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Location and Extent of Rajasthan

Rajasthan, the largest state of India in terms of area, is renowned for its vast desert landscapes, historic forts, and vibrant cultural heritage. Situated in the northwestern part of the Indian subcontinent, Rajasthan's geographical location and extent play a pivotal role in shaping its climate, resources, and lifestyle.

Geographical Location

1. **Latitudinal and Longitudinal Coordinates**
   Rajasthan lies between **23°3'N to 30°12'N latitude** and **69°30'E to 78°17'E longitude**. These coordinates place the state predominantly in the **tropical and subtropical zones**, influencing its climate and vegetation.
2. **Neighboring States**
   Rajasthan shares its boundaries with **five Indian states**:
   - **Punjab** to the north.
   - **Haryana and Uttar Pradesh** to the northeast.
   - **Madhya Pradesh** to the southeast.
   - **Gujarat** to the southwest.
3. **International Boundary**
   Rajasthan shares an **international border of approximately 1,070 kilometers** with **Pakistan** along the western and northwestern frontiers. The Thar Desert forms a significant part of this boundary.
4. **Area Coverage**
   Rajasthan covers an area of **342,239 square kilometers**, accounting for approximately **10.4% of India's total geographical area**.

Extent and Physical Features

1. **Thar Desert**
   - **Extent**: The Thar Desert, also known as the Great Indian Desert, spans the western part of Rajasthan, covering nearly **60% of the state's total area**.
   - **Characteristics**: This region is characterized by arid conditions, shifting sand dunes, and sparse vegetation.

2. **Aravalli Range**
    - **Extent**: Stretching diagonally across the state, the Aravalli Range is one of the oldest mountain systems in the world, running from **northwest to southeast**.
    - **Significance**: It acts as a climatic divide, separating the arid regions of the west from the relatively fertile plains in the east.
3. **Plains and Plateaus**
    - The **eastern Rajasthan plains** and the **Hadoti plateau** are more fertile, benefiting from rivers like Chambal, Banas, and Mahi.
4. **Salt Lakes and Marshes**
    - **Sambhar Lake**, India's largest inland saltwater lake, is located near Jaipur.
    - The **Rann of Kutch** extends into the southwestern fringes of Rajasthan.

Climatic and Ecological Impacts

1. **Climate Zones**
   Rajasthan exhibits a diverse climate, largely determined by its location and geographical extent:
    - **Arid Zone**: Western Rajasthan, including districts like Jaisalmer and Barmer.
    - **Semi-Arid Zone**: Central regions such as Ajmer and Jaipur.
    - **Humid Zone**: Southeastern areas, including Kota and Udaipur.
2. **Natural Vegetation**
    - The western desert regions have sparse vegetation like cacti, kikar, and babul.
    - The Aravalli Range and eastern plains support deciduous forests.
3. **Biodiversity Hotspots**
    - Protected areas like **Ranthambore National Park**, **Keoladeo National Park**, and **Desert National Park** showcase the unique flora and fauna of Rajasthan.

Geopolitical and Strategic Importance

1. **International Border**
    - Rajasthan's location along the Pakistan border makes it strategically significant for India’s defense.
    - Key border towns include **Jaisalmer**, **Barmer**, and **Sri Ganganagar**.
2. **Connectivity**
    - The state serves as a gateway to the **western and northern states of India**, with national highways and railway networks enhancing trade and transport.
3. **Cultural Confluence**
    - Rajasthan’s location has historically made it a hub of cultural exchanges, evident in its diverse traditions, architecture, and cuisines.

Socio-Economic Significance

1. **Tourism Hub**
   Rajasthan’s location amidst diverse landscapes has made it a favorite tourist destination, attracting millions annually. Key attractions include **Jaipur**, **Udaipur**, **Jaisalmer**, and **Mount Abu**.

2. **Agriculture and Livelihood**
    - The eastern plains support agriculture due to better water availability.
    - Livestock rearing is common in arid and semi-arid zones.
3. **Mineral Resources**
    - Rajasthan is rich in minerals like marble, granite, and zinc, leveraging its geological diversity.

Challenges Due to Location and Extent

1. **Water Scarcity**
    - The arid climate and limited rainfall result in frequent droughts.
    - Over-dependence on groundwater and inter-state river disputes aggravate the issue.
2. **Desertification**
    - The Thar Desert continues to expand, posing challenges to agriculture and habitation.
3. **Cross-Border Tensions**
    - Proximity to Pakistan often leads to geopolitical and security challenges.

Developmental Initiatives

1. **Desert Development Programme**
   Aimed at mitigating desertification and promoting sustainable livelihoods.
2. **Indira Gandhi Canal**
    - Brings water from the Sutlej and Beas rivers to the arid regions of Rajasthan.
    - Facilitates agriculture and reduces dependency on rainwater.
3. **Tourism Promotion**
    - Emphasis on eco-tourism and heritage tourism to leverage its geographical and cultural assets.

Physiographic Divisions of Rajasthan

Rajasthan, the largest state in India, boasts a diverse landscape encompassing arid deserts, rugged mountains, and fertile plains. This varied topography is a result of complex geological processes that have shaped the region over millions of years. Understanding the physiographic divisions of Rajasthan is crucial for comprehending its climate, biodiversity, and human geography.

1. Western Sandy Plains:

This region, forming a significant portion of the Thar Desert, is characterized by vast stretches of sand dunes, arid climate, and sparse vegetation. It can be further divided into two sub-regions:

- **Sandy Arid Plains:**

    - **Marusthali:** This is the core of the Thar Desert, with shifting sand dunes, extreme temperatures, and very low rainfall.
    - **Dune-free Tract:** Located on the fringes of the Marusthali, this area has relatively stable sand dunes and slightly higher rainfall, supporting some agriculture and pastoralism.
- **Semi-Arid Transitional Plains (Rajasthan Bagar):**
    - **Luni Basin (Godwar Tract):** This region is drained by the Luni River and its tributaries. It has a more moderate climate and supports agriculture and livestock rearing.
    - **Plain of Interior Drainage (Shekhawati Tract):** Characterized by internal drainage, this area has saline depressions and seasonal lakes.

2. Aravalli Range and Hilly Region:

The Aravalli Range, one of the oldest mountain systems in the world, bisects Rajasthan from southwest to northeast. It acts as a natural divide between the arid western plains and the semi-arid eastern plains.

- **Aravalli Range and Bhorat Plateau:** The Aravalli Range comprises several hills and plateaus, including the Guru Shikhar, the highest peak in Rajasthan. The Bhorat Plateau is a dissected upland region with fertile valleys.
- **Northeastern Hilly Region:** This region comprises the Alwar hills and other isolated hills, known for their scenic beauty and historical significance.

3. Eastern Plains:

This region, lying to the east of the Aravalli Range, is characterized by fertile alluvial soils, a network of rivers, and a more humid climate. It is further divided into:

- **Banas Basin:** Drained by the Banas River, a tributary of the Chambal, this area is known for its agricultural productivity.
- **Chambal Basin:** This region is characterized by ravines and fertile valleys, supporting agriculture and wildlife.
- **Chappan Plains:** Located in the southeastern part of the eastern plains, this area is known for its flat topography and fertile black soils.

4. Southeastern Rajasthan Pathar (Hadoti Plateau):

This region, located in the southeastern part of Rajasthan, is a plateau formed by the Deccan Traps and Vindhyan Scarplands. It is characterized by undulating terrain, fertile black soils, and a network of rivers.

- **Vindhyan Scarpland:** This forms the northwestern edge of the Hadoti Plateau, with a steep escarpment overlooking the Chambal Valley.
- **Deccan Lava Plateau:** This forms the core of the Hadoti Plateau, with fertile black soils suitable for agriculture.

Significance of Physiographic Divisions: