

A People's History of India 36:

Irfan Habib, Man and Environment: The Ecological History of India, Aligarh Historians Society, Tulika Books, New Delhi, Fifth Edition, (Paperback), 2017, pp. 161, Rs. 340.00.

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Book Review:

The environmental history of India has attracted the attention of a wide array of historians ever since the pioneering work of Madhab Gadgil and Ramchandra Guha title, *This Fissured Land: An Ecological History of India* (1992), and *Nature, Culture, Imperialism* (1995) by David Arnold and Ramchandra Guha had been published. Some other major works in this field are, *Environmental Issues in India: A Reader* (2006) by Mahesh Rangarajan, *Environmentalism: A Global History* (2000) by Ramchandra Guha etc. The Present book under review being the 36th volume of the series titled 'A People's History of India', is one of the latest editions on this topic. Irfan Habib, the Professor Emeritus of Aligarh Muslim University is the general editor of this series as well as the author of the present volume. Irfan Habib has taken initiative to write ecological history of India from the pre-historic times to colonial rule in India titled as 'Man and Environment: The Ecological History of India. This work not only

represents an elaborate discussion on the topic, but also includes a systematic analysis on interrelationship among man, animal, vegetation, natural events etc. on a larger historic time frame.

The present book under review is divided into five chapters and each chapter of this book is subdivided into sub-themes and sub-sections. The major arguments in this book have been ingrained in the subsections. The five Chapters are as follows-

1. The environment in the period of the evolution and diffusion of the human species.
2. The nature environment, the Neolithic Revolution and the Indus Civilization.
3. Ancient Times: c.1500 B.C to 700 A.D
4. Medieval India: c. 700 A.D to 1750 A.D
5. Ecology of the Period of Colonial Rule

The First chapter of this book discussed on the physical changes of the climate, animal, evolution and gradual diffusion of human during the Pleistocene age. This age witnessed a number of Ice ages. The author has marked geological as well as earths rotational factors as the major reasons for the climate changes in the Pleistocene age. The formation permanent ice had resulted fallen into the sea level. During this period 11 times sea level had fallen to 75 metres than the present sea level. It resulted in the formation of Kashmir valley which was originally a lake in the past. In the beginning of the Pleistocene age major species of vegetation and animals had come into existence. The archaeological discoveries reveal that during this time due to the failure of adaptation in the climatic changes, many animals in India had extinguished like Hippopotamus, Wild Horses, Spotted Hyena, different species of Elephants etc. The author has acknowledge Africa as a region for the origin of human species. Taking advantages a fall in sea level in Ice age, Homo Habilis and Homo Erectus spread outside of Africa into the regions like Jordan valley, Caucasus mountains, China, Pakistan, India etc. The author has suggested that Acheulion stone tools were the signature of the arrival of early humans in Sohan valley and Kashmir.

In the second chapter, the Neolithic Revolution and natural environment of the Indus Civilization have been discussed. It deals with development of agriculture during new stone age and Indus civilization. Next Section of this chapter deals with climatic circumstances leading to development of Indus civilization and the exact relationship between climate changes and development of agriculture has been discussed in a systematic way. Author argue that Indus valley, climatically a region of low rainfall consisting of fertile soil due to flood deposits of river Indus was more suitable for cereals like wheat and barley. The Gangetic basin in central and eastern parts with heavy rainfall is more suitable for the cultivation of rice. A detail account of climatic conditions including rainfall, retention of water by soils due to high forest and bush density and secondary precipitation leading to development of agriculture has been presented beautifully with scientific justification.

Chapter three describes the tillage, animal domestication, forest and wild-life in the ancient times (c.1500 BC-700 AD). In this chapter author has extensively used archaeological sources. Animals like Horse, Ass, Camel, Elephant, Pig, Hen, etc were domesticated. Destruction of forest was in vogue for all the extension of agricultural land. A brief account of ploughs and other tools used during the period for the cultivation citing references from Atharvaveda makes the section more important from chronologically understanding. Thereafter explains used of animal agriculture that led to domestication of animals. A good detail of forest and wild life of this particular period mentioned here. Description of forest fire, clearing the forest for cultivation, and shifting cultivation makes the presentation more interesting. Next section of this chapter detail analysis on environment, religion and society. The development of religion or faith in God has been described as Human inability to control forces of nature such as rain, flood, drought, storm, lightning, wildfire, and fear of the fierce animals of wilderness, probably lay at the root of much of prehistoric superstitions which ultimately blossomed into religion, producing priests and rituals.

Fourth chapter is about the relationships between ecology and environment in medieval India (700 AD-1750 AD). Physical geography of India hardly

changed in medieval India. Famine, epidemic, and natural disaster, changes in shoreline or river courses were common in this period. But modest population, growth were there. The author has accepted that in 1801 AD, population of India was 207 million and annual rate of population growth was 0.2% (1601-1801 A.D). The Introduction of various new agricultural techniques such as Saqiya (The Persian wheel) had flourished in the agricultural field. The use of different domestic animals led to the economic growth of this period. The author has been pointed out that before the Mughal rule, exact extent of forest were unknown. Forests had much to do with the Mughal economy. Due to the political reasons deforestation took place in this period like the deforestation of doab region in the fourteenth century. Royal hunting had abolished wildlife species especially the Cheetah. The author further discussed on the Nile flood data from 622 A.D -1520 A.D. this can may be major new era of research the history of medieval India.

The last chapter of the book related to ecology and environment of the colonial period. The author perception that the political circumstances of a place and region affect the ecology and its human response finds very much suitable to the present days fact on ecology and environment. Size of Indian population determined by regular country-wide census beginning around 1867-72. In this chapter, the author criticizes Kingsley Devi's opinion on higher rate of population increase in India. Author also has criticized Viceroy Lord Dufferin's remark on India's overpopulation as the reason for all miseries. The author has represented that colonial governance for their political economic and personal gain destroyed Indian forest. During this time, huge destruction of forest took place due to the extension of agriculture land and commercial use of timber. In the name of preservation of forest they restricted access to the local people into the forest assaulted wildlife which drastically reduced its population. Species like one-horned Rhinoceros, Tiger, Lion, Leopard, Nilgai, Dolphin, Wild Ass become rare ones. But the species like Cheetah become absolutely extinct. Colonial looted polices were responsible for the miseries of

common people of frequent famine, epidemic, cyclone, earthquake, invasion of microbes etc. During this time degradation of soil was common. There was a crisis in the animal husbandry and a progressive deterioration in the quality of livestock due to declining areas of grazing.

The author has further discussed some major areas should be emphasized by the researchers such as food scarcity, let diseases rage, degradation of soil, crisis in the pastoral sector, transformation of forests into commercialized reserves, decimation of wildlife etc.

On the basis of chapter wise content analysis it is concluded that a balanced approach has been adopted in course of description ecology and environment of different time period. Scientific details, whenever required, make it more understandable history. The work is very vivid, elaborative and informative. Selection of words and sentences are very clear and concise. This work has been written using bibliographic note at the end of the each chapter which highlights major publications in that particular field. Footnotes or numbered references are not given in this book. But this includes notes on main areas of debates and meaning of particular terms. Some specific areas of chapter have been elaborated and extracts. Extensive extracts from sources have been provided in this work. There are special notes on ecology, climatology, zoo-archaeology, natural history, and forestry. But it has some shortcomings like over emphasis on the extract portion, non-inclusion of water resource management and not too much detailed on each chapter or time period. Otherwise this book may be recommended to those who interested in environmental history or ecological history of India from pre-history to colonial period.
