
Building for Over One-Fifth of the Earth's Surface

Building in Hot Dry Climates

By Balwant Singh Saini

176 Pages. Chichester (U.K.). John Wiley & Sons Ltd. £ 15.

Reviewed by Edgar Rebeiro

Prof. Balwant Singh Saini is not new to India. He was trained as an architect in this country and taught for a while at the Delhi School of Planning and Architecture. In Australia he is intensively involved in the process of teaching architecture and urban design, undertaking research and a varied range of projects which has taken him to several countries. His current book is a reflection of these rich experiences which deal with an important belt of the world; namely the areas between the tropics of Cancer and Capricorn. The regions, the book deals with, occupy, over 1/5th of the earth's surface from parts of the USA and Latin America and South Africa, to almost the whole of North Africa, most of the Middle East and Pakistan and a substantial portion of India and Australia. The physical, social, economic, cultural and political formation of these areas are as diverse as any in the world but an important unifying element is that they possess a climate which is dry and hot. As Prof. Saini says, the absence of moisture has been a major limiting factor for vegetation in these areas and this has led to poor animal production and low population densities. Yet in an over-crowded world, there has been a tremendous increase in man's interest in developing these lands. From this angle alone the book, primarily addressed to architects, builders, planners, engineers, administrators and others concerned with planning and building problems in hot and dry climates, is timely and significant.

It couldn't have been an easy task for Prof. Saini to deal with such a wide area in a publication of less than 200 pages. He has, however, handled the various facts of the subject well with the help of a large number of well selected photographs, figures and sketches which have resulted in a very readable book: a must for every library concerned with this field of study encompassing affluent nations, the recent oil rich countries and underdeveloped economies. In such an exercise, efforts towards the built environment naturally differ widely from programmes involving sophisticated technology to simple methods. The stress, however, is on exploitation of local materials and on human and natural resources—the main objective being the incremental growth of these potential regions through more equitable settlement patterns.

In the opening chapters, Prof. Saini assesses the resources in the belt available for such objectives. These revolve mainly around agriculture and pastoral industries, on mining and on tourism, all within a historical - cultural context. Exploiting solar power, improving water sources and transportation facilities are important elements in the physical planning process. The special physiological and psychological comforts of man in these arid areas are also discussed as a need to be catered to.

The chapters on building designs and on building materials and methods are appropriately illustrated in terms of orientation and structure in relation to climate and

the judicious use of walls, glass and louvres, roofs and ceiling and of floors. Dust and sound control greatly determine design as these are important elements in the deterioration of building materials along with solar radiation. The author discusses the widespread use of materials not easily available in this belt like metals, timber, asbestos, paints, plastics, bitumen, glass and cement. These add appreciably to costs and thereby necessitate appropriate designs to reduce maintenance on the one hand and changes in technology on the other. The stress on mud and clay products is most welcome as the materials to be exploited fully in the settlements of the future. The varied forms and plasticity of these are also suited to self-help and incremental housing and this is indicated in the chapter devoted to shelters for the poor which imply higher densities and speed in construction.

Comparatively little space is devoted in the book to services and equipment which in the hot regions constitute a major expense in both layouts and individual structures, though the use of solar energy, various catchment devices for scarce water (inclusive of roof tops), improvement systems for dry sanitation and the like are competently described. The chapter dealing with the planning and design of external spaces, namely: spaces within plots (around courtyards or otherwise) and common open spaces from the neighbourhood to the city level, is of significance, especially for India.

Tradition and historic contexts have laid great stress on lawns, plants and water bodies, all of which are scarce in such regions. At the cityscape level plants and trees as screens from dust and hot air are indicated as also the total beneficial impact of greenery on the environment. Examples of concentrated settlements mainly along water sheds have also been shown, indicating

the cellular plan as the most suited with narrow and winding streets. Wide roads and open-ended planning are not suited to such regions and when resorted to result in enormous expenses. The author also discusses the concept of row houses and courtyard planning and indicates how both these can also be adapted in this belt.

The major significance of this book

is that the references and examples are such they have prospects of replicability. Though various facets are touched upon in this volume, they should generate sufficient thought for each of these facets to be further researched, regionwise. It is hoped that the emerging settlements frame for India exploits publications such as Prof Saini's.

What Impact of Conferences on Settlements ?

Human Settlements in Asia

R.P. Misra and B.S. Bhooshan

100 Pages. New Delhi, Heritage Publishers. Rs. 75.

Prof. Misra has specialised in urban regional planning, while Mr. Bhooshan is basically an architect. In their joint efforts in the field of human settlements have been quite valuable and supplemental to Prof. Misra's several contributions in this field. This book is the result of a collaboration between their Institute of Development Studies, Mysore and the International Institute of Environment and Planning, London of which Dr. Barbara Ward is President.

This is a timely publication as it addresses an urgent follow up to the recommendations of the 1976 United Nations Conference on Human Settlements in Vancouver.

One of the major aims of that conference was that each member country evolves a human settlement policy as a frame for the balanced development of the environment in view of man's uneven exploitation of the earth and the wasting of global resources. Dr. Misra is one of the main crusaders of such policies and her efforts have motivated this book devoted to analysing attempts in Asia for implementing the main Vancouver recommendations.

For this analysis, the authors have selected seven different situations in Asia. (1) India : the second most populous country in the world with a wide variety of developmental situations within a democratic frame; (2) Nepal : a land-locked monarchy with a Panchayat system; (3) Indonesia : a large archipelago with a colonial background and resource rich but with an unbalanced population distribution; (4) Philippines : also a large archipelago with a colonial background under the rule of a President; (5) Singapore : an island city; (6) Japan : an urbanised and developed democracy, and (7) China: the most populous country in the world governed by a communist system.

The analysis has been made country-wide with the following objectives :

- Awareness of the recommendations and their implications in decision-making bodies at the national and subnational level.
- Search for policy instruments to implement the recommendations.
- Identification of specific policies or changes in policies, and
- Decisions and strategies to implement policies and recommendations.

With these objectives in view, the authors travelled widely in the above countries for discussions and collection of secondary data. Their limitation has been the fact that the study was time-bound, and considering that they barely had six months, the publication is an excellent record of current efforts being made—or rather lacking—in the seven selected situations. Efforts towards a national settlements policy are discouraging the world over, and the authors have shown that in Asia too such efforts are sadly lacking even though various governmental actions, budgetary allocations and forums indicate an awareness of the problems and the need for concerted and integrated action. For this there is sufficient data and know-how. Interestingly, news of the best attempts in favour of the environment are at present from China, which was not represented at Vancouver. On the other hand, the response from India is inadequate. The publication is, therefore, significant and must get the attention of our policy makers at all levels, especially as we do not as yet have a national urbanisation policy, let alone a national human settlements policy.