
UNIT 18 UNDERSTANDING OF ENVIRONMENT

Structure

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18.0 INTRODUCTION

Colonialism is generally considered an environmental turning-point in the history of India. An era of unprecedented resource exploitation begins and natural resources get geared to the requirements of the nascent English industries. The commercial interests come centre-stage and a large chunk of communities dependent on various resources-use practices for their subsistence are marginalised. The twin-processes of industrialisation and colonisation operate in tandem and bring in environmental impoverishment for India. The colonial power, in this process, is guided by its own understanding of the environment of the colony and the policy of resource use unfolds and becomes operational in consonance with this understanding. In the details that follow we attempt a portrayal of this perception. In this task, we are not helped much by evidence that is direct and in any sense prolific. The description is therefore not very elaborate, yet it is informative.

18.1 INDUSTRIALISM: ENVIRONMENTAL DISCOURSE

Industrial Revolution was a momentous occurrence. It signaled a brake for the *biological regimes* and initiated a process of industrialisation that was impregnated with enormous new possibilities of the use of natural resources. Industrialisation was accompanied by technological advances of far reaching impacts and they together unleashed processes that altered completely the prevailing picture of the natural world. Fernand Braudel had said: “In fact, until the eighteenth century, a Jungle Book could have been written about almost any part of the globe” (*The Structures of Everyday Life*, tr. Sian Reynolds, Harper and Row, 1985, p.69). Within a century since then, however, echoes of wailing voices could be heard saying *How Green Was My Valley?*

England was a pioneer in industrialisation. It was a special circumstance

that had given England a position of eminence. Industrialisation was a complex process that had got initiated there due to a peculiar combination of factors. The major areas that had come under the splurge of industrialisation were agriculture, demography, inland transport, technology, trade and industry. In fact there was no sector of private or public life in England that was actually immune from industrialisation. An understanding of industrialisation and its working in England is therefore of help to us in gaining insights into the formulation of environmental perceptions of English colonisers.

Agriculture provided the necessary backdrop against which the industrial changes unfolded. Experiments with soil usage and the introduction of a variety of crops was perhaps the first stage where notable changes became evident. The fertilising properties of soil were enhanced by liming and marling the soil (adjusting the right mix of clay and lime in the soil) and a pattern of crop rotation experimented for rejuvenating the different layers of soil. It is an interesting fact that industrial and mechanised equipment in agriculture were introduced only around mid-nineteenth century. Braudel notes that changes in agriculture “come not so much from machines or wonder crops as from new methods of land use; new timetables for ploughing; new forms of crop rotation which eliminated fallow and encouraged grazing, a useful source of fertiliser and therefore a remedy for soil exhaustion; attention to new strains of crops; selective breeding of sheep and cattle; specialised farming for higher yields – all with results which varied according to region, to natural conditions and to the constraints of the market which were never the same in two places. The resulting system was what would in the nineteenth century be called *high farming*...” (*The Perspectives of the World*, tr. Sian Reynolds, Harper and Row, 1984, p.559).

One of the early changes in the industrial sector was the introduction of coke as a fuel replacing charcoal. The most noticeable use of coke was in blast-furnaces for making pig-iron. In “about 1760, the cost price of charcoal-fired smelting was about £ 2 per ton greater than that of iron produced by the rival method” the coke fired blast furnaces (Braudel, *op. cit.* p.569). The other significant change was in the cotton sector where a production boom began to show by the close of the eighteenth century. Here India was directly involved. To quote Braudel again whose succinct remarks are of high value in our discussion: “The cotton revolution, first in England, but very soon all over Europe, began by imitating Indian industry, went on to take revenge by catching up with it, and finally outstripped it. The aim was to produce fabrics of comparable quality at cheaper prices. The only way to do so was to introduce machines – which alone could effectively compete with Indian textile workers. But success did not come immediately. That had to wait for Arkwright’s water-frame (1769) and Crompton’s mule (1775-8) which made it possible to produce yarn as fine and strong as the Indian product, one that could be used for weaving fabric entirely out of cotton. From now on, the market for Indian cottons would be challenged by the developing English industry – and it was a very large market indeed, covering England and the British Isles, Europe (where various continental cotton industries

were however soon putting up their own competition), the coast of Africa, where black slaves were exchanged for lengths of cotton, and the huge market of colonial America, not to mention Turkey and the Levant – or India itself. Cotton was always produced primarily for export: in 1800 it represented a quarter of all British exports; by 1850 this had risen to fifty per cent” (Braudel, *op. cit.*, p.572).

An extraordinary expansion of English trade was one more feature of industrialisation. After 1760 the English overseas trade continuously increased. The centre of gravity of this trade moved towards American colonies and India. Significantly this success, in most cases, was achieved by force. Along side this, came improvements in inland transport. The Canal fever - as the development of navigable waterways is generally known as - began in 1775 and by 1830s wide and narrow canals had crisscrossed the entire country. The main intent was to facilitate haulage of resources on a bulk scale so that growth of English industries would not be stifled for want of natural resources in the proximity of the sites of the industries.

These details point towards two conclusions. In the first place industrialisation resulted into a good deal of destruction, adaptation and restructuring. The traditional structures of agriculture were impaired and the land use patterns changed significantly. For instance, animal farming became more profitable than arable making farmers to shift to forage crops. Since forage crops do best on light and sandy soils, these became the most productive land in England. Heavy clayey soils by contrast, previously regarded as the richest for cereal growing, and unsuitable for forage crops, were hit by the low prices created by higher yields in rival regions (Cf. Braudel, *op. cit.*, p.560). Secondly, industrialism i.e. the adaptation of an industrial mode of life, became the dominant social norm. In other words, this meant a transition from a predominantly agricultural society to one in which manufacture dominated.

The central discourse under industrialisation was about the revolution in the mode of resource use – transforming resources from one form to another and making it possible for resources to be transported over large distances, away from the places of their origin.

Evidently the environmental perception or understanding of the English colonisers was mediated by this discourse. In the English understanding of environmental conditions in India in the eighteenth century but especially since the battle of Plassey the following features were quite dominant:

- 1 The natural resources of India needed to be elevated to the level of commercial use in place of the prevalent general practice of use for subsistence purposes;
- 1 The resource-use practices needed to become free of any restraints so as to enable resource exploitation;

- 1 In this process, community control over resources required to be unshackled even through legal mechanisms if needed; and
- 1 A conflict in the ways of life or cultures was deemed inevitable in this process.

As we shall see in Units 20 and 21, this understanding guided the exploitative working of the colonial policy in the case of water resources and forest resources.

18.2 COLONIALISM: ENVIRONMENTAL DISCOURSE

Colonisation of India was an occurrence of singular significance. The largest colony in the world was created by the classic capitalist power. The long historical process, from about the middle of the eighteenth century till the beginning of the twentieth century, was fraught with devices of resource exploitation of an unprecedented kind interceded by an environmental perception that oriented resources principally towards market. The colonial discourse on environment has been nicely elaborated by Alfred Crosby in his work *Ecological Imperialism: The Biological Expansion of Europe* (CUP, 1986). We use his argument (as given by Gadgil and Guha) here and split and paraphrase it to show the consequences of colonial discourse on environment as below in line with our discussion:

- 1 European colonisers exterminated native ecosystems and populations;
- 1 The complex of weeds, animals and diseases brought by Europeans devastated the flora, fauna and human societies of the colonies;
- 1 It created 'Neo-Europes' that dominate the New World today;
- 1 In this biological expansion of Europe there were three areas that were 'within reach' but 'beyond grasp' – Middle East, China and India;
- 1 Population densities, resistance to disease, agricultural technology and sophisticated socio-political organisations made these areas more resistant to the ecological imperialism of Europe;
- 1 Thus 'the rule (not the law)' was that although Europeans did conquer the tropics, they did not succeed in Europeanizing the tropics, not even country sides with European temperatures (p.134);
- 1 Portmanteau Biota (collective term for the organisms the colonising whites brought with them) enabled the European powers to easily overrun the temperate regions of North and South America as well the continent of Oceania;
- 1 In the case of more ecologically resistant civilisations like India and China a different strategy had to be adopted;

- 1 In India, the British could not create neo-Europes by decimating indigenous populations and their natural resources base;
- 1 But they did intervene and radically after existing food-production systems and their ecological basis;
- 1 Moreover, by exposing their subjects to the seductions of the industrial economy and consumer society, the British ensured that the process of ecological change they initiated would continue, and indeed intensify, after they left India's shores.

The English colonial control of India began with the acquisition of the power to collect land revenue – the *Diwani* rights of Bengal, Bihar and Orissa. What seemed on the face a simple political process had grave and quite far reaching implications. Irfan Habib describes the process and its meaning exquisitely: “The East India Company, which obtained this power, was controlled by the great merchant-capitalists of London. These merchants had so far conducted a trade, based on the import of Indian piece goods (muslin, calico, chintz), silk, indigo and spices, that was financed mainly by the export of treasure. Now, suddenly, they found in their conquests the ultimate bliss that every merchant dreams of: to be able to buy without having to pay, and yet be able to sell at the full price. This could be achieved by treating the entire revenue of the country as gross profits. From these the expenses necessary for maintaining government and army, and law and order – the costs of maintenance of the existing system of exploitation – had to be deducted in order to yield the net profits. These could, in turn, be invested for the purchase of Indian commodities, the so-called ‘investments’. The purchase of these commodities in conditions where the buyer had a monopoly, and their sale in markets throughout the world, further enlarged the profits before the ‘tribute’—a word freely in use for it at the time—was finally received in England. The revenues from the conquests dwarfed the amount of bullion that had once financed English trade; and, accordingly, the exports of Indian commodities underwent an enormous increase. British imports originating in ‘East India’ increased from £1.5 million in 1750–51 to 5.8 million in 1797-98, from 12 per cent of total British imports to 24 per cent. In contrast, the British exports to East India rose only from 6.4 per cent to 9 per cent of total British exports. Unlike the later imperialists, fighting for markets in the colonies, these pre-industrial conquerors were hunting for colonial commodities, which had the whole world as their market” (‘Colonialisation of the Indian Economy’ in *Essays in Indian History*, New Delhi, 1995, pp.299-300).

Interestingly the profits so gained by English did not come from commerce but were made available through the collection of land revenue. Thus if the profits had to be increased the land revenue too needed to be enhanced. A great pressure was exerted on the farmers/peasants for maximising the land revenue. The results were terrifying as the agriculture was ruined. The colonial perception of the commercial use of resources had yielded disastrous results.

During the period coinciding with the first half of the nineteenth century “the colonial objective changed from seizing Indian commodities to seizing the Indian market. The changed objective not only made the East India Company’s monopoly over Indian internal commerce and overseas trade obsolete, but positively required free trade...

The English exports of manufactures, textiles in the first place, not only practically wiped out the Indian exports of cotton goods, but also entered India to challenge Indian manufactures, in their home market....” (Irfan Habib, *op. cit.* p.319). The result was a second disaster; de-industrialization of India had been effected.

About mid-nineteenth century the capital investment at home (in England) had reached a saturation point. This gave rise to an intensified race for markets and export of capital. In India this capital was used for laying railways. Once this process had progressed up to a certain stage, the influx of imports from England gained momentum. This onslaught of imports had grave consequences for the traditional craft industries of India. They were ruined beyond repair. Such was the ecological-environmental encounter between India and its colonial conquerors, the English.

18.3 CONSERVATION

It is generally argued that the age of discovery and associated maritime travel gave rise to a new way of looking at man-nature relationship. There were two kinds of major changes involved in this new vision. The first related to the emergence of a view that natural environment surrounding the human society was pliable to man’s desired changes. The second gave rise to a new kind of significance being attached to nature that was also often imitated. The development of the idea of botanical garden was copied from Middle East (Cf. Richard H. Grove, *Green Imperialism*, New Delhi, 1995, p.24). By the time we arrive at the seventeenth century “a fundamental displacement of social and symbolic meanings away from the confines of religious contexts and into more secular settings” takes place. Soon the “idea of a flawed and fallen natural world in opposition to a spiritual heaven became less attractive as the whole globe became technically and economically more reachable and as its extra-ordinary variety and richness, especially in tropical regions, became apparent and knowledge of it more widely disseminated in printed books” (Richard H. Grove, *op. cit.* , p.51).

The conservation efforts initiated in the colonies were the result of a keen awareness that had developed about an impending global scarcity of timber resources. However, none of these efforts could be linked directly to any methodical efforts at organising the resource-use practices in the colonies to the objective of conservation. A serious threat to the supply of naval timber was the initial impetus for conservation. In the absence of any institutional evolution thus the environments of colonies continued to suffer.

Richard H. Grove has studied the conservation practices of English colonisers in his book *Green Imperialism*. He writes: “The very early incorporation of conservationism as an accepted part of the role of the colonial state in India needs to be set in a broader context. There is no doubt that environmental sensibilities in Britain, for example, were, among some groups, almost as well developed by the 1860s as they were among the scientific services in India. They were very different kinds of sensibilities, and were associated with different kinds of social critique. The biota of Europe was simply not perceived as being threatened by rapid ecological change of the kind that was taking place in India. As a result, embryonic worries about the destruction of rural landscapes and about species extinctions remained the concern of a largely ineffective minority” (pp. 462-3). It is not totally unfair to assume that environmental conservation as a policy was not on the principal agenda of the colonialists. Forest resource, as we shall see in Unit 20, was their major focus. The depleted wood resources back home in England were a blinker. It was not until the early years of twentieth century that serious attention was given to the issue.

18.4 SUMMARY

Colonial understanding of environment was guided by the process of industrialisation and the necessity of controlling resources available in the colonies. The main feature of this understanding was an emphasis on the use of natural resources as commodities. In this the local cohesive communities who had hitherto been sustaining on the natural resource were relegated into background and their place in was occupied by atomised individuals. A major consequence of this was that individual access, in place of community access, to resources was promoted. The natural resources were now oriented towards market and the subsistence pattern of resource-use was seriously ruptured. The conservation practices, taking into consideration the environment as a whole, had not come into vogue. India as a colony was seen as a repository of natural resources, the exploitation of which was seen as a legitimate right.

18.5 EXERCISES

- 1) How did industrialism shape the colonial perception of environment?
Discuss.
- 2) Did colonisation of India result in environmental degradation?
Comment.
- 3) Write a short note on the colonial conservation practices.

18.6 SUGGESTD READING

Madhav Gadgil & Ramchandra Guha, *This Fisured Land: An Ecological History of India*, Delhi, 1992.

**Colonialism and
Environment**

Richard H. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1800*, Delhi, 1995.

Irfan Habib, *Essays in Indian History, Towards a Marxist Perception*, New Delhi, 1995.

Richard H. Grove, Vinita Damodaran, Satpal Sangwan, eds., *Nature & The Orient, The Environmental History of South and Southeast Asia*, Delhi, 1998.