

Seven years before its present appearance in English, Michael Mann's study of agrarian and ecological change in the central Ganga-Yamuna Doab was first published in German, in 1992. Though by then ecological concerns had begun to find a foothold in the terrain of historical research in India, the overlap between social, economic and administrative processes still provided the most convincing explanation for historical phenomena. The increasing inclusion of ecology as an influential factor seemed to add awkward edges to an otherwise harmonious construction. Understandably then, as explanatory arguments, the widely appreciated socio-economic impact of administrative decisions needed only reiteration while ecological considerations required elaboration. The book under review highlights the marked ecological transformation that occurred in the Central Doab during the early decades of British rule and explains it to be the result of administrative and economic policies of the colonial government. Not surprisingly, the term 'Indian soil' in the title of the book conveys not simply its more commonly understood metaphoric meaning of Indian political territory, but also its very literal sense of the soil as an economically exploitable and alterable physical entity.

The book appears to consist of three broad logical divisions – though the chapterisation itself follows different lines. The first, and largest, portion of approximately 85 pages (Chapters 2 and 4) deals explicitly with the nature of 'British rule' and its impact on the agrarian economy. Chapter 2 discusses at length the evolution of British land revenue administration in the ceded and conquered provinces. It describes agrarian social hierarchies and local revenue responsibilities of village level functionaries in the Central Doab and also some other parts of India. Despite regional differences, however, the visible consequences of colonial rule were very similar. These included the emergence of new proprietary concepts in land, the auction of land belonging to revenue defaulters (which created a market for land) and the increased role of town-based moneylenders and speculators in agriculture. An important factor that had a significant bearing in all this was the change made by the British to the currency and finance policy of earlier rulers. In this chapter the author creates "a framework, within which the transformation of Indian agriculture... took place" (p 65).

Chapter 4 can be clubbed with Chapter 2, because, as a logical sequence, it specifically deals with this transformation. The first half of this chapter describes at length the state of agriculture in the region in 1800 – the methods of cultivation and irrigation, the local variations in fertility and levels of cultivation and the "lively and economically active" towns and population centres (p 105). It is argued that the agro-economic situation in the

## Book review

# Colonialism and Ecology

BRITISH RULE ON INDIAN SOIL:  
NORTH INDIA IN THE FIRST HALF OF THE NINETEENTH CENTURY

by Michael Mann

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Central Doab was depicted as poor by later British administrators because of their desire to increase commercial agriculture, and hence revenue demand, to unprecedented levels. The second part of the chapter explains the change brought about by British agrarian policy. Through forced commercialisation, the Doab was systematically developed into a large-scale cotton-growing region in order to produce the commodity at world market prices. Government loans were advanced to farmers for the cultivation of cash crops. Indian moneylenders began intervening in the agricultural market again on an increasing scale. Food crop production, despite their rising prices, lost out to the cultivation of more valuable crops. Cotton production increased dramatically and cash crops came to occupy not only the best lands, but also a larger portion of the canal-irrigated area (pp. 132-3). This did not however, increase the productivity of cash crops. The ecological impact of intensive cropping and the extension of cultivation on soil fertility, says Mann, was already becoming apparent.

Chapters 3 and 5 (approximately 51 pages) together constitute the second broad division of the book. The purpose behind the third chapter, the author explains, is to provide "an overview showing the attacks on the natural balance of forests, their consequences, and the clear connection between ecology and economics" (p 67). It is here, therefore, that the theoretical foundations for Chapter 5 are laid. After recounting, all too briefly, the history of the commercial evaluation and exploitation of forests in India and a few other parts of the world, Mann proceeds to describe what he titles the "ecological relevance of forests" (pp. 73-82). The last portion of this chapter deals with the ecology of the Ganga-Yamuna Doab, which was altered almost completely when the agrarian economy shifted from what according to the author was a "self-sufficient subsistence farming" to a system that was based on "soil intensive cash crop production." Extensive clearance of *dhak* forests for extending cultivation further caused salination and "thus contributed to a form of desertification" (p. 91).

Following the logic of the author's argument, the changes described in Chapter 3 resulted in the "ecological and economic catastrophe" detailed in Chapter 5. Till 1800 the large forested areas of the Central Doab enabled the

maintenance not only of an ecological balance but also of a locally sustainable agrarian economy. Systematic deforestation brought about by the British thereafter resulted in agricultural decline. Among the consequences of ecological change listed by the author are: increased swings in the quality of precipitation (p 149); an increase in temperature on the one hand and frequent frost on the other (p 151); cholera (p 152); soil degradation (pp. 153-4) and a drop in agricultural yield (p 155). Perhaps the most dramatic consequence, says the author, was a fall in the water table, which severely affected agriculture. It prompted the colonial administration to advance *taqavi* loans to build wells, but these too were intended to encourage the cultivation of sugarcane.

The third portion of the book (Chapters 6 and 7) deals with the disastrous human consequences of colonial policy. The author suggests that unprecedented commercialisation of the agrarian economy created a rural proletariat that barely managed to survive. Food shortages and famine resulted from a situation in which population grew, cultivation of cash crop for the world market increased, but food production fell. Mann argues that "the Central Doab shows the direct consequences of the transformation of an indigenous agrarian economy into a colonial one" (p 169). What followed is a story of human misery. Famine occurred in 1813-14 and 1817-18. But it was during the erratic years of 1833-36 and the famine in 1837-38 that starvation, smallpox and cholera decimated the population. Cultivated area in large parts of the Doab declined sharply. The author substantiates his argument by a detailed discussion of the changing demography of the region. Despite the disastrous consequences of their policy, the British rulers continued to seek administrative answers for what was essentially an "eco-economic" problem.

The overall social impact that colonialism had on the Central Doab is brought out in Chapter 7. Inability of assesses to pay high rates of land revenue frequently resulted in the mortgaging or sale of land to creditors. The sale and purchase of estates due to accumulated revenue arrears and increasing intervention of financiers and speculators brought about shifts in the landownership pattern of different castes, particularly in old cultivation areas. What colonial rule

effected was a "change in the entire social framework through the creation of a land capital market." Commercialised agriculture and oppressive taxation radically transformed the North Indian environment, economy and village social structure.

*British Rule on Indian Soil* is a well-researched and systematically argued book. A large number of archival sources have been examined, and the picture thus created illustrates a larger (and by now familiar) narrative in which British rule is the turning point at which South Asian society and economy took on so many of the hues that coloured it throughout the 20<sup>th</sup> century. That does not however, make all arguments entirely indisputable. There are several points on which the reader might choose to disagree with the author. Numerous sweeping statements contained in the chapter titled 'Ecological Destabilisation' – and upon which so much of the book's ecological argument is based – may really not be the truisms that the author assumes them to be. Other parts of the book too have their share of unsubstantiated statements. For example, there is little evidence to support the author's statement that "deforestation around the Mughal centres in the seventeenth century had led to the desert's expansion and caused the water table to sink" (p 135). Nor does Irfan Habib make any mention of this, even though he is referred to in the footnote! Furthermore, to argue that intensive well irrigation also resulted in a fall in the water table (p 159) may be an overestimation of the efficiency of animal or human operated water-lifting systems – especially at a time when the water level had already dropped considerably due to consecutive and unusually dry seasons.

But more importantly, however, it is the author's assumption that the pre-colonial economy was entirely subsistence oriented and devoid of connection with the world market (pp. 12, 128, 213) that can be seriously questioned. Several regional economies in the Mughal Empire were not only closely linked to distant international markets, but were also highly commercialised. Parts of the Central Doab certainly lay within the influence of one such regional economy with global connections. Recent research provides us good reason to believe that with the decline of centralised Mughal rule, crucial socio-economic transformations in much of South Asia were beginning to take place even before the establishment of British rule. While many fundamental changes were certainly brought about by direct colonial rule, it appears that the author may have oversimplified, if not overstated, the effects of its impact so early in the nineteenth century.

Chetan Singh  
Department of History  
Himachal Pradesh University  
Shimla