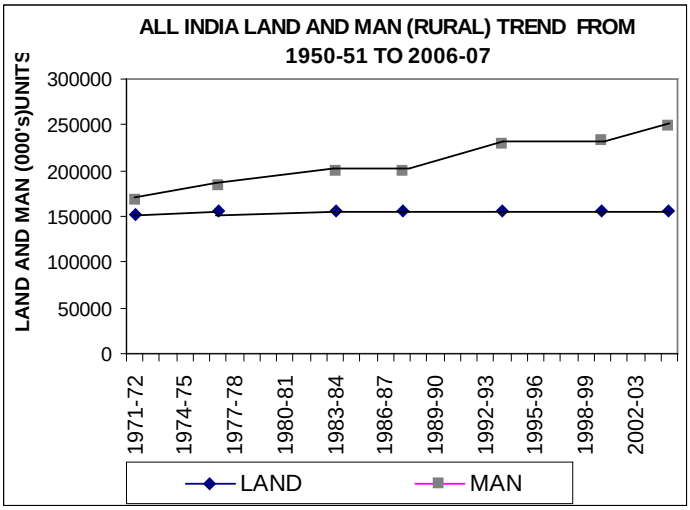


Figure 6

All India Rural Land/Man Ratios 1972-73 to 2004-05

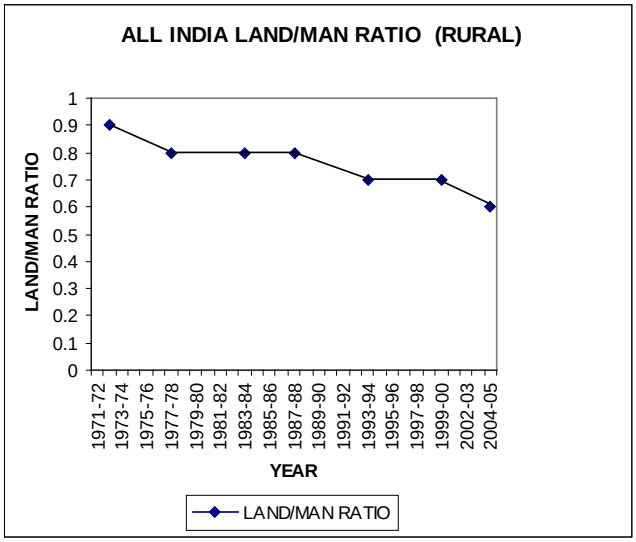


Figure 7

West Bengal Rural Cultivated Area and Agricultural Workers 1983 to 2004-05

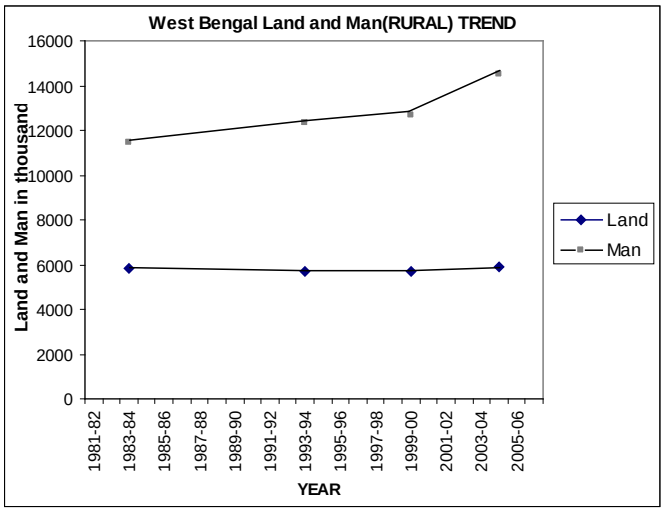
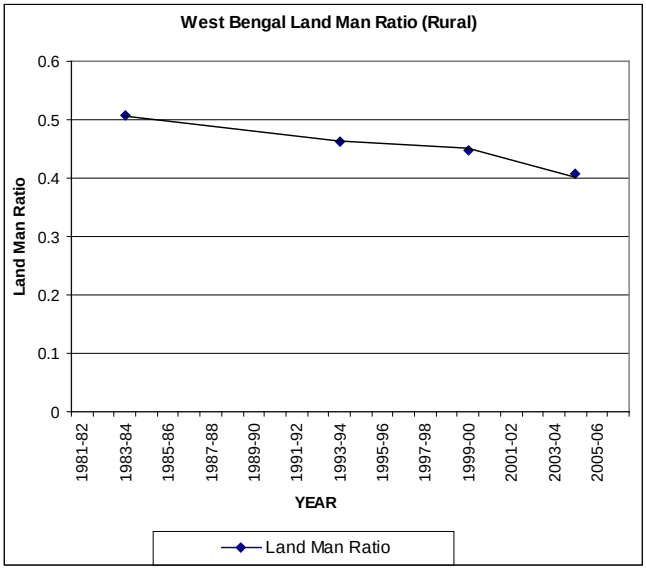


Figure 8

West Bengal Rural Land/Man Ratios 1983-2004-5



2. Outcomes in Terms of Average Area Owned and Size Distribution of Land Holdings

NSS data on ownership holdings indicates that owned area in rural areas has gone down from 129 million ha in 1961-62 to 117 million ha in 1992 and then to 107 million ha in 2003. They suggest that the most recent contraction of rural owned area is due to reclassification of area, consequent to urbanisation.

This was associated with a rapid decline in average area owned per household, and an in increase in inequality in the distribution of owned area among households. Average owned area of those who owned some land fell from 2.01 ha per household in 1961-62 to 1.14 ha in 1992, and then to only 0.81 ha in 2003. (Average operated area of operational holdings is bigger, but the trend is the same.) Gini's coefficients for owned area, (which measure the degree of inequality in the distribution of owned area among households), and which had remained constant at 0.71 in 1971-72, 1982 and 1992, rose to 0.74 in 2003. Table 2 gives details for all_India on the characteristics of ownership holdings for from 1961-62 to 2003.

Table 2
Household Ownership of Land: Rural India by NSS Rounds - 1961-62 to 2003

Item	*1961-62 17th*	*1971-72 26th*	*1982 37th*	*1992 48th*	*2003 59th*
1. Estimated number of households (million)	72.3	78.2	93.5	116.2	147.8
2. Estimated area owned (million ha)	128.7	119.6	119.7	117.4	107.2
3. Average area (ha) owned per household	2.01 (1.78)	1.69 (1.53)	1.44 (1.28)	1.14 (1.01)	0.81 (0.73)
4. Estimated number of landless households	8.4	7.5	10.6	13.1	14.8
5. Percentage of landless Households	11.68	9.64	11.33	11.25	10.04

*Notes: (*i) Average area owned in item 3 excludes landless households. Figures in brackets in item 3 are average area owned per household including landless households.

(ii) Report 491 did not give estimates for the total number of households including landless households, except for the 59th Round. Estimates in items 1 and 4 have been derived from those given in lines 2 and 3, and 5, respectively.

Source: Based on NSS 59th Round Report No 491, Statement 2, page 11, and Statement 3, page 12.

However, NSS ownership estimates need to be taken with a grain of salt. As Rawal (2008) points out, the NSS surveys underestimate the extent of inequality in both ownership and operational holdings because owners of large holdings under report the extent of their owned land, while at the other end of the size class scale, landlessness is also seriously underreported. Rawal (2008) estimates that landlessness in the sense of owning no land other than a homestead was in the neighbourhood of 42 percent in 2003 in India as a whole, and roughly 47 percent in West Bengal

There is a social group dimension to the average area owned per household too, which needs to be mentioned. In 2003, Scheduled Tribe households, who owned about 11 percent of owned area, recorded a per household owned area of 0.727 ha. Members of Scheduled Caste households, who owned 9 percent of owned area, owned, on the average, only 0.304 ha. Other Backward Class households accounted for 44 percent of owned area, with a typical per household owned area of 0.758 ha. "Others", who owned 36 percent of area, reported

per household owned area of 1.003 ha.

The situation in West Bengal, however, differs greatly from that in India as a whole, as the figures in table 3 reveal. Average area owned is much more similar across social groups, and the share of OBC households in all households is tiny as compared to their share in rural India as a whole. Table 3 gives the details.

Table 3
Average Area Owned per Household by Social Group and Share in Households of each Social Group: Rural India and West Bengal, 2003

State	*Characteristics*	*Social Group*				
		ST	*SC*	*OBC*	*Others*	*All*
Rural India	Average Area Owned (ha)	0.767	0.304	0.758	1.003	0.725
	Share in Households (%)	10.5	21.6	41.6	26.3	100
Rural West Bengal	Average Area Owned (ha)	0.285	0.247	0.422	0.308	0.295
	Share in Households (%)	7.1	29.1	5.4	58.3	100

Notes: i) ST-Scheduled Tribe; SC-Scheduled Caste; OBC-other Backward Class.
ii) The all social group category includes a small group for whom caste was not recorded.

Source: NSS 59th Round Report No 491, Statement I R pages A-14 and A-15.

3. Marginalisation of Agricultural Holdings

In India today, the extent of marginalisation of rural ownership holdings by size category is the definitive feature in the lives of agricultural workers and the conditions of agricultural production. By 2003, in India as a whole, roughly 80 percent of all ownership holdings belonged to the marginal, (1.000 ha or less), size category. Altogether, 96 percent of households owned holdings of 4 ha or less in 2003. The situation in West Bengal is even more striking, as the figures in table 4b show.

Table 4a
Share of Ownership Holdings by Size Category: Rural India by NSS Rounds from 1971-72 to 2003

Category of Holdings	Share of Ownership Holdings by Size Category.			
	1971-72 26th	1982 37th	1992 48th	2003 59th
1. Marginal (1.000 ha or less)	62.62	66.64	71.88	79.60
2. Small (1.001-2.000 ha)	15.49	14.70	13.42	10.80
3. Semi-medium (2.001-4.000 ha)	11. 94	10.78	9.28	6.00
4. Medium (4.001-10.000 ha)	7.83	6.45	4.54	3.00
5. Large (>10.000 ha)	2.12	1.42	0.88	0.60

Source: NSS 59th Round Report No 491, Statement 5, page 19.

Table 4.b
Share of Ownership Holdings by Size Category
Rural West Bengal by NSS Rounds from 1971-72 to 2003

Category of Holdings	Share of Ownership Holdings by Size Category			
	1971-72 26th	1982 37th	1992 48th	2003 59th
1. Marginal (1.000 ha or less)	77.62	81.60	85.88	92.06
2. Small (1.001-2.00 ha)	12.64	11.50	9.48	5.70
3. Semi-medium (2.001-4.000 ha)	7.30	5.54	3.94	1.40
4. Medium (4.001-10.000 ha)	2.39	1.28	0.71	0.20
5. Large (>10.000 ha)	0.05	0.08	0.00	0.00

Source: NSS Round Report No 491, Statements, page 19.

The hard fact is that the typical household operating a holding of less than 4 ha cannot cover actual consumption expenditures out of the combined income from crop cultivation and animal husbandry combined. Then how do these people survive? Tables 5a and 5b, for all India and West Bengal respectively, provide some of the answers.

4. Farmer Household Incomes by Source

The key to the survival of members of farm households possessing less than 4 ha lies in the fact that the typical farmer household now has only one foot in self cultivation of the operational holding. The other foot is either in the hired labour market or in some kind of non-farm activity – typically in self employment.

From table 5a, it is evident that the roughly 45 percent of farmer households who possess 0.40 ha or less rely, for the vast majority of their incomes, on wages. Income from crop cultivation and animal husbandry combined constitute a strictly secondary source of income. Non-farm business income accounts for roughly 17 percent of income. It is worth noting that these sub marginal farm households depend more on income from self employment in a non-farm business, than farmers in any other size class of land possessed.

It is only when you come to size classes of 0.41 and above, that the single largest income source is cultivation. The share of cultivation as an income source is directly related to the size class of land possessed.

At the all India level, in the typical case, a farm household can cover actual consumption expenditure, from cultivation, only if he possesses 4.01 hectares or more. Although these are averages which hide inter-regional and inter farm household variations, it may be noted that less than 5 percent of farmer households belong to this fortunate operational holdings group.

The typical West Bengal farmer household belonging to the lower size classes of land possessed, appears to be somewhat better off. Households belonging to every size class of land possessed earn more from cultivation than is the case for the typical farm household at the all India level, and also more from non-farm business activity. A somewhat smaller share of income comes from wages, and typical earnings from this source seem to be lower. A much larger proportion of all farmer households are involved in non-farm businesses.

But one basic feature is common to farmer households in West Bengal and India as a whole. It is that those possessing less than 4 ha typically cannot cover their consumption expenses out of the income earned from their agricultural activities.

Table 2

Average Monthly Income by Source: India 2002-2003

Size class of land possessed (ha)	*Percent of Farmer households*	*Average Income by source/ Share in sum of Incomes*				*Sum of Incomes by source Rs*	*Consumption Expenditure Rs.*
		Wages Rs. (%)	*Crop Cultivation Rs. (%)*	*Animal Husbandry Rs. (%)*	*Non Farm Business Rs (%)*		
<0.01	11.62	1075 (77.9)	11 (0.8)	64 (4.6)	230 (16.7)	1380	2297
0.01-0.40	33.96	973 (59.6)	296 (18.1)	94 (5.8)	270 (16.5)	1633	2390
0.41-1.00	27.59	720 (39.8)	784 (43.3)	112 (6.2)	193 10.7	1809	2672
1.01-2.00	15.08	635 (25.5)	1578 (63.3)	102 (4.1)	178 (7.1)	2493	3148
2.01-4.00	7.57	637 (17.7)	2685 (74.8)	57 (1.6)	210 (5.9)	3589	3685
4.01-10.00	3.33	486 (8.6)	4676 (82.3)	12 (0.2)	507 (8.9)	5681	4626
>10.00	0.55	557 (5.8)	8321 (86.1)	113 (1.2)	676 (7.0)	9667	6418

Notes: 1. A farmer is defined as one who possesses some land and is engaged in some agricultural activities on that land during the last 365 days. Agricultural labourers are excluded.

2. A farmer household is a household having at least one farmer as its member.

3. Sum of incomes excludes income from rent, interest, dividends and other sources such as pensions and remittances

Source: Situation Assessment of Farmers Report No. 497 NSS 59th Round (Jan-Dec 2003) Table 6, page A-192

III. The Potential for Converting Wastelands and Degraded Lands into Cultivated Land

In India today population growth has led to declining per capita availability of inelastic land resources. Urbanisation, industrialisation and land degradation have made the situation worse. However, short of buying up land abroad to augment food supplies, there are a number of things that could be done to deal with the constraints of 'scarce land'. One of them is to convert India's extensive areas of waste land and degraded land into cultivable area.

The evidence suggests that accelerated conversion of wastelands and degraded lands into arable land could constitute a potentially important, countervailing measure. In India, the most recent scientific estimate of the extent of degraded lands/wastelands that, with

Table 2

Average monthly income by Source: West Bengal 2002-2003

Size class of land possessed (ha)	*Percent of farmer households*	*Average Income by Source/Share in sum of incomes*				*Sum of Incomes by Source Rs.*	*Consum-ption Expenditure Rs.*
		Wages Rs. (%)	*Crop Cultivation Rs. (%)*	*Animal Husbandry Rs. (%)*	*Non Farm Business Rs. (%)*		
<0.01	8.87	996 (69.5)	0 -	45 (3.1)	393 (27.4)	1434	2308
0.01-0.40	59.16	865 (51.8)	334 (20.0)	70 (4.2)	400 (24.0)	1669	2320
0.41-1.00	27.40	943 (39.6)	1053 (44.2)	112 (4.7)	275 (11.5)	2383	2974
1.01-2.00	7.38	686 (18.8)	2225 (61.1)	160 (4.4)	572 (15.7)	3643	3877
2.01-4.00	1.92	978 (16.3)	4621 (77.11)	-33 (-0.6)	427 (7.1)	5993	4754
4.01-10.00	0.28	722 (18.7)	5263 (136.2).	-2465 (-63.8)	344 (8.9)	3864	5234
>10.00	-	-	-	-	-	-	-

Notes: 1. A farmer is defined as one who possesses some land and is engaged in some agricultural activities on that land during the last 365 days. Agricultural labourers are excluded.

2. A farmer household as a household having at least one farmer as its member.

3. Sum of incomes excludes income from rent, interest, dividends and other sources such as pensions and remittances

4. There were very few sample cases (11 only) in the 4.01 to 10.00 size class and none in the size class possessing more than 10 ha.

Source: Situation Assessment of Farmers Report No. 497 NSS 59th Round (Jan-Dec 2003) Table 6, page A-191

appropriate investment, could be brought under cultivation, is gigantic.

One hundred and four million ha of degraded arable land and 16.5 million ha of degraded open forest land with less than 40 percent canopy – a total of 120.72 million ha - were identified by an expert group as lands most likely to respond to investment in "amendments and management". Signatories to the expert group's report include experts from the Indian Council of Agricultural Research, (ICAR), The National Remote Sensing Agency, (NRSA), the National Academy of Agricultural Sciences, (NAAS) and the National Rainfed Area Authority< (NRAA). Their 'grand total' of 120.7 million ha amounts to more than three quarters of the total area currently under cultivation and two thirds of the area identified as "cultivable land" in official land utilisation statistics.

There are, in addition, roughly 83 million hectares of rainfed area, accounting for 58 percent of net sown area.

Most of the degraded land identified by the expert group is cultivable land which has been turned into wasteland by water, (67 percent), or wind, (10 percent), erosion. Another 14.5 percent suffers from chemical degradation. This includes salt affected and acidic soils,

alone or in combination with water erosion. A relatively small area – less than 1 percent – has been subject to physical degradation, attributable either to mining and industrial waste or to 'serious' water logging, defined as permanent surface inundation.

Degraded open forest land, with less than 40 percent canopy, accounts for an additional 13.7 percent of the estimated 120.7 million ha area which could be transformed into arable land.

State level estimates of the area of degraded arable and open forest land are given in table 6. The potential area for conversion into arable land in West Bengal is 2 million ha. This amounts to roughly 23 percent of the total geographical area of the State. This may not be so impressive as the area available in some other states, but the "amendment and management" of even a part of this area could provide significant opportunities both for increasing the productivity of agricultural land and for distribution of cultivable land to land-poor rural households.

The 11th Five Year Plan refers to the report of this expert group in its discussion of wasteland development projects. Citing the expert group's results, they note that "degraded land which has the [potential for development under watershed development projects amounts to 64 million ha." Of this, 36.4 million ha is proposed to be developed during the 11th Five Year Plan.

This falls far short of what is required to reclaim for cultivation the 120.7 million ha identified by the expert group.

IV. THE NEED FOR A NATIONAL LAND POLICY IN INDIA

India does not have a National Land Use Policy. This is despite a number of serious efforts to develop one during the 1980's, which seem to have been abandoned in the 1990's.

A National Land Use and Wasteland Development Council, chaired by the Prime Minister, was set up, which spent three years, from 1983 to 1986, in preparing policy guidelines. It is not clear what happened to these guidelines.

Then in 1987, the Ministry of Agriculture initiated an extensive research project titled Perspective Plan for Conservation, Management and Development of Land Resources on a zonal basis. Zonal studies were carried out, reports were produced and recommendations were made. In 1988, the Planning Commission set up Agro-climatic Regional Planning Units. The recommendations of the zonal studies were never taken up for serious consideration.

There is no mention of these efforts in the agriculture chapter of the 11th Five Year Plan.

Table 6

State-Wise Area Statistics: Degraded Arable/Open Forest Land (M. ha as at 2004-05)

Degraded Arable Land

Sl. No.	State	Open Forest land					Rainfed Area		
		TGA States (M ha)	Area (M ha)	% of TGA India	% of TGA States	NSA States (M ha)	Area (M ha)	% of NSA India	% of NSA States
1	Andhra Pradesh	27.50	9.57	2.91	34.80	10.12	6.45	4.56	63.75
2	Arunachal Pradesh	8.37	2.06	0.63	24.61	0.16	0.12	0.09	73.17
3	Assam	7.84	4.42	1.34	56.38	2.77	2.60	1.84	93.73
4	Bihar	9.41	1.46	0.44	15.52	5.72	2.28	1.61	39.90
5	Chhattisgarh	13.51	4.71	1.43	34.86	4.73	3.56	2.52	75.34
6	Delhi	0.15	0.03	0.01	20.27	0.03	0.003	0.00	11.11
7	Goa	0.37	0.10	0.03	27.03	0.14	0.11	0.08	78.01
8	Gujarat	19.60	3.07	0.93	15.66	9.62	6.46	4.57	67.14
9	Haryana	4.42	0.53	0.16	11.99	3.53	0.57	0.41	16.14
10	Himachal Pradesh	5.57	0.95	0.29	17.06	0.55	0.44	0.31	80.73
11	Jammu & Kashmir	22.22	1.87	0.57	8.42	0.75	0.45	0.31	60.24
12	Jharkhand	7.9	3.83	1.16	48.48	1.77	1.61	1.14	91.01
13	Karnataka	19.18	8.50	2.59	44.32	9.85	7.68	5.43	77.99
14	Kerala	3.89	2.76	0.84	70.95	2.19	1.76	1.25	80.37
15	Madhya Pradesh	30.82	14.00	4.26	45.43	14.95	8.93	6.32	59.75
16	Maharashtra	30.71	10.05	3.06	32.73	17.43	14.55	10.29	83.47
17	Manipur	2.23	1.82	0.55	81.61	0.22	0.18	0.13	82.95
18	Meghalaya	2.24	1.73	0.53	77.23	0.23	0.16	0.11	69.57
19	Mizoram	2.10	1.23	0.37	58.57	0.09	0.08	0.06	88.89
20	Nagaland	1.66	1.54	0.47	92.77	0.30	0.24	0.17	78.95
21	Orissa	15.60	3.74	1.14	23.97	5.76	4.43	3.13	76.96
22	Punjab	5.04	0.46	0.14	9.13	4.24	0.21	0.14	4.95
23	Rajasthan	34.22	20.46	6.23	59.79	17.94	10.67	7.55	59.49
24	Sikkim	0.71	0.03	0.01	4.23	0.11	0.10	0.07	89.29
25	Tamilnadu	13.00	3.21	0.98	24.69	4.67	2.46	1.74	52.63
26	Tripura	1.05	0.76	0.23	72.38	0.28	0.24	0.17	85.71
27	Uttar Pradesh	24.09	14.58	4.43	60.52	16.81	3.78	2.68	22.48
28	Uttarakhand	5.35	1.25	0.38	23.36	4.73	0.43	0.30	9.10
29	West Bengal	8.87	2.00	0.61	22.55	5.55	2.20	1.55	39.63
	TOTAL		120.72	36.72			82.753	58.53	

Source: Table 2, Anonymous (2008), NRAA, Min. of Agriculture, GOI and Agricultural Statistics at a Glance (2008).

Note: TGA is Total Geographical Area, and NSA is Net Sown Area.