

BOOK REVIEWS

WATER BALANCE AND ITS APPLICATIONS

by
V. P. Subrahmanyam

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Price Rs. 34/-, pp. 102

Water balance studies provide information regarding evapotranspiration, water surplus, water deficiency and runoff from a region. These in turn give very useful information about water needs for agriculture and other related matters.

The concept of water balance was first developed by Prof. Thornthwaite in early forties of this century in order to study the soil moisture requirements of a region. In subsequent years a number of revisions and improvements in the computational procedures were made by him in order to get fairly accurate estimates of water balance components.

On account of wide application of water balance procedures in the present day water management techniques, there has been a great demand for a suitable handbook which can give principles and practices of water balance for conservation and development of water resources.

The application of water balance techniques are more relevant to our country, as our main source of water is monsoon rainfall, which is received hardly in a period of 4 months (June to Sept.) in a year. Apart from this, monsoon rainfall distribution is also erratic both in space and time. Considering this, in this country proper conservation and utilization of water resources are the most important problems of our times

and these problems have become quite acute due to population explosion of the last few decades.

To a large extent conservation, development and utilization of water resources can be achieved by using water balance techniques. This task has been made quite simple by Prof. Subrahmanyam by writing this monograph in a lucid style which can even be understood by non-technical persons who are not so familiar with technical jargon.

In India, Prof. Subrahmanyam has been a pioneer researcher in the field of water balance studies. He has carried out extensive work on this specialised subject during the last 30 to 35 years after spending a couple of years in USA under the able guidance of Prof. Thornthwaite, who is considered to be the father of this branch of science. It is heartening to find that Prof. Subrahmanyam, a busy research guide and a teacher, should have found time enough to write the present monograph on "Water Balance and its Applications" in spite of his heavy schedule of work as the Head of the Deptt. of Meteorology and Oceanography at Andhra University.

The monograph has been divided into 3 parts. The first part is concerned with the Thermal Regime and introduces the concept of summer concentration of thermal efficiency indices in evaluating thermal continentalities. The computational steps

are shown in Appendix I of the monograph. The second part of the monograph discuss concept of moisture regime and in this section have been presented water balance characteristics of 12 stations which lie in different climatic regions of this country. Particularly, important is Appendix II of the monograph which gives computational procedures for evaluating water balance components. The third part of the monograph is devoted to application of water balance techniques to the problems in the fields of agriculture, droughts, water potential of river basins etc. This section is based on recent research papers on water balance published in scientific journals of

repute. In fact, this part of the monograph is just like a working manual for active research workers in the above fields.

By all accounts, the monograph is an indispensable reference-cum-handbook on the subject of water balance and is, therefore, a must for all those who are working in the fields of agriculture, hydrology, hydrometeorology and allied areas. It is equally useful to research students working in the field of water resources development and management.

O. P. DHAR and
P. R. RAKHECHA

MEASURING LAND POTENTIALS IN DEVELOPING COUNTRIES

by

N. K. Dey

University of Burdwan

pp. 271, Price Rs. 40/-

The book is the result of intensive field and laboratory work to measure and assess the land potentials of three areas viz. 'Demetrio', Tarsia and Kanchannagar. It gives the method of field survey step by step, and has illustrated the exercise with the help of blocks, tables and descriptive details. The book is particularly useful for the beginners who have yet to develop

their own idea of serious field work. For each land unit in the field, the author has drawn a block-diagram, given separate description and tabulated the results. The book ends with a copious bibliography which is of interest to all interested in geomorphology, soils and ecology.

K. R. DIKSHIT

A FEEDBACK ANALYSIS OF THE PROGRESS AND PLANNING OF AGRICULTURE IN INDIA AND EMERGENT SOCIO-ECONOMIC CONFLICTS

by

Champa Mitra

University of Burdwan

Published by the author herself, Burdwan

1982, pp. IV + 112, Price Rs. 16/-

The book, dedicated to Prof. S. P. Chatterji, the doyan of Indian Geography, and with a foreward by R. K Mukerji, the

Vice-Chancellor of the University of Burdwan aims at examining the problems of agricultural development in India. The book is