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Location and Extent of Kerala

Kerala, a southwestern state in India, is renowned for its natural beauty, diverse culture, and rich history. Nestled between the Arabian Sea to the west and the Western Ghats to the east, Kerala enjoys a unique geographic location that has contributed to its distinct culture and thriving biodiversity. This article provides a detailed and in-depth exploration of the location

and extent of Kerala, shedding light on its geographical significance, boundaries, and regional features.

1. Geographical Location of Kerala

Kerala is located in the southernmost part of the Indian subcontinent. It is situated between **8°18' and 12°48' North Latitude** and **74°52' and 77°24' East Longitude**. This location places Kerala along the Malabar Coast, which stretches for over 500 kilometers from the north to the south of the state. The state is bordered by **Karnataka** to the north, **Tamil Nadu** to the east, and the **Arabian Sea** to the west.

1.1 Proximity to Major Geographical Features

Kerala's position gives it strategic access to several important geographical features:

- **Arabian Sea:** The state's western coastline faces the Arabian Sea, which has played a key role in Kerala's maritime trade and cultural exchanges throughout history.
- **Western Ghats:** The towering Western Ghats form the eastern boundary of Kerala, contributing to the state's rich biodiversity and influencing its climate patterns.
- **Tropical Location:** Situated close to the equator, Kerala experiences a tropical climate, characterized by high humidity and a monsoonal rainfall system.

2. Boundaries of Kerala

Kerala's geographical boundaries are well-defined and contribute significantly to the state's distinct identity. The borders of Kerala can be divided into **coastal boundaries** and **land boundaries**.

2.1 Coastal Boundaries

Kerala has a long coastline along the Arabian Sea, stretching approximately 590 kilometers. This coastline is dotted with beaches, lagoons, and backwaters, making it a popular destination for tourists. The western coastal belt also houses major ports like **Kochi**, **Thiruvananthapuram**, and **Alappuzha**, which have historically been key to Kerala's trade and cultural exchange with other parts of the world.

2.2 Land Boundaries

- **North:** To the north, Kerala shares its border with **Karnataka**. The state boundary extends from the western coastal region up to the **Wayanad** plateau, where the Western Ghats form a natural divide.
- **East:** To the east, Kerala is bordered by **Tamil Nadu**. The boundary stretches along the Eastern foothills of the Western Ghats, where forests and wildlife sanctuaries dominate the landscape.
- **South:** In the south, Kerala is bounded by the state of **Tamil Nadu**. The southernmost point of Kerala is at **Kanyakumari**, where the three seas—the **Bay of Bengal**, **Arabian Sea**, and **Indian Ocean**—meet.
- **West:** The western border of Kerala is the Arabian Sea, which plays a vital role in shaping the state's economy and culture.

3. Physical Extent of Kerala

Kerala's geographical extent refers to its total area and the variation in its topography. The state covers an area of about **38,863 square kilometers**, making it one of the smaller states in India by land area. Despite its small size, Kerala is characterized by a diverse landscape that includes coastal plains, hill ranges, valleys, and plateau regions.

3.1 Length and Breadth

- **Length:** The state extends for about **600 kilometers** from its northernmost to its southernmost point, i.e., from **Kasargod** in the north to **Kanyakumari** in the south.
- **Breadth:** The breadth of Kerala varies significantly, ranging from a narrow width of **50 kilometers** in some parts to over **120 kilometers** in others. The state is narrowest in the central region near **Alappuzha** and broadens as it stretches southward.

4. Topographical Features of Kerala

Kerala's geography is dominated by three distinct physical divisions: **the coastal belt**, **the midland region**, and **the highland region**.

4.1 Coastal Belt

The coastal region of Kerala, known for its scenic beauty, stretches for about 590 kilometers along the Arabian Sea. This region is marked by sandy beaches, tidal estuaries, and **backwaters**. The coast is rich in biodiversity, with **mangrove forests** and saltwater ecosystems. This coastal belt also has numerous lagoons and freshwater lakes, such as **Vembanadu Lake** and **Punnappra-Vayalar Lake**, which have shaped the livelihoods and cultural practices of the people.

4.2 Midland Region

The midland region of Kerala lies between the coastal plains and the Western Ghats. This region is characterized by **rivers**, **fertile plains**, and **agricultural fields**. The **hilly terrains** here provide a gradual slope from the Ghats to the coastal plains, offering a diverse range of flora and fauna. **Rubber plantations**, **coconut groves**, and **spice gardens** dominate the landscape of this region.

4.3 Highland Region

The highland region of Kerala is dominated by the **Western Ghats**, which rise steeply to form the eastern boundary of the state. These mountains reach an elevation of **2,695 meters** at **Anamudi**, the highest peak in Kerala and South India. The Western Ghats are home to a number of **hill stations**, including **Munnar**, **Wayanad**, and **Thekkady**, famous for their tea, coffee plantations, and rich biodiversity. The Western Ghats are also classified as a UNESCO World Heritage Site for their significant role in biodiversity conservation.

5. Rivers of Kerala

Kerala is home to several important rivers, most of which originate in the Western Ghats and flow westward into the Arabian Sea. The **Nila (Bharathapuzha)**, **Periyar**, **Pamba**, **Mullayar**, and **Chaliyar** are some of the major rivers that serve as vital sources of irrigation, drinking water, and hydroelectric power.

5.1 River Basin Locations

- The **Nila** river basin in the central region is one of the largest, flowing through districts like **Palakkad** and **Thrissur**.
- The **Periyar** river basin is located in the southern part of the state, flowing through **Ernakulam** and **Idukki**.
- The **Pamba** river basin is located in the **Pathanamthitta** district, famous for its pilgrimage site at **Sabarimala**.

6. Climate and Vegetation

Kerala enjoys a tropical climate, with high humidity and distinct wet and dry seasons. The state experiences heavy monsoonal rains, especially during the **southwest monsoon** from **June to September**. This climatic condition supports a rich **tropical rainforest vegetation**, which thrives in the hilly areas and forests of the Western Ghats. Kerala is home to a variety of ecosystems, ranging from **tropical rainforests** in the Western Ghats to **mangrove swamps** along the coast.

Physiography of Kerala

Kerala, a state nestled in the southwestern corner of India, is renowned for its lush greenery, serene backwaters, and rich biodiversity. This picturesque landscape is a direct result of the state's unique physiography, which encompasses a fascinating array of landforms.

1. Introduction

Kerala's physiography is characterized by three distinct regions:

- **Highlands:** The easternmost region, dominated by the Western Ghats mountain range.
- **Midlands:** A transitional zone between the highlands and lowlands, with rolling hills and valleys.
- **Lowlands:** The westernmost region, comprising the coastal plains and backwaters.

This varied topography significantly influences Kerala's climate, soil types, and consequently, its agricultural practices and overall economy.

2. Highlands

The highlands, situated at an elevation of over 75 meters above sea level, form the backbone of Kerala's physiography. This region is characterized by:

- **Mountain Ranges:** The Western Ghats, a UNESCO World Heritage Site, dominate the landscape with their towering peaks, deep gorges, and cascading waterfalls. Some notable peaks include Anamudi (highest peak in South India), Meesapulimala, and Agasthyamalai.
- **Forests:** These mountains are cloaked in dense tropical rainforests, home to a rich diversity of flora and fauna. These forests play a crucial role in regulating the state's climate and water resources.
- **Plantations:** The fertile slopes of the highlands are ideal for the cultivation of tea, coffee, cardamom, pepper, and other spices. These plantations contribute significantly to Kerala's economy.

3. Midlands

Lying between 7.5 meters and 75 meters above sea level, the midlands act as a transition zone between the highlands and lowlands. This region is characterized by:

- **Rolling Hills:** The terrain is less rugged than the highlands, with gentler slopes and wider valleys.
- **Laterite Soil:** The predominant soil type is laterite, which is rich in iron and aluminum. This soil supports a variety of crops, including rubber, tapioca, and vegetables.
- **Rivers and Streams:** Numerous rivers and streams originate in the highlands and flow through the midlands, providing water for irrigation and other purposes.

4. Lowlands

The lowlands, situated below 7.5 meters above sea level, are the most densely populated region of Kerala. This region is characterized by:

- **Coastal Plains:** The plains extend along the Arabian Sea coastline, forming a narrow strip of land.
- **Backwaters:** A network of interconnected lagoons, lakes, and canals parallel to the coastline. These backwaters are a unique feature of Kerala's physiography and support a thriving fishing industry and tourism sector.
- **Alluvial Soil:** The fertile alluvial soil deposited by rivers is ideal for paddy cultivation and coconut groves.
- **Beaches:** Kerala's coastline is dotted with pristine beaches, attracting tourists from around the world.

5. Influence on Climate and Agriculture

Kerala's diverse physiography plays a significant role in shaping its climate and agricultural practices.

- **Climate:** The highlands experience a cool and wet climate, while the lowlands have a warm and humid climate. The Western Ghats intercept the monsoon winds, resulting in heavy rainfall in the highlands and moderate rainfall in the lowlands.