
UNIT 3 SOURCES OF STUDY

Structure

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3.0 INTRODUCTION

History of Environment is basically an exploration of society-nature interaction. The focus of this Unit is to do a general survey of the major writings on the environmental history of India. It is an interesting fact that the initial writings in the genre of environmental history focused primarily on the history of the humans without in any significant manner according space to environmental considerations. It was with the growth of ‘scientific revolution’ and ‘enlightenment’ in Europe that a shift in history writing became evident and the story of evolution, taking into consideration the environmental factors, began to find a discernible place. However, it was only in the period after the first world-war that historical writings incorporating geographical factors as influencing/shaping historical developments appeared. A systematic exploration in this direction started with the establishment of *Annales* School in France. It was here that the trend was initiated of investigating history in the wider context of the prevailing environmental conditions. Similarly, movement against the pollution provided space to environmental concerns in history writing in America. ‘But despite all this, it is also the case that only in the past twenty-five years or so have historians methodically pursued a systematic exploration of this interchange (interchange of humans with their natural environment), in the process establishing a distinct branch of history: environmental history’ (Brian Fay, ‘Environmental History: Nature At Work’ *History and Theory, Theme Issue, Environment and History*, Vol. 42, No. 4, December 2003 p.1).

In this Unit our focus is on the writings on environmental history of India. We have attempted a broad survey of the available major literature and have tried to discern, as clearly as possible, the trends therein. It should be noted that no single text serves the purpose of encapsulating all or most of the aspects and for this reason a detailed bibliography is attached for the enthusiasts.

3.1 SURVEY OF LITERATURE

“The words ‘environment’ and ‘ecology’ have been subjected to extensive

efforts at definition during the past twenty years or so. Already it has been found necessary to allow them space to breathe. So it is also with 'environmental history' or even 'Environment and History'. As with most commitments, it is possible to have 'hard' and 'soft' positions. The 'hard' might suggest that environmental history necessarily involves an examination of environmental dynamics through human agency in which the change is quantifiable in some shape or form. A softer approach would suggest, perhaps, that change could be inferred from even where data are not available. Interactions with environment may also be frozen in narrow time-scale where change is less significant. Relevant sections of legislation are all part of environmental history."

The above attempt to define environmental history by the editor of the *Environment and History* (John M. Mackenzie, Editorial, *Environment and History*, Vol, VII, No. 3, August, 2002) clearly reflects the dilemma of the present day historians working on environmental issues. A closer examination of the writings appearing under the rubric of 'Environmental History' makes it clear that the documentation of the ecological changes/disturbances caused by the introduction of colonialism have dominated the discourse though there are a few important aberrations too. Most of the works on environmental history have located their study to analysing the disruptions in the traditional way of living as caused by forces and consequences of industrialisation. In the case of India these disruptions were caused by colonialism and some have continued even after independence. In general historians working on modern era have, along with economic exploitation, explored the exploitation of natural resources by the colonial power to cater to the interests of the mother country. The loss of natural flora and fauna and explanations of the causes and effects have been the major concerns of the environmental historians working on modern India. Further concerns of historians can be located in the debate initiated by the revisionist school of history writing and subaltern's attempt to explore the role of and impact on the marginal groups of society, largely ignored in the conventional history writing.

3.1.1 Methodologies

The above stated principles and concerns have been the defining features of the environmental history and these have been most vigorously put into practice in the case of forestry. Deforestation and associated climatic change has proved to be a vibrant zone. The conflict over classification of traditional rights and claims of tribals and their relationship with the state polity, initially with pre-colonial state and later on with colonial state have been useful add-ons. The domination of these issues in the environmental history can be gauged by the following acceptance by the editors of *Nature and the Orient*: "We make no apology for devoting so much of the book to the history of the relationship between forests, people and the state, and to the history of the discourse and ideology of colonial forestry in India, Burma and Malaysia. At the peak of its power the Indian Forest Department, for example, directly controlled over one-fifth of the land area of South Asia. Moreover, the forest history of the subcontinent and South Asia varies enormously from area to area, and

we feel it necessary to highlight these differences and make a start at producing a series of detailed and empirical environmental histories, concentrating quite deliberately on the forest sector".(From 'Introduction' in *Nature and The Orient*, Delhi, 1998).

The systematic beginning of environmental history writing in India that also set the tone for future writings is invariably associated with Ramchandra Guha and Madhav Gadgil's seminal monograph *This Fissured Land* written in 1992. The authors suggested that in pre-colonial India, resource utilisation was in harmony with nature and resource sharing among various strata of the society was very cordial. The caste society with different claims on different resources led to a state of equilibrium in turn providing stability to the resource demand and supply. Caste was seen as consisting of endogamous groupings that were each marked by a particular economic activity and a particular ecological niche. However, perhaps unintentionally, the notion of self-sufficient villages was also justified by such arguments. The analysis of the various environmental movements were explained in terms of disruptions caused by the British as it was argued elsewhere that in pre-British time 'there was little or no interference with the customary use of forest and forest produce' [Ramchandra Guha, 'Forestry in British and post-British India: A Historical Analysis', *Economic and Political Weekly*, 20 (1985), p. 1893]. A romanticised image of the human-environment interaction in the Indian context was thus portrayed by Guha & Gadgil.

The transition from the study of events and watershed occurrences to the study of processes and explorations of deeper continuities from an ecological point of view was a gradual process. In this the concern shifted to asking how and why certain kinds of livelihood patterns or production methods survived and how others were transformed. By replacing the study of events thus the processes had begun to occupy the center-stage.

The relative neglect of the colonial impact on the land by professional historians made it an obvious field for early inquiry. Moreover, early writers were more concerned with the protection of environment as they had been actively supporting the cause of conservation of environment. Thus they looked for evidences of popular protests against the exploitation and often neglected the contrary evidence. South Asian works have often focused on certain themes at the expense of others: the forest rather than agriculture, movements of *Adivasis* and marginal peasants rather than changing responses of urban dwellers, histories of irrigation as opposed to conflict over water-rights, etc.

There have been a few exceptions though to this general trend. Sumit Guha has tried to bridge the gap between pre-British and British period. His area of study has been the region dominated by Marathas where rich repositories of Maratha documents have been put to excellent use. At the same time he has also avoided the illusionary divide between forest and agriculture and notions of ethnicity in the wider context of environment. He has demonstrated with fresh evidence that tribal polities

did not evolve in isolation (Sumit Guha, *Environment and Ethnicity*, Cambridge, 1999).

Further, Sumit Guha has pointed out that the large areas of Western plateau (Maharashtra) outside the rain drenched Konkan coast were rendered treeless even during the heydays of Marathas. The pattern of living has modified the environment of the region as he demonstrates that the use of fire and the keeping of cattle were practiced here for at least forty centuries, if not more. In the process a thorny forest region was transformed into seasonal grass-land: the ecology was re-shaped in major ways. The fluidity was more than matched in economic terms. Dry spells could lead to a resurgence of herding.

In the attempt to analyse the deeper continuity Sumit Guha has relied upon archaeological as well as anthropological evidences to substantiate historical evidence thereby stressing the significance of processes rather than watersheds or events.

He has argued that it is important to keep in mind that in South Asian past relatively small area was under permanent tillage and the much larger percentage of land was often in the state of transition at least in the pre-modern period. In the analysis of state's perspective of land it has been pointed out that even in pre-British period 'the rulers, like the Marathas, saw the forest as an obstacle: tree cover multiplies the danger from robbers, rebels and tigers'. Jungle clearance has been equated in terms of fresh revenue possibilities though it had been an arduous and difficult task.

In another work, by Nandini Sinha for the region of Mewar (*State Formations in Rajasthan: Mewar during the seventh- fifteenth centuries*, Delhi, 2002) similar themes have been explored. She asserts that forested and hill regions were integrated into wider imperial systems of South Asia. Moreover the panorama of economic activities in any sub-region was far more diverse than is often realised. There were no clear-cut stages or phases like hunter-gatherer, herder, settled cultivators and artisan and city dweller.

3.1.2 Colonial Period

It is important to note that the whole discourse of colonial historiography has been and its later proponents have tried to analyse history in terms of 'evolutionary' time scale where succession from primitive to tribal to chieftaincy to state has been a unidirectional and mutually contradictory process (Ranajit Guha, *History At The Limit of World-History*, New Delhi, 2003. He has highlighted the limitations of modern historiography in terms of over concern for 'statism'). In this context Ajay Skaria's writings deserve serious consideration as there the notion of wild has been seen in terms of opposition to civilised. The relationship between tribal people and state has also been located in terms of interaction between civilised and primitive.

Ajai Skaria highlights the general negligence of marginal areas and

laments the lack of importance given to traditional issues. He tries to locate the problems of marginal issues in the context of politics of growth and finds that the same is important for the construction of ideas such as jangali/tribal/primitive. He questions the notion whereby tribals were equated with 'wild' and 'primitive' and settled agriculture (under the patronage of state) with civilisation. He also explores the inter-dependence between state and tribal polities where revenue rights and authority were shared in a complex web of relationship. There has now been an attempt to question the notion of a uniform British policy all across India and recent researches have pointed out that there was a serious divergence of views on policies related with the forest/land/agriculture. (Ajai Skaria, 'Being Jangali: The Politics of Wilderness', *Studies in History*, Vol. 14, No. 2 n.s. 1998, pp. 193-215. Also Ajai Skaria, *Hybrid Histories: Forests Frontiers and Wildness*, Delhi, 1998.)

Sivaramakrishnan's work is a further advance on the issue of forests and the colonial policy. He tries to locate the issue within the context of the debate that ensued with the attempt to formulate Private Forest Bill between 1865 and 1878. Underplay of various social, economic and environmental concerns made the whole debate so complex that ultimately the bill could not be formatted. The major issues involved in this debate were property rights sanctioned by permanent settlement and that now any attempt to withdraw or curtail the same would lead to greater resentment. These forests were often termed as Jungle Mahal, hence accepted as private property. This was the period when forests were sought after due to wood, which was in great demand because of railways. Initially with the formation of permanent settlement it was expected that marginal lands would also be put to better and positive uses but it was not the case in eastern India, so there was a demand for a private forest policy. There were conflicting issues at stake. On the one hand attempt was made through permanent settlement to maximise land revenue but soil conservation and forest produce were also important. The other conflict visible was the claims of the raiyat over the forest produce, which were recognised by tradition. The landlords on the other hand argued that it lead to degradation of forests and soil erosion. Conversion of private forests to protected forests would lead to the denial of claims to raiyat but would meet the simultaneous demand generated by expanding railways further complicating the issue of traditional claims *versus* commercial exploitation. The importance of his approach lies in a thorough exploration of conflicting interests vis-a-vis natural resources. There were several claimants and the state had to consider several probabilities before arriving at any formal policy. He also examines the debate over environmental considerations. It was not only scientific knowledge (about forests) which participated in the debate but various self interests also tried to appropriate the issue and mend the policy in their favour. (K. Sivaramakrishnan, 'Conservation and Production in Private Forests: Bengal, 1864-1914', *Studies in History*, Vol. 14, No. 2 n.s. 1998, pp. 237-264. Also see K. Sivaramakrishnan, *Modern Forest*).

Similarly, Ravi Rajan points out the internal divisions in the colonial

perspective. The so-called colonial policy has not been a monolithic structure and there were quite evident heterogeneous views. The author has very clearly pointed out internal divisions in colonial policy by examining the deliberations at the Empire Forestry Conference on two crucial colonial agro-ecological policy concerns, shifting cultivation and soil erosion, during 1920 to 1950. The problem of conservation of forest- wild had been of immense significance especially in the 1930s due to the experience of 'Dust Bowl'. Examples from West Africa were cited to point out the benefits of shifting cultivation but it was put aside by citing the nature of forests in India. 'The political damage caused by shifting cultivation was its inducing nomadic habits on parts of the local population, discouraging agricultural progress and facilitating the evasion of taxes'. The problems caused by shifting cultivation were not only of tax evasion but the larger issue of timber trade/supply to cater to the needs of British was also at the centre-stage. The problem of soil erosion was caused by the cutting of forests for commercial use and the clearing of land for agricultural purposes. It was further fuelled by the ever-increasing population pressure and overgrazing. To tackle the problem, scientific studies were encouraged, but, 'given the social roots of the technological experts, it was asserted that the nature of their technical intervention was by no means value neutral'. (Rajan S. Ravi, 'Foresters and the politics of colonial agro ecology: The case of shifting cultivation and soil erosion, 1920-1950', *Studies in History*, Vol. 14, No. 2 n.s. 1998, pp. 217-236).

The reconstructions of forest histories also need to pay close attention to local and regional peculiarities. Ajit Menon has pointed out that 'the forest-dependent communities view land in terms not so much of ownership but of use.' He suggests that the process of colonisation depends both on the state's ability to take over large areas of land and the ability of local communities to shape the state's initiatives to at least some extent. It is significant that the manner in which state policies reach local communities in the Kolli hills continues to be determined by the latter's reception and response. [Ajit Menon, 'Colonial Constructions of 'agrarian fields' and 'forests' in the Kolli Hills', *The Indian Economic and Social History Review*, 41, 3 (2004), pp 315-337].

The attempts to challenge the portrayal of adverse role played by British by arguing that it was the British who initiated systematic forest conservation policy in India is another significant area of Indian environmental history. It has been argued that, "the original 'greens' in India were in fact colonial officials. Colonial forest policy ... was rooted in an enlightened understanding of environmental issues developed in particular by a group of remarkable Scottish medicos serving in the colonies, who sought initially to understand the connection between climate and health, but very quickly became experts in botany and ecology. They argued that there was a close connection between deforestation and environmental desiccation and pressed strongly for state-led conservation of forests. Through their pressure, the earlier *laissez-faire* attitude towards forests was replaced from the mid-19th century onwards

by active management and control”. (From David Hardiman’s review of *Nature & The Orient in Economic and Political Weekly*, issue dated July 3-9, 1999).

The state-led conservation of forests was legitimised under the guise of imparting modern knowledge or banishing the forest-dwellers from their habitat for harming the forests. A balance between agriculture and forests could be achieved by identifying lands suited to the agriculture and marginal land could be developed as forests. The primacy of agriculture was thus quite evident. The availability of ground water was also a related issue often combined with the soil erosion. At times forest growth was considered harmful for ground-water as it sustained itself on the ground water only. (Rajan S Ravi, ‘Foresters and the politics of colonial agro ecology: The case of shifting cultivation and soil erosion, 1920-1950’, *Studies in History*, Vol. 14, No. 2 n.s. 1998, pp. 217-236.)

It clearly brings out the fact that colonial concerns with respect to forests were principally guided by covert economic considerations though overtly predominated by the objective of conservation. The debate over conservation of environment was traced to the literary traditions of romanticism where nature in its pristine form was aspired. The environment was to conserve to protect the environment in its natural conditions. Similarly, the aboriginals of the forests were to be protected so as to conserve the primitive form of environment. (Archana Prasad, *Against Ecological Romanticism: Verrier Elwin and the Making of Anti-modern Tribal Identity*, New Delhi, 2003.)

Another area of exploration has been the analysis of the various policies having a bearing on the environmental issues. Vasant Saberwal has made a major contribution in this field. He argues that ‘there is growing recognition within the academic ecological community of the complexities of ecosystem functioning and the limits to our predictive and explanatory capabilities with regard to large-scale ecological phenomenon’. His explanation brings it out that the concerns for conservation evolved over a long period of time along with the growth in the scientific knowledge about environment. The role of the state in the appropriation of scientific knowledge in support of its claims by the state has also been pointed out by him. He writes: “This essay examines the chronological progression of the desiccation debate, and I have located my analysis in the broader scientific context within which these ideas were articulated during the late 19th and early 20th century. I explore the connection between a scientific paradigm of a given era, and bureaucratic use of this discourse on Himalayan degradation, the institutional context within which the discourse has taken place, has in a sense, shaped or directed the discourse. Over-time, one observes a two-way process whereby bureaucracies may use science to inform a particular rhetoric; at the same time bureaucratic rhetoric comes to influence the scientific discourse itself, and thereby the very nature of science”. [‘Science and the Desiccationist Discourse of the 20th Century’, in *Environment and History* 4, 3 (1997), pp. 309-43].

The changing history of the encounters of humans and animals has become another field of growing interest, both in terms of changing elite taste and of ground level conflicts and co-existence. In this context, *The End of Trail: The Cheetah in India* (Divyabhanusinh, New Delhi, 1999) stands out. The author has attempted to trace the history of Cheetah in India, its origin, spatial distribution, attitude towards the animal, gradual erosion of space for the big animal and finally the extinction of the specie. It is an important contribution that helps in a comprehension of complex relationships between fauna and the society, especially the explanation that the extinction of the animal was caused by the side-effect of the larger historical process and not as a direct process of elimination of the species as it was for other 'big games'.

The picture will be sharper if we simultaneously examine the work of Mahesh Rangarajan. ('The Raj and the natural world: The war against 'dangerous beasts' in colonial India', *Studies in History*, Vol. 14, No. 2 n.s. 1998, pp. 265-299.) Rangarajan has analysed how and why certain types of animals were directly targeted and consequently became extinct. Apparently, the very simple process of agricultural expansion has resulted in the gradual erosion of space for big animals. The shrinkage of the hunting area forced the animals to move in the closer proximity of the humans resulting in violent encounters. The availability of technology placed society of the early colonial period in a better position to combat the 'dangerous beast'. How these dangerous beasts became dangerous and how human action liberally contributed in this was not the concern of the contemporary society. At another level the article also traces the possible political uses of this controversy as it became a tool to secure the right to carry arms even if it was prohibited by the civil authority.

Understanding of environmental issues through in depth regional histories has become the other area of exploration. The interplay of regional identity and ecological niche has come into sharper focus than in the past. It is interesting that there have been a few detailed micro-histories of a particular range of hills, a watershed or a valley system, a reserved forest or a princely reserve.

There have been several useful works on pastures, fields and forests of colonial and contemporary Rajasthan. But except for passing references in studies of agrarian production few have examined the dynamics of water management in Rajasthan prior to 1800. (Ann Grodzins Gold & B.R. Gujjar, *In The Times of Trees and Sorrows: Natural, Power and Memory in Rajasthan*, Durham, Duke University Press, 2002; N.S. Jodha, *Life on the Edge: Sustaining Agriculture and Community Resources in Fragile Environments*, New Delhi, Oxford University Press, 2001). Primary concern of Jodha has been to examine 'the changing status and usage pattern of natural resources... and the possibilities of arresting their negative trends characterising these changes'. P.S. Kavoori, (*Pastoralism in Expansion: The Transhumming Herders of Western Rajasthan*, Delhi, Oxford University Press, 1999) has explored the issue of 'common property resources' by examining the conditions of the

pastoralists in the contemporary Period. Similarly, R. Thomas Rosin has found a relative shortage of the 'common grazing land' and the stress over the sedentary lifestyle has reduced the opportunities for the pastoralists. By the same token, it also reduce the opportunities available with the peasantry in times of drought and famine. (R. Thomas Rosin, *Land Reforms and Agrarian Change: Study of a Marwar Village from Raj to Swaraj*, Jaipur, Rawat Publications, 1987). Similarly, for the later period, conflicts over natural resource use have been extensively investigated, i.e., forest protection and conservation *versus* extension of settled cultivation. (Rajan S. Ravi, 'Foresters and the politics of colonial agro-ecology: The case of shifting cultivation and soil erosion, 1920-1950', *Studies in History*, Vol. 14, No. 2 n.s. 1998, pp. 217-236. K. Sivaramakrishnan, 'Conservation and production in private forests: Bengal, 1864-1914', *Studies in History*, Vol. 14, No. 2 n.s. 1998, pp. 237-264).

There are several studies highlighting the problems with the British policies with regard to the forest management where monoculture has been a major issue and the exploitation of natural resources for a distant elite who was least concerned with the social impact of such policies, a matter of great concern.

The other strand in these studies for the forested region has been the analysis of impacts on the tribes living on the periphery of the settled agriculture. It is significant in the sense that since the tribes were not adhering to the practice of settled agriculture the British were not able to tackle the tribes. (Sumit Guha, *Environment and Ethnicity in India, 1200-1991*, Cambridge University Press, Cambridge, 1999.) The resistance offered by these tribes to the British policies have been extensively examined and it has been argued that British were unable to comprehend the complex functioning of their social relationships. In most of the cases, the problem can be located in a difference of vision of landscape shared by the British and the reality of Indian landscape. In other words, the nature of political intervention influences the nature of colonial discourse on ethnicity, environment and resource exploitation.

3.1.3 Pre-Colonial Period

The broad survey of the writings on the environmental concerns in India cannot ignore the contributions made by historians working on pre-colonial period. The issue of marginal has been addressed with special reference to pastoral, tribal, hunter, etc. Francis Zimmermann has examined ancient texts to construct the ecology of the period. He has questioned the practice of equating the term *Jungle* with the forest. Zimmerman has explored the suggestive ecological references from the ancient texts where animals are classified in two groups: *jungla* "those of the dry lands," and *anupa*, "those of the marshy lands" and pointed out that by closely examining such texts we can infer a great deal about the ancient ecology. (Francis Zimmermann, *The Jungle & the Aroma of Meats: Ecological Themes in Hindu Medicine*, London, 1989. Similar

trends are visible in Roger Jeffery ed., *The Social Construction of Indian Forests*, Manohar, New Delhi, 1998).

Following more conventional path, Aloka Parasher-Sen has tried for the Mauryan period to 'understand how the state perceived the forest dwellers and sought to subordinate and assimilate them. Geography and the perceived existence of the hostile tribes defined the frontiers of the empire and both had to be mastered for the expansion and integration of the state'. [Aloka Parasher-Sen, 'Of tribes, hunters and barbarians: Forest dwellers in the Mauryan period', *Studies in History*, 14, 2, n.s. (1998). pp.173-191. Also Shereen Ratnagar, 'Pastoralism as an Issue in Historical Research', *Studies in History*, 7, 2, n.s. (1991). pp.181-193]. The other major concern has been the study of social formations and it has been influenced by the methodologies and tools deployed by anthropology and archaeology. (R. Ray, *Ancient Settlement patterns in Eastern India*, Delhi, 1987, M.L.K. Murthy, 'Environment, Royal Policy and social formations in the Eastern Ghats, South India', *Indian History Congress*, Delhi, 1993, pp. 615-631, D.K. Bhattarchaya, *Ecology and Social Formation in Ancient History*, Delhi, 1990). Ranabir Chakravarti has highlighted the role of hydraulic management in the process of settlement in ancient period, ('The Creation and Expansion of Settlements and Management of Hydraulic Resources in Ancient India', in Richard Grove, Vinita Damodaran and Satpal Sangwan, (eds.), *Nature and the Environment*, Delhi, 1998, pp.87-105).

Few writers have probed the significance of pre-colonial water systems (David Ludden, 'Ecological zones and the cultural Economy of irrigation in Southern Tamilnadu', *South Asia*, Vol.-I, No. I, 1978, p. 1-13. and Burton Stein, *The New Cambridge History of India*, Vol. 2, *Vijayanagara*, Cambridge, Cambridge University Press, 1994; *Peasant State and Society in the Medieval South India*, Delhi, Oxford University Press, 1980); this is especially true of north and northwest India. In most of these studies scholars have stressed the role of traditional village community in construction and maintenance of irrigation mechanisms. David Hardiman suggests, that 'small-dam systems of irrigation existed in the past which were sustained over long periods of time... by community based control.' (David Hardiman, 'Small Dam Systems of the Sahyadris' in David Arnold and Ramchandra Guha eds, *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*, Delhi, Oxford University Press, 1995. pp. 185-209). In the same vein Elizabeth Whitecombe has argued that irrigation "works were financed by loan capital. Hence, in the sanctioning of constructions the emphasis was necessarily placed on the prospect of their remunerativeness." ('The Environmental Costs of Irrigation in British India: Waterlogging, salinity, malaria', in David Arnold, and Ramchandra Guha eds. *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*, Delhi, Oxford University Press, 1995. p. 237-259). David Mosse has examined the interplay of 'developmental politics' to explain the level and process of state intervention. The role of community based programmes to tackle contentious issues like management and allocation of 'common property resources' like water bodies, etc. have also been

examined. (David Mosse, *The Rule of Water: Statecraft, Ecology and Collective Action in South India*, New Delhi, Oxford University Press, 2003.pp.1-27). Water systems have been examined by R.J. Fisher, (*If Rain Doesn't Come: An Anthropological Study of Drought and Human Ecology in Western Rajasthan*, Delhi, Manohar, 1997) and Tripta Wahi, ('Water Resources and Agricultural Landscape: Pre-colonial Punjab', in Indu Banga ed., *Five Punjabi Centuries: Polity, Economy, Society and Culture, c.1500-1990*. Delhi, Manohar, 1997).

As we move further back in medieval India we discover a general dearth of scholars focusing on environment and on man-environment interaction. We may refer to the two initial chapters in *the Cambridge Economic History of India*, Volume I (ed. Tapan Ray Chaudhuri and Irfan Habib, CUP, 1982) by Irfan Habib and Burton Stein on 'The Geographical Background' (especially of North India) and 'South India: Some General consideration of the Region and its Early History' respectively as studies located on the fringe of environmental history. Another study, by Harbans Mukhia, entitled 'Was There Feudalism in Indian History?' also explores influences of environmental factors on human settlement and social formations as a sub-theme and not as the central subject. (Presidential Address, Medieval India Section, *Indian History Congress*, 1982). In fact closest to the field of environmental history is Shireen Moosvi's useful study 'Ecology, Population Distribution and Settlement Pattern in Mughal India in 1989 [Man and Environment, XIV (I), 1989, pp 109-116]. One can also refer to an article by Mohd. Afzal Khan published in 2002 ['Environment and Pollution in Mughal India *Islamic Culture*, LXXVI (Vol.76), No.1, January 2002, pp 101-116].

A serious influence on the man-environment studies in medieval India has been that of the *Annales*. Influences of environment on the social formations have been a major area of exploration for the *Annales*. Since the very beginning of the movement, we can trace the attempts made by contributors to explore the newer kinds of sources to analyse the role played by environment in historical developments. They have tried to place the role of environment in the wider settings of social formations and have not remained confined to the colonial impact only. They also attempt to transcend the barrier of medieval and modern history and have been more comfortable with the whole range of human activities in place of mainly the political history.

Harbans Mukhia is credited with making *Annales* popular in India by translating the writings of French historians along with Maurice Aymard (*French Studies in History*, Vol. I- *The Inheritance* New Delhi 1988 and Vol. II- *The Departure*, Sage, New Delhi 1990). The influence of the *Annales* tradition is visible in an important contribution made by Chetan Singh. He has explored the relationship between environment and society in Western Himalaya: "...But my project rested on the belief that there were some long established and well understood relationships between society and its physical surroundings. ... Such fundamental relationships did, indeed exist: a society could hardly have survived for any length of time without them. It was, however the clear-cut enunciation

of these relationships that was missing. This required the deliberate elaboration both of socio-economic processes and specific ecological environment within which they operated". (Chetan Singh, *Natural Premises: Ecology and Peasant Life in the Western Himalaya 1800-1959*, Delhi, 1998).

Similarly, Mayank Kumar has also attempted to examine the interaction between environment and society in medieval Rajasthan. He has questioned the notion that the traditional societies always practiced the methods aimed at a prudent use of natural resources and has cited several cases of exploitation of nature by traditional societies in Rajasthan. He also cautions that the magnitude of exploitation of natural resources did multiply manifold under the impact of Industrial Revolution, (*Environment and Society in Medieval Rajasthan*, unpublished Ph.D. thesis, Jawaharlal Nehru University, New Delhi, 2001).

In any attempt to track the interaction between humans and environment one should be careful to avoid the notions of geographical determinism. It is a major cause of concern for the historians dealing with middle ages. Febvre suggested that 'there were no necessities, only possibilities. A river might be treated by one society as a barrier, yet as a route by another.' (Peter Burke, *The French Historical Revolution: The Annales School, 1929-89*, Cambridge, 1990). Similarly, one should not over stress the role of human agency in influencing the environment. Ramchandra Guha and David Arnold have suggested: "Moving more firmly within the parameters of environmental history *per se*, there is the study of human engagement over time with the physical environment, of the environment as context, agent, and influence in human history. Here, nature figures unabashedly as human habitat, but in a dual capacity. On the one hand are ranged those elements of nature-climate, topography, animal and insect life, vegetation and soils-which directly or indirectly shape human activity and productivity. In affecting land-use and subsistence, they help to promote or prohibit specific forms of social structure, economic organisation and belief systems. They also extend the margins of historical analysis and bring centre-stage a 'cast of non-human characters' normally ignored, at least until recently. ...But the relationship is a reciprocal one, for man more than any other any other living organism also alters the landscape, fells tree, erodes soils, dams streams, kills off unwelcome plants and predatory animals, installing favoured species in their stead". (David Arnold & Ramchandra Guha, 'Introduction: Themes and Issues in the Environmental History of South Asia', in David Arnold & Ramchandra Guha (eds.), *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*, Delhi, 1995, p.2.). Such works would have to delve into a wider set of sources: folksongs and legends, music and lore, locating these against the changing backdrop of human-nature encounters. This would mean looking at both culture and nature, howsoever defined, in new ways.

3.2 SUMMARY

is not possible to examine all or even most of the writings on environment within the frame of a Unit. Recently, we have witnessed the growth of anthropological works to examine the contemporary social understanding of past environments. At the same time there has been an ever-growing trend of field-study based works conducted to examine the feasibility of development policies with respect to environment. Here a survey has been conducted to map out the beginning of writings on the environment of the past. It also examines the change in the methodology adopted to explore the hidden past and ecological context suggested by the sources. It is also for you to realise that the writings on environmental history simply demand closer examination of evidences and search for the non-human components of our past.

3.3 EXERCISES

- 1) Discuss briefly the nature of writings on environmental history in the colonial period.
- 2) Examine the characteristic features of the literature on environment focusing on the pre-colonial period.

3.4 SUGGESTED READING

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