

Geographical, Climatic and Vegetation Diversity in the Himalayas

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Abstract

The Himalayas have been a destination for geologists, plant researchers, and explorers for centuries. It also is the abode of significant religious beliefs of people of India, China, Nepal and Bhutan. While its geographical spread is magnificent, there is an enormous amount of vegetation diversity in the mountain range that varies according to the climate and other surrounding factors.

Objective of this Study

This dissertation describes the geographical, climatic and vegetative variations in detail and provides geographical views of the Himalayan Range

Research Methodology

This study is conducted as desk research with collation of views of experts by referring to secondary data in printed and electronic forms

Introduction

The Himalayas is a young mountain range that is spread across 1500 miles from Afghanistan to China and is geographically distributed in three ranges i.e. greater, outer and lesser Himalayas. The Greater Himalayas have an average elevation of 20,000 feet and contain the highest peaks in the world, including Mt. Everest. The Himalayas basically are on the fault line that was created after Indian and Eurasian continental plates those collided approximately 55 million years ago. As Indian plate is still moving into the Eurasian, it is causing the Himalayas to grow annually by an average of 2.4 inches.

Geography

Himalaya Ranges

The Himalayas, as mentioned above are distributed in three parallel ranges viz.

Greater Himalayas

The Greater Himalayas contain highest mountain range of the Himalayas including Mt. Everest and is spread from Pakistan to China, running through India and Nepal in length of approximately 1400 miles. This range contains glaciers and the sources of prominent rivers viz. Indus, Ganges, Yamuna, Brahmaputra and Yangtze are in Greater Himalayas



Outer Himalayas

Also known as Shivalik range and primarily runs on North to North Eastern Indian subcontinent and is approximately 1000 miles long with the average elevation of 3,000 to 4,000 feet. In few versions, Shivalik range is also considered to include the Assamese part of Himalayan foothill that is spread 400 miles further eastward



Lesser Himalayas

The Lesser Himalayas range is spread over 1500 miles with varying height from 12,000 to 15,000 feet and is the main inhabited part of the Himalayan range and shows significant ethnic variation across the mountain range



Climate in the Himalayas

Himalayas act as natural border protecting India from northern cold winds and bars monsoon winds those eventually cause rain falls in India. The Himalayas significantly vary in temperatures from subtropical to freezing cold weather on higher altitudes. Himalayas exhibit higher rainfall on eastern part and have a drier west. The degree Celsius temperature according to altitude and precipitation varies from subzero to high-thirties. The moderate winter and high summer precipitations result in snowfall and rains respectively. The south west monsoon raises the moisture levels and its condensation then results in rain or snow. The monsoon remains active until September, followed by calm and stable weather until December before the winters beginning

Vegetation

According to precipitation and altitude, the vegetation of Himalayan range varies from coniferous forests to alpine grasslands and meadows. The tropical forests of Himalayas can be largely classified in a tropical rainforest in high rain areas mainly in the eastern part and tropical deciduous in lower slope ranges. The variation of sunlight causes extremely taller trees and are the natural source of resins and timber in the tropical areas. *Pinus roxburghii* (Chir Pine) is the most common tree in the Shivalik range. *Cedrus*

deodara (Deodar Cedar) is a common and highly valued species in the western range. There are other varieties of conifers found in the range of pine variations and spruce being most common. In the alpine zone of 10,500 to 11,700 feet in central ranges, Juniper and Rhododendron are commonly found in sunny areas whereas mosses and lichens are prevalent in lower shady alpine areas.

The Himalayas also hosts the valley of flowers, located in Uttarakhand, India is a UNESCO controlled heritage site and hosts many rare or endangered flower species and has been a prominent information source for plant researchers. This valley is at the altitude between 3350 to 3650 meters above sea level and is actually a transition zone between greater Himalayas and Shivalik

Though due to natural restrictions, the agriculture in Himalayan mountains does not produce massive outputs, the local farmers yield rice and pulses as primary crops for their staple diet. In addition, fruits, herbs and shrubs are naturally produced in abundance due to the supporting climatic conditions.

References

Websites:

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2. <https://en.wikipedia.org/>