

BOOK REVIEWS

DESERTIFICATION AND ITS CONTROL IN THE THAR, SAHARA AND SAHEL REGIONS 1993. A. K. Sen and Amal Kar (Eds.) Scientific Publishers, 5A, New Pali Road, Jodhpur-342 003. 478p. Rs. 475/-

The Commonwealth Secretariat in London felt the need to arrange a Workshop to disseminate knowledge and experience of the countries in the Commonwealth which are affected by desertification, among themselves. For this purpose a Workshop was arranged in Central Arid Zone Research Institute (CAZRI), Jodhpur in March 1989. This volume contains 27 papers presented by the Indian participants together with 7 regional reports from India, Zambia, Ghana, Kenya, Nigeria, Tanzania and Uganda.

The papers from India are state-of-art papers on the techniques and tools used for gathering and analysis of data, results obtained and measures to combat a variety of natural and artificially (by human interference) created problems, that crop up in a semiarid and arid country.

The volume begins with a brief Introduction (1) explaining the background, objectives of the Workshop and impact of desertification, soil erosion and drought—the major problems faced in this environment. Erosion by water (5) and wind (7) of soil (6) is a perennial problem in different parts of the deserts and their magnitude are rightly brought to our notice in the beginning itself. Monitoring of desertification (14), the distribution of deserts in India and Africa (2), the typical landforms associated with these (9) and the problems and prospects in desertification control—particularly as attempted at CAZRI are explained (17). Drought can mean different things to different investigators. An historical account of droughts in India and Africa (3) is followed by a climatological analysis, particularly in Western Rajasthan (4). The effect of successive droughts on Natural Flora (12) and Crop Productivity (13) is explained with examples. The need for appropriate water harvesting and soil conservation to mitigate the effects of drought (19) is emphasized, and so also the socio-economic aspects (15). The utility of Remote Sensing in monitoring drought and desertification is adequately explained (8). In view of the special environmental conditions prevailing in deserts (sandy or rocky, with or without migrating dunes) special measures have to be adopted in each phase of cultivation right from preparing the field (ploughing), sowing, irrigation (20), weed removal, harvesting and protecting (18) from possible stunted growth or extinction. Methods to improve productivity are also outlined (21, 27). Land in its natural state permits certain amount and category of use. If the capability of the same land is to be improved then not only certain basic methodologies are to be adopted (10, 11,) but types of uses have to be modified as well. If agricultural crops cannot be grown, then social forestry (22) or horticulture (23) must be thought of and appropriate measures undertaken. Almost all over the world in desert areas, livestock play an important role in the economy and their needs (24) and migration (16) also form subject matter for study, though wild life, even if minor, has not been forgotten (25). Some mining activity also does take place in deserts (26) and the need to keep in check its contribution to the worsening of the environment is duly brought to light.

The 7 country reports highlight the special problems in each of those countries, the organisations involved in those studies, as well as action to combat desertifica-

tion, and the policies to be followed in the immediate future. Unfortunately maps of these countries showing in detail the distribution of arid and semiarid lands are conspicuous by their absence.

This volume should be of interest to those in India who have not had the opportunity to follow up the activities of CAZRI (Jodhpur) through its earlier publications during the past two decades and also to the scientists, particularly in Africa, who would like to have a bird's eye view of the problems faced and methodologies adopted to combat desertification in India and possibly benefit from this experience.

R. V.

MAPPING AND COMPILATION—Methods and Techniques (1993) By K. K. Rampal, Concept Publishing Company, A/15-16, Commercial Block, Mohan Garden, New Delhi 110059, 320 pages, Rs. 350/-

The book on 'Mapping and Compilation—Methods and Techniques', provides a good insight into various aspects of the map making process, in a simpler and precise manner. The initial chapter introduces the subject with a brief history of map making, importance of maps, visualisation of earth's shape and scales and their significance. Second chapter essentially covers various cartographic aspects such as symbol standardisation and representation methods, discussing their merits and limitations. This chapter also gives the topo-sheet referencing methodology. The chapter on drawing and drafting materials describes various drawing and drafting materials in detail. However, this chapter could have been more concise.

Chapter dealing with the map classification brings out the various types of maps in use and also gives a brief account of the various agencies producing the maps and maps published by India and other countries.

Chapter 5 is the most informative chapter which deals with the map projections. The information provided in this chapter about the classification of projections and different types of projections is extremely valuable for many of the scientists who work with maps. However, the scheme depicted for planar's giving the perspective and non-perspective projection need to be corrected.

The chapter on 'Map Compilation' summarises the techniques utilised in preparing the final map. Explaining the two broad categories, the author discusses various steps showed in the map compilation till the final map is produced, keeping in view the different sources of information.

Chapters 7 and 8 dealing with the printing of thematic maps and cadastral maps respectively, form a good reading material to understand the processes involved in both of these. The chapter on cadastral mapping also helps in understanding how the cadastral details are depicted and how best they can be transferred on to the other thematic maps when required.

The chapter on 'Computers in mapping' provides the state of the art methods utilised in the art and science of map making. However, a few lines on the current concepts of Geographic information system would have made the chapter more complete. Figures depicted in the section call for improvement.

In spite of the existence of SPOT satellite providing data in stereo mode, this was not referred in the elements of remote sensing chapter. Depiction of various maps prepared utilising the satellite data might have provided a better and complete insight into this aspect, justifying the title of the chapter.

In total, this book forms a good study material for courses related to map making, and a source of information for those scientists and agencies dealing with the maps for various application projects.

*Regional Remote Sensing Service Centre,
Bangalore 560 070*

G. BHANU MASTHAN