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"Man and Environment-The Ecological History of India"-A Review

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Abstract—The present state of ecology force us think about the state of development from early historic period. The damages done to different ecological system by either man or nature can better be understood if we know the chronological accounts of changes with time. This article presents a review of 'Man and environment-The Ecological History of India' a masterpiece of Irfan Habib, a noted historian and academician. This book describes brief details of ecology of starting from early historic period.

1. INTRODUCTION

The book, "Man and Environment-The Ecological History of India" authored by Irfan Habib a noted historian and a renowned academician of history, is one of the volume of the series entitled, "A People's History of India" edited by the author himself. It provides a detailed description of not only the climatic changes of different periods starting pre-historic one to the colonial rule but also deals with different types of flora and fauna; evolution and diffusion of human beings; wild-life; degradation of forests due formation of permanent settlement; development of agriculture; industrial and soil pollution during British rule. Extensive extracts from various sources and special notes on ecology, climatology, zooarcheology, natural history and forestry in systematic manner given at the end of each chapter are additional attractions which render conceptual clarity to the readers on the subject related to ecology and environmental sciences.

This book contains five chapters in total. Chapter 1 concerns the environment in the period of evolution and diffusion of human species. Firstly, 'ecology' and 'environment' have been defined in minimum possible words but reflecting all characteristics. Environment as defined by the author is "Environment encompasses all living things (other than human) and physical surroundings". Similarly, ecology has been defined as, "Ecology is the science that essentially studies our relations with environment". Details of physical changes during Pleistocene constitute the nest section. It includes a brief scientific description of development of earthforms through continental drift, tectonic stress, and motion of the earth. This is the point where Ice-Age starts. Physical circumstances leading to the development of mountains, rivers

and earth's surface have been considered in sequence. Climatic changes during Pleistocene led to creation of vegetation and animal life have been included in the next section of the chapter followed by evolution and diffusion of human species.

Second Chapter of the book describes the natural environment, Neolithic revolution and Indus civilization. It deals with development of agriculture during New stone age, pastoralism, symbiosis of agriculture, pastoralism and Indus civilization. The last section of the chapter details climatic circumstances leading to development of Indus civilization. The exact relationship between climatic changes and development of agriculture has been discussed in systematic way. Indus valley, climatically a region of low rainfall consisting of fertile soil due to flood deposits of river Indus of 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 detailed 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 3 describes the tillage, animal domestication, and forest and wild-life in the ancient times (c. 1500 BC-AD 700). 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 interesting. The next section of the chapter explains used of animals in agriculture that led to domestication of animals. A good detail of forests and wild-life of the period mentioned above has been presented nicely here. Description of forestfire, clearing of forests for cultivation, and shifting cultivation makes the presentation better to be understood systematically and chronologically. Wild-life of the time, like elephants, cats, tiger, and lions have been described with evidences. The last section of the chapter details 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 and 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".

In the next chapter, that is 4th Chapter, describes ecology and environment of Medieval India (c. 700-1750). Details of physical environment of the period with absence of volcanic activity, erosion of sea-shores, formation of deltas etc. constitutes the first section of the chapter. Description of prevalent famine due to phenomenon like drought and flood, and subsequent spread of epidemic like tuberculosis and malaria forms the next section of the chapter. The growth of population and agriculture necessitate domestication of animals, irrigation system development. A brief account of the wildlife and the forest of the period extracted from different sources hav been given.

"There are, then actual mentions of the forests in different localities in the text and records of the period. The evidence about the habitats of wild elephants is also relevant, since these animals can only flourish wherever they have protection of dense forests."

The last chapter (Chapter 5) of the book relates to ecology of 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. The exploiter classes and state arose during Neolithic Revolution. Size of Indian population determined by regular country-wide census beginning around 1867-72 constitutes the next section of the chapter. Indian population from 1871-1941 has been given in tabular form Further description of prevalent epidemics like cholera, plague, , small pox etc. affecting the population has also been described. Environmental pollution arising due to

industrialization and degradation of land have also been described in brief.. Indian agriculture witnessed construction of canals during British period for the Irrigation purposes. Crisis in animal husbandry arising due to shrinking forest areas as result of overgrazing has also been accounted beautifully.

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 periods. Scientific details, wherever required, make it more understandable to the reader particularly those who do not have science background. There is another book on the subject, "This Fissured Land-An Ecological History of India" authored by M. Gadgil and R. Guha published by University of California Press, Los Angels (1993). In this book ecologist Gadgil and historian Guha have presented fresh perspectives of the ecological history of India and theoretical issues of interest to environmental historians regardless of geographical specialization. Marxist interpretations of the facts and issues dominate in the entire text which lessen the independence intellectual analysis and the language of the book is more heavy and intellectual oriented. On the other hand the present book of Habib contains a neutral, apolitical and unbiased description of ecology and environment of India. The simple language of the book makes it more useful for the students, researchers and academicians.

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