Soil erosion : Topics in applied geography.

R. P. C. Morgan

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A new addition to the series " Topics in Applied Geography ", edited by John Dawren and Donald Davidsons, Morgan's book on SOIL EROSION, a practical guide to applied physical geography. The problem of soil erosion is being faced mainly by agriculturists and tackled by engineers. The geographers in general and the geomorphologists and pedologists in particular have much to contribute towards the solution of this problem. In view of this, the book on soil erosion by Morgan should fulfil the need of a concise and yet all inclusive methodological text book on this aspect.

The soil conservation can only be effectively done after understanding various aspects of the problems associated with soil erosion. The soil erosion is a function of variety of factors which include lithology, relief, slope, intensity and magnitude of storms. These aspects are considered in the first three chapters by the author. In these chapters, the author has given a comparative account of various indices available for quantifying the erodability of processes and the erosivity of soil. The Monograph for computing soil erodability factor based on the method of Wischmeier, Johnson and Cross facilitates easy quantification of soil loss and the comparative account of various methods, with the author's comment, will certainly encourage detail studies of the problems of soil conservation by geographers.

Soil erosion is basically a problem in land resource evaluation. This aspect is discussed by the author in chapters 4, 5, and 6. The discussion of the land capability classification and use of the geomorphological mapping system for the soil erosion survey outlines the methodology of such surveys. Besides the theoretical discussion, the inclusion of various criteria for land capabality classification (Table 4. 4.) has increased the utility of the book to a considerable extent. The following chapters deal with the modelling of soil erosion and strategies for erosion control. The chapter on soil erosion modelling basically refers to various equations for estimating the soil loss. In the sixth chapter, different measures for controlling soil erosion have been suggested. These include agronomical measures (rotation–strip cropping–mudkhing) and mechanical methods like contouring–terraces–wind breaks etc.

The third part of the book includes the case studies of soil erosion survey at macromeso and micro levels from Peninsular Malaysia. The case studies explain the relationship of erosion and the scales of area describing how the nature of the problem of the erosion study differs with changing scales. Besides the soil erosion survey maps for meso and micro level areas, the author has included the maps of proposed land use which is the aim of the entire study.

In the last chapter while concluding, the author has pointed out the utility of soil erosion surveys, pointing out the role physical geographers can play in the land evaluation surveys.

The book is no doubt a valuable addition to the available literature on applicd physical geography. The aim of the series to bridge the gap between the theoretical geography and solution to the practical problems, is certainly fulfilled by this book. It is hoped that this book will inspire the physical geographers and will help bringing them closer to the field of applied research.

A. M. D.