Location and Boundaries of Meghalaya 1
Physiographic Divisions of Meghalaya 4
Climate of Meghalaya 5
Rainfall Distribution in Meghalaya 8
Drainage System of Meghalaya 10
Rivers of Meghalaya 13
Soil Types in Meghalaya 15
Natural Vegetation of Meghalaya 18
Biodiversity of Meghalaya 20
Wildlife Sanctuaries in Meghalaya 24
National Parks in Meghalaya 26
Forest Cover and Management in Meghalaya 29
Agricultural Practices in Meghalaya 31
Major Crops of Meghalaya 34
Plantation Agriculture in Meghalaya 36
Mineral Resources of Meghalaya 39
Mining Activities in Meghalaya 41
Hydro Power Potential of Meghalaya 44
Water Resources in Meghalaya 46
Transport and Communication Infrastructure in Meghalaya 50
Rural and Urban Settlements in Meghalaya 51
Population Distribution in Meghalaya 54
Demographic Features of Meghalaya 56
Land Use Patterns in Meghalaya 60
Environmental Issues in Meghalaya 61
Soil Erosion and Conservation in Meghalaya 66
Flood and Landslide Vulnerability in Meghalaya 67
Role of Geography in Economic Development of Meghalaya 70
Eco-tourism Potential in Meghalaya 72
Sustainable Development Initiatives in Meghalaya 75

Location and Boundaries of Meghalaya

Meghalaya, often referred to as the "Abode of Clouds," is one of India's most picturesque states, nestled in the northeastern region of the country. The state is renowned for its breathtaking landscapes, abundant biodiversity, and unique cultural heritage. This article

provides an in-depth look at the geographical location, boundaries, and significance of Meghalaya's positioning within India and the larger South Asian region.

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1. Geographical Location

Meghalaya is located in the northeastern part of India, forming a vital link between the Himalayan region and the plains of the Indian subcontinent. The state lies between **25°02' N to 26°07' N latitude** and **89°49' E to 92°50' E longitude**.

- **Area:** Approximately 22,429 square kilometers, making it one of the smaller states in India.
- **Altitude:** The state features varying elevations, with the Shillong Plateau dominating its topography. The average elevation ranges from **150 meters in the valleys to about 1,961 meters above sea level**, with Shillong Peak being the highest point.

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2. Boundaries

Meghalaya shares its borders with two Indian states and an international neighbor:

1. **North and East: Assam**
    - Meghalaya shares a **443-kilometer-long boundary** with Assam. This boundary is crucial for Meghalaya’s access to trade, transportation, and communication networks with the rest of India.
    - Key districts of Assam adjacent to Meghalaya include Kamrup, Goalpara, and Dima Hasao.
2. **South and West: Bangladesh**
    - The international boundary with Bangladesh extends for approximately **443 kilometers**. This border is demarcated by natural features such as rivers and hills.
    - The border passes through Meghalaya’s Garo Hills, Khasi Hills, and Jaintia Hills regions, making the state a gateway for potential transnational trade and cultural exchange with Bangladesh.

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3. Physiographic Significance

Meghalaya's geographical location places it strategically between the Brahmaputra Valley in the north and the Bangladesh plains in the south. Its physiographic features include:

- **Shillong Plateau:** A prominent geological structure, also known as the Meghalaya Plateau, formed by Precambrian rocks. The plateau acts as a natural water divide and influences the state's climate and hydrology.
- **Rivers:** Major rivers like the Umngot, Simsang, and Jadukata originate in the state, flowing either towards the Brahmaputra or Bangladesh.

- **Cherrapunji and Mawsynram:** Located on the southern slopes of the Khasi Hills, these areas are recognized as some of the wettest places on Earth, influenced by their proximity to the Bay of Bengal.

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4. Importance of Boundaries

a. Economic Significance

- **Trade with Bangladesh:** Meghalaya's border with Bangladesh facilitates trade in commodities such as limestone, coal, and agricultural products. Border haats (markets) promote local trade and cultural exchange.
- **Connectivity with Assam:** The boundary with Assam provides access to major railway and road networks, linking Meghalaya with India's mainland and other northeastern states.

b. Strategic and Political Importance

- The proximity to Bangladesh makes Meghalaya geopolitically significant. Cross-border cooperation is essential for addressing challenges like illegal immigration, smuggling, and border security.
- Meghalaya’s location as a buffer between the Brahmaputra Valley and Bangladesh ensures its relevance in regional politics and security.

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5. Neighboring States and Regions

- **Assam:** As a northeastern hub, Assam provides Meghalaya with logistical support and economic opportunities. The proximity to Guwahati, a major urban center, benefits Meghalaya’s development.
- **Bangladesh:** The low-lying plains of Bangladesh contrast sharply with Meghalaya’s hilly terrain, creating unique ecological and hydrological interactions. Shared rivers like the Simsang and Umngot play a critical role in fostering bilateral relations.

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6. Climatic Influence of Location

Meghalaya’s location plays a pivotal role in shaping its subtropical climate:

- **Monsoonal Impact:** The Bay of Bengal's monsoonal winds are intercepted by Meghalaya’s hills, resulting in heavy rainfall, especially in the southern slopes.
- **Temperature Variations:** The altitudinal range causes temperature variations, with cooler climates in the higher altitudes like Shillong and warmer conditions in the valleys.

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7. Challenges Associated with Boundaries

- **Border Disputes with Assam:** Historical disputes over the demarcation of boundaries with Assam have led to occasional conflicts. Resolving these disputes is critical for maintaining regional harmony.
- **Illegal Immigration:** The porous border with Bangladesh makes Meghalaya vulnerable to illegal immigration, impacting the state's socio-economic dynamics.
- **Smuggling and Security:** Smuggling of goods like cattle and narcotics poses a challenge for border security forces. Enhanced surveillance and cooperation with Bangladesh are required.

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8. Role in Regional Integration

Meghalaya's location allows it to act as a bridge between South Asia and Southeast Asia:

- **Act East Policy:** The state plays a role in India's Act East Policy, aimed at enhancing connectivity with ASEAN countries.
- **Cultural Exchange:** The location fosters cultural interactions between indigenous tribes of Meghalaya and ethnic groups in Bangladesh.

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9. Future Prospects

- **Border Infrastructure Development:** Strengthening road and rail links along the Assam-Meghalaya border and with Bangladesh will enhance economic integration.
- **Eco-Tourism:** The state's natural beauty and unique biodiversity make it an attractive destination for eco-tourism, leveraging its location.
- **Regional Cooperation:** Initiatives like BBIN (Bangladesh, Bhutan, India, Nepal) and other cross-border projects can further Meghalaya's economic growth.

Physiographic Divisions of Meghalaya

Meghalaya, aptly named "The Abode of the Clouds", is a state in Northeast India characterized by its diverse and complex physiography. The state is predominantly a plateau, deeply dissected by rivers and streams, resulting in a landscape of dramatic relief. This article provides an in-depth look at the physiographic divisions of Meghalaya, exploring their unique characteristics and significance.

Broad Physiographic Regions

Meghalaya can be broadly divided into two main physiographic regions:

1. **The Garo Hills:** Occupying the western part of the state, the Garo Hills are generally lower in elevation than the Khasi-Jaintia Hills. They are characterized by a series of

parallel ridges and valleys running in a north-south direction. Nokrek Peak, the highest point in the Garo Hills, rises to an elevation of 1,412 meters. The region is known for its dense forests, rich biodiversity, and unique cultural heritage.

2. **The Khasi-Jaintia Hills:** Located in the central and eastern parts of the state, the Khasi-Jaintia Hills are higher in elevation and more rugged than the Garo Hills. Shillong Peak, the highest point in Meghalaya, stands tall at 1,965 meters in this region. The Khasi-Jaintia Hills are further divided into distinct zones:
    - **Northern Undulating Hills:** This zone comprises the northern part of the Khasi Hills, with elevations ranging from 170 to 820 meters. The hills gradually merge with the Brahmaputra Valley in the north.
    - **Central Upland Zone:** Forming the core of the Meghalaya plateau, this zone has elevations ranging from 1,500 to 2,083 meters. It is characterized by rolling uplands, deep gorges, and river valleys.
    - **Southern Plateau:** This zone is characterized by a plateau surface that slopes gently towards the south. It is marked by numerous waterfalls and caves, making it a popular tourist destination.

Geological Significance

The physiography of Meghalaya is closely linked to its geological history. The state is part of the Indian Peninsular Plateau, formed of ancient Precambrian rocks. These rocks have been subjected to various tectonic forces and erosional processes over millions of years, leading to the formation of the present-day landscape. The presence of limestone and sandstone formations has resulted in the development of karst topography, characterized by caves, sinkholes, and underground rivers.

Impact on Climate and Biodiversity

The physiography of Meghalaya plays a crucial role in shaping its climate and biodiversity. The elevation and orientation of the hills influence rainfall patterns, creating a unique microclimate. The central plateau receives the highest rainfall, while the northern and southern slopes experience a drier climate. This variation in climate supports a wide range of flora and fauna, making Meghalaya a biodiversity hotspot.

Human-Environment Interaction

The people of Meghalaya have adapted to the challenging terrain and unique environment. Traditional agricultural practices, such as shifting cultivation, have been shaped by the physiography. The steep slopes and abundant rainfall have also led to the development of unique water management systems. However, human activities, such as deforestation and mining, have also impacted the fragile ecosystem.

Climate of Meghalaya

Meghalaya, often referred to as the "Abode of Clouds," boasts a unique climate shaped by its geographical location, topography, and monsoonal influence. Nestled in the northeastern part