

PROLOGUE



Prudence and Profligacy

Contemporary India is a fantastic mosaic of fishing boats and trawlers, of cowherds and milk-processing plants, of paddy fields and rubber estates, of village blacksmiths and steel mills, of handlooms and nuclear reactors. Its 850 million people live in tiny fishing hamlets and camps of nomadic entertainers; in long-settled villages and slowly-decaying old towns; in suburban ghettos and burgeoning metropolitan cities. Some build their shelters with bamboo and mud, others with cement and steel. Some cook with small twigs on a three-stone hearth, or with coconut husks on a mudstove, some with electricity and gas in modern kitchens.

Naturally, the demands of this remarkable mosaic on the country's resources are exceedingly varied. Thus, bamboo is coveted by rural artisans for weaving baskets and to fashion seed drills, by graziers to feed their cattle, and by industry to convert into paper and polyfibre. Landed peasants want the less fertile lands around villages to graze their cattle, the landless to scratch it to produce some grain, the forest departments to produce marketable timber. Peasants want the mountain valleys to grow paddy, power corporations to construct hydro-electric dams.

The resources so varying in demand are regulated in equally varying ways. There are sacred ponds which are not fished at all, and beach seiners recognize customary territorial rights of different fishing villages—even though none of this has any formal legal status. Many tribes in north-eastern India own land communally and put it to shifting cultivation, an ownership pattern recognized by law. Village common lands, used as grazing grounds, and wood-lots were once controlled by village communities; they are now government land under the control of revenue or forest departments. There are tenants who cultivate lands that belong to absentee landowners, though much of the land under cultivation is now owned by the tiller. A good bit of the land cultivated by tribals is, however, legally state-owned; this is part of a vast government estate which covers over a quarter of the country's land surface, mostly designated 'Reserved Forest'. Business corporations control large tracts of land, as tea or rubber estates, and there are moves to permit even larger holdings for forest-based industries.

A whole range of these resources, regulated and utilized in many different ways, is under great stress. There are very few deer and antelope left to hunt for hunter-gatherers such as the Phapsedhis of Maharashtra. A majority of the shepherds in peninsular India have given up keeping sheep for want of pastures to graze them. The shifting cultivators of north-eastern India have drastically shortened their fallow periods from a traditional fifteen to a current five years. All over, peasants have been forced to burn dung in their hearths for want of fuelwood, while there is insufficient manure in fields. Ground-water levels are rapidly going down as commercial farmers sink deeper and deeper bore-wells. There are long shutdowns in industry for want of power and raw material, and every urban centre is groaning under acute shortages of housing, fuel, water, power and transport.

In this ancient land, which harbours what is undoubtedly the most heterogeneous of cultures on earth, these resource shortages have given rise to an amazing range of adjustments,

collusions and conflicts. However, the country is living on borrowed time. It is eating, at an accelerating rate, into the capital stock of its renewable resources of soil, water, plant and animal life. Does this mean we are headed for disaster? Or is this a temporary phase before we get back on the path of sustainable resource use? Or perhaps before further technological advances open up an undreamt range of resources? It is obviously true that not *all* resources are being decimated everywhere. In the village of Gopeshwar in the Garhwal Himalaya, for example, there is a nice grove of oak and other broad-leaved species. All families in the village carefully observe traditional regulations on the quantum of plant biomass removed from this grove. But this quantum is quite inadequate for their needs, and for the balance they turn to other hill slopes where exploitation is unregulated and denudation at an advanced stage. This was apparently not the case some decades ago, when the grove was larger and fulfilled the demands of a smaller population in a sustainable fashion.

Human history is, as a whole, precisely such a patchwork of prudence and profligacy, of sustainable and exhaustive resource use. In contemporary India the instances of profligacy clearly outnumber (and outweigh) those of prudence, although this book will argue that such was not always the case. In our own times, acute resource shortages have given rise to a host of social conflicts, and these have significant consequences for what is now happening to the life of India's people and to the health of its land.

The implications of the uses and misuses of India's biological resources are only dimly perceived by the rich and the powerful. But we, in common with the majority of Indians who face the burden of this misuse in their daily lives, believe them to be of tremendous significance: hence this book. We have attempted an ecological history of changing human interactions with living resources, using the Indian case illustratively to explore four themes. The significance of these, in our view, is scarcely restricted to one country, nor even to one continent.

First we ask: under what conditions may we expect human beings to exercise prudence in their use of natural resources?

Second, we investigate both the 'hardware' and 'software' of natural resource use in different historical periods. 'Hardware' refers to the forces and relations of production—namely the technological infrastructure and the systems of property—open access, family, communal, corporate, or state—governing resource use. 'Software' refers to the belief systems (for example, religion, tradition, or science) which legitimize and validate human interactions with nature.

Third, this book analyses the forms of social conflict between different groups of resource users. Here we are especially interested in changes in the intensity of social conflict over time, and in its escalation as one mode of resource use gains ascendancy over another.

Finally, we are interested in the impact of changing patterns of resource use, as well as of social conflict, on the status of living resources. Beginning with the conditions that favour prudence, we come full circle with our analysis of the conditions under which profligacy predominates.

These four themes—i.e. prudence, profligacy, strategies of resource use, and the conflicts to which they give rise—provide the unifying framework for the three parts of this book. The theoretical framework of the study is outlined in Part I. Here we analyse the different forms of restraint on resource use reported from human societies. We locate these practices of resource use in specific cultural and historical contexts. This link between ecology and history is accomplished by means of our typology, which we designate 'modes of resource use'. We put this forward as a supplement to the 'modes of production' scheme which social scientists have traditionally used as a framework for historical periodization.

Part II presents a new interpretation of how the cultural and ecological mosaic of Indian society came together. Given the fragmentary nature of historical evidence on this, our reconstruction may be viewed as *one* plausible scenario of the ebb and

flow of different social systems, as well as of different belief systems of resource use, which existed in the Indian subcontinent before British colonialism. Based on our fieldwork in peninsular India, we advance an ecological interpretation of the caste system, thereby complementing standard economic and ideological interpretations of the persistence of caste as the organizing principle of Indian society.

Part III draws on more abundant source material. It presents a socio-ecological analysis of the new modes of resource use which were introduced by the British, and which have continued to operate, with modifications, after independence in 1947. We argue that British colonial rule marks a crucial watershed in the ecological history of India. The country's encounter with a technologically advanced and dynamic culture gave rise to profound dislocations at various levels of Indian society. While sharply critical of colonialism, Indian historians have, in the main, been indifferent to the ecological consequences of British intervention. Our analysis, in contrast, highlights the essential interdependence of ecological and social changes that came in the wake of colonial rule. Furthermore, our study shows that the socio-ecological consequences of European colonialism in India, while significant in themselves, were quite different from those in the New World.

The British did not merely change Indian history, they also changed the writing of it—by providing historians with an unprecedented level of documentation. Consequently, Part III draws upon a far wider range of sources than the earlier two parts; even so, its focus is only on the most important aspect of the ecological encounter between Britain and India—changes in the ownership and management systems of India's forests. For over a century, India has had the benefits—such as these are—of an extensive system of state forestry. With over one-fifth of the country's land area in its charge, the forest department has been, since the late nineteenth century, by far our biggest landlord. Since students of modern Indian history have shown a surprising unawareness of this fact (cf. Sarkar 1983;

Kumar 1983), and also since every member of India's agrarian society had a direct economic relation to forest produce, a historical assessment of colonial forest management is long overdue. The edifice of colonial forestry has been taken over by the government of independent India. Therefore our analysis will shed light on the links between economic development and ecological change in one important Third World country. Finally, the Indian case, as presented in our history, may illuminate several current debates on tropical deforestation.

In this manner, Part I presents a theory of ecological history; Part II provides a fresh interpretive history of pre-modern India; and Part III contains a socio-ecological history of the forest in modern India.

Although our focus is specifically on interactions between humans and living resources, the business of covering the broad sweep of Indian history is daunting. So we have no illusions about the 'definitiveness' of this enterprise. Our generalizations and data are bound to be modified, altered, even overthrown, in the course of time, as is normal with academic ventures in relatively uncharted terrain. Yet it is undeniable that to date historians of India have been almost completely unaware of the ecological dimensions of social life. Their focus has been more or less exclusively on relations around land and within the workplace, never on the ecological fabric within which both field and factory are embedded, and which these in turn transform. Hence the questions which scaffold this book—the hardware and software of natural resource use, social conflicts around nature, and the cumulative impact on ecological health—are, we believe, asked and partially answered for perhaps the first time in relation to ancient, medieval and modern India.

Ultimately, the ecological history of India must be constructed around detailed regional studies, sharply bounded in time and space. Yet there are periods in the development of scholarship when a new interpretation cannot endlessly await the steady accumulation of certified data. Indeed, to plot the

pieces of a jigsaw puzzle one must begin determining the shape and structure of the puzzle. In the circumstances, while this book provides new data and new interpretations of old data, it provides above all a new and alternative framework for understanding Indian society and history.

Here we draw inspiration from Marc Bloch, who prefaced his great study of French agriculture—itself a model of ecological analysis—with these words:

There are moments in the development of a subject when a synthesis, however premature it may appear, can contribute more than a host of analytical studies; in other words, there are times when for once the formulations of problems is more urgent than their solution . . . I could liken myself to an explorer making a rapid survey of the horizon before plunging into thickets from which the wider view is no longer possible. The gaps in my account are naturally enormous. I have done my best not to conceal any deficiencies, whether in the state of our knowledge in general or in my own documentation, which is based partly on first-hand research but to a much greater extent on soundings taken at random . . . When the time comes for my own work to be superseded by studies of deeper penetration, I shall feel well rewarded if confrontation with my false conjectures has made history learn the truth about herself.