

Greening the “Wastelands”: Evolving Discourse on Wastelands and its Impact on Community Rights in India

Sushil Saigal¹

ABSTRACT

This paper explores the evolution of “wastelands” discourse in India – from the colonial time to the present – and how it has shaped India’s land and forest policies, and through them community rights on these two vital natural resources.

The concept of wastelands originated in India during the colonial period. All lands that were not under cultivation (revenue-yielding lands) were classified as wastelands and the state asserted its proprietary rights over them. Some of these were later reclassified as forests or allotted for cultivation and plantation. Thus, the idea of wastelands originated from the perspective of revenue rather than ecology.

After independence, the discourse surrounding wastelands changed. The national government was less interested in land revenue but was keen on expanding agriculture to make the country self-sufficient in food. During this period, wastelands came to be viewed as empty lands available for expanding agriculture and settling agricultural labourers.

With the country achieving food self-sufficiency in the 1970s, the discourse surrounding wastelands changed again. Now degradation of forests and shortages of fuelwood and fodder were seen as the main challenges. A massive afforestation programme was launched in the 1980s to bring 33% of the country under tree cover.

Subsequently, the emphasis shifted more towards the watershed role of wastelands and a watershed development programme was launched for soil and moisture conservation. More recently, the wastelands discourse has moved towards addressing the challenges posed by climate change.

This changing national discourse on wastelands has profoundly impacted India’s land and forest policies, and through them livelihoods of many people, especially rural communities. An awareness of this continually evolving discourse helps in better understanding of various land- and forest-related programmes and projects and their outcomes.

KEY WORDS

Wastelands, India, Forests, Afforestation, Discourse

INTRODUCTION

The main objective of this paper is to explore the origin and evolution of the “wastelands” discourse in India and to examine how it has shaped the country’s land and forest policies, and through them community rights on these two vital natural resources. The paper is largely based on archival research, which was supplemented with secondary sources and interviews with key informants.

¹ PhD Candidate, Department of Geography, University of Cambridge.

Although several accounts of pre-colonial land tenures and related policies are available (see, for example, Baden-Powell 1892; BISR 1984; Agarwala 1985a; Lal 1989; Gadgil and Thapar 1990; Gadgil and Berkes 1991; Puri 1992), I start from the colonial period as it is considered to be 'an important watershed in the ecological history of India' (Guha and Gadgil 1989, p. 142). Many concepts and policies introduced during this period continue to shape perceptions and programmes to this day. In fact, as elaborated below, many legislations enacted during the colonial period still provide the legal framework for the management of wastelands and forestlands in the country.

COLONIAL PERIOD: CONTROL, REVENUE, AND EXTRACTION

The term wasteland is commonly applied to a desolate, barren area². However, this is not what the colonial administrators had in mind when they classified a significant proportion of the country as wasteland. They used the term "waste" in its older legal sense which meant 'a piece of such land not in any man's occupation, but lying common'³. They, however, emphasized only the "unoccupied" nature of such lands and generally ignored their customary use as village commons, often citing practices of the preceding rulers or ancient authorities (see, for example, Gadgil and Guha 1992). This is how senior colonial administrators justified the takeover of such lands:

There never has been any doubt that in theory, the 'waste' – that is, land not occupied by any owner or allotted to anyone – was at the disposal of the ruler to do what he liked with; in short, was the property of the State (Baden-Powell 1892, p. 236).

The old Rajahs claimed all areas which were not actually brought under cultivation, but any person who required waste land for the purposes of cultivation could obtain it without difficulty on agreeing to pay the assessment in force. The rest of the waste land had always been recognised as the property of the rulers, and from them was inherited by the British Government by right of conquest (Stebbing 1923, p. 465).

The government asserted its ownership by enacting laws such as the Waste Land (Claims) Act of 1863⁴ (Baden-Powell 1892) and the Forest Acts of 1865 and 1878⁵ (Singh 1986; Guha 1990; Gadgil and Guha 1992). The main purpose of these legislations was to assert government's control over all uncultivated lands in the country⁶.

[The Waste Lands (Claims)] Act clearly proceeds on the principle of the State right; so do the Forest Acts, which contemplate 'waste' lands being taken up for forest purposes subject to a 'forest Settlement', i.e. determination and separation of the rights of private persons and those of the State (Baden-Powell 1892, pp. 237-238).

² *The Chambers Dictionary*, 2003, Chambers Harrap Publishers Ltd., Edinburgh.

³ *The Shorter Oxford English Dictionary on Historical Principles*, 1967, Clarendon Press, Oxford.

⁴ This Act, in its amended form, is still in force. Available online at http://punjabrevenue.nic.in/waste_act.htm (accessed 27.02.2010).

⁵ The Act was further amended in 1927 and, in its amended form, still provides the basis of forest administration in India (Singh 1986). Available online at <http://www.envfor.nic.in/legis/forest/forest4.html> (accessed 26.02.2010).

⁶ The colonial government asserted its control over not just uncultivated lands but over all lands including cultivated areas. The first legislation to claim rights over land – Bengal Regulation I – was enacted in 1824, which was slowly extended over the entire country. This allowed acquisition of land by the government. It was further amended in 1870 and 1894 to yield Land Acquisition Act, which, in its amended form, is still applicable in the country (Singh 1986). Available online at <http://dolr.nic.in/hyperlink/acq.htm> (accessed 21.03.2010). The principle of 'eminent domain' is also included in the Constitution of India, which was adopted after independence (Singh 1986). See Article 31A (2) (a) (iii). Available online at <http://lawmin.nic.in/coi/coiason29july08.pdf> (accessed 26.02.2010).

Although the above laws mentioned local claims or rights, it was made clear that the government was the owner of these lands and only certain ‘*servitudes* or rights of user’ were claimable by private persons for compensation before the government could exercise complete control over the land (Baden-Powell 1892, p. 238, emphasis in original).

The forestlands were often created from wastelands as is evident from the following extract from the Indian Forest Act, 1927:

The State Government may constitute any forest-land or waste-land which is the property of Government, or over which the Government has proprietary rights, or to the whole or any part of the forest-produce of which the Government is entitled, a reserved forest in the manner hereinafter provided (Section 3)⁷.

In fact, there were often calls made by senior administrators to the government in ‘exercising great care in the disposal of *wastelands containing forests*’ (Agarwala 1985a, p. 32, emphasis added)⁸. However, not all forestlands contained forests as is evident from the following extract from the forest policy of 1894⁹:

The fourth class of forests referred to are pastures and grazing grounds proper, which are usually forests only in name. It is often convenient, indeed, to declare them forests under the Act, in order to obtain a statutory settlement of the rights ... (Paragraph 12).

It seems that the main purpose of the classification of certain lands as wastelands and forestlands was to assert government control. But the government didn’t want control just for its own sake. The key motivation for asserting control over land was to claim revenue from it (Singh 1986). At that time, land revenue was one of the main sources of state income¹⁰ (Vani 2002).

The State derives its principal revenue from the land ... The ‘land-tax’ in England is only one item, and not a very large one, among a host of other taxes ... In India the land-revenue is a totally different thing (Baden-Powell 1892, p. 25).

Therefore, much of the legislative effort of the colonial government was towards maximising its revenue from land.

Our laws have always avoided any theory on the subject of the origin of the right of the State, and the earliest Regulations of 1793 contented themselves with asserting just so much (and no more) as would serve as a sufficient basis for the system when reduced to shape, – namely, that by ancient law (custom would have been better) the Government was entitled to a share in the produce of every bighá of land, that share to be fixed by itself ... it reserves to itself the ultimate ownership in default of any other owner ... To secure its own revenue, which (as just stated) is a first charge on all land, it holds all land as hypothecated to itself for the amount of the revenue ... (Baden-Powell 1892, pp. 281-282).

The actual identification of wastelands and forestlands took place through the process of “settlement”, a term applied to the method of assessing the land revenue demand (Ray 1984). Extensive land survey and settlement operations were carried out throughout the country to streamline the land revenue collection system (Gol 1880)¹¹. These operations resulted in creation of detailed village records and often demarcation of cultivated lands and wastelands/forestlands on maps.

⁷ Source: <http://www.envfor.nic.in/legis/forest/forest4.html> (accessed 26.02.2010).

⁸ Agarwala indicates the extract to be from a letter dated November 1, 1864 from the Governor-General to the Secretary of State for India requesting enactment of the Indian Forest Act.

⁹ Circular No. 22-F dated 19.10.1894.

¹⁰ Also see <http://agcensus.nic.in/ACI2.html> (accessed 10.08.2009).

¹¹ There were two major types of land revenue settlements: *ryotwari* and *zamindari*. The latter was also called *mahalwar* or *mauzawar* (Gol 1880).

The revenue considerations played such an important role in government decisions and policies that the financial benefit-cost ratio of settlement operations was closely monitored and no new settlements were carried out in areas where additional revenue generation was doubtful.

Looking back over settlement work during the past 30 years, there is no doubt that, as a mere financial speculation, it has paid well (Gol 1880, p. 36).

The Government of India, therefore, ruled that no new re-settlement operations should be undertaken, unless it could be shewn either that the proceeding would result in an adequate increase of revenue, or that such special circumstances existed as would justify a large outlay without any corresponding revenue gain (Gol 1880, p. 36).

As land revenue was only collected from agriculture land, the policy was to allow extension of agriculture into both wastelands and forestlands.

Under the ryotwari system every block of arable waste has its assessment fixed upon it, and can be taken up by any one who chooses to pay the assessment; but under the zamindari system the assessment of the village remains the same during the entire settlement term, whether the zamindar leaves the waste unbroken, or brings every inch of arable land under the plough. It follows that reclamation of waste lands under the ryotwari system involves an immediate gain of revenue to the Government, while under the zamindari system the gain is deferred till the next revision of settlement (Gol 1880, p. 8).

It should also be remembered that, subject to certain conditions to be referred to presently, the claims of cultivation are stronger than the claims of forest preservation ... Accordingly, wherever an effective demand for culturable land exists and can only be supplied from forest areas, the land should ordinarily be relinquished without hesitation ... (The Forest Policy, 1894, Paragraph 6)¹².

The government initially decided to sell the remaining wastelands to generate further revenue but later on changed its policy to leasing of wastelands when it was felt that the latter approach would yield higher revenue.

At one time the idea was to sell the land out and out, with no revenue claims; then the policy changed; and seeing the great and rapid growth in the value of land, it began to be felt that to sacrifice the State rights so readily was a mistake. The policy now is rather to lease the land for a term of years, and only to allow the conversion of the title to one of ownership (and that subject to paying land-revenue) when the lessee has shown that he is earnest and has really made proper use of the grant (Baden-Powell 1892, p. 238).

The government drew up rules for the sale or lease of wastelands in 1860s (Gol 1904; Shiva 1991; Vani 2002). Although the rules allowed extension of cultivation by the local people, the largest chunks were offered to European settlers to establish plantations.

The second class of rules, though open to persons of any nationality, are intended chiefly to induce European enterprise to establish and develop plantations of such staples as tea, coffee, cinchona, which do not come within the scope of ordinary native agriculture (Gol 1904).

It is clear that the colonial concept of wastelands was *not* based on the biological productivity or ecological status of the land. Rather than being degraded lands, it is quite likely that these were the ecologically most important lands. For example, vast tracts of so-called wastelands were actually located in densely forested districts (Shiva 1991). The following account provided by a former Editor of *The Englishman*

¹² This was influenced by a report submitted by Dr J.A. Voelcker, a Consultant Chemist to the Royal Agricultural Society, in 1893 on improvement of Indian agriculture (Gol 1976a; Gadgil and Guha 1992; see Voelcker 1893). Dr Voelcker was asked to advise the government on improving agricultural output in 1889 after the great famine of 1876-78 (Gol 1976a).

newspaper of Calcutta (now Kolkata) is most illuminating regarding the actual condition of wastelands:

... [waste lands] harbour the foes of man, affording safe retreats to the tiger, the bear, and the leopard, where rank vegetation decaying under the tropical sun, impregnates the passing breath of heaven with those foul exhalations, the fruitful source of deadly fevers, and still more fatal cholera and dysentery ... (Saunders 1863, p. 10).

Apart from the environmental services being provided by wastelands, it is also likely that they played an important role in the subsistence economy of the local people. The local people often used these lands for various subsistence uses such as livestock grazing and collection of wild food items and medicinal plants. The forest policy of 1894 notes:

But where the settlement is ryotwari, every survey number or field that is unoccupied or unassigned is in the possession and at the disposal of Government, and trespass upon it is *prima facie* forbidden. In some cultivated tracts, these unoccupied and waste lands are the only source available from which the grazing requirements of the resident population can be met (Paragraph 47).

It has been argued that the takeover of these lands by the government contributed to numerous famines faced by India during the colonial period (Satya 2004; also see Davis 2001).

Although identification and demarcation of wastelands and forestlands is now considered to be linked to reclamation and conservation efforts, it was certainly not the case during the colonial period¹³. In fact, lands left in their natural state were viewed rather negatively. For example, it was proposed that wastelands offered for sale should be divided into two classes and a different price be charged for each class. The two suggested classes were 'those which are *'encumbered with jungle'*, and those which are not' (Saunders 1863, p. 14, emphasis added).

Quite often, heavy extraction, rather than conservation, followed the declaration of certain lands as wastelands or forestlands. Ironically, the lands notified as 'reserved' and 'protected' forests¹⁴ faced the most 'fierce onslaught' (Smythies 1925, p. 6 in Guha and Gadgil 1989, p. 144), often by officials with titles such as the 'Conservator of Forests' (Stebbing 1922; Lal 1989). Early interest in forests stemmed from strategic needs, especially the need for Indian teak for shipbuilding as oak forests in England had been exhausted (Stebbing 1922). The need for timber dramatically increased after the advent of railways in India in 1853¹⁵. The railway network was rapidly expanded and had reached 51,658 kilometres in 1910 (Gol 1964, in Gadgil and Guha 1992). Each mile of railway track required 860 sleepers and these lasted only 12 to 14 years. The railways also consumed enormous quantity of wood as fuel

¹³ There were only some localised conservation efforts during the colonial period. The examples include establishment of tree plantations (mostly economically important species), especially in South India (Lal, 1989; MoEF 1999); ravine reclamation efforts in 1880s in Uttar Pradesh (Khan 1987; Sharma and Shukla 1990); enactment of a law in Punjab in 1900 to control erosion by mountain torrents (Sharma and Shukla 1990); establishment of a committee for reclamation of *usar* (alkaline) lands in Uttar Pradesh in 1930 (Sharma and Shukla 1990); appointment of a Land Management Officer in Uttar Pradesh in 1937 (BISR 1984); and promotion of contour bunding through Bombay Land Improvement Act, 1942 (Srivastava 2000a). The Royal Commission on Agriculture (1928) had suggested many measures for protecting soils from erosion though most of its recommendations could not be implemented due to ensuing economic depression (Gol 1976a).

¹⁴ These were the categories of forests introduced in the 1878 Act. A third category called the 'village-forests' was also introduced but not implemented in most parts of the country (Gadgil and Guha 1992).

¹⁵ See Indian Railways website <http://www.indianrailways.gov.in/> (accessed 21.03.2010).

before commercial-scale coal mining started in India (Gadgil and Guha 1992). In order to satisfy the demands of the railways, large tracts of lands were declared forestlands. The area classified as forestland rapidly expanded and had reached 90,200 square miles (2,33,618 square kilometres) by the end of the nineteenth century (Stebbing 1923). Large tracts of wastelands were also converted into fuel reserves and handed over to the Forest Department (Agarwala 1985a).

In addition to the demands of the imperial navy and railways, further heavy extraction was carried out during both World Wars. For example, while the outturn of timber and fuel was 270 million cubic feet in 1937-38, it jumped by over 62% to 439 million cubic feet in 1944-45 (Gadgil and Guha 1992). The data regarding the Forest Department's income and expenditure during the colonial period indicates that it always generated surplus for the government¹⁶ (Stebbing 1926). A former senior forest official noted:

Perhaps no single factor in the progress of Forest Administration in India is so striking as the continuous rise in the revenue from the forests since the first introduction of conservancy some sixty years ago (Stebbing 1926, p. 617).

It is clear from the above account that the concept of wastelands introduced during the colonial period had little to do with ecological status of land and everything to do with its revenue-generation capacity. All lands that were not generating revenue for the government were deemed to be wastelands. Some such lands were reclassified as forestlands once their strategic and revenue potential was realised. The main thrust of the government policy was to convert as much of the remaining wastelands as possible into revenue-generating lands through extension of agriculture or plantation crops. Therefore, classification of lands as wastelands or forestlands did not lead to any conservation efforts, but on the contrary often led to rapacious extraction and degradation. However, the government priorities as well as expectations from wastelands changed when India gained independence in 1947.

POST-INDEPENDENCE PERIOD: FOOD, REFORMS, AND “DEVELOPMENT”

After independence, one of the top priorities of the new government was achievement of self-sufficiency in food production. The country had suffered a food crisis during World War II and there was a famine in Bengal¹⁷. In order to cope with the difficult food situation, the colonial central government started paying more attention to food production, a subject that had been primarily dealt with by the provincial governments in the previous two decades¹⁸. A Department of Food was created in 1942 and in the same year a Food Production Conference was convened. This led to a number of steps to increase food (and fodder) production and subsequently led to the 'Grow More Food' campaign. The campaign was further strengthened after the reports of the Foodgrains Policy Committee (1943), the

¹⁶ Based on data for 1869-70 to 1924-25.

¹⁷ In addition to the war and the preceding economic depression, separation of Burma (now Myanmar) from British India in 1937 also had a significant impact as Burma was a major supplier of rice to India. The supply was totally cut-off after the Japanese occupation of Burma in 1942 during World War II (Gol 1976a).

¹⁸ Greater responsibility over many subjects including agriculture was transferred to the provinces as a result of the constitutional reforms (Montagu-Chelmsford Reforms) of 1919. The Department of Agriculture, which had been created in 1871 at the central government level, was pruned and merged in the Department of Health, Education and Lands. Further devolution of powers to the provinces took place under the Government of India Act of 1935 (Gol 1976a).

Famine Inquiry Commission (1945), and the Reconstruction Committee of Council (set up in 1943) and a 'Statement of Agriculture and Food Policy in India' was issued in January 1946 (Gol 1976a).

After independence, not only was food production made the top-most priority of the government but there was also an additional concern regarding the loss of key cotton and jute production areas due to partition of the country. As a result, an 'Integrated Production Programme' was launched in June 1950 'to win freedom from foreign bread and achieving progressive self-sufficiency' (Gol 1976a, p. 143). The main thrust was on increasing area under agriculture by extending cultivation in wastelands and forestlands. The chapter on 'Land Policy' in the country's First Five Year Plan issued in 1951 noted:

Increase of agricultural production represents the highest priority in planning over the next few years (Planning Commission 1951, Chapter 12, Paragraph 2).

A committee was set up in 1948¹⁹ to standardize land use classes in the country. The committee suggested a nine-fold classification superseding existing five-fold classification and included new categories such as 'Culturable Wasteland'²⁰ (also see Sharma 1990; Puri 1992). Another committee²¹ was subsequently set up to identify suitable wastelands in blocks of 100 hectares or more. The committee conducted a survey in 12 states and identified around 640,000 hectares of wastelands suitable for cultivation (Gol 1976b). Further surveys were subsequently carried out to locate wastelands in blocks ranging from 5 to 100 hectares as well and around 2.3 million hectares of such wastelands were identified (Gol 1976b). In order to speed up the land development process, reliance was placed on heavy machinery and a specially established agency – Central Tractor Organisation – was entrusted this task (Gol 1976a).

A significant proportion of wastelands (surveyed as well as un-surveyed) were distributed to farmers for agriculture. The figures compiled by the Ministry of Rural Development (MoRD) indicate that as much as 6.2 million hectares of government wastelands were distributed up to 2008 (MoRD 2008). Since the area under agriculture increased sharply in 1950s and 1960s but has remained more or less constant since then²², it is reasonable to assume that the bulk of distribution occurred in the first couple of decades after independence. In addition, around 2.6 million hectares of forestlands were also brought under agriculture between 1951 and 1980 (MoEF 1998a), bringing the total area diverted for agriculture to 8.8 million hectares.

Although the main objective of land distribution was to increase food production, it was not the only reason. Land distribution was also an important element of the social reform process, as explained by MoRD:

Distribution of Governments' Wasteland has been one of the key Strategies of land reforms; it has been the accepted policy that wasteland at the disposal of the Government should be distributed amongst eligible rural poor (MoRD 2001, p. 94).

The reform aspect becomes more apparent if one considers the land distribution programme as a whole. In addition to wastelands and forestlands, government also re-distributed significant area of land *already under agriculture*. This included 2.18

¹⁹ Technical Committee on Coordination of Agricultural Statistics.

²⁰ Source: http://www.krishiworld.com/html/land_utilisation1.html (accessed 20.09.2009).

²¹ Wasteland Survey and Reclamation Committee.

²² Source: http://dacnet.nic.in/eands/At_Glance_2008/ls._new.html (accessed 10.08.2009).

million hectares of ceiling surplus land²³ and 0.88 million hectares of *Bhoodan* land²⁴. In addition, 0.17 million hectares of alienated lands were reinstated to Scheduled Tribes (MoRD 2004). In all these cases, the key purpose was social reform and justice rather than increasing food production.

Another reform policy was the acquisition of estates of erstwhile landlords by the government. This resulted in a sharp increase in forestland in the country from 39.94 million hectares at the time of independence to 75.16 million hectares by 1986-87 (Lal 1989). However, not only was this acquisition based on old settlement records rather than actual status of the lands (Gol 1976c), but more importantly there was large-scale felling on lands that actually had forests. The landlords felled and sold trees to realize as much profit as possible before handing over the control of the land to the government (Planning Commission 1951; MoEF 1999). As a result, in the words of a top forest official, 'we added area [to forestlands] but lost forests' (interview #1, 12.09.2008).

This addition of denuded areas to forestland had a significant impact on the wastelands discourse subsequently due to adoption of a national goal of putting a third of the country's geographical area under forest and tree cover. This goal was set in the National Forest Policy issued in 1952²⁵, although one of the sub-committees of the Reconstruction Committee of Council had also suggested that the provinces should strive for a 20 to 25% forest cover (Gol 1976a). The 1952 policy noted²⁶:

... India, as a whole, should aim at maintaining one-third of its total land area under forests. As an insurance against denudation a much larger percentage of the land, about 60 per cent should be kept under forests for their protective functions in the Himalayas, the Deccan, and other mountainous tracts liable to erosion. In the plains, where the ground is flat and erosion is normally not a serious factor, the proportion to be attained should be placed at 20 per cent (Paragraph 19).

It is interesting to note that decision to keep one-third of the country's area under forest cover was taken after noticing 'close parallelism between a high proportion of forest area and the general prosperity of a region' (MoEF 1998b, p. 139). Consequently, Europe was chosen as a role model:

Viewed against its temperate climate, even distribution of rain-fall, and its industrial bias, Europe provides a valuable guide for the proportion of forests that we might well adopt. In India, where we have to reckon with an oppressive tropical sun, desiccating hot winds, periodic monsoons, steep mountain slopes, a lower forest productivity, and a predominantly agricultural population, a proportion somewhat higher than that of Europe would appear to be indicated. From practical considerations, however, we might, for the present, be content with a considerably lower percentage. We should aim at increasing the over-all percentage of area under forest to a minimum of 33.3 (MoEF 1998b, p. 139).

It is also worth noting that 'industrial bias' of Europe has been mentioned in the above quote. In spite of the rhetoric about 33.3% forest cover, "development" was the real thrust of government policy. In addition to 2.6 million hectares of forestlands

²³ This land was acquired by the government from other landowners by imposing a statutory ceiling on agricultural land holdings.

²⁴ Bhoodan literally means 'a gift of land'. It was a reform movement launched in the 1951 by Vinoba Bhave. See <http://www.mkgandhi-sarvodaya.org/bhoodan.htm> (accessed 22.03.2010).

²⁵ Ministry of Food and Agriculture Resolution No. 13-1/52-F dated 12.05.1952.

²⁶ The policy was possibly influenced by the 'Principles of Forest Policy' agreed by the Conference of the Food and Agriculture Organization in 1951. One of the agreed principles was that 'each country should determine and set aside areas to be dedicated to forests, whether at present forested or not' ([http://www.fao.org/docrep/x5577E/x5577e06.htm#principles of forest policy](http://www.fao.org/docrep/x5577E/x5577e06.htm#principles%20of%20forest%20policy), accessed 23.03.2010).

provided for agriculture, another 1.7 million hectares of forestlands were diverted for industrial and economic development projects such as river valley projects, industrial sites, roads and transmission lines between 1951 and 1980 (MoEF 1998a). Although some efforts at combating land degradation were started²⁷, the focus was clearly on economic development and industrialisation. In fact, the ultimate objective of many conservation efforts was also often to safeguard industrial or agricultural interests such as prevention of silting of dams or shifting the use of cowdung from fuel to manure.

Although the 1952 forest policy document starts with six 'vital national needs', that included everything from conservation to supply of subsistence products to local communities, there are hints of the real intent elsewhere in the document:

While, therefore, the needs of the local population must be met to a reasonable extent, *national interests* should not be sacrificed because they are not directly discernible ... The accident of a village being situated close to a forest does not prejudice the right of the country as a whole to receive the benefits of a *national asset* (Paragraph 7, emphasis added)²⁸.

The meaning of 'national interest' becomes clear if one examines the actual programmes pursued during this period. In the 1950s, the paper industry was provided bamboo from forests at a throwaway price of INR 1 per tonne, when the prevailing market price was over INR 2,000 per tonne (Gadgil and Guha 1992). At the time of formulation the country's Third Five Year Plan (1961-1966), it was estimated that by 1975 there is likely to be a shortage of 4 million tonnes of industrial wood and 100 million tonnes of fuelwood (Planning Commission 1961). Yet, 88% of government investment on plantations went into industrial plantations (see Table 1).

Table 1 Comparison of selected forest development schemes from the First to the Fourth Five Year Plan (INR Lakhs²⁹)

Scheme	First Plan (1951-56)	Second Plan (1956-61)	Third Plan (1961-66)	Annual Plans (1966-69)	Fourth Plan (1969-74)
Economic plantations for industrial and commercial uses	111.91	486.88	1,163.16	934.04	2,014.99
Farm forestry-cum-fuelwood plantations	-	-	109.54	151.93	361.25

Source: Gol 1976c

²⁷ These included *inter alia* launch of *Vana Mahotsav* (festival of forests) in 1950 to encourage tree plantations (Sagreiya 1967); focus on soil conservation by the Damodar Valley Corporation, which influenced soil conservation efforts in the country through establishment of the Soil Conservation Society of India, which, in turn, played a role in creation of the Soil and Water Conservation Division in the Ministry of Agriculture (Srivastava 2000a; Subramaniyan 2000); initiation of a scheme for 'Soil Conservation in the Catchment of River Valley Projects' during the Third Five Year Plan (Planning Commission 1988); setting up of a Committee on Natural Resources by the Planning Commission in 1963 (Sharma and Shukla 1990); initiation of a ravine reclamation scheme in 1967 through constitution of the Central Ravine Reclamation Board (Srivastava 2000a); and programmes to reclaim waterlogged and saline-alkaline lands (Gol 1976b).

²⁸ The forest policy of 1952 was less sympathetic towards local communities' needs than even the colonial forest policy of 1894.

²⁹ 1 Lakh = 100,000

The industrial focus of forestry was also very much in line with international thinking on the subject at the time. In an influential paper, J.C. Westoby, a senior official of the Food and Agriculture Organization of the United Nations (FAO) argued strongly in favour of industrial forestry as a way of tackling “underdevelopment”:

Wood removed from forests can be used either as fuelwood or for industrial purposes; here we shall only be concerned with industrial wood, since it is evident that fuelwood is secondary from the point of view of economic growth (Westoby 1962, online).

As a result, external technical and material assistance was available to promote industrial forestry. During the Third Five Year Plan, a ‘Pre-Investment Survey of Forest Resources and Industries’ was also launched with assistance from the United Nations. The objective was to ‘facilitate formulation of a long-term programme for forestry development including planting of forest area with quick growing species; development of communications, and assessment of the economic prospects of forest based industries’ (Gol 1976a, p. 178). Several logging training centres were also established with external support (Gol 1976c). It was noted with palpable pride in the Fourth Five Year Plan Document (1969-1974) that ‘[a] vigorous programme of economic plantations for industrial and commercial uses was pursued during 1961-69’ (Planning Commission 1969, Chapter 8).

In addition to being seen as source of industrial raw material, the forests continued to be seen as a source of revenue for the government (Gol 1976c). These policies obviously had an adverse impact on forest-dependent local communities in many parts of the country (see, for example, Gadgil 1991a;b;c).

It is clear from the above account the key focus areas in the post-independence period were food, social reforms, and industrial development and wastelands and forestlands were utilised primarily for these purposes. Initially, bulk of tree plantations established were restricted to forestlands but the situation changed with the advent of social forestry in the 1970s.

SOCIAL FORESTRY ERA: ENERGY, FOREST CORPORATIONS, AND EUCALYPTUS

Two key developments in the 1970s shaped the wastelands and associated afforestation discourse. The first was the energy crisis (see, for example, Ikenberry 1986; Barsky and Kilian 2004) caused by a sharp increase in the price of oil³⁰. The second was the publication of the report of the National Commission on Agriculture (NCA).

The energy crisis of 1970s helped to focus the world’s attention on energy-related issues. In this context, the issue of deforestation and growing fuelwood shortage in the Global South – with attendant ecological and humanitarian consequences – also got into limelight. This came to be known as the ‘other energy crisis’ (Eckholm 1975). The Indian energy planners also emphasised the need to focus on fuelwood (interview #2, 15.09.2008; Planning Commission 1979).

The NCA covered a vast array of subjects and made several recommendations related to forestry. However, its main focus was on promoting “production forestry”, which meant commercial forestry operations to be financed through banks. It considered dependence of local communities on forestlands for fuelwood, fodder, and other subsistence products to be a serious impediment in its commercial forestry plans. It therefore suggested that these needs should be met from outside the

³⁰ Often referred to as the ‘oil shock’.

forestlands. This helped to launch a plantation programme, which, although meant to keep people away from forestlands, came to be known as “social forestry”.

The following extracts from the NCA report help in understanding the thinking behind NCA’s recommendations:

Although the forest area is a little less than half of the cultivated area, the contribution of the forestry sector to the Net Domestic Product (NDP) is very small and is not commensurate with its potential. The contribution of forestry and logging in 1972-73 was 1.5 per cent at 1960-61 prices. As noticed in the advanced countries in the world forestry should be able to do better (Gol 1976c, p. 1).

It is clear that any strategy for forest development must take into account the goods and services that the forests should provide ... Production of industrial wood would have to be the *raison d’etre* for the existence of forests. Actually it is in this value that many other values that have been claimed or stressed for forests so far can be absorbed (Gol 1976c, pp. 32-33).

... by taking up the [social forestry] programme ... it would be possible to meet the requirement of fuelwood, fodder, small timber ... at the same time these programmes would remove a serious impediment in the practice of production forestry (Gol 1976c, p. 120).

The NCA report greatly influenced the government policy regarding both forestlands and wastelands. The focus on forestlands shifted to production forestry and on wastelands to social forestry³¹.

The primary objective in the Fifth Plan [1974-1979] is to take up a dynamic programme of production forestry, aiming at clearfelling and creating large scale man-made forests with the help of institutional financing (Gol 1976c, p. 15).

There is an urgent need for attaining self-sufficiency in fodder, fuel, small timber and wood for pulp. In this context, country’s wasteland or unutilised land offers great scope. We, therefore, feel that the reclamation of wasteland may be planned to meet the above demands of national importance (Gol 1976b, p. 205).

The NCA suggested that about 48 million hectares of forest land should be dedicated to production forestry and state-owned companies or corporations should be set up to attract institutional finance (Gol 1976c). Accordingly, 26 Forest Development Corporations (FDCs) were set up in different states (Gol 1990)³². The FDCs mainly focussed on converting “low” value mixed natural forests to “high” value plantations (FSI 1999; Saxena 1991).

... in some areas good quality mixed forests were felled to get better sites for raising plantations of chosen species, which in most cases was teak (MoEF 1999, p. 86).

Apart from environmental consequences, this policy adversely affected forest-dependent local communities and often led to serious conflict (see, for example, Anderson and Huber 1988³³). One senior official of the Ministry of Environment and Forests (MoEF) subsequently termed FDCs to be ‘Forest Destruction Corporations’ (interview #1, 12.09.2008).

In any case, FDCs failed even in their production forestry objectives. A government review report published in 1990 indicated that although FDCs controlled over 1.2

³¹ The achievement of food self-sufficiency due to ‘green revolution’ also perhaps played a role in the shift in focus from food to fuel and fodder (see, for example, Randhawa 1974).

³² 1990 figure. Some states viz. Orissa, Karnataka and Tamil Nadu had more than one FDC each (Gol 1990).

³³ In some areas, industrial plantations were also attempted on government wastelands/village commonlands. Many such plantations also faced stiff opposition from the local people. A well-known case is that of Karnataka Pulpwood Limited, which was set up to raise eucalyptus plantations to supply pulpwood to Harihar Polyfibres Limited (Gadgil and Guha 1992).

million hectares of plantations³⁴, their performance was far from satisfactory in terms of survival, yield, and quality (Gol 1990).

Most FDCs were incurring losses and had failed to attract adequate institutional finance, the reason they were created in the first place (Gol 1990). In spite of forestry being a priority sector, a mere 0.8% of the NABARD's³⁵ cumulative disbursement had gone into forestry³⁶ (Haque 1996a). There were numerous operational problems as well that led to failure of most FDCs (Gol 1990; Haque 1996b).

Regarding social forestry, NCA suggested two main programmes – (1) 'farm forestry' on agriculture farms, especially as boundary plantations and (2) 'extension forestry' on government wastelands, village commonlands, and strip lands available along roads, railway tracks, and canals (Gol 1976c).

From mid-1970s onwards social forestry became the main focus of forest policy in India. Apart from the impetus provided by the NCA, it got tremendous further boost due to radical changes in thinking within the international forestry establishment. The heightened international concern over rural energy crisis was coupled with increasing concern over deforestation. In 1978, two watershed events took place. The first was the 'Jakarta Declaration' and the second was issuance of a new forestry policy paper by the World Bank. The importance of these events is reflected in the documents of FAO and the World Bank:

The Conference considered that the "Jakarta Declaration", issued by the Eighth World Forestry Congress, reflected a *turning point in the history of forestry* and in the evolution of forestry's contribution to social and economic development in general and to the well being of rural people in particular. The Declaration highlighted the need for urgent action to safeguard the world's forest resources with a view to contributing to rural development, providing employment opportunities, promoting the use of wood as a renewable source of energy, maximizing support to agriculture and food production and maintaining their important role in environmental stability, especially through the control of floods and desertification (FAO 1979, Paragraph 67, emphasis added).

In response to the 1978 policy paper, the Bank has switched its emphasis away from financing industrial forestry projects almost exclusively to financing social and rural development and environmental forestry projects (World Bank 2001a, Online).

Up to 1978, about 95 percent of Bank forestry lending was for industrial projects--for example industrial plantations and sawmills. But in response to the Forestry Policy paper of 1978, the Bank made a major effort to finance social or rural development and environmental forestry projects. These "new-style" projects put much more emphasis on the living standards of people in the project area and less on the extraction of raw materials for industry (World Bank 2001b, Online).

The energy crisis and changed thinking within the international forestry establishment led to tremendous interest in fuelwood plantation projects among international funding agencies (interview #2, 15.09.2008). As a result, a large number of externally-aided social forestry projects were started in the country in late 1970s and 1980s (Planning Commission 2001a). These were mainly implemented by the state Forest Departments, which got involved in large-scale tree planting on non-forest lands for the first time (Planning Commission 2007).

³⁴ This included 966,538 hectares of new plantations of commercial tree species such as teak, eucalyptus, bamboo, pine and casuarina, 18,774 hectares of cash crop plantations such as red oil palm, rubber, cashew, tea, cardamom, coffee and lavender, and 251,174 hectares of existing plantations acquired from the Forest Departments (Gol 1990).

³⁵ National Bank for Agriculture and Rural Development – main financial institution for agriculture, forestry and rural development projects.

³⁶ Up to 31.03.1995.

This led to a spurt in plantation activity in the country. While the total extent of tree plantations established up to 1974 was 2.11 million hectares, over 1.44 million hectares of plantations were raised between 1974 and 1980, and as much as 4.65 million between 1980 and 1985 (see Table 2).

Table 2: Area covered under afforestation and financial outlay (1951-1985)³⁷

Plan Period	Area covered (lakh ha)	Outlay (INR crores)
First (1951-56)	0.52	1.28
Second (1956-61)	3.11	6.86
Third (1961-66)	5.83	21.13
Post Third (1966-69)	4.53	23.02
Fourth (1969-74)	7.14	44.34
Fifth (1974-79)	12.21	107.28
Annual (1979-80)	2.22	37.10
Sixth (1980-85)	46.5	926.01

Source: MoEF 1998a

However, in spite of the substantial area coverage under plantations, social forestry, like production forestry, failed to meet its primary objective, i.e. meeting local fuelwood and fodder needs from government wastelands, village commonlands, and farms.

Under the extension forestry programme, the Forest Department usually established a plantation and then handed it over to the local *panchayat* after a few years. The programme was not very successful and there were several problems with this approach: (1) it was largely a Forest Department-driven programme with little involvement of the local community beyond wage employment (Pathak 1994; Vira 1995); (2) it was difficult to find vacant lands due to widespread encroachment or existing subsistence use (Pathak 1994); (3) the local *panchayat* was often dominated by village elite and didn't represent the interests of the poor, who were the main stakeholders by virtue of their dependence on wasteland/commonland (Pathak 1994); (4) fast-growing non-browsable exotic species were preferred by the Forest Department defeating the very purpose of the programme (Mishra 1997); and (5) the *panchayats* often harvested the plantations soon after taking their charge, sold produce outside the village, and didn't reinvest money into new plantations thereby ending the programme after just one cycle (Köhlin 1998).

Farm forestry was more successful in terms of number of trees planted. It seems that the Forest Department had not anticipated its success as initially their focus was on wastelands/commonlands plantations and farm forestry targets were kept at modest levels (Saxena and Ballabh 1995). However, farmers, especially those with large holdings in commercial agriculture areas, took to tree planting in a big way. In Uttar Pradesh, for example, while only 11% of the target for community self-help woodlots could be achieved, farm forestry exceeded its target by as much as 3,430% (Gadgil and Guha 1992).

However, instead of planting fuelwood and fodder trees for meeting local needs, farmers mainly planted short rotation trees (especially eucalyptus) for the

³⁷ 1 lakh = 100,000; 1 crore = 10 million.

commercial and industrial market (Adiseshiah 1989; Pathak 1994; Saxena and Ballabh 1995). Although a large number of trees were planted by farmers within a short span of time, the success of farm forestry was short-lived. By mid-1980s, farmers started abandoning it as they didn't get the anticipated returns from trees (Saxena and Ballabh 1995).

It is widely acknowledged that social forestry was a failure, even by the government:

[Social forestry] programme was undertaken largely departmentally and could not establish the required linkage with the communities and instead, served mainly to urban and commercial uses through the widespread promotion of fast growing tree species (Planning Commission 2007, p. 34).

While the period between early 1970s and mid-1980s was defined by the focus on energy, forest corporations and the eucalyptus wave under farm forestry, there were other key developments during this period as well that had a major impact on the wastelands and the associated afforestation discourse in subsequent years.

RURAL DEVELOPMENT FORESTRY ERA: ENVIRONMENT, BASIC NEEDS, AND PEOPLE'S MOVEMENT

Although production and social forestry were the dominant features of 1970s and early 1980s, another key concern emerged during the period, *viz.* environment. It was partly on account of keen interest taken in environment issues by the then Prime Minister Mrs Indira Gandhi. A number of important initiatives were launched during her term. These included the establishment of the National Committee on Environmental Planning and Coordination (1972) (Planning Commission 2007), enactment of The Indian Wildlife (Protection) Act (1972), launch of the 'Project Tiger' (1973)³⁸, and enactment of The Water (Prevention and Control of Pollution) Act (1974)³⁹.

The importance of environment issues steadily increased over the period and it had a direct bearing on the subsequent wastelands and afforestation discourses. The need for a national land use policy – in spite of 'Land' being on the State List⁴⁰ – was first highlighted through a paper titled 'A Charter for the Land', which was written by a senior official in 1972 (MoRD 2001). The paper reportedly influenced the Prime Minister, who expressed great concern over the matter (Vohra 1986a). The states were subsequently requested in 1974 to set up State Land Use Boards (NWDB 1986a). Similarly, there was concern over deforestation and the subject 'Forests' was moved from the State List to the Concurrent List in 1976⁴¹. The central government subsequently issued guidelines for forest management that *inter alia* suggested a ban on tree felling over the altitude of 1,000 metres. In 1980, the central government enacted the Forest (Conservation) Act to control diversion of forest land for non-forest use (FSI 1987). In the same year, a separate Department of Environment was also established at the centre (MoEF 1986). The growing importance of environment issues was also reflected in the inclusion of a separate

³⁸ Source: <http://projecttiger.nic.in/> (accessed 26.03.2010).

³⁹ Source: <http://moef.nic.in/modules/rules-and-regulations/water-pollution/> (accessed 27.03.2010).

⁴⁰ India is a federal country consisting of twenty-eight states and seven union territories. The allocation of responsibilities between the centre and the states for different subjects is listed in the Constitution of India (Seventh Schedule) in the form of Union List, State List, and Concurrent List.

⁴¹ Source: <http://lawmin.nic.in> (accessed 26.03.2010).

chapter on environment in the Sixth Five Year Plan (1980-1985) (Planning Commission 1980).

The concern over environment increased significantly in the 1980s. In 1981, The Air (Prevention and Control of Pollution) Act⁴² was enacted and the National Eco-development Board was established (MoEF 1986). This increased concern for the environment was also in line with the changing international thinking as reflected in the adoption of the World Conservation Strategy⁴³ and the World Soil Charter⁴⁴ in 1980 and 1981, respectively.

A couple of reports during the period highlighted the need for urgent action to improve land and forest management. The first was the report of the National Commission on Floods which indicated that the area prone to periodic flooding had doubled between 1971 and 1981, with huge attendant economic loss (Singh *et al.* 1986; Puri 1992). The second was the report of the National Remote Sensing Agency (NRSA) (1983) that indicated that India lost forests at an average annual rate of 1.3 million hectares between 1972-75 and 1980-82 (NWDB 1986a; FSI 1987; Puri 1992).

The civil society response to these concerns came in the form of a NGO – Society for Promotion of Wastelands Development – that was established in 1982 under the chairpersonship of an eminent scientist Dr M.S. Swaminathan. The Society played an important role in highlighting degradation of land and forest resources and promoted a people-centred approach for their development (Eswaran 2001; interview #3, 29.05.2008; interview #4, 29.05.2008). This people-centred approach was also endorsed by the United Nations Environment Programme (Tolba 1982).

A key turning was the appointment of Mr Rajiv Gandhi⁴⁵ as India's Prime Minister in 1984. Soon after taking charge, he launched a number of major environment-related initiatives. These included setting up of the MoEF, establishment of the National Wastelands Development Board (NWDB), launching of a massive programme to clean Ganges River, enactment of a comprehensive Environment (Protection) Act, and adopting a new conservation and people-oriented National Forest Policy^{46,47}. The thrust given to conservation issues by Mr Rajiv Gandhi is also reflected in the record number of protected areas constituted during his tenure (October 1984 to December 1989) (MoEF 2009a).

The Prime Minister identified wastelands development as one the thrust areas of his government and launched a massive plantation programme to combat deforestation⁴⁸. In his address to the nation on January 5, 1985, he announced:

Continuing deforestation has brought us face to face with a major ecological and socio-economic crisis. The trend must be halted. I propose immediately to set up a national wastelands development board with the object of bringing 5 million hectares of land every

⁴² Source: <http://moef.nic.in/modules/rules-and-regulations/air-pollution/> (accessed 27.03.2010).

⁴³ See <http://data.iucn.org/dbtw-wpd/edocs/WCS-004.pdf> (accessed 27.03.2010).

⁴⁴ See <http://www.fao.org/docrep/t0389e/t0389e0b.htm> (accessed 27.03.2010).

⁴⁵ Son of Mrs Indira Gandhi.

⁴⁶ See <http://moef.nic.in/index.php> (accessed 27.03.2010).

⁴⁷ An Island Development Authority was also set up in 1986 with the Prime Minister as its Chairperson for ecologically sound development of the Andaman and Nicobar and Lakshadweep Islands (Planning Commission 1992).

⁴⁸ It has been suggested that perhaps his past experience as a pilot shaped his views regarding deforestation in the country (interview #5, 12.09.2008).

year under fuelwood and fodder plantations. We shall develop a people's movement for afforestation (NWDB 1986a, p. 13).

These goals were subsequently also reflected in the National Forest Policy announced in 1988⁴⁹. It laid emphasis on afforestation through a 'massive people's movement' and reiterated the 'national goal' of having a minimum one-third of the total area of the country under forest and tree cover.

The magnitude of the afforestation effort suggested by the Prime Minister can be gauged from the fact that it translated into planting of 16,842 trees every year in *each and every* village of India⁵⁰. Another notable feature of his announcement was the emphasis on people's movement rather than government machinery to achieve the target. This non-bureaucratic approach was also reflected in the constitution of NWDB. Not only did he choose a NGO professional over bureaucrats to head NWDB, he also vested the Board with executive functions against the prevailing norm of granting only an advisory role to such bodies (interview #2, 15.09.2008).

Not only did the Prime Minister announce a major programme, he himself personally got involved in it. He became Chairperson of the newly set up National Land Use and Wastelands Development Council (NWDB 1986a)⁵¹ and ensured that the programme did not face any bureaucratic bottlenecks. He intervened several times to speed up the process by setting deadlines (interview #5, 12.09.2008; interview #1, 12.09.2008).

After the establishment of the NWDB, one of the first tasks it undertook was to define and estimate the extent of wastelands. As there was a plethora of definitions⁵², NWDB decided to appoint a Technical Task Force for the purpose (Technical Task Group 1985). The definition suggested by this group was further refined and the following was agreed:

Wastelands for the purpose of this document mean degraded land which can be brought under vegetative cover, with reasonable effort, and which is currently under-utilised and land which is deteriorating for lack of appropriate water and soil management or on account of natural causes (NWDB n.d.a, p. 2).

This new definition represented an important shift as wastelands were defined in ecological terms, rather than their revenue or agriculture potential, or legal status. The next step was estimation of wastelands. Again, there was a plethora of estimates (see Srivastava 2000b). The most often quoted figure, however, was 175 million hectares which that had been estimated by NCA. The NWDB considered it to be an overestimate as they had possibly included all lands needing attention as wastelands⁵³ (NWDB 1986b). Therefore, NWDB requested NRSA to take up a 'National Wastelands Identification Project' in 1986 (NWDB n.d.a). This was again a departure from the past as wastelands were to be directly identified through remote sensing rather than through collation of data collected by local officials. This exercise led to a revised estimate of 55.4 million hectares of wastelands (NWDB 1986c).

⁴⁹ MoEF Resolution No. 3-1/86-FP dated 07.12.1988. Available online at <http://moef.nic.in/downloads/about-the-ministry/introduction-nfp.pdf> (accessed 27.03.2010).

⁵⁰ Assuming 2,000 trees per hectare. According to the last census in 2001, there were 593,731 inhabited villages in India. Source: <http://www.censusindia.gov.in/> (accessed 27.03.2010).

⁵¹ It had two bodies under it – National Land Use and Conservation Board in the Ministry of Agriculture and Rural Development and NWDB in MoEF.

⁵² See, for example, Bhumbra and Khare n.d.; Mohammad 1990; Sharma 1990; Bagchi and Philip 1993.

⁵³ NCA had classified as much as 62% of cultivated lands as wastelands. The NCA figure was re-assessed by the Ministry of Agriculture as well (see Singh 1989).

Thus, the estimate of wastelands in the country dropped significantly from 53% (as estimated by NCA) to around 16% of the geographical area. These wastelands were classified under a new 13-fold classification (MoRD and NRSA 2005).

While devising its strategy, NWDB decided to focus on fuelwood and fodder as these had been identified as critical to address both deforestation and subsistence needs issues (see Advisory Board on Energy 1985; NWDB 1986b; NWDB 1986d). This was also in line with the changing thinking about the role of commonlands and development interventions. A seminal study in mid-1980s (Jodha 1986) had shown the extent of dependence of rural poor on commonlands and that programmes focusing on these lands could be used to address poverty. Even at the international level, the thinking about “development” was changing and there was a greater focus on poor and their basic needs (see, for example, Griffin and Khan 1978; Streeten and Burki 1978).

The NWDB projected its wastelands reclamation programme as a poverty alleviation effort. Its chairperson stated that ‘India’s poverty is closely connected with its increasing land degradation’ (Chowdhry 1989, p. 5). The key document prepared by NWDB outlining its strategy noted:

Half of India, the poorer half depends for its subsistence on the common lands, the uncultivated half of India. Over the years, these lands – forest lands, grazing lands and other common lands – have become highly degraded leading to deforestation and ecological degradation on the one hand, and poverty, unemployment and impoverishment of quality of life and drudgery of women and children on the other hand. Unless this vicious circle of ecological degradation and poverty is broken, there is no hope either of achieving ecological balance or improving the situation of the rural poor (NWDB 1986a, p. 13).

Once the land degradation-poverty connection was made, a large amount of rural development funds became available for plantations. Up to 25% of funds of the flagship rural employment schemes were reserved for afforestation⁵⁴ (Planning Commission 1988). The importance attached to wastelands development during the period can be discerned from the amount of funds allocated to it (see Table3).

Table 3: Area-wise break-up of funds of Ministry of Environment and Forests (1987-88 to 1990-91) (INR million)

	1987-88	1988-89	1989-90	1990-91	1991-92
Wastelands Development	603.3	600.0	684.0	800.0	1215.0
Ganga Action Plan	455.0	570.0	603.0	620.0	546.0
Environment / Ecology and Environment	307.0	360.4	321.0	308.3	379.7
Forestry & Wildlife	276.9	290.9	289.8	364.3	523.7

⁵⁴ Although the actual proportion of funds made available was somewhat less than the target, these still constituted the bulk of funds available for tree plantation during this period (Planning Commission 1988).

Source	MoEF 1988	MoEF 1989	MoEF 1990	MoEF 1991	MoEF 1992
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Although NWDB had a huge afforestation target, it chose not to depend much on the state Forest Departments as it did not view them very positively, possibly due to the past experience with social forestry. One NWDB member noted:

... it would be unrealistic to depend too much on our forestry establishments for afforestation ... let them not claim any kind of monopoly in this field. For we just do not have the kind of time at our disposal which would justify the luxury of a dog-in-the-manger attitude by forestry establishments. We will also, of course, never have the kind of money at our disposal which would permit massive afforestation to be carried out on the basis of three-strand barbed wire fencing and uniformed forest guards galore. It is in any case a ridiculous proposition that a quarter of the country's total land resources – and degraded resources at that – should be allowed to be managed by a handful of state forest departments with previous records which inspire little confidence (Vohra 1986b, p. 14).

The NWDB instead focussed on trying out various institutional alternatives that would lead to a people's movement, as desired by the Prime Minister. The key ideas it adopted included grants to voluntary agencies, promotion of decentralized people's nurseries, provision of margin money for plantation projects financed through banks, *tree pattas*, and tree growers' cooperatives. Although there had been a greater emphasis on fuelwood as compared to fodder since the social forestry era⁵⁵, fodder plantations assumed greater importance after the severe drought of 1987⁵⁶ (Planning Commission 1988).

The Grants-in-Aid Scheme for voluntary agencies was started in 1985-86 and provided grants to NGOs for undertaking tree plantations. The Decentralised People's Nurseries Scheme was initiated in 1986-87 to encourage seedling production by farmers, especially small and marginal farmers (*kisan* nurseries). The scheme also promoted seedling production by schools, voluntary agencies, and cooperatives. The Margin Money Assistance Scheme was started in 1987-88 and provided 25% of the project cost as grant, provided an equal contribution was made by the implementing agency and at least 50% of the total project cost was commercially financed (Planning Commission 1988). The *tree patta* scheme was designed to allow poor (including landless) persons to participate in the plantation programme by providing them access to small parcels of land as well as support for planting trees. While the beneficiaries were entitled to benefits from the trees, the ownership or any other right in the land was not granted to them (NWDB 1986c). Following the Prime Minister's call for massive afforestation, a two-day conference of Revenue Secretaries and Revenue Ministers was held in May 1985. The guidelines for the scheme were circulated to all states in February 1986⁵⁷. Under the cooperatives initiative, rural people were encouraged to form tree growers' cooperatives, which were then leased land and provided support to establish tree plantations.

The Grants-in-Aid and Decentralised People's Nurseries schemes played an important role in involving the NGO sector and civil society in the plantation activity.

⁵⁵ For example, a Rural Fuelwood Plantation Scheme had been under implementation in 157 districts since the Sixth Five Year Plan (MoEF 1988).

⁵⁶ For example, a new scheme of Silvipasture Farms was launched in 1987-88 (Planning Commission 1988).

⁵⁷ See *Wastelands News*, Vol. II, No. 1, August-October 1986.

The Margin Money Scheme (subsequently renamed as Investment Promotion Scheme) was, however, not very successful and just a handful of projects were sanctioned under it (MoRAE 1997). Although nine states had launched *tree patta* schemes by 1987 (MoEF 1987), it was also not considered very successful due to problems such as privatization of a common pool resource and diversion of allotted land for agriculture⁵⁸. For promoting tree growers' cooperatives, two major projects were launched in collaboration with the National Dairy Development Board (NDDB) and the Indian Farmers Fertiliser Cooperative Limited (IFFCO) (NWDB n.d.b).

Although NWDB could not achieve its ambitious target, it did promote plantations on a massive scale. The total cumulative area of plantations in the country up to 1985 was 8.21 million hectares. And just between 1985 and 1992, as much as 11.99 million hectares of plantations were established (MoEF 1998a). This period also saw a tremendous interest in the issue of wastelands in the country, as reflected in numerous meetings and publications (see, for example, VIKSAT and SPWD 1984; Agarwala 1985b; Bandyopadhyay *et al.* 1985; Hegde and Abhyankar 1986; Singh *et al.* 1986; Yadav 1986; Khan 1987; FRI 1988; Shankarnarayan 1988; CSIR 1990; Yadav 1990; Puri 1992)⁵⁹.

Although NWDB played a major role in linking environment and poverty programmes and led a massive rural development forestry programme, it had lost its pre-eminent position within government by early 1990s. The decline of NWDB was accompanied by the shift of the wastelands and associated afforestation discourse in new directions.

NEW DIRECTIONS: WATERSHED, JOINT FOREST MANAGEMENT, AND CLIMATE CHANGE

The NWDB started off as a very powerful body with considerable autonomy. However, over a period of time problems emerged between NWDB and the parent ministry within which it was housed. It ultimately led to the departure of NWDB's chairperson in January 1988 (interview #6, 06.09.2008; interview #2, 15.09.2008). This considerably weakened the Board. Another negative policy change was the withdrawal of the provision for compulsory earmarking of 25% of funds of the rural employment schemes for afforestation (NWDB n.d.d; NWDB n.d.e)⁶⁰. The next major blow was the resignation of Mr Rajiv Gandhi in December 1989 following the defeat of his party in the elections. While he was still in power, the process was initiated to upgrade NWDB to a 'Mission'⁶¹ (MoEF 1990; NWDB n.d.c) but it was not pursued by the next government (interview #5, 12.09.2008; interview #2, 15.09.2008).

In 1992, NWDB was virtually bifurcated with one part being assigned forestlands and the other non-forest wastelands. The part dealing with forestlands was retained

⁵⁸ See report of the sub-group headed by Mr V.B.Eswaran submitted to the Policy Advisory Group on Distribution of Benefits from Common Lands constituted by NWDB. Reproduced in *Wastelands News* Vol. VI, No. 4, May-July 1991.

⁵⁹ *Wastelands News* – quarterly publication of the Society for Promotion of Wastelands Development – also carried a large number of articles on wastelands-related issues and provided a platform for debate.

⁶⁰ The fund allocation for forestry in the new rural employment scheme (*Jawahar Rozgar Yojana*) fell to just 1.3% by 1994-95 (MoEF 1999). Also see Report of the Committee on Action Plan for Forestry Sector for the Next Twenty Years.

⁶¹ The programmes with the highest national priority are declared as 'Missions' and are monitored closely (interview #5, 12.09.2008).

within MoEF and renamed National Afforestation and Ecodevelopment Board (NAEB). The other part, still called NWDB, was moved to a newly created Department of Wastelands Development (DoWD)⁶² in MoRD (MoEF 1993; Kanda 2000)⁶³. Many consider this move to be the final blow for NWDB (interview #3, 29.05.2008; interview #7, 11.09.2008; interview #5, 12.09.2008). After moving to MoRD, NWDB became just an advisory body and soon lost its relevance. One senior official of MoRD commented that while he was there for two years, only one meeting of NWDB was held as it was felt that NWDB would not be able to add much value to MoRD's ongoing programmes (interview #2, 15.09.2008). After the split of NWDB into two separate ministries, the wastelands and afforestation discourses started evolving somewhat independently.

When DoWD was created in MoRD, some of the schemes being implemented by the erstwhile NWDB were entrusted to it, including part of the NWDB's flagship Integrated Wastelands Development Projects scheme (MoRD 1993). Some other schemes being implemented by MoRD, especially those related to drought preparedness and mitigation⁶⁴, also had a strong wastelands development component. The rural employment schemes being implemented by MoRD also contributed towards wastelands development. In addition, Ministry of Agriculture was also implementing many schemes with a focus on soil management and water conservation⁶⁵.

A key development took place in 1994 when a government committee⁶⁶ recommended that all major land development schemes should be implemented on a watershed basis⁶⁷. The committee based its recommendations partly on cases (e.g., Ralegaon Siddhi and Mittermari) where watershed approach had reversed the degradation process. The adoption of the committee's recommendations by the government led to the recasting of the wastelands discourse in terms of watershed development. From now on, watershed became the main *mantra* for land development programmes in the country. As watershed development was primarily seen as a strategy for protecting livelihoods of people living in ecologically fragile areas (MoRAE 1996; Rao 2000), up to 50% of funds of rural employment schemes were reserved for watershed development projects (MoRAE 1999). A common set of guidelines to be followed by all relevant schemes were issued in 1995, which were revised again in 2001 and 2003⁶⁸. A large number of watershed development projects (usually covering 500 hectares each) were implemented in the country.

⁶² Renamed as Department of Land Resources in 1999 (MoRD 2001).

⁶³ Persons who closely observed the process felt that political compulsions played an important role in the creation of the new department along with a new ministerial post (interview #9, 29.05.2008; interview #5, 12.09.2008; interview #2, 15.09.2008).

⁶⁴ The two major schemes were Drought Prone Areas Programme (DPAP) (started 1973-74) and Desert Development Programme (DDP) (started 1977-78) (MoRAE 1999).

⁶⁵ These included (i) Soil Conservation in the Catchments of River Valley Projects & Flood Prone Rivers (started 1962 and 1981); (ii) Watershed Development Project in Shifting Cultivation Areas (started 1974-75); (iii) Reclamation & Development of Alkali & Acid Soil (started 1985-86); and (iv) National Watershed Development Project for Rainfed Areas (started 1990-91). Source: <http://www.agricoop.nic.in/Nrm/STATNRM.pdf> (accessed 10.08.2009).

⁶⁶ Technical Committee on DPAP and DDP constituted under the Chairpersonship of Prof. C.H. Hanumantha Rao.

⁶⁷ Although there had been earlier calls for adopting watershed approach (e.g., MoRD Task Force under Dr M.S. Swaminathan in 1982), it was only after the report of the technical committee chaired by Prof C.H. Hanumantha Rao that it became the dominant approach.

⁶⁸ See <http://www.dolr.nic.in/fguidelines.htm> (08.06.2009).

These projects focused on government wastelands and village commonlands though forestlands and private lands were not excluded. The main emphasis in these projects was on soil and moisture conservation and rural livelihoods, and afforestation was just one of several components⁶⁹. In 2005, another committee reviewed the watershed programme (MoRD 2008) and suggested its further strengthening and expansion (DoLR 2006). Based on its recommendations, an Integrated Watershed Management Programme was launched by MoRD and a new set of guidelines issued in 2008 (MoRD 2008). The annual budget of the programme gives an idea of its scale. It was INR 11.15 billion (approximately US\$ 247 million)⁷⁰ in 2007-08.

While the focus on non-forest lands was shifting towards watershed management, a major change was occurring on forestlands as well. A new programme called Joint Forest Management (JFM) emerged in 1990. Its main objective was regeneration of degraded forests by forging a partnership between the state forest departments and local communities. The communities were offered greater access and a share in produce in return for protection and management of a designated forest patch. The programme generated huge interest among NGOs and donors as well and a number of externally-aided projects with participatory forestry as a significant component were launched (Planning Commission 2001a).

As the JFM programme spread, MoEF slowly reduced its other wastelands development activities. Three schemes being implemented by NWDB viz. Rural Fuelwood Plantation, Operation Soilwatch and Silvipastoral Farms were discontinued in 1990-91 (MoEF 1991). During 1993-94, the Integrated Wastelands Development Projects Scheme was replaced with a new scheme called Integrated Afforestation and Eco-development Projects Scheme (MoEF 1994). After NAEB was constituted, it also got involved in the JFM agenda. Towards the end of 1990s, there was a renewed focus on achieving one-third forest and tree cover in the country. The National Forestry Action Programme, completed in 1999, laid great stress on meeting this target⁷¹ (MoEF 1999). The target was reiterated in 'The Coimbatore Charter on Environment and Forests' agreed at a conference of central and state forest ministers and senior officials⁷². Subsequently, the target was included in the Tenth Five Year Plan (2002-07), which also laid down a timetable for achieving it, i.e. 25% by 2007 and 33% by 2012 (Planning Commission 2002a; also see Planning Commission 2001b; Planning Commission 2003a)⁷³. The Tenth Five Year Plan also proposed 'universalisation of JFM', i.e. initiation of JFM in all forest-fringe villages (Planning Commission 2006a, Paragraph 3.7.13). In order to meet these objectives, in 2002-03 NAEB launched the National Afforestation Programme by merging some existing schemes, which was implemented through JFM committees⁷⁴ (Planning Commission 2006b). It also restructured the existing Grants-in-Aid scheme (continuing from NWDB days) and renamed it as Grants-in-Aid for Greening India⁷⁵.

⁶⁹ See <http://www.dolr.nic.in/fguidelines.htm> (08.06.2009).

⁷⁰ Proposed budget. US\$ conversion at March 2010 rate.

⁷¹ However, it estimated that an astounding US\$ 32 billion would be required to complete the job.

⁷² See <http://www.envfor.nic.in/> (accessed 07.06.2009).

⁷³ The target was also mentioned in the National Environment Policy and the Report of the National Forest Commission, both of which were finalised in 2006 (see MoEF 2006).

⁷⁴ Initially launched as a pilot scheme in 2000-01 under the title 'Samnavit Gram Vanikaran Samridhi Yojana' (Integrated Village Afforestation and Development Scheme). The JFM committees were organised into groups called Forest Development Agencies for implementing the scheme.

⁷⁵ See www.forests.tn.nic.in/PublicUtilities/graphics/NAEBGuidelines.pdf (accessed 29.03.2010).

The importance of JFM in the 1990s and early 2000s can be gauged from the fact that over 100,000 JFM groups were organised and 22 million hectares of forestland (30% of the total area) was under JFM by 2006 (MoEF and WII 2006).

Along with watershed development and JFM, another key development took place in the 1990s. Through a Constitutional amendment in 1992⁷⁶, significant powers were devolved to *panchayats*. A new schedule (Eleventh Schedule) was added to the Constitution and a number of matters were entrusted to them. These *inter alia* included land improvement, soil conservation, watershed development, social forestry and farm forestry, and fuel and fodder. As a result, considerable emphasis was laid on the involvement of *panchayats*, especially in the watershed development programme, and to a lesser extent also in the JFM programme⁷⁷.

Although watershed development and JFM continued in the new century, their 'golden decade' was over (Alagh 2005). The watershed approach moved towards 'watershed plus' with much greater emphasis on sustainable livelihoods (DoLR 2006). Although the focus on afforestation remained strong, other alternatives to JFM started emerging. A key development was creation of the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) on the order of the Supreme Court of India. This body was entrusted with the responsibility of managing funds obtained from the diversion of forestlands⁷⁸ for afforestation and forest development purposes (interview #8, 10.08.2009). A large amount of funds accumulated with CAMPA within a few years⁷⁹. The availability of CAMPA funds encouraged the government to develop ambitious afforestation plans (interview #8, 10.08.2009).

Since early 2000s there has been a great interest in raising bio-fuel plantations, especially of *Jatropha curcas* and *Pongamia pinnata* (Planning Commission 2003b; MoRD 2004; MoRD 2006; MoRD 2008). The stated objectives include 'rehabilitating degraded lands' and reducing the country's huge oil import bill (Planning Commission 2003b, p. ix). In addition, the 'India Vision 2020' document issued in 2002 also contemplated energy plantations to generate as much as 100,000 megawatts of power (Planning Commission 2002b).

In recent years, both wastelands and afforestation discourses have shifted considerably towards the issue of climate change. The Prime Minister announced a national action plan to combat climate change in 2008 and launched the 'National Mission for a Green India'⁸⁰ – one of the eight missions announced by him (Gol 2008). Interestingly, even past plantations carried out for entirely different objectives are now being presented in the context of climate change:

Due to this, the carbon stocks in Indian forests have increased over the last 20 years ... (Gol 2008, p. 18; also see Ravindranath *et al.* 2008).

⁷⁶ The Constitution (Seventy-third) Amendment Act, 1992. Source:

<http://indiacode.nic.in/coiweb/amend/amend73.htm> (accessed 30.03.2010).

⁷⁷ The role of *panchayats* was particularly emphasised in the 'Hariyali' watershed guidelines issued in 2003 (MoRD 2004).

⁷⁸ These funds are collected from industrial, commercial, or development projects that use forestlands.

⁷⁹ The total fund size had reached INR 112 billion (approximately US\$ 2.48 billion) by 2009 (MoEF 2009b).

⁸⁰ The plan was to use CAMPA money for this programme but it has run into problems as permission for this was not granted by the Supreme Court (interview #8, 10.08.2009).

It seems that the future thrust of both wastelands development and afforestation programmes is going to be on climate change for some time. A booklet issued by MoEF in August 2009, in the run up to the climate change meeting at Copenhagen, noted:

India's forests serve as a major sink of CO₂. Our estimates show that the annual CO₂ removals by India's forest and tree cover is enough to neutralize 11.25 % of India's total GHG emissions (CO₂ equivalent) at 1994 levels, the most recent year for which comparable data is available for developing countries based on their respective National Communications (NATCOMs) to the United Nations Framework Convention on Climate Change (UNFCCC). This is equivalent to offsetting 100% emissions from all energy in residential and transport sectors; or 40% of total emissions from the agriculture sector. Clearly, India's forest and tree cover is serving as a major mode of carbon mitigation for India and the world (MoEF 2009c, p. 5, emphasis in original).

Even Indian industry, long interested in captive plantations for meeting their raw material needs, has started projecting their carbon sequestration potential (FICCI 2007). To a lesser extent, land degradation is also being framed in terms of meeting obligations under UN conventions related to biological diversity and desertification⁸¹. In addition to these current interests, wastelands continued to be seen as vacant lands available for all emerging needs of the country. For example, following a controversy over acquisition of agriculture land for Special Economic Zones, the Ministry of Commerce and Industry issued the following instructions:

In the wake of controversies on land acquisition, the Ministry of Commerce and Industry has advised all the State Governments that in case of land acquisition for setting up of Special Economic Zones, first priority should be for acquisition of waste and barren land ... (DoC 2008, p. 100).

It is apparent that the discourses on wastelands and afforestation continue to evolve in response to ever-changing needs and priorities at the national and international levels.

CONCLUSION

The wastelands (and associated afforestation) discourse has shaped India's land and forest policies, landscapes, and community rights and livelihoods for around 150 years. The power of this discourse is reflected through the policies and programmes it has spawned. By 2007, afforestation had been carried out over 41.6 million hectares⁸² and as much as 50.9 million hectares had been covered under watershed development programmes⁸³ – that's as much as 28% of the entire country's area already and still counting⁸⁴.

The discourse has continuously evolved in accordance with the perceived national needs and priorities such as revenue, food, fuel and fodder, combating deforestation and poverty, and more recently, climate change.

⁸¹ See, for example, <http://pib.nic.in/release/release.asp?relid=57618> (accessed 12.03.2010) and MoEF 2003.

⁸² The figure has been calculated from the following government reports: MoEF 1998a; MoEF 2000; MoEF 2001; MoEF 2002; Planning Commission 2006b.

⁸³ Source: <http://www.agricoop.nic.in/Nrm/STATNRM.pdf> (accessed 10.08.2009).

⁸⁴ Although there is likely to be some overlap between the two figures, there is no denying the huge coverage of these programmes. Another 32.05 million hectares is likely to be covered under the watershed programme by 2012. Source: <http://www.agricoop.nic.in/Nrm/STATNRM.pdf> (accessed 10.08.2009).

It is only with an historical awareness of this evolving discourse that we can better understand various land- and forest-related policies, associated programmes and projects, and impacts on community rights.

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