

Introduction

The book provides a discussion and an introduction to climatology and the characteristics and global distribution of climatic elements and how the climate relates to landforms in respect to each topic. The study of landforms is called geomorphology. The second chapter discusses the controls or factors that determine climatic conditions globally and regionally and, or, locally are discussed. They include energy and moisture fluxes (controls) and latitude, altitude, land and sea and relief features and their formation processes (factors). The third chapter looks at the purpose and problems of classifying climates. Two approaches to climate classifications, i.e. genetic and generic are examined and types of climatic classifications using each of these approaches together with their merits and demerits identified. A discussion of the importance of micro and man-made climates are made and applied geomorphology. The fourth chapter discusses the causes of both natural and anthropogenic climate change. The current debate on global warming and climate change is highlighted. Climate change takes place when a shift in a type of climate prevailing over a given area takes place. Such a change involves a shift in the general circulation of the atmosphere and the energy balance of the atmosphere. There are two kinds of climate change. Natural climate change and climate change caused by human activities i.e. anthropogenic or manmade climate change, and how those anthropogenic processes alter the development rates of the landforms. The fifth gives the definition and scope of Biogeography, the importance of the biosphere and the concept of ecosystem and how geomorphic processes support the biophysical processes. The role of mankind in the biosphere is also discussed. The sixth chapter discusses the patterns and types of distribution of living organisms. The biotic and abiotic factors that influence the patterns and types of distribution are described. The abiotic factors include climate, soil and relief. The biotic interactions include competition, predation and symbiosis. These interactions are discussed and their effects on the living organisms considered. Chapter seven introduces the theory of ecological succession. Vegetation processes are also described; indicating the effects of disturbance on vegetation types, and also relates the physical environment to the geomorphic changes. † The eighth describes the distribution of world vegetation and its classification. The vegetation characteristics in each of the biomes are discussed in detail and the human impact on the vegetation regions is described. The discussion focuses on the terrestrial biomes. The ninth chapter discusses the soil components, rock weathering and formation of soils, physical and chemical properties soils, soil regimes and types and classification of soils.

Finally definitions of key words used in the book.