

SIMPLIFIED GEOGRAPHY OF HIMACHAL PRADESH

A COMPREHENSIVE WORK

FOR
ASSISTANT PROFESSOR
AND OTHER STATE EXAMINATIONS

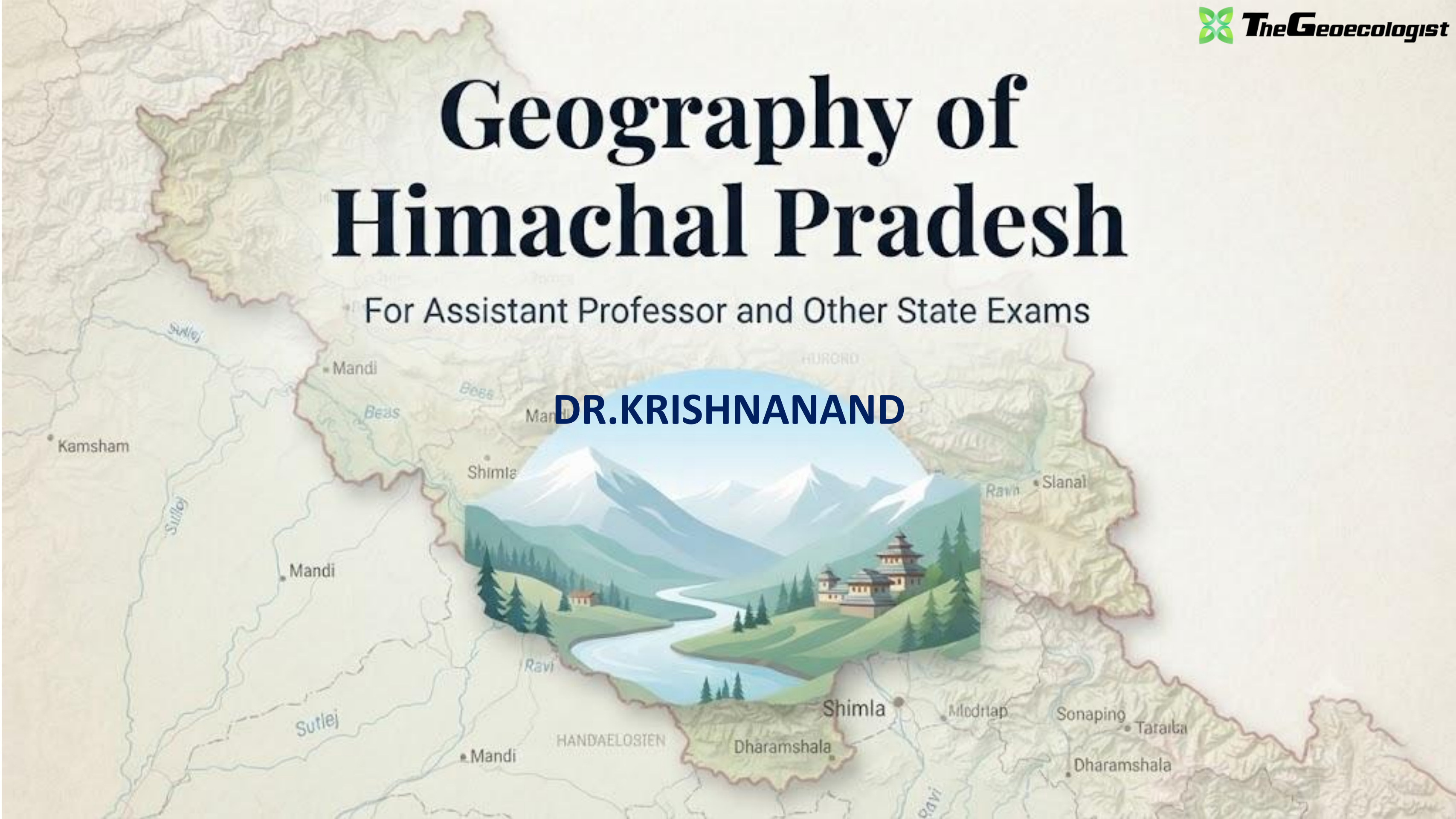
BASED ON YOUTUBE LECTURES BY
DR. KRISHNANAND



Geography of Himachal Pradesh

For Assistant Professor and Other State Exams

DR. KRISHNANAND



ABOUT THE AUTHOR

Dr. Krishnanand, Founder and Director of **TheGeoecologist**, is a proficient scholar in the field of **research and academics in Geography**. He graduated from **Shaheed Bhagat Singh College, University of Delhi**, and completed his **Ph.D. from the Department of Geography, Delhi School of Economics, University of Delhi**. He has been actively involved in teaching Geography for **UPSC, State PCS, UGC NET and other competitive examinations**.

He is an avid **field researcher and geographical photographer**, with a strong interest in understanding landscapes through a spatial and interdisciplinary perspective. His areas of academic interest include **Geomorphology, Geology, Climatology, Hydrology, Environmental Geography, Disaster Geography, Remote Sensing and GIS, Resource Geography, and Regional Geography**.

Through **TheGeoecologist**, he has developed and delivered extensive visual and concept-based Geography content, particularly focusing on making complex geographical processes easier to understand through **maps, diagrams, spatial analysis and applied examples**.

Geography of Himachal Pradesh is a visually driven compilation designed for **Assistant Professor and other state-level examinations**. The eBook presents Himachal Pradesh through an integrated geographical lens, covering its **physical geography, geomorphology, geology, drainage, climate, soils, vegetation, biodiversity, population, settlements, agriculture, industries, hydropower, infrastructure, environmental challenges and disaster vulnerability**. Its distinctive approach is the use of **maps, diagrams, spatial models and geographical synthesis** to connect physical and human processes.

This eBook is an attempt to transform the geography of Himachal Pradesh from a collection of facts into a connected spatial story; where mountains, rivers, climate, people, resources and hazards interact to shape the landscape.

TheGeoecologist



CONTENTS

- 1. PHYSIOGRAPHIC DIVISIONS & TERRITORIAL EXTENT**
- 2. GEOLOGY, TECTONIC STRUCTURE & HIMALAYAN OROGENY**
- 3. DRAINAGE SYSTEM & RIVER BASINS**
- 4. CLIMATE, PRECIPITATION & RAIN-SHADOW EFFECT**
- 5. SOILS & ALTITUDINAL SOIL ZONATION**
- 6. FORESTS & ALTITUDINAL VEGETATION**
- 7. BIODIVERSITY, NATIONAL PARKS & CONSERVATION**
- 8. GLACIERS, LAKES & CRYOSPHERIC SYSTEMS**
- 9. AGRICULTURE & APPLE ECONOMY**
- 10. MINERAL RESOURCES & INDUSTRIAL GEOGRAPHY**
- 11. HYDROPOWER POTENTIAL & HYDROELECTRIC PROJECTS**
- 12. POPULATION, SOCIAL COMPOSITION & SETTLEMENTS**
- 13. TRANSPORT, TUNNELS & STRATEGIC INFRASTRUCTURE**
- 14. ENVIRONMENTAL DEGRADATION & CLIMATE CHANGE**
- 15. NATURAL HAZARDS: EARTHQUAKES, CLOUDBURSTS, FLASH FLOODS & GLOFs**
- 16. DISASTER MANAGEMENT & INDIGENOUS ADAPTATION**
- 17. GEOPOLITICS, BORDER GEOGRAPHY & STRATEGIC PASSES**
- 18. GEODIVERSITY, GEOHERITAGE & GEOTOURISM**
- 19. REGIONAL & DISTRICT GEOGRAPHY OF HIMACHAL PRADESH**

PREFACE

Welcome to the digital realm of **Simplified Geography of Himachal Pradesh**, a comprehensive eBook designed to present the geography of Himachal Pradesh in a clear, systematic and visually engaging format. This work has been developed to transform the complex geographical character of the Himalayan state into an accessible resource for **Assistant Professor and other State-level competitive examinations**.

The eBook brings together the major dimensions of Himachal Pradesh's geography—from its **physiography, geology and drainage to climate, soils, forests, agriculture, population, industries, hydropower, infrastructure, environment and natural hazards**. The content is organized around the fundamental geographical principle that the physical landscape of Himachal Pradesh strongly influences its human and economic geography.

A distinctive feature of this book is its emphasis on **maps, diagrams, spatial models and geographical visualization**. Complex concepts such as Himalayan orogeny, thrust systems, altitudinal zonation, river basins, rain-shadow effects, settlement patterns, hydropower systems and disaster processes have been presented through visual representations to facilitate quicker understanding, revision and recall. The book repeatedly connects geographical concepts with specific landscapes and regions of Himachal Pradesh.

The book also moves beyond conventional descriptive regional geography by examining contemporary geographical challenges. **Climate change, glacier retreat, shifting apple cultivation, hydropower development, tunnel construction, flash floods, GLOFs, seismic vulnerability, carrying capacity and environmental degradation** are approached as interconnected geographical processes rather than isolated topics.

This eBook is intended not merely as a collection of facts, but as a **connected geographical narrative**. From the Trans-Himalayan cold deserts to the Shiwalik foothills, and from the high-altitude water towers to the densely populated valleys, every region reflects a distinct relationship between **relief, climate, resources, society and development**. The Regional and District Geography section further brings these relationships together at the regional scale.

It is hoped that this work will help **Assistant Professor aspirants, State PCS candidates, Geography students, researchers and all those interested in the geography of Himachal Pradesh** to develop a deeper and more spatial understanding of the state.

Geography is not merely about knowing places; it is about understanding why places are the way they are.

Dr. Krishnanand

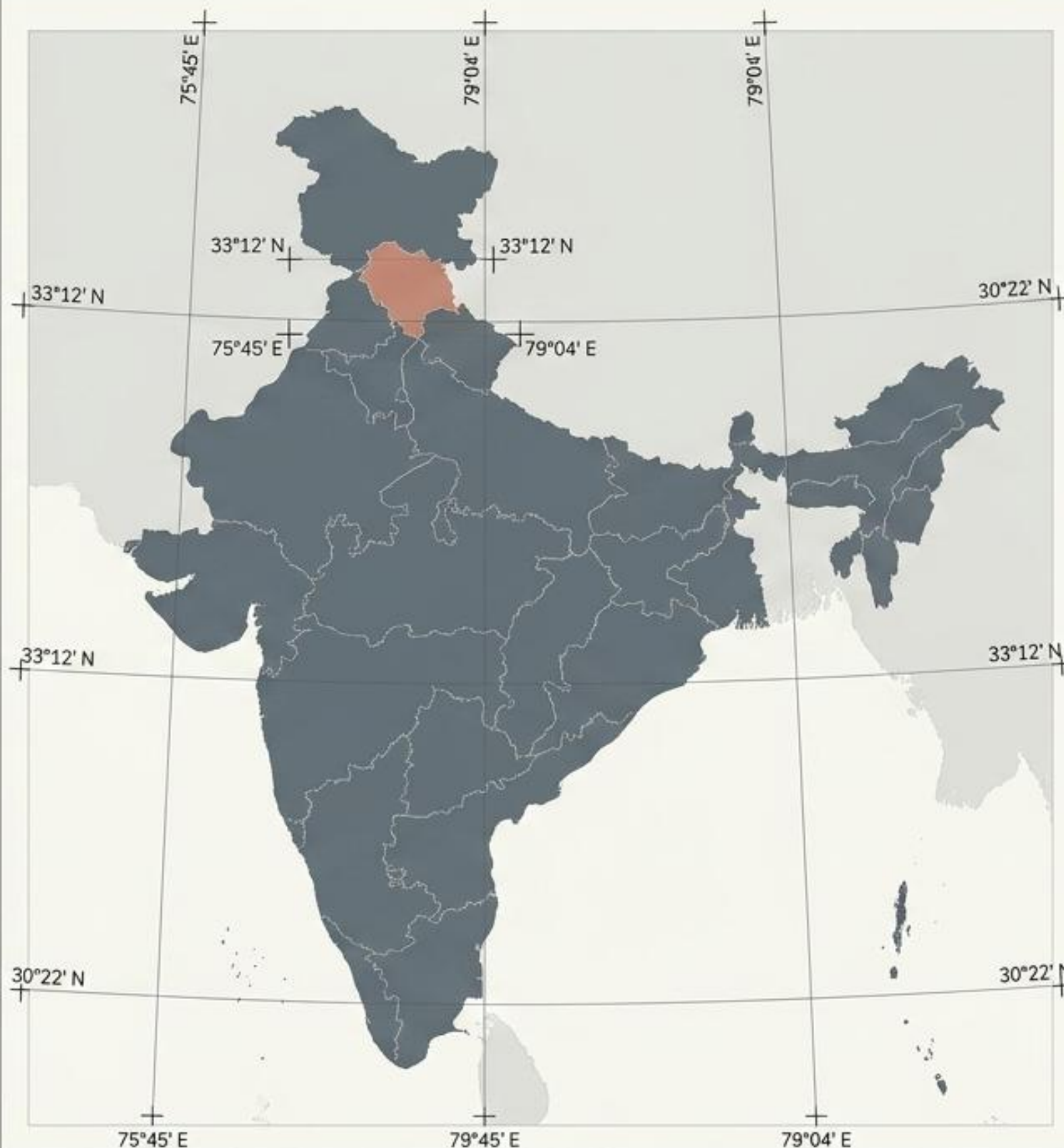
Himachal Pradesh: Geography through Maps and Diagrams

**A Spatial Analysis of
Geomorphology, Hydrology, and
Technological Resilience**



Spatial Coordinates and Territorial Extent

- Latitude: 30°22' N to 33°12' N
- Longitude: 75°45' E to 79°04' E
- Total Geographical Area: 55,673 sq km
- Elevation Range: 350m to 7,000m above mean sea level

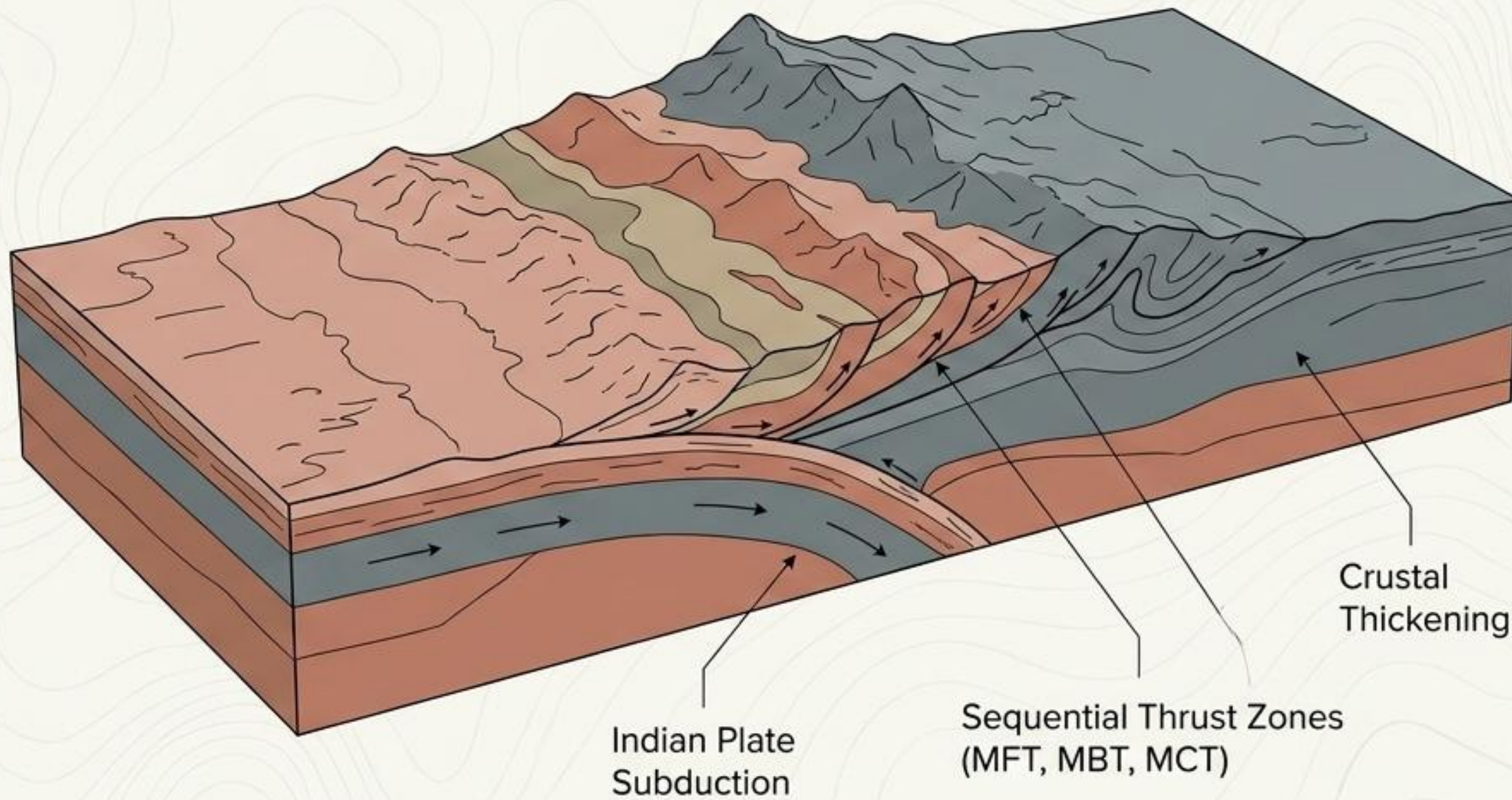


The Tectonic Matrix: Physiographic Architecture

- Sub-Himalayas
- Lesser Himalayas
- Higher Himalayas

Sub-Himalayas (Outer)	Lesser Himalayas	Higher / Tethys Himalayas
Altitude: 900–1,500m Geology: Tertiary molasse-type sediments (Sirmur & Siwalik Groups) Bounding Fault: Main Frontal Thrust (MFT)	Altitude: 1,500–5,000m Geology: Proterozoic sedimentary cycles; Alpine-type ranges Bounding Fault: Main Boundary Thrust (MBT)	Altitude: Above 5,000m Geology: Vaikrita Group, Haimanta Group; Cambrian to Eocene sequences Bounding Fault: Main Central Thrust (MCT)

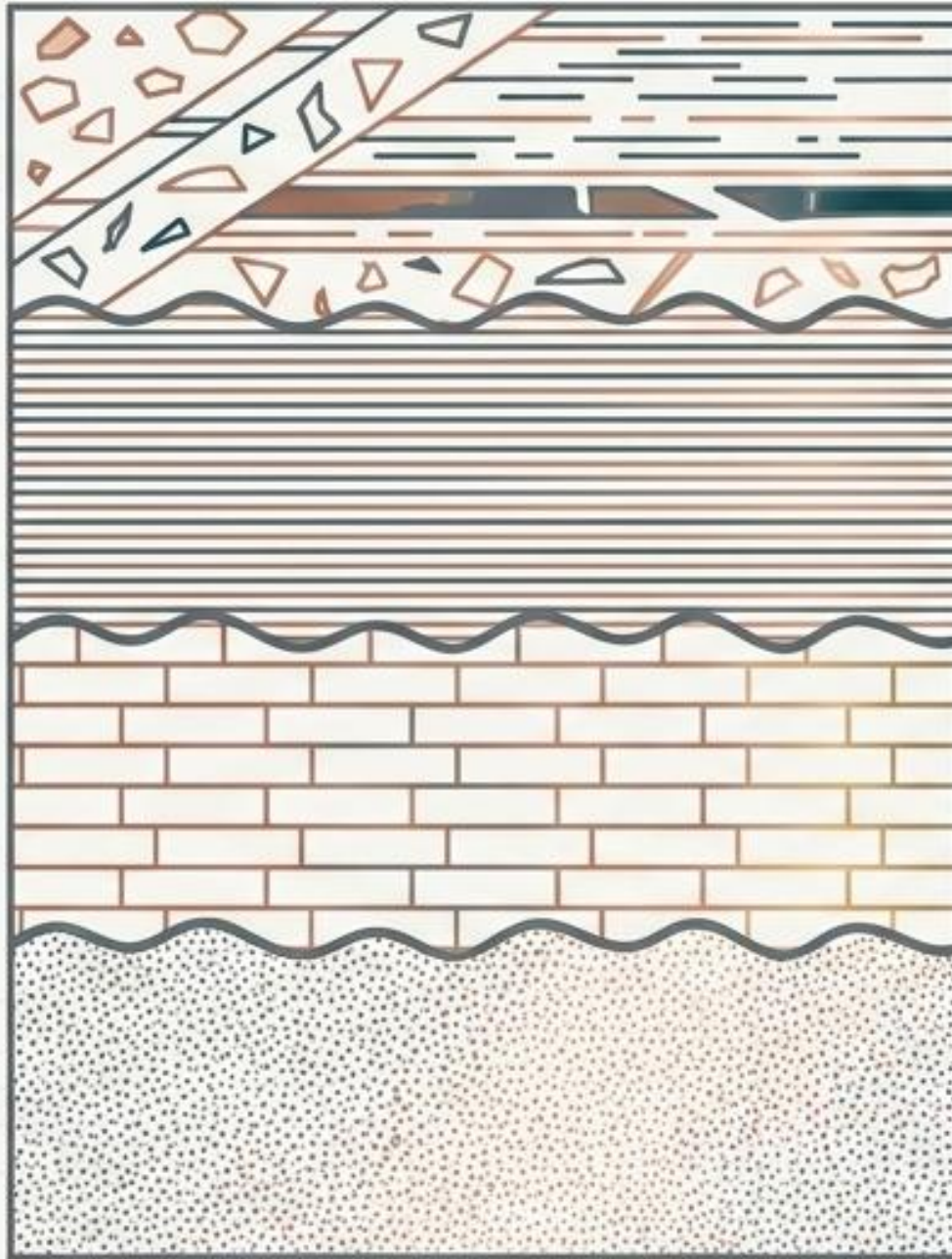
3D Orogenic Cross-Section



The collision of the Indian and Eurasian plates (starting 55 ± 2 Ma) drives the continuous tectonic uplift and altitudinal banding of Himachal Pradesh.

Functional 3D profile cross-section. Subtlenizent, and eleganted typography layat llinited for structural grid.

Proterozoic Sedimentary Megacycles (Lesser Himalayas)



Cycle 4: Blaini-Krol-Tal (~700 Ma to Cambrian)
- Diamictite horizons, black shales, carbonates.

Cycle 3: Simla (900-700 Ma) - Shales,
greywackes, ending with Nagthat redbeds.

Cycle 2: Shali / Larji (1400-900 Ma)
- Dolomitic and calcareous stromatolites.

Cycle 1: Rampur-Berinag (~1800 Ma)
- Ortho-quartzites, slates, basic volcanics.