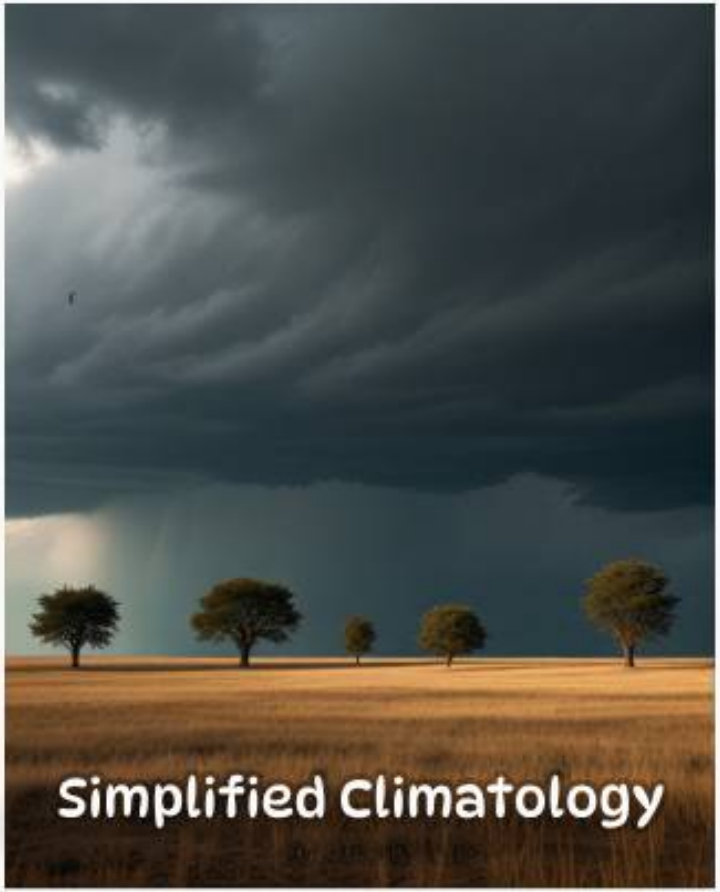
Simplified Climatology

SIMPLIFIED
CLIMATOLOGY

A COMPREHENSIVE WORK

FOR UPSC CSE

AND OTHER COMPETITIVE EXAMINATIONS

DR.KRISHNANAND

GEOGRAPHY OPTIONAL SPECIAL

The Geoecologist

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 CLIMATOLOGY along with detailed explanations available through his YouTube lectures of the same.

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PREFACE

Climatology is the scientific study of climates, which is defined as the mean weather conditions over a period of time. A branch of study within atmospheric sciences, it also takes into account the variables and averages of short-term and long-term weather conditions. Climatology is different than meteorology and can be divided into different areas of study. It can be defined as the scientific study of spatio- temporal characteristics and variation of climatic elements like rainfall, temperature, evapotranspiration, humidity, pressure, winds and air masses. The word Climatology is derived from two Greek words 'klima' and 'logia'. The klima means place or zone and logia means the study of climate. The climate is the average study of weather. The standard average periods for climatic analysis are thirty years defined by the World Meteorological organization . In Physical Geography, climatology is of immediate relevance because of its inherent interest on climate-human inter-relationships.

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 Climatology in a comprehensive manner.

Dr. Krishnanand

Chapter 1

INTRODUCTION TO CLIMATOLOGY

CLIMATOLOGY

from Greek, ***KLIMA, "slope, inclination, zone"***

The term originally denoted **a zone of the earth between two lines of latitude**, then any region of the earth, and later, **a region** considered with reference to its **atmospheric conditions**.

Climate is generally defined as ***the average state of the atmosphere for a given time scale (hour, day, month, season, year, decade and so forth) and generally for a specified geographical region.***

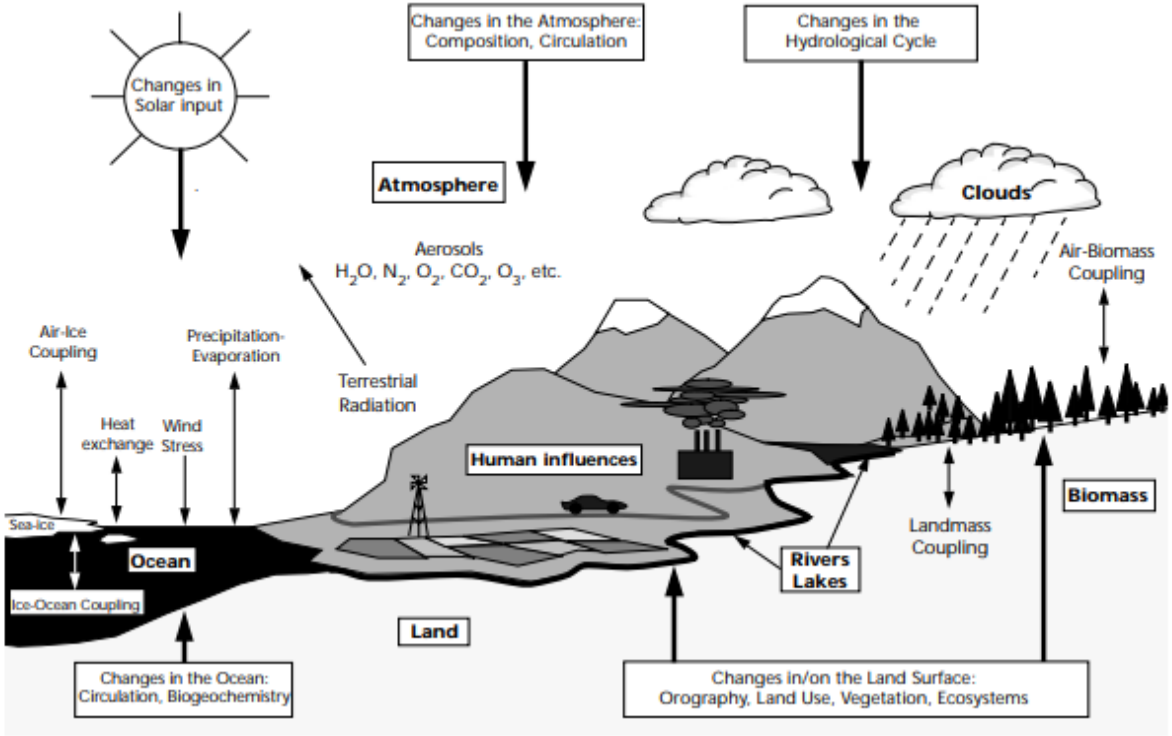
The average-state description involves a wide range of variables among which, **TEMPERATURE AND PRECIPITATION** are the most commonly used;

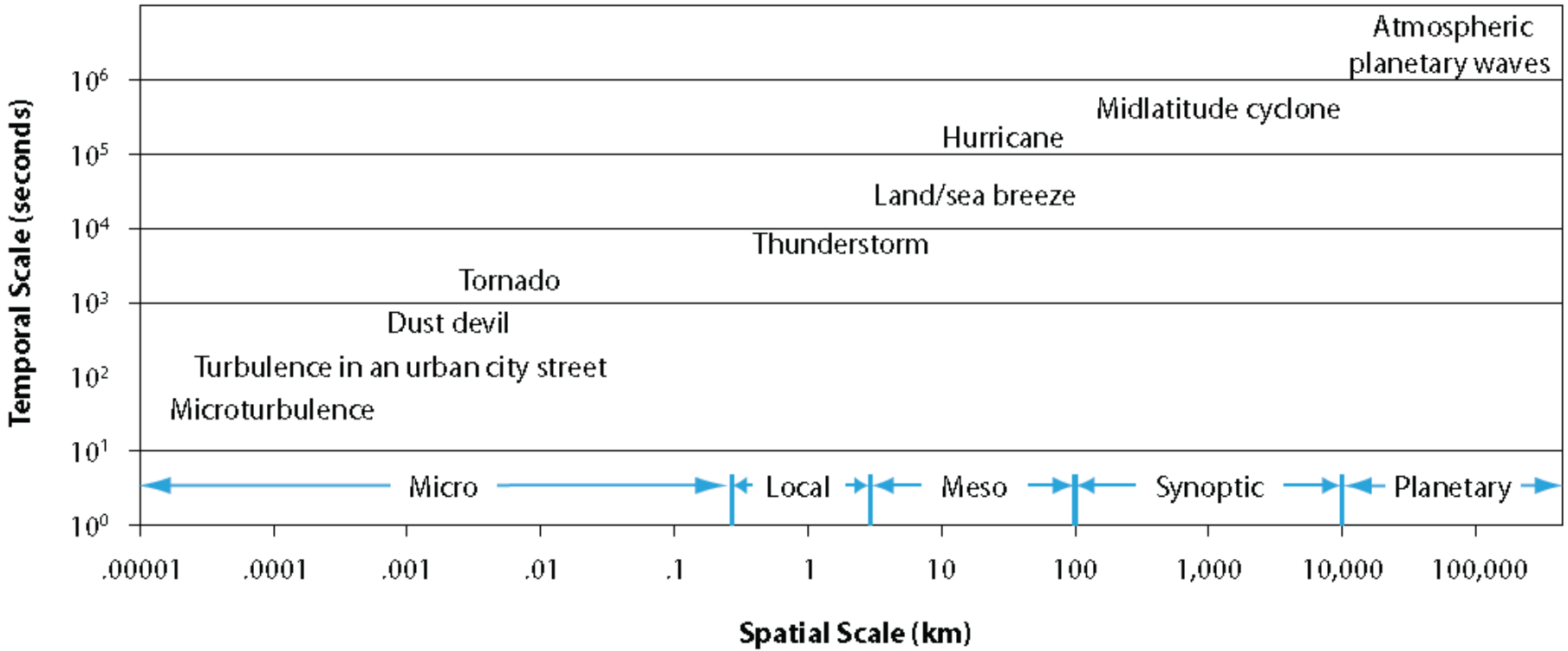
However, the list may include **wind, cloudiness and sunshine, pressure, visibility, humidity** and elements with noteworthy human impacts such as **severe storms, excessively high and low temperatures, fog, snow and hail.**

The **CLIMATE SYSTEM** is defined as the five components in the geophysical system, the atmosphere and four others which directly interact with the atmosphere and which jointly determine the climate of the atmosphere.

The five components are listed below:

(a) Atmosphere;
(b) Ocean;
(c) Land surface;
(d) Ice and snow surfaces (both land and ocean areas); and,
(e) Biosphere (both terrestrial and marine).





SCALES IN CLIMATOLOGY