

SIMPLIFIED

ENVIRONMENTAL GEOGRAPHY

GEOGRAPHY OPTIONAL SPECIAL

A COMPREHENSIVE WORK

FOR UPSC CSE

AND OTHER COMPETITIVE EXAMINATIONS

BASED ON YOUTUBE LECTURES BY

DR.KRISHNANAND



ABOUT THE AUTHOR

Dr. Krishnanand is highly proficient scholar in the field of research and academics in Geography and environment. He graduated from Shaheed Bhagat Singh College, University of Delhi. He was awarded **"best student of the college across all disciplines**" in 2009 and **"Gold medal**" in 2010. He completed his Ph.D from Department of Geography, Delhi School of Economics, University of Delhi. **He has a teaching experience of over a decade in the field of Geography for UPSC, State PCS , UGC NET and other competitive examinations.**

He is an avid field researcher and photographer with two Geographical Documentaries on YouTube Channel- TheGeoecologist, to his credit - **Exploring Ladakh- A Geoecological Perspective and Spiti Valley Project.** His areas of interest include Geomorphology, Geoecology, Geotourism, Environmental Geography, Geodiversity, Geomorphosites, Fossil park, Geoparks, Field Work and Documentary Making in Geography, Remote Sensing and Geographic Information System (GIS) and GPS. **He has published three books and six articles at National and International levels.**



This E-book by Dr. Krishnanand is a Simplified Compilation on Environmental Geography along with detailed explanations available through his YouTube lectures of the same.



TIITLE

CONTENTS

PAGE NO.

PREFACE

Chapter 1: ECOSYSTEM: WORKING & FUNCTIONING	5-11
Chapter2: DEFINITION, CONCEPT AND ATTRIBUTES OF ECOLOGY	12-24
Chapter 3: ECOSYSTEM: STRUCTURE AND CLASSIFICATION	25-41
Chapter 4: PRINCIPLES OF ECOLOGY	42-65
Chapter 5: ECOTONE, ECOLINE & EDGE EFFECT	66-73
Chapter 6: ECOSYSTEM SERVICES	74-88
Chapter 7: INFLUENCE OF MAN (HUMAN) ON ECOLOGY & ENVIRONMENT	89-101
Chapter 8: GLOBAL & REGIONAL ECOLOGICAL CHANGES & IMBALANCES	102-112
Chapter 9: ECOSYSTEM THEIR MANAGEMENT AND CONSERVATION	113-123
Chapter 10: ENVIRONMENTAL DEGRADATION AND MITIGATION MEASURES	124-138
Chapter 11: ENVIRONMENTAL MANAGEMENT & CONSERVATION	139-150
Chapter 12: BIODIVERSITY CONCEPT & CONSERVATION	151-166
Chapter 13: SUSTAINABLE DEVELOPMENT	167-179
Chapter 14: ENVIRONMENTAL HAZARDS & REMEDIAL MEASURES	180-203
Chapter15: ENVIRONMENTAL EDUCATION	204-212
Chapter16 : ENVIRONMENTAL POLICIES	213-222
Chapter17: LEGISLATIONS IN ENVIRONMENT & ECOLOGY	223-244

PREFACE



Environmental Geography is the branch of geography thatdescribes the spatial aspects of interactions between humans and the natural world. It requires anunderstanding of the dynamics of climatology, hydrology, biogeography, geology and geomorphology, as well as the ways in which human societies conceptualize the environment.

Environmental geography represents a critically important set of analytical tools for assessing the impact of human presence on the environment by measuring the result of human activity on natural landforms and cycles. Environmental geographers are familiar with how natural systems function, but they also know that humans are a dominant agent of change in nature. They realize that it is not possible to understand environmental problems without understanding the physical processes as well as the demographic, cultural, and economic processes that lead to increased resource consumption and waste. Environmental geographers fan out along a variety of academic paths, and these paths will cross, mingle, or converge with those of other disciplines.

This E-book aims to facilitate the young and budding **UPSC CSE aspirants** as well as geographers and research scholars especially in the field of geographical studies to understand the conceptual framework of the subject matter of **Environmental Geography** in a comprehensive manner.

Dr. Krishnanand



CHAPTER 1

ECOSYSTEM WORKING & FUNCTIONING

An ecosystem is a discrete **structural, functional and life sustaining** environmental system. The environmental system consists of **biotic and abiotic components in a habitat**.

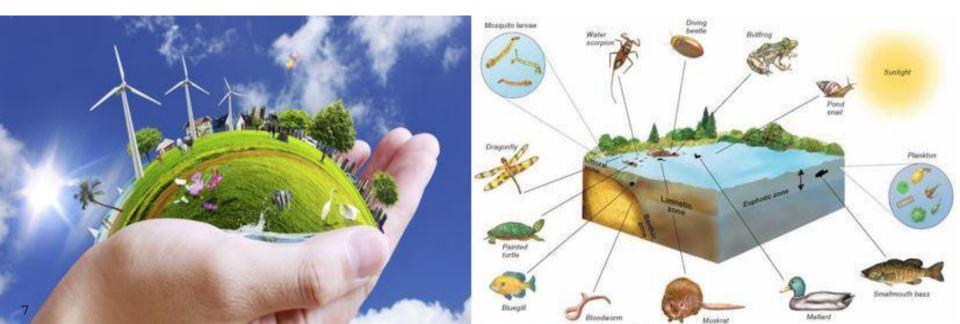
Biotic component of the ecosystem includes the living organisms; plants, animals and microbes whereas the **abiotic component** includes inorganic matter and energy.





Abiotic components **provide the matrix for the synthesis** and perpetuation of **organic components (protoplasm).**

The synthesis and perpetuation processes involve **energy exchange and this energy comes from the sun** in the form of light or solar energy.



Thus, in any ecosystem we have the following functional components:

(i) Inorganic constituents (air, water and mineral salts)

(ii) Organisms (plants, animals and microbes), and

(iii) Energy input which enters from outside (the sun).

Function of Ecosystem

