

The Decline of Village Common Lands and Changes in Village Society: South India, c. 1850–2000

Haruka Yanagisawa

Graduate School of Humanities and Social Sciences, Chiba University,
1-33, Yayoicho, Inageku, Chiba-shi, 263-8522, Japan

and
Institute of Oriental Culture, University of Tokyo,
Hongo, Bunkyo, Tokyo, 113-0033, Japan

Postal address: 7-6-5, Sugita, Isogoku, Yokohama, 235-0033, Japan

E-mail: h-yanagisawa@eva.hi-ho.ne.jp

Abstract

The widely accepted view that emphasises the negative impact of the decline in common property resources on the village poor generally presumes that village common lands would have been used by all villagers inclusive of the poor without serious differences in the right to access them. Mainly based on historical documents for Tamil Nadu from the nineteenth century, this paper argues that influential villagers controlled 'waste lands' (village common land) and that this elite-dominant system of controlling natural resources declined with the gradual emancipation of the subordinate section of villagers. The acquisition of small bits of cultivated land and the encroachment on waste lands by the landless not only mirrored their empowerment and strengthened their bargaining position but also implies, under some circumstances, the creation of possible pre-conditions for an egalitarian type of resource-controlling system. This paper also suggests that, as witnessed in Tamil Nadu in the last two decades, the growth of non-agricultural job opportunities could possibly weaken the pressure on lands and also induce farmers to change cropping patterns of their farms, sometimes leading to an expansion of farm forestry. The acquisition of landholding by the landless and their emancipation could also possibly contribute in this direction.

Keywords: common property resources, historical changes, South India, Tamil Nadu, village social structure, job opportunity

INTRODUCTION

IN NINETEENTH CENTURY TAMIL NADU, as was the case in other areas in India, a significant portion of village lands was not cultivated but used by villagers for grazing their livestock, and for collecting wood for fuel, fodder, manure, house-building materials, etc. Such common land was classified as 'waste land' by the revenue administration of the colonial period. Therefore hereafter whenever I use 'waste land', it denotes, if not specifically stated otherwise, common lands (or commons). The extent of waste lands has decreased very rapidly since then, as we shall see below. In his excellent pioneering work, Jodha (1986) found that the village poor depended highly on such uncultivated village common property for collecting wood for fuel and other material indispensable for their everyday life and that the material collected was also a

source of income for them. The extent of such areas was, however, more than halved between 1950 and 1980. While the poor were sometimes assigned such waste lands in the process of the land reforms, a large part of the lands that had thus been once assigned to the poor was later acquired by richer people. Thus, Jodha highlighted the negative consequences of the decrease in village common lands and of the policy of assigning waste lands.

While Jodha presents an excellent depiction of the present state of village common lands, he does not trace the historical changes of these lands but just presumes that they would have been used by all villagers inclusive of the poor without serious differences in the right to access them. This presumption, however, needs to be verified by an examination of historical documents, and also there must have been regional differences. The recent histori-

ography rather questions the general existence in the nineteenth century of an indiscriminate right among villagers to natural resources (Mosse 2003). The conversion of waste lands into cultivated lands started at the latest in the nineteenth century, as we shall see below, and the process was accompanied by a structural change in the landholdings as a whole. The implication of the reduction of waste lands may be well understood by locating the issue in this historical process. By analysing historical data mainly of Tamil Nadu, this paper considers the reduction of waste lands in the context of the changing social structure of villages, in particular the change in the status of the lower strata in village society.

This paper depends heavily on village settlement registers and other administration documents concerning Lalgudi taluk, Tiruchirapalli district. It deals mainly with villages in unirrigated (dry) zones, since waste lands were almost extinct in irrigated (wet) zones of this taluk by 1860 but remained to a significant extent only in unirrigated zones.¹ In the first section, I examine the structure of the holdings of cultivated lands and how waste lands and other natural resources were controlled around the 1860s in Tamil Nadu. In the second section, I trace changes in the landholdings, pointing to a new phase that appeared in the process of the decline of waste lands since the end of the nineteenth century, and compare the changes witnessed in Tamil Nadu with cases in other states. The third section discusses the changes in connection with the types of natural resource controlling system. The last section deals with changes Tiruchirapalli district has witnessed since the 1980s, the use of natural resources and the impact that increased opportunities for farm and non-farm employment in rural areas have had on the preservation of natural resources.

THE STRUCTURE OF LANDHOLDINGS IN THE FIRST HALF OF THE NINETEENTH CENTURY

Landholdings and Agrarian Relationships

The societies of the irrigated (wet zone) villages in Tamil Nadu were far from being egalitarian in the first half of the nineteenth century. An analysis of the Settlement Registers for villages in Lalgudi taluk has revealed a highly concentrated pattern for landholdings in wet villages. More than half of the land was owned by members of higher castes, such as Brahmans and Vellalars, usually comprising a handful of large landowners, whereas the majority of the villagers, consisting mainly of low caste non-Brahmans and Dalits, held no land or at most a negligible area. Such a concentration in landownership was quite common in other wet areas. The land owned by people from the higher castes was mainly cultivated either through a sharecropping system or by using permanent labourers. Landowners had to rely for the cultivation of their land principally on permanent labourers and ten-

ants, either low caste non-Brahmans or Dalits. The high caste landowners obstructed the acquisition of land by those of lower castes, particularly Dalits, since the higher castes would have lost their advantages if the members of lower castes became landholders (Yanagisawa 1996a).

Agrarian relationships in villages in dry lands in the nineteenth century were to a considerable extent similar to villages in wet zones. In a group of dry land villages, like wet zone villages, most of the village land was owned by people from high castes, such as Brahmans, Vellalars or Reddis, though the dry zone also had another type of village, where low caste non-Brahmans dominated landholdings. As was the case in wet villages, there were very few Dalit *pattadars* (landholders) in 1865 in dry zone villages, and the majority of the Dalits were probably agricultural labourers, even though agricultural labourers in this zone were mostly daily coolies; permanent bonded labourers comprised only a small portion of them (Yanagisawa 1996b).

The Rights of Landholders to Waste Lands

In the first half of the nineteenth century, the right to use waste lands was not equally shared by all villagers. In some areas, mainly in irrigated areas, the dominant landholders were called *mirasidars* by the revenue administration. A collector wrote in 1818 that waste lands were 'held in common joint property by the whole of the Meerassidars', each being entitled to the benefits of pasturage, firewood, and other profits of the *tarisee*, or waste, in proportion to his share of *mirasi* rights in the village. He further added: 'Each of these consists chiefly of tracts of common, on which the Meerassidars graze the cattle employed by them in agriculture, or of jungle, in which they cut the firewood used by them for fuel' (Hudleston 1862: 377, 374). In some documents, it is stated explicitly that *mirasidars* possessed the exclusive right to cut firewood and work quarries (Hudleston 1862).

Documents dating from 1824 and 1839 also supported the views stated by the collector by suggesting that grazing in waste lands was a part of *mirasi* rights. As Thomas Munro reported for Arcot: 'The waste in *meeras* villages in Arcot is supposed by Mr. Ellis [Collector of Madras] to belong to the meerassidars jointly; . . . It confers a right, but not the right of ownership, to the pasture of the waste lands, and the fishery of the tanks and *nullahs* [water courses], in common with the other meerassidars of the village. The same right exists every where.' A document for Chingleput also confirms their right of grazing: '. . . with regard to the *Parumboke* and *Anadi* waste lands, their right extends no further than to the privileges of grazing their cattle on them when waste . . .' (Hudleston 1862: 437, 452). In other words, since waste lands were under the control of the *mirasidars* of the village, non-*mirasidar* villagers were not entitled to the benefits of waste lands as equally as the dominating landowners,

but most probably were allowed to use such land so far as the *mirasidars* permitted.

Though information on the use of waste lands in unirrigated zone Tamil villages is scanty, high caste landholders are likely to have actually occupied and used those areas classified as 'waste land.' Referring to 'grass' and 'pasture' in Salem in the late eighteenth century, Murton (1977: 86) has already suggested that such pasture lands generally belonged to the Vellalars. J.W.B. Dykes's observation seems to support this argument. He stated in 1852 that the Vellalars in Salem bred cattle, produced plenty of ghee or clarified butter and often paid the assessment on their land through the sale of young stock (Dykes 1853).

As the officiating collector of Salem suggested in 1860, the elite cultivators firmly controlled pasture lands: 'My opinion is that this suit reveals what is very common in this district, influential Ryots keep lands so firmly in their possession for pasture, that few of their neighbours will incur the odium of forcing them either to pay Government the full assessment or give up the lands to those who would cultivate it' (GoM 1860: 14). Such evidence suggests that the Vellalars and other higher caste landholders probably used the uncultivated land in their villages to rear their cattle and that they also had command of non-Vellalar labourers.

The 1878 Settlement Report of Coimbatore district again points to the domination of influential farmers over uncultivated lands:

This is a rent [land tax] levied at the rate of 1/4 of the full assessment on lands allowed to the ryots for grazing purposes, on condition that no one is willing to cultivate and pay the full assessment. The total collections in Fasley 1284 (1874-75) amounted to only Rupees 150. The system is liable to the abuse that lands may be taken up at the reduced rate by influential ryots, who retain them at the same rate to the exclusion of other poorer ryots willing to cultivate but afraid to come forward. It is believed that much land was some years back kept out of cultivation by this means (underscoring added) (GoM 1878: 5780-5781).

Thus the report discloses that influential farmers with a large number of livestock occupied uncultivated land to graze their cattle to prevent poor farmers from cultivating it. Later, the 1910 Settlement Report on Coimbatore district stated that 'in the plains of Dharapuram, the business [cattle rearing] was perhaps concentrated into the hands of wealthy ryots,' (GoM 1910: 11) indicating that wealthy ryots continued to dominate cattle breeding in the 1900s as they had done in the 1870s.

Even though *mirasidars* and other influential ryots did have a superior right to waste lands, this does not necessarily imply that other classes were completely excluded

from using resources in such lands. It was simply impossible for such inferior classes to survive without using them. In fact Francis Buchanan's report in South India at the beginning of the nineteenth century indicates that in an area near present Palghat, 'Although the whole of the *Parum*, or hilly land, is private property, no one here prevents the cattle of his neighbours from feeding on his ground, or any person that pleases from cutting grass' (Buchanan 1807: 451). However, in an area nearby, his survey also shows that while the landholders were entitled to use pasture lands, the landless were not allowed to pasture but permitted to collect fodder:

Rich men feed their labouring cattle four months on grass, and eight months on straw. Poor people can only allow straw for one half of the year. Every man who occupies rice-land (Dhanmurry) has a certain part of the high land attached to it for pasture; and to this he has an exclusive right, without paying rent: but any man may cut grass wherever he pleases (Buchanan 1807: 381).

For Bhavani, Buchanan observed that 'any person who pleases may cut *Bamboos*, or forest trees. Nor is any rent exacted from those who feed cattle in waste lands, except where the pasture is very good; and there, for an exclusive privilege of keeping their herds, some people pay a trifle' (Buchanan 1807: 225). The existence of an exclusive privilege for very good pasture lands also indicates that the right to waste lands was not same among different segments of villagers.

If the uncultivated lands and forests were sufficiently abundant in comparison with the size of the population and cultivated lands, there would have been no need to regulate the use of resources in uncultivated lands by villagers. In fact, as we shall see below, even in 1880 more than 40 percent of dry lands remained uncultivated, and hence, it is most likely that there was no shortage of pasture and uncultivated lands.

This, however, changed when, in accordance with an increase in the population and an expansion of cultivation into waste lands, people gradually felt a shortage of pasture and waste lands. Influential ryots are likely to have started regulating and limiting the use of natural resources by non-elite villagers. Minoti Chakravarty-Kaul's excellent study on common lands in Punjab is very suggestive on this point. Here, while the village common lands were under the control of a proprietary body, like in Tamil Nadu, all the residents of the village were given the right to graze. But in the latter half of the nineteenth century the population density, combined with favourable conditions for cultivation, led to a decrease in the grazing fallow of the villages. The proprietary groups resorted to enclosure of the common lands and reserved grazing for themselves and for conservation of forested grazing lands. The chief court, even as late as 1932, could not

prevent the proprietors from cultivating these waste lands (Chakravarty-Kaul 1992).

Mirasidars in Tamil Nadu also had an exclusive and preferential right in dividing common lands as shown by the following extract from the Board of Revenue Proceedings for 1853:

The Petitioners complain that on a partition of the Samoodayem lands of their village such lands have been divided among the Brahmin Meerasidars only, the proprietors of 7 1/2 out of 10 shares and that they, the Petitioners, were not allowed to participate in the said waste lands as they ought to have been as Meerasidars of 2 1/2 out of original shares (GoM 1853: 6164).

Thus we may be permitted to conclude that, in both wet and dry areas in Tamil Nadu, the pasture lands and other waste lands were not commonly used equally by all villagers but, like cultivated lands and other natural resources, were controlled by dominant landholders of the village.² The landless were likely to be able to use these resources, for example for collecting wood for fuel, etc., so far as the dominant villagers permitted on condition that the waste lands were abundant enough to support the population size. It should be emphasised that the dominant landholders strongly opposed the cultivation of such waste lands by landless people, in particular by Dalit agricultural labourers, since it might have led to an insufficient supply of obedient labourers, as we shall see below when we discuss such cases appearing after the end of the nineteenth century. In most areas, they successfully prevented waste lands from being cultivated by the landless at least till the end of the nineteenth century.³

Privatisation of Waste Lands by the Dominant Villagers

The latter half of the nineteenth century witnessed a rapid decrease in the extent of waste lands. The Madras Government once levied a lower assessment on waste and pasture lands than on normal agricultural lands, but in 1874 they stopped this policy for the purpose of encouraging the cultivation of waste lands, by means of which the government expected an increase in land revenues (GoM 1905). The officer who conducted the settlement operation in Tiruchirapalli district in 1860 expected the conversion of the still-remaining waste lands and the reclamation of forest lands (Moore 1878). In seven taluks in North Arcot district, waste lands accounted for 42 percent of the unirrigated area and 7 percent of the irrigated area in 1880, but by 1911 they were reduced to 26 percent and 4 percent respectively (GoM 1912; GoM 1917; Baker 1984). A similar change was witnessed in Tiruchirapalli district, where unoccupied land nearly halved in a period of 30 years after 1894 from 210,000 to 120,000 acres

(GoM 1923b). The Settlement Registers for five villages in unirrigated areas in Tiruchirapalli district also reveal a rapid decline of waste lands. As shown in Table 1, 2,290 acres of village lands were classified as 'lands with no *pattadars* ('no holder's name')' in 1865. Thus waste land occupied 21 percent of the total village land inclusive of '*poramboke*', i.e., the lands used as roads, river beds, house plots, and threshing floors. The table shows that the extent under 'waste land' dropped to 3 percent in 1895 and 2 percent in 1925.

The upper strata of villagers, whose rights over waste lands were superior to those of the landless, took the lead in privatising waste lands. This is indicated by the 1853 document cited above. In a dry village in Tiruchirapalli district, a large portion of land converted from waste to occupied land came to be owned by higher caste members of the village, as shown in Table 2.

Government policy, till around 1920, encouraged land occupation by these classes. According to Darkhasht rule, which regulated the occupation of waste lands, when someone in a village applied to cultivate waste lands, then the other villagers would be notified of the application. Only when there was no *mirasidar*, as in the case of a *mirasi* village, or no other landholder declared the intent to cultivate the said waste land, the first applicant was allowed to occupy it. Regarding the occupation of uncultivated lands, a preferential right was accorded first to *mirasidars*, next to the landholder owning land adjacent to the waste land concerned, and third to any landholders with lands in the village. Thus, under this rule, the landless could cultivate waste lands only when no other landholder claimed the intent to cultivate the land concerned. The government justified the restriction on the ground that it was aimed at preventing village lands from being divided into too many small holdings. The rule was formulated through debates over the rights of *mirasidars* in the early decades of the nineteenth century, in which *mirasidars* strongly asserted that they were the village founders and owned all lands in the village, including waste lands. The government conceded their assertion by granting them the preferential right to occupy waste lands. The colonial government thus established revenue collecting and other administration systems that heavily depended on the strong influence held by *mirasidars* and other large landholders in local societies (Yanagisawa 1996a).

It is not easy to identify the factors that led to the transformation of waste lands to cultivated lands. In addition to the encouragement by the government, the growth in demand for agricultural products from domestic and international markets is likely to have stimulated the expansion of cultivation into waste lands. While population increase may also have been a factor that induced people to bring waste lands under cultivation, the connection between the two is not straightforward. The rate of population increase in the five villages above mentioned was 14

Table 1

Land-use in five unirrigated villages in Lalgudi taluk, Tiruchirapalli district, Madras Presidency

Land type	1865		1895		1925	
	acres	%	acres	%	acres	%
<i>Patta</i> land	6,500	61	8,350	78	8,563	81
Waste land	2,290	21	305	3	254	2
<i>Poramboke</i>	1,936	18	2,021	19	1,796	17
Total	10,726	100	10,676	100	10,613	100

Sources: GoM c.1865, c.1895, c.1925.

Table 2

Pattadars who privatised waste lands over 30 years: An unirrigated village in Lalgudi taluk, Tiruchirapalli district, Madras Presidency

New <i>pattadars</i>	Area of 1865 waste land privatised by 1895		Area of 1895 waste land privatised by 1925	
	acres	%	acres	%
(1) Area privatised				
Reddiar	49	8	1	1
Brahman	14	2	2	1
Kavundan+Pillai	234	40	63	41
Muttiriyar	16	3	13	9
Caste unknown	42	7	9	6
Others	76	13	3	2
(2) Area not privatised	148	26	61	40
Total	579	100	152	100

Sources: GoM c.1865, c.1895, c.1925.

Note: In the third column, the total of the percentages adds up to only 99 as the figures have been rounded off.

percent during the 24 years between 1871 and 1895, and 11 percent during the next 30 years, whereas cultivated land expanded by 28.5 percent and 2.6 percent respectively for the two periods.⁴

THE EMANCIPATION OF THE LANDLESS AND THEIR OCCUPATION OF WASTE LANDS

Changes in Landholdings

Agrarian society in Tamil Nadu, as described above, underwent a marked change after the 1870s. The growing emigration of agricultural labourers and other members of the lower castes to estates overseas such as in Sri Lanka and Malaya not only provided them with alternative job opportunities but also stimulated the growth of their sense of independence. As a result higher caste landowners faced increasing difficulties in securing labourers and making them work as hard as before. Some labourers are likely to have purchased small bits of land in their villages with the funds they had saved while working as plantation labourers. On the other hand, a large number of higher caste people left their villages for urban areas to gain employment in white-collar jobs and to obtain a higher education, either leasing out their land to tenants or reducing their landed property and thus weakening their control over village resources.⁵

The changes in the landholding structure mirrored a transformation in agrarian relations. First, in the five dry villages in Lalgudi taluk, the areas held by Dalits rapidly increased. As pointed out earlier, there were hardly any Dalit *pattadars* in any one of these villages in 1865. Thirty years later, in 1895, Pallan, Paraiya and other Dalits owned 86 acres, and their position had further improved by 1925, when they owned 147 acres (Table 3). All five villages witnessed an increase in Dalit landholdings after 1865.

Not only Dalits, but low caste non-Brahmans also expanded their landed property after 1865. The increase in Muttiriyar landholding was particularly remarkable: Muttiriyars had 289 acres in 1865, 1,105 in 1895, and 1,997 acres in 1925. The landholdings of the Udaiyans, too, increased substantially, from 332 acres in 1865 to 533 acres in 1925.

Was this increased landholding by members of lower caste communities achieved at the cost of landholders from higher castes? By the year 1925, though Brahmans decreased their landed property, the amount reduced was only 232 acres. Another landholder group of a higher caste, the Kavundans and Pillais, did not reduce their holdings, but, rather, expanded them. Hence changes in the area owned by higher caste members hardly account for the large scale land transfer, amounting to 2,000 acres, to lower caste members.

Table 3

Distribution of landholdings in five unirrigated villages in Lalgudi taluk

Pattadars	Year 1865	Year 1895	Year 1925
	acres		
Brahman	984	654	752
Non-Brahman	2,749	4,851	5,440
Kavundan+Pillai	906	1,170	1,341
Muttiriyar	289	1,105	1,997
Nadan	153	185	1
Reddi	305	496	270
Udaiyan	332	564	533
Vanniyan	224	307	305
Others	540	1,024	993
Dalits	0	86	147
Occupational titles	249	95	86
Caste unknown, female	68	404	460
Caste, etc., unknown	1,295	1,264	782
Temple	827	992	718
No holder's name	2,290	309	262
Others	310	56	243
Total	8,772	8,711	8,890

Sources: GoM c.1865, c.1895, c.1925.

Instead, the largest decrease during these 60 years was marked by the area categorised under 'no holder's name', which dwindled by about 2,000 acres, from 2,290 acres in 1865 to a mere 262 in 1925. Thus the decrease in cultivated lands held by dominant caste members was more than compensated for by their privatisation of waste lands. It may be inferred that while they sold a part of their own cultivated land to the landless, earning the counter value, they privatised waste land free of cost in accordance with the Darkhasht rule, which authorised those with landholdings in the villages to privatise waste lands on a preferential basis.⁶

Empowerment of the Landless and Their Occupation of Waste Lands

A new phase of occupation of waste lands appeared at the end of the nineteenth century. The landless started to cultivate such waste lands in some unirrigated villages. As seen in Table 2, while the major part of the waste land was privatised by higher caste villagers, some Muttiriyars, who are supposed to have been landless, occupied the lands as *pattadars*, though to a small extent. The change seems to have accelerated after the 1920s. A detailed analysis of landholding in a Reddi dominated village in Tiruchirapalli district by Nara and Mizushima reveals that out of 33.57 acres of waste lands privatised between 1940 and 1980, 14.9 acres were occupied by Dalits, 11.84 acres by Gounder caste members, both of whom had previously been almost landless (Nara & Mi-

zushima 1981). In 10 other villages in the same district, about half of the land that had been classified as *tarisu* (waste lands) in the 1925 registers had been converted to *patta* lands by 1987, of which 64 percent had come to be held by the previously landless or by small farmers owning less than 2 acres (Table 4).

The government policy also changed. The claims of *mirasidars* and adjacent landholders over waste lands were gradually restricted after 1893 and finally abolished in 1918. Rather, the government started reserving specific areas for assignment to Dalits. By 1918, they had made several grants of waste lands to the depressed castes for dwelling and cultivation. However, land acquisition by the landless and the decrease in waste lands as witnessed in Tiruchirapalli district was, for the most part, not attributable to this land assignment policy. Among the Tamil districts, two districts, North and South Arcot, accounted for more than 60 percent of the total assigned areas in Tamil Nadu. In other districts, the percentage of the assigned areas was negligible. The contribution made by the assignment policy to the acquisition of lands by Dalits may account for only 10 percent of the total area held by them. The landless came to own lands mainly by their own ability (Yanagisawa 1996a).

To summarise, in nineteenth century Tamil Nadu, a large portion of villagers were excluded from holding agricultural land, and village common lands (waste lands) were under the control of the influential group of villagers. The upper class farmers had initiated the conversion of waste lands into cultivated lands by the middle of the nineteenth century, and they had actually privatised a large extent of waste lands by the end of the century. This hierarchical structure of landholding and control over natural resources started to weaken at the end of the century. Those segments of villagers who had been excluded from landownership gradually acquired small bits of land. Furthermore, probably in the 1920s and thereafter, Dalits and other landless people occupied waste lands for cultivation.

It should be reiterated that the process did not proceed without any obstruction. As observed in the case of Coimbatore, influential *ryots* had retained pasture land to exclude 'other poorer ryots willing to cultivate' (GoM 1878: 1780-1781), since the latter were the main labour force upon which the richer farmers depended. Therefore, the acquisition of cultivated and uncultivated lands by the landless revealed the weakening of the controlling power held thus far by influential *ryots* over land and natural resources in their villages. It also mirrored the growing independence of the lower strata of the villagers, who, resisting the oppression by the higher caste people, came to own small bits of agricultural land and later brought waste lands under cultivation.

Conversely, the acquisition of small bits of land empowered them and provided them with the resources with which they could weaken their dependence on their pre-

Table 4
Patta holders in 1987 and 1998 of lands which were registered as 'waste lands' in 1925:
Ten unirrigated villages in Lalgudi taluk, Tiruchirapalli district, Tamil Nadu

	1987		1998	
	acres	%	acres	%
(1) <i>Pattadars</i>				
Villagers holding less than 2 acres of land	1,265	32.2	1,072	27.3
Villagers holding more than 2 acres of land	131	3.3	272	6.9
Persons living in other villages	445	11.3	237	6
Persons living in Tiruchirapalli city	10	0.3	348	8.9
Others	111	2.8	138	3.5
(2) Waste lands	1,969	50.1	1,863	47.4
Total	3,931	100	3,930	100

Sources: GoM c. 1925 and GoTN c.1987 and my field survey in Lalgudi taluk, Tiruchirapalli district conducted in 1998

vious employers. It was reported in 1922 that Dalits who had hitherto worked as farm servants 'now own lands themselves and are becoming more and more independent of the landowning classes' (GoM 1924: 10). The trend was observed in other districts in South India. In Nellore district also, 'the assignment of land to the members of the depressed classes has to some extent induced them to refuse to work as farm servants' (GoM 1923a: 10).

Decrease in Extent of Waste Lands and Encroachment after Independence

After independence, the state government of Tamil Nadu (Madras) continued its policy of expanding cultivation by encouraging the reclamation of waste land and assigning waste lands to Scheduled Castes (SC) and other landless people (MFA 1961). At present, villagers with less than 5 acre landholdings are eligible to assignment of waste lands without compensation if there are no other villagers who have preferential rights over the land. The first preference is given to the members of SC and Scheduled Tribes (ST), the second to ex-military personnel and third to holders of adjacent lands. Assignees are not allowed to sell the land for 10 years after the assignment.⁷

In Tamil Nadu, it is likely that more waste lands had been occupied by the landless by the 1960s. According to the *Report on location and utilisation of wastelands in India* (MFA 1961), for Madras state, 'although the total area reported in the revenue records under culturable waste was 2 million acres, a large proportion of it had been brought under cultivation by encroachment by landless labourers or cultivators' (MFA 1961: 5).

Different Types of Changes in India: 'Empowerment of the Landless' and 'Privatisation by the Rich'

A report from Maharashtra state presents a similar type of development. According to Milind S. Bokil, in Marat-

wada region of the state, over the past 40 years, Dalits have encroached upon the village common lands to establish private ownership, and from time to time their encroachments have been regularised by the state government.⁸ The motive behind the encroachment is to bring the land under cultivation to increase the food security of the households and to earn a better social status. Before the encroachments almost all the Dalits were formerly employed by the large landowners on annual bonds. This kind of labour relationship was dramatically altered once Dalits started establishing access to land. They accorded primacy to cultivating the encroached lands and worked as wage labourers as and when required. The additional food security not only enabled them to sustain themselves during lean periods but also helped to improve their bargaining strength. The beneficiaries acquired a certain sense of pride in becoming farmers. It is interesting to note that *gram panchayats* have been handing over the commons to the Forest Department to plant trees. The *panchayat's* motive in transferring the lands has been, according to Bokil, mainly to prevent future encroachments rather than to augment the local biomass (Bokil 1996).

A village survey in Andhra Pradesh also indicates that the 1969 policy of opening up formerly restricted government waste land for use by landless labourers had a strong impact on labourers' economic position. On average, since 1969, labourer households in the study village encroached on 1.2 acres of waste lands. According to Costa and Venkateshwarlu, this policy of encouraging encroachment, together with other anti-poverty policies, enabled labourers to escape from traditional bonded relations and to engage in petty commodity production and enter non-agricultural employment (Costa & Venkateshwarlu 1999).⁹

A recent study of five ecologically different regions in India also corroborates such aspirations the poorer section of villagers had toward landholdings. V. Ratna Red-

dy observed that smaller size farmers are more in favour of privatising commons while larger farmers are interested in community management. In the context of arid zones, rights to share benefits from common property resources are ambiguous. Larger farmers draw a disproportionately larger share from common property resources. Therefore, larger farmers prefer community managed systems as they benefit most from the common grazing lands, while lower income households argue for privatisation as they feel that the village elite always benefits the most from community management (Reddy 1999). Pasha's survey of 14 villages in Karnataka reveals the same preference by the rural poor. In discussion with the poor households, Pasha notices that even these households largely prefer the available common property resources be distributed among them as private property resources (Pasha 1992). Chambers *et al.* (1989: 165) also cite a case in Madhya Pradesh in which the village *panchayat*, controlled by the village elite, handed over village common lands to the Forest Department to avoid encroachment by the poor, or their allotment to Dalits by the government.

In contrast to these observations, which suggest that the encroachment on waste lands contributes to the empowerment of the landless, the dominant interpretation emphasises the fact that encroachment and assignment have after all led to the privatisation of common lands by the richer section of the people, yielding a negative result for the poor.

As mentioned in the first section of this paper, Jodha's survey of villages in 19 districts located in seven states in India has shown that villagers, in particular the poor, depend heavily on village common lands as a source for fodder, fuel and food. In six out of 12 villages, the income the poor earned from common lands exceeded one-fifth of their total income. Village common lands have, however, been increasingly privatised partly due to the land assignment policy. According to Jodha, while in terms of numbers of households that received assigned lands the share of the poor is larger, in 16 out of 19 regions the share of the poor in the privatised lands was lower than the share of all other farmers. Furthermore, a large portion of lands once assigned to the poor was either sold or mortgaged and acquired by the rich. Thus, he concludes, the collective loss of the poor from a decline of common property resources has not been compensated by acquisition and retention by the poor of privatised common lands (Jodha 1986).

A historical study of common lands in a village in Karnataka state by Karanth (1992) also reveals that though the government started assigning waste lands to SC and ST members in the 1920s, the majority of assignees, who had been bonded labourers, could not cultivate the assigned lands and lost them, and the land was eventually transferred into the hands of the members of upper castes.

These different interpretations concerning encroachment on and assignment of waste lands project the com-

plex nature of the issue. The net results of encroachment and of the assignment policy seem to differ by region. Nadkarni and Pasha surveyed 14 villages in Karnataka to find that while the main encroachers in developed villages were the rural elite, in backward villages it was the relatively poor. Thus they attribute the difference to the level of economic development attained by the villages (Nadkarni & Pasha 1991).

It can be also hypothesised that the extent to which the lower strata of village society attained socio-economic independence from the elite group is an important factor that determines the result. An interesting case was found by Karanth, who, as referred to above, surveyed the historical change in a village in Karnataka. Here, while bonded labourers lost their assigned lands, members of a musician caste, who had a source of income as village musicians and therefore were more independent of the upper castes than the Dalits, were able to retain most of the land granted (Karanth 1992). The case of Maratwada region presented by Bokil no doubt reflects the developed Dalit movements, and in Tamil Nadu also there has been a long history of the emancipation of Dalits, as shown by the acquisition of lands by their own efforts. Jodha's research also reveals that the proportion of land later transacted away was very low for lands that were illegally appropriated (encroached upon) initially. In such areas with the movement of the lower classes of people, encroachment is an expression of their independence and this, together with the regularisation of the encroachment, reinforces their bargaining power. But, where such conditions did not exist, encroachment on waste lands, regularisation and the assignment policy was only able to benefit the richer group of villagers in the main, as stressed by Jodha.

THE PRESERVATION OF NATURAL RESOURCES AND THE EMPOWERMENT OF THE LANDLESS: TWO TYPES OF NATURAL RESOURCE CONTROLLING SYSTEMS

As indicated by the evidence cited in the earlier sections, in the nineteenth century 'waste lands' were used by villagers for grazing their livestock, collecting wood for fuel, fodder, manure, house-building materials, etc., and therefore formed an indispensable part of the reproduction of agro-based local economy and of people's lives. While the reclamation of such village common lands to expand cultivation, however, did not mean any damage to the natural resource base so far as waste lands still remained abundant, cultivators started feeling difficulties in regard to pasture lands by the last quarter of the nineteenth century, indicating a shortage of village common lands (Baker 1984; Chaudhuri 2008). Hence one may understand this paper as emphasising the contradiction between the empowerment of the landless and the preservation of natural resources, as the former appears to have

contributed to a decline in village common lands. To prevent any possible misinterpretation, I shall examine the problem of the declining village common lands in a wider context.

First, the issue should be understood in connection with the results of the land reforms. As shown in the previous sections, the waste or common lands were privatised and converted to cultivated lands mainly by the dominant group of villagers down to the 1920s, and by the time of Independence this process had reduced waste lands to less than one-tenth compared to several decades before. Land reform in the majority of states failed to redistribute privatised agricultural lands. With no prospect of acquiring cultivated lands through land reforms, the landless, under the pressure of population increase, had no choice but to encroach upon the barely surviving waste lands. We can argue that if there had been land reforms that drastically changed the existing pattern of agricultural lands, the decline of village common lands would not have been so serious as is the case now.¹⁰

Second, the state of natural resources would be influenced by demographic change as well as by the economic environment. An increase in population was one of the driving forces that induced villagers to reclaim uncultivated waste lands. The availability of non-agricultural employment opportunities in rural areas and chances of out-migration from villages would be important factors contributing to the preservation of natural resources either by slowing down the expansion of cultivation into waste lands or even reducing the cultivated areas. An expansion of farm forestry could, under some conditions, enrich the biomass resources of the localities. We shall examine in a later section how the empowerment of the landless was able to contribute, through these channels, to preventing natural resources from deteriorating further.

Third, the most important aspect of the change in village common lands lies in the fact that the decline accompanied a change in the natural resource controlling system in Tamil Nadu. Irrespective of locality and states of natural resource endowment, how the system to manage natural resources works seems to have a vital impact on the preservation of natural resources in the long term. The past experiences in India reveal that the state or government cannot be the most effective agent for preserving natural resources. Rather, many scholars correctly regard the local community as the unit that could or possibly can contribute to preservation by setting various restrictions on the use of common resources. We shall examine, in this section, how the empowerment of the landless relates to changes in resource managing systems.

There seems to be two types of community control of the resources: one is the 'elite-dominant' type and the other the 'egalitarian' type. It may be inferred that in nineteenth century Tamil Nadu, the natural resources including village common lands would have been under the control of the elite-dominant type,¹¹ but as the result of

the socio-economic changes in village social structure, the elite failed to maintain their capacity to control them. Though in some villages, as revealed by Robert Wade (1988), the dominant villagers still maintain an effective system of mutual cooperation in using natural resources, such as a sophisticated system of pasturing livestock, the general trend has been toward a decline of such type of control.¹²

It is plausible that in some parts of India, in particular in mountainous regions, where village society was not much differentiated but was composed mainly of small landholding farmers without a large group of landless population, the use of natural resources was regulated by rules and norms commonly approved by the villagers. Chambers *et al.* (1989) summarise cases of community control of natural resources to conclude that the successful cases appear more in the hilly regions than on the plains. They attribute the success to several factors: in the hill regions, natural resources in an area are utilised only by the members of a village; the hill settlements are more homogeneous in caste, with one caste usually dominant, in both land and numbers, whereas villages on the plains tend to be multi-caste, which makes social control more difficult; in the hills, village elders discourage the frequent abuse of common resources, whereas the old system of authority in the plains villages has been undermined.¹³ The most convincing argument has been presented by Pranab Bardhan, who has surveyed 48 irrigation communities in contemporary South India and found that cooperative behaviour in an irrigation community is significantly related negatively to inequality in landholding (Bardhan 2000).¹⁴ It may be inferred that the creation of a more egalitarian village social structure may contribute to creating a prerequisite for preservative control of natural resources based on equal participation by all segments of village society. If the acquisition of landholding by the landless and their emancipation implies a trend toward an egalitarian type society, it can be seen as a positive development in terms of environmental preservation in the long run.

In fact, some cases of joint forest management and other community-based management of natural resources in various areas in India suggest the possibility of such a direction.¹⁵ Attempts to manage forests with the participation of local people started in Midnapore district, West Bengal in the 1970s. Here the initiative has been taken by small farmers and agricultural labourers of tribal and Dalit origins, who with the assistance of the Forest Department, have set up forest protection committees. They, in cooperation with other villagers, afforested degraded forest lands, regulated their own grazing and collection of fodder and wood for fuel, controlled illegal cutting by outsiders and successfully earned income from the thus protected forests. According to Mark Poffenberger, a landless household was able to earn INR 35–50 per day in 1979 by spending 3–4 hours in the morning cutting

firewood for sale. The shift away from cutting wood for fuel and the subsequent loss in income was eased by the land reform programme of the West Bengal government, which transferred titles for the rain-fed lands from landlords to tenant farmers. Poffenberger suggests that the emergence of tribal and Dalit leaders who could mobilise the communities' commitment to forest protection is a testimony to the broader socio-political changes that have occurred in the state over the past 20 years (Poffenberger 1995).

Another case is an attempt in Sukhomajri village in Haryana state, which started in the late 1970s. As it is a famous case, we do not need to go into details. The only thing I would mention here is that, according to Chopra *et al.* (1990), who compared the case with those in other surrounding villages, in order to succeed in the preservation programme it was important to involve the villagers. In economies where a large percentage of households have access to private resources in the form of land or livestock, it is easier to set up rules for the management of common property.

In connection with the observation presented by Mark Poffenberger, the present state of the dependence of the poor on common property resources is not unproblematic in terms of the preservation of natural resources. As surveyed by Jodha, the collections from common property resources form a considerable part of their income. The main part of their income-generating activity is, however, the collection of firewood for sale (Iyengar 1989), which is likely to contribute significantly to the degradation of the forest.¹⁶ Under present conditions, sometimes the landless are given no other choice but to be one of the agents for the degradation of natural resources. Their acquisition of small bits of land can provide the condition under which they can lessen their dependence on common property and participate in the management of the common resources as an agent of their preservation.

Of course, one may correctly say that it is too optimistic to expect the creation of an egalitarian-type community in which all villagers participate in controlling natural resources. Rather, the reverse case can be more common. As Janakarajan suggested, in some parts of Tamil Nadu the control of the tank irrigation system was seriously corrupted as a result of the transfer of land ownership to non-elite villagers (Janakarajan 1993), and, as mentioned before, Mosse's work also presents similar cases. At the same time, Mosse's case study also suggests that there are efforts among villagers to re-construct a controlling system based on a changing power balance within villages (Mosse 2003). What this paper would like to emphasise is the need to explore the conditions necessary either to create a new form of controlling system or modify the present ones to adapt to a new situation.

Hence while the empowerment of the landless or the lower strata of villagers and the trend toward a socio-economically more equitable social structure may appear

to have a negative influence on the conservation of the natural environment, it is not necessarily so in the long run. Under certain conditions, it may possibly contribute to the creation of a community-resource-control system of the egalitarian type.

A NEW PHASE SINCE THE 1980s

Changes in the extent of cultivated areas and waste lands witnessed in the recent decades in Tiruchirapalli district deserve consideration, though such cases may not be very common in other areas in India. Since the 1980s, the tempo of the decline in waste lands has slowed down, the expansion of cultivation has actually stopped, and in some regions a part of the agricultural lands have become fallow, on which trees providing fuel later grow. The availability of wood for fuel and other biomass needs in rural areas seems to have increased.

A comparison of the extent of waste lands in 10 dry villages between 1987 and 1998 reveals that the rate of decrease per decade was only 3 percent, whereas it was about 8 percent between 1925 and 1987. In contrast, the areas under crop drastically shrank by 1997 to about 60 percent of the 1925 figures. The reduction in the area under crop is not unique to these villages. In undivided Tiruchirapalli district (inclusive of the present Pudukottai district which previously belonged to Tiruchirapalli district) it was around 49 to 50 percent of the total geographical area for the period between 1953 and 1983, except for a few years, and it dwindled to 43–44 percent after 1983. The 'culturable waste' decreased from 340,000 acres to 97,000 acres between 1951 and 1984, but the trend has reversed since then and had revived to 134,000 acres by 1994. More important, 'other fallow lands', i.e., lands with no crops for more than 5 years, have been increasing since the middle of the 1980s, in particular in the 1990s.¹⁷ It is interesting to note that a variety of plant called *simai karuvai* (*Prosopis juliflora*) grows on such fallow lands. The trees grow very quickly even if the farmers do not tend them.

To clarify the causes of this change in cropping, we made a quick survey of 13 villages in this district in 1998 and 1999: all were dry villages except for one. Out of 13 villages, two are located far from Tiruchirapalli city so that it is hardly possible for villagers to commute to the city, although a few actually manage to do so. The economic conditions in these two villages are apparently different from those of the other 11 villages. While the wage level of agricultural labourers in the 11 villages closer to Tiruchirapalli is around INR 50 per half day, in the other two villages it is about INR 30, and farmers do not suffer from any insufficiency in the supply of agricultural labour. Though the area under crop has decreased even in these two remote villages, the extent of the reduction is only around 15 percent, which is much smaller than in the other villages, where it reaches 40 percent.

In the 11 villages located closer to the city, people attribute the decrease in the area under crop to an insufficient supply of labourers and to the reduction in income of farmers due to a rise in the wage level. In fact, many villagers commute to Tiruchirapalli city from the villages using the good transport facilities, where they are employed mainly as construction workers. The majority of the construction workers commuting from the villages are from the households of either landless labourers or marginal farmers. Though wages differ by job, a construction worker is paid more than INR 100, sometime reaching INR 120–150, which, even after deducting transportation charges to and from the city, is much higher than that of agricultural labourers in the villages. In particular, younger people prefer employment in the city to working as village agricultural labourers. Those hired as agricultural labourers are of middle and advanced ages and are not strong enough to work in the city. In fact, in most villages, the commuters outnumber the agricultural labourers.

In two out of the 11 villages, a large number of villagers are engaged in the polishing of synthetic diamonds. Merchants cut synthetic diamonds in Tiruchirapalli, and the diamonds are polished in suburban villages and collected by merchants for shipment to remote markets. In one village, 300 out of a rough total of 1,000 households are said to own polishing machines and another 600 households are furnished with machines lent by merchants. Here, the machines outnumber agricultural labourers. The situation is more or less similar in the other village as well.

All this evidence suggests that the increasing demand for labourers in either urban or rural areas and the resultant higher wage level of labourers may lead to the shrinkage of the areas under crop, and the expansion of fallow lands, on which people grow *P. juliflora*. The impact of the growing demand for labour is likely to be larger for smaller size and marginal farmers who own only unirrigated lands. As even small farmers sometimes have to employ wage labourers for the cultivation of their farms, an increase in the wage level implies a higher cost for the farmers, resulting in the reduction of income from cultivation. In this situation, if the income of non-agricultural employment in urban or rural areas is higher than that of agricultural labourers in the village, marginal farmers are likely to abandon the cultivation of their farm lands and choose to work in construction or synthetic diamond polishing and leave their land fallow. The *P. juliflora* that grows on the fallow lands will be sold as firewood later, yielding income for them. In fact, we have come across many cases in which marginal farmers who had previously been assigned waste lands do not cultivate their land but leave it fallow.

Thus in Tiruchirapalli district, as a result of the increase in non-agricultural employment, small and marginal farmers tend to prefer working in non-agricultural

employment to continuing cultivation of their lands. The change has contributed to the spread of the fuelwood plant, *P. juliflora*.¹⁸ A survey of a village in Tamil Nadu carried out at the end of the 1980s already revealed such behaviour among small farmers. Here, as there was a demand for wage labour in a nearby town, many small and marginal farmers (18 out of 27 households in these categories), who had previously cultivated groundnut on their lands, chose to be employed as non-agricultural workers. They planted such trees as cashew and eucalyptus on their land, which require less labour to grow (Saxena & Ballabh 1995). A study of Karnataka also suggests that if non-agricultural employment opportunities are available, small farmers prefer working in such new jobs and plant eucalyptus on their lands (Nadkarni 1989).

The impact on cropping patterns of the increase in the labour demand and the resultant tightening of the labour market in rural areas has been reported for other areas in India also. Saxena and Srivastava examined the background against which farm forestry very rapidly expanded in Uttar Pradesh in the 1980s. According to them, the Green Revolution has increased the demand for labour, resulting in a rise in the wage level and a decline in the unemployment rate. It has become difficult for farmers to employ a sufficient number of wage labourers at agriculturally crucial times, and the cost of supervising them has also increased. In this situation the farmers choose to plant eucalyptus on part of their lands in order to reduce the cost of supervision (Saxena & Ballabh 1995). A similar kind of change was observed in 1989 in the Kuttanad region of Kerala. Here, workers were reported to be unwilling to do agricultural work, and 40 percent of farmers reported 'a clear shortage of workers' (Byres *et al.* 1999: 166). They also reported increased transaction costs in terms of recruiting costs, supervision costs, defaults on contractual obligations, and so on. This has resulted in farmers keeping as much as 10 percent of the crop area fallow (Byres *et al.* 1999). Hence the tightening of the labour market and the growing assertiveness of labourers and tenants worked toward reducing the area under crop and expanding farm forestry instead in the 1980s. The total extent covered by forests in India did not decrease after 1980, since, while the natural forests were reduced to some extent, this reduction was compensated for by a rapid expansion of farm forestry in the 1980s (Agarwal *et al.* 1999). At the same time, recent literature has recognised that in many parts of India the 1980s witnessed an increase in non-agricultural employment in rural areas, a growth in the number of those migrating to nearby urban areas from rural areas, a tightening of the labour market in rural areas, and a rise in the agricultural wage (Unni 1998). Also the labourers have become more assertive. Though the study of farm forestry in India is in its infancy, Saxena and Srivastava's study seems to indicate a strong connection between the two changes observed in the last two decades.

The under-utilisation of agricultural land was already noted in Andhra Pradesh in 1991 by V. Ratna Reddy. He found that the net area sown had declined significantly over a period of 33 years in this state. He analysed data and suggested that the under-utilisation of land is associated with irrigation (especially well irrigation), tractors, commercialisation, etc., which can be attributed to the inability of the farmers to adjust to a higher demand for resources. The resource crunch faced by the farmers seems to have been aggravated by the advent of new technology due to the capital intensive nature of modern inputs. This has led to the concentration of limited resources on more fertile lands to the neglect of other lands (Reddy 1991). Citing Reddy's work, C.H. Hanumantha Rao suggests that the progress of yield increasing technology has resulted in reducing pressure on the marginal lands. According to him, the technological changes introduced in Indian agriculture are essentially land-augmenting or land-saving, and the resultant growth in total factor productivity can be regarded as the single most important factor contributing to the sustainable use of resources (Rao 1998; Rao 1994). While it is doubtful whether we can understand the under-utilisation of agricultural lands in Tiruchirapalli district as the result of the concentration of capital intensive resources on more fertile lands, there is no evidence denying the general argument by Rao that the land-augmenting new technologies have weakened the pressure to expand the areas under crop, and in this way they have contributed to the reduction of the cropped lands in general.

In addition to these economic elements, demographic changes have also contributed to this end. In South India, fertility rates have been steadily falling and the fall accelerated in the 1980s. Tamil Nadu has achieved replacement level fertility (Guilmoto 2001). The decline in population growth may have lessened the pressure to expand agricultural cultivation, though we are yet to identify through what channels the demographic factors have influenced the changes in waste lands.

Putting these pieces of evidence together, we may be allowed to conclude that, in Tiruchirapalli district and some other areas in India, the increase in agricultural and non-agricultural employment and the resultant tightening of the labour market in rural areas since the 1980s, together with the introduction of land-augmenting technologies in agriculture and the decline in population growth, have led to the under-utilisation of agricultural lands and an increase in fallow lands, on which *P. juliflora* and other trees grow. This implies a weakening of pressure to expand cultivation into waste lands and also an augmentation of the supply of biomass needed by the local people.

Such cases cannot be very common in India as a whole. The common understanding may in fact be that the expansion in rural labour demands is not large enough to weaken people's land hunger. Still, the South Indian case

is worth noting as it indicates one of the possible courses of development in the near future.

We have discussed in the previous section the long term implication of the emancipation of the landless in connection with the preservation of natural resources. We should remember that the emancipation of the landless has a strong connection to the increase in the demand for labour and the tightening of the labour market. Byres *et al.* (1999) presents many cases that provide us with evidence for this connection. While in the latter situation, a greater demand for labour and a tightened labour market empowers rural labourers and strengthens their assertiveness, the emancipation of labourers and their acquisition of lands works toward reducing the supply of labour to the market and reinforcing the bargaining position of the labourers, so contributing to a rise in the wage level and the cost of supervising employees. In this way, the empowerment of the lower strata of village society could contribute to the conservation of natural resources through a different route, i.e., by tightening the labour market.¹⁹

CONCLUSION

To summarise, while in the nineteenth century Tamil Nadu, influential villagers not only owned the major portion of cultivated lands but also controlled uncultivated 'waste lands', this elite-dominant system of controlling natural resources started to decline in accordance with the gradual emancipation of the subordinate section of villagers. The acquisition of small bits of cultivated land and the encroachment on waste lands by the landless mirrored their empowerment and also strengthened their bargaining position. Such cases of empowerment of the landless and their encroachment were witnessed in other regions of India. As we have stressed, such acquisition of land ownership and the encroachment by these subordinate groups not only contributed to a decline of the previous system of controlling natural resources but also implies a creation of possible pre-conditions for an egalitarian type of resource controlling system.

The cases witnessed in Tiruchirapalli district and some other parts of India in the last two decades suggest that the growth of non-agricultural job opportunities may possibly weaken the pressure on land and also induce farmers to change cropping patterns of their farms, sometimes leading to an expansion of farm forestry. The acquisition of landholding by the landless and their emancipation may also possibly contribute in this direction.

At the same time, it goes without saying that the decline in the elite-dominant controlling system may result in a general decline of natural resource management without creating a new system. The local resource controlling system in India is at a crossroads. Though it is not easy to predict which scenario would be more plausible, our discussion indicates a need to consider village

level environmental changes in the context of the historically transforming socio-economic structure of village societies.

Notes

1. One reason for the earlier extinction of waste lands in wet areas is probably that it was easier for villagers to furnish waste lands in wet areas with some kind of irrigation facility and thus to convert them to cultivated lands, than waste lands in dry areas.
2. Though not on waste land, David Mosse's pioneering work on the tank irrigation system in nineteenth century Ramnad and Sivaganga of Tamil Nadu demonstrates that the system was under the strong control of the elite class of the hierarchical village society (Mosse 2003). For Garhwal in the period before 1930, Jishnu Das found that the resource conserving regulatory rules were largely directives from the princely courts rather than village level institutions. The forests, particularly trees and wildlife, were controlled and regulated by the king (Das 2000).
3. In the pre-colonial and early colonial periods, it was not uncommon in India that rights to common lands were not equal among different segments of the local population. Groups of influential villagers who held the major parts of the arable lands and often claimed to be the founders of the villages often had superior rights to waste lands. In the nineteenth century Punjab, the landholders formed a body called *malikan-deh*, which controlled village common lands (Chakravarty-Kaul 1996). The proprietary body was dominated by the Jats, who, as Tom Kessinger's study of a Punjab village suggests, were often supposed to be descendants of village founders (Kessinger 1979). In the pre-British period, waste lands were abundant in Maharashtra. Here the bulk of arable lands were held by holders of a hereditary right called *mirasidars*, whereas people called *uparis* (literally 'strangers') also cultivated lands as tenant farmers. *Uparis*, however long they might have been in cultivation, could not take part in governing village affairs including disposing of the waste land and common lands (Fukazawa 1983). In eastern Bengal, the system of controlling waste lands seems to have changed under the colonial rule. There *zamindars* controlled waste lands in the nineteenth century. According to Nariaki Nakazato, while *raiya*s had enjoyed the customary right to gather forest products from olden times, after the introduction of the *zamindari* settlement the *zamindars* introduced a system of demanding rent for the jungle cutting carried out by *raiya*s (Nakazato 1994).
4. Binay Chaudhuri presents a valuable observation on the connection between population increase and the reclamation of uncultivated lands in various regions in India (Chaudhuri 2008).
5. See the case of Gangaikondan village in Tirunelveli (Thomas & Ramakrishnan 1940: 61). For further cases, see Yanagisawa (1996a: 110–112).
6. In support of this inference, we can cite an observation made by the 1878 Settlement Report of Coimbatore district, which revealed that grazing lands which had tended previously to have been taken up by influential *ryots* were brought under cultivation between 1862 and 1872: 'The annexed Statement shows the revenue under this head from Fasly 1272 to Fasly 1282. The great decrease is due to the fact of lands formerly held under this tenure having been now brought under cultivation' (GoM 1878: 5780–5781). Furthermore, the 1910 Settlement Report of the same district pointed to the concentration of cattle-breeding cattle in the hands of wealthy *ryots* in Dharapuram and stated that 'fodder for the cattle is provided by reserving part of the patta land for pasture, and growing cholum on the land irrigated by wells' (GoM 1910: 11). Thus the wealthy *ryots* had no choice but to reserve a part of *patta* land for fodder, probably because they could no longer use uncultivated land for grazing.
7. They are called 'conditional *pattas*'.
8. In support of Bokil's observation, a report on the condition of waste lands in Maharashtra stated that 'although the total area reported in the revenue records under culturable waste was 2.3 million acres, a large proportion of it had already been disposed of for cultivation on *eksali* lease by the members of the Backward Classes including the *adivasis*' (MFA 1962: 5).
9. Tony Beck, who surveyed the access of the Lodhas (tribals) and other poor people to the common property resources in West Bengal, observed that the hands of the Lodhas were strengthened by the policies and the reforms of the Left Front government in Bengal. Under the land reform programme, the former landless Lodhas received small portions of land. While this land was often of poor quality, gaining it increased the sense of self-respect among the Lodha households. Policies such as land distribution are likely to increase the bargaining power of the poor in such areas as access to common property resources (Beck 1994). A similar impact on the consciousness of labourers of assigning lands to them and on the labour market was observed in an Uttar Pradesh village by Ravi Srivastava. Labourers could go on strike because they now had some land. Here also, the Brahmin members of the *gram panchayat* handed over all village waste land to the Forest Department (Srivastava 1999).
10. As we will see, Pranab Bardhan also emphasises the importance of implementing land reforms (Bardhan 2000).
11. The following observation by Iyengar in Gujarat villages presents a typical case of the 'elite dominant' type of resource control: 'The older generation in almost all villages expressed a feeling that the regulation and control of the use of CPR [common property resources] land was much strict and efficient during the pre-independence period. People in general feared and respected the jagirdars, talukdars, inamdars and other large owners and the village level revenue officials. Illegal felling of trees was not only punishable offence but it was also an embarrassing event if the culprit was caught' (Iyengar 1989).
12. An interesting case study has been done by Janakarajan (1993). Mosse's excellent observation of the tank irrigation system in Tamil Nadu also reveals how the weakening of elite led village social order led to a decline of the irrigation system (Mosse 2003).
13. Nadkarni's study of a region in Karnataka also corroborates Chambers's conclusion. Here, there was no evidence of a zeal for regeneration of degraded forests. The major reason for this apathy, according to him, seems to be the acute class differentiation in the local economy, giving rise to unequal benefits from forests (Nadkarni 1989).
14. Based on this finding, Bardhan emphasises the need for land reform, since 'land reform tends to get poor farmers more actively involved in local self-governing institutions' (Bardhan 2000: 862).
15. This does not mean that every joint forest management programme was successful. For the problems associated with the joint forest management approach, see Jeffery and Sundar (1999).
16. In the case of Karnataka, according to Nadkarni, the non-local fuelwood demand far exceeds the industrial demand for the raw material. Among the villages and forests he surveyed, the most degraded forest was located around a village where the extraction of fuelwood for sale as a source of earning was prominent and the proportion of landless labour, too, was higher compared to other villages (Nadkarni 1989).
17. Computation of statistical data for 20 years from the Government of Madras *Season and crop report of the Madras state* for the years 1951 to 1958, and 1959–60, and the Government of Tamil Nadu *Season and crop report of Tamil Nadu*, for the years 1975–76, 1978–79, 1980–81, 1982 to 1987, 1988 to 1990 and 1993 to 1995.
18. *P. juliflora* grows even on degraded lands and at present is widely spread in semi-arid zones of the subcontinent from Gujarat to Tamil Nadu. N.C. Saxena, a forest expert, reveals that the total

amount of biomass the variety provides is twice as large as that of eucalyptus. It is not a favoured species in the market since it is thorny. The natural regeneration of *P. juliflora* shrubs provides excellent fuelwood for consumption as well as for sale at almost zero cost to a very large number of the poor (Saxena & Ballabh 1995; Agarwal *et al.* 1999; Saxena 2000). Based on his studies in Anantapur of Andhra Pradesh and Mathura of Uttar Pradesh, he even says that '*Prosopis* has on its own solved the fuelwood crisis, besides providing employment to many who prune the branches and sell it in urban areas' (Chambers *et al.* 1989: 212). A survey of five villages in Anantapur district, Andhra Pradesh, presents some data for this, demonstrating the vital importance of this plant as the source of household energy. *P. juliflora* is the sole source of cooking energy for 68 percent of the total households and accounts for three-fourths of the fuel requirement for 18 percent of the total households (Ravindranath & Hall 1995). Iyengar's survey on Gujarat villages also points to *P. juliflora*'s contribution to solving the problem of fuelwood (Iyengar 1989).

19. Iyengar's survey also indicates that increased opportunities for farm work and other non-agricultural activities within the villages and outside relieve the need to earn income from depleted common property resources (Iyengar 1989).

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