

### Forest and Tribal Life

by ROHIT SHUKLA, AMBUBHAI T. DESAI, A. B. VORA, R. B. LAL and K. M. KULKARNI

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This is a research monograph, based on a pilot study of the socio-economic traits of the tribals which sustain the eco-system, by an interdisciplinary group with members drawn from Sociology, geography, anthropology and botany. The study is still at a very exploratory stage. It focusses attention on the tools and traditions of the tribals particularly the Garasia Rajputs and Bhil Garasias with their 24 clans

on the basis of the four sample villages studied in detail. The book has a reasonably good account of the tribal society, but does not quite succeed in clearly demonstrating its relationship with the environment, both traditional and the contemporary. Yet, it is a good introduction to the relationships of the Garasias with their environment.

K.R.Dikshit

### Waters of Hope : Himalaya-Ganga Development and Cooperation for a Billion People

by B. GEORGE VERGHESE

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Politics today is not confined to only the socio-economic issues of a country. Issues related to the environment have recently come to the attention of political leaders even in the poorer countries of the Third World. This has been in response to the demands of ordinary people for greater responsibility regarding environmental affairs. The late Prime Minister of India, Mrs Indira Gandhi said 'Poverty is the greatest polluter'; a stark truth now supported by many environmentalists. The writer of the book under review pays tribute to the same view with his firm belief that poverty is the 'greatest engine of ecological flight'.

The author B. G. Verghese was educated at Delhi and Cambridge universities; originally began his career as a journalist but is now actively engaged in research with the Centre for Policy Research in New Delhi. He is also associated with several grassroot level movements on environmental issues. The essence of Verghese's book is mutual cooperation and

complementarity among the five poor countries of South Asia in their search for economic development and environmental improvement. This, according to him, is possible through a unification and joint use of the Himalayan rivers : Ganga-Brahmaputra-Barak -Meghna systems. These rivers carry waters of hope. There is an unusually futuristic outlook running through the book; a rare and grand burst of imagination.

The book is quite large; sixteen pages of preface and 446 pages of matter of which the main text covers 402 pages. The rest contains a 21 page reference and a 23 page index. In addition, there is a very informative section on the names of rivers crossing international boundaries. For example, most of us know that the Brahmaputra is known as Dihang (or Siang) in Arunachal, and as Tsangpo (or Yalu Tsangpo) near its source, but that the part of Kosi Tibet is called Arun or for that matter Tamur in Nepal is information indeed. Other

details, like two well-drawn maps, conversion-table, list of local and technical names, abbreviations and acronyms are also well-looked after.

There are 18 chapters in total; each of these chapters is subdivided into several sub-chapters. Excepting the last chapter, the 'Post-script', the shortest one is 'Waters of Hope' (9 pages) whereas the longest one is 'Cooperate or beggar my neighbour' (50 pages). The length of the chapters does not vary arbitrarily, it always reflects the importance of the topic under discussion. Verghese has begun with a discussion on the changing nature on the basis of latest concepts and theories. For example, Himalayan orogeny has been elaborated from the point of view of plate tectonics. This scientific attitude has enhanced the value of the book to the researchers. Verghese has also used latest available data in the book. Another notable feature in a book of this size is the near absence of printing mistakes.

The target audience of the book is environmentally conscious people from all walks of life, educationists, environmental activists, politicians, bureaucrats and planners - the author has tried to make everyone share his feelings. Consequently, at places he had to dilute his arguments and take shelter in simplification; at times the number of sub-chapters has been made unusually large, as many as 38, to break the subject matter. The area under study is a large geographical - political region comprising India - Bangladesh- Nepal - Bhutan - parts of Tibet. It is unique geographically because of its integrated drainage network. Politically too, it is a complete region by virtue of acting since pre-historic times as a 'buffer zone' between the two rich civilizations on its eastern and western extremities. Even from the point of view of race, language and culture, it is transitional in the truest sense of the term. Every tenth person of the world is a resident of this region.

Another characteristic feature of this politico-geographic region is its ancient civilization and culture. Man has inhabited this area since the early days of permanent settlement, the recent historical period has experienced rapid growth of population and settlement, thus upsetting the ecological balance in the region. Consequently, in spite of great resource potential and a diversity of flora and fauna, the problems of the region are becoming more and more acute every day. Tremendous poverty, excessive population pressure, floods, droughts and famines, and the difficulty of communication with the sea particularly for the land-locked countries like Nepal, Bhutan and parts of Tibet - have come to be recognized as the major ailments.

Verghese, believes, if properly utilized, the hydroelectricity from the water resources of the region could herald an unprecedented prosperity comparable to the oil resources of West Asia. In addition to the surface water reserves, there is a huge reservoir between 1-3 thousand metres below the ground in West Bengal, Bangladesh, Tarai and the Ganga plains. Our geologists have been trained in such a way that while looking for oil they consider such rich aquifers as 'dry holes'.

The second chapter discusses history, with the greatest emphasis placed upon the evolution of the irrigation system. Verghese has shown how the ancient knowledge of indigenous irrigation died and a 'hydraulic' civilization replaced the 'hydrological' civilization of the past. As the axe, the plough, and urbanization and technology brought about major changes in the Ganga - Brahmaputra - Barak plains, life in the hills became affected too - by overpopulation, deforestation and the penetration of tea - gardens. Bhutan, in comparison to Nepal and Tibet, somehow escaped outside influence and remained isolated.

Verghese has emphasized the need for utilizing the river systems of the region as waterways. The competition from the railways and the destruction of forests have rendered them useless over the last two centuries. However, the recent fuel crisis, and the increasing pressure on the existing modes and routes of transport have once again drawn the attention to the re-establishment of the waterways as the best alternative. In Tibet, practically on the roof of the world, the Tsangpo is navigable for a length of about 600 km. east-west in the most densely settled part of the country. Surprising, but true. Even the Calcutta port can be restored to its former glory once the waterways connecting it to this vast hinterland can be reclaimed.

What we really need, according to Verghese, is a new outlook regarding water. A precious resource like water has to be identified and new laws have to be created to utilize it for the purpose of joint welfare. This would help in the protection of the environment and improve the resource situation of the poor countries too.

The answer to the question 'whether to protect the environment or give first priority to development' does not lie in restricting the autonomous process of the latter. Verghese believes that one should aim at hastening economic development so that the initial harm done to the environment may be made good adequately in the long run. Not all of us may agree with this view, but the articulateness

and the force of Verghese's arguments have to be appreciated. There is no denying that within the next few decades scientists are going to turn their attention from the existing energy crisis to a severe water crisis. Hence the importance of the availability and proper utilization of water is going to increase to a great extent.

The aspect of water quality also has to be considered. None of these countries have been able to seriously take up comprehensive projects on this, excepting probably the Ganga Action Plan which is till a pioneer in this field. Till date, all water-related policies of the governments have been geared to provide irrigation. To utilize water in the desired way requires international cooperation as well as financial and technological help from the developed countries.

It is natural that Verghese has paid slightly greater attention to the case of India - probably because of the easy availability of data and the size of the country. However, the omission of Pakistan from the plan of integrated use of water in the South Asian region is quite surprising. But the enterprising role of the SAARC has not escaped the author's attention. Himalaya, according to Verghese, is a "world heritage resource". Like the Amazon rainforest, the protection of the Himalayan environment too is a joint responsibility of mankind.

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