

The Indian Himalaya holds key to India's ecological and social security by virtue of being centre of biological and cultural diversity and store house for water and other resources. Apart from harbouring rich cultural and biological diversity, the Indian Himalayan region (IHR) is the major supplier of timber, medicines, fiber, oils, spices and condiments, firewood, organic manure, fodder and hydropower. It is reckoned as 'genebank' and continues to remain an important centre for the origin of the crop diversity and numerous under-utilized and potential future crops. The north eastern region of the IHR has been recognized as a world heritage of biodiversity hot spot.

The IHR is complex, unique in geomorphology, vulnerable, fragile and reacts sensitively to population pressure and global climate change. The intense variability of this mountain ecosystem and its elements to the human as well as climate induced changes is of great concern. It is invariable to note that the finite resources of the IHR are gradually depleting making it unable to maintain the demands of the changing life style of its growing inhabitants as well as other dependent populace down below in the plains. In the higher altitudes, the major Himalayan glaciers, which are the main source of water in northern and eastern India, are receding fast. Though the global climate change is one of the major causes of receding glaciers and there is no distinct finding linking intervention by local people directly with receding of glaciers, yet human interference in Himalayan lakes and other water bodies has resulted in the decrease in their area significantly over the time. One possible option to arrest resource depletion in the IHR is creation of sound database generated through research and development that would enable develop appropriate location-specific techniques and packages.

The real world data, both quantitative and qualitative, originating from the fact and figures of finite resource are dispersed across a geographical location of the IHR. Both human and natural resources in the IHR can be quantified from the facts that originate from the real world data. But this data unless processed or analyzed can not be used in a decision making process and may take the form of historical records that are recorded and filed without immediate intent to retrieve the same for decision making. Probably with the realization of this fact, two decades ago the National Committee on Environmental Planning and Coordination had organized a national seminar on 'Resources development and environment in the Himalayan region'. The issues raised at that time indicated the existence of information gaps. The recommendations included a list of priorities and among them two important ones were i) constitution of a high-level multidisciplinary group to identify gaps in the on-going research, design and development pertaining to the Himalayan region and also to identify appropriate financial arrangements for supporting further activities that need to be taken up, and ii) initiating a programme on long-term research into the functioning and dynamics of the Himalayan ecosystems. Some recommendations of this seminar were implemented and progress on certain sectors such as inventory of resources and development of suitable technologies was satisfactory. However, the pace of all such activities is not sufficient to meet the pace of population growth and their growing requirements, which are intimately linked with the natural resources of the region.

Keeping all these earlier developments as well as the present requirements in the view, this volume of resource information database has emphasized on real world data, which were collected and compiled to maximum number of available parameters. Analyses of available data suggest that in the IHR the major concerns are degradation of bioresources with consequential negative repercussions on livelihoods, and infrastructure and economic development. Though the human resource developmental parameters (such as literacy, sex ratio, non-dependency rate, etc.) are significantly high in the IHR as compared to other parts of the nation, the economic development in the region is not up to the mark, and that too is unequally distributed. It is also appearing that the regions under central and western Himalaya have received comparatively better attention in developmental activities as compared to the eastern and north-eastern regions. The access to amenities (such as schools, medical

infrastructure, post and telecommunication, bank and financial institutions, etc.) is better in the states in western and central Himalayan region than that of the north-eastern states.

The other finding that emerges from analyses of various data is that the ever-increasing human population is dependent on the finite resource and as a result per capita uses of all resources are decreasing gradually. This is very much true particularly in the case of land resources, where there is scarcity of arable land in the region. Agriculture is one of the most dependable and primary livelihood options of the communities living in the IHR and is getting affected adversely due to various factors through out the IHR. In the eastern Himalaya, agriculture practiced in the form of shifting cultivation (*Jhum*) is gradually becoming ecologically non-viable due to drastic reduction in its fallow period under intense anthropogenic pressure, while in the central and western Himalaya it is affected by size of settled agricultural land and significant growth in human population. It also appears from the analyses that by declaring more areas as protected area, the problem of livelihood dependency on forest resources of the local people is aggravated particularly in central Himalaya. The resource accounting done in this monograph based on sound database may help to resolve the problem of park-people conflict in declaring new biosphere reserves or protected areas in the region. Further, the findings also suggest that despite of the fact that the entire IHR region is treated as backward area in terms of poor economic and infrastructure development, there are wide variations in development within the region. Some portions of the region are well-developed, which can be compared with the developed states of the country while other portions continue to remain under-developed and backward and yet to entertain the minimum infrastructural requirement. As could be seen, this un-even distribution is not only characteristics of the states but also of the districts within the state.

Certain limitations of this volume have also been realized. For example, it is understood that the information module of this volume is the outcome of processed data using mathematical/statistical operation and human reasoning techniques. Therefore, the usefulness and validity of the data may lesser over time as information is always time variant and a dynamic model of resource use that involves change over time. Further, futuristic predictions based on historical time series data may result in inaccurate outcome as the nature is exposed to several environmental factors. However, using a time-series data a probable outcome could be predicted with a measure of variability to describe the significance of the outcome. The present volume based on secondary data could effectively be used for analytical purposes relating to regional planning and development. The major constraint while compiling this document was non-availability/accessibility of all the data on various parameters. Another constraint, as we felt, was the comparison of regions and states in the same scale in spite of their geographical size. In order to avoid this problem in some tables, the data of Assam hills and West Bengal hills were excluded. However, despite the limitations and constraints, the volume would certainly serve as a reference point not only to general readership but also to the development planners particularly for the effective management of the resources in the Indian Himalayan region.