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Location and Extent of Assam

Assam, a state located in the northeastern region of India, is a land of rich cultural heritage, biodiversity, and strategic geopolitical importance. Known for its lush green landscapes, tea plantations, and the mighty Brahmaputra River, Assam is a vital part of India's northeastern region.

Geographical Location

Assam lies between **24°7′N to 27°58′N latitude** and **89°42′E to 96°1′E longitude**, occupying a strategic position in the northeastern corner of India. The state forms a gateway to the rest of the Seven Sister States (Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, and Meghalaya), connecting them with mainland India.

- **Tropic of Cancer:** The Tropic of Cancer does not pass through Assam, but the state's latitude places it close to the tropical zone, resulting in a predominantly humid subtropical climate.
- **Bordering States:** Assam shares its borders with:
    - Arunachal Pradesh to the north and northeast.
    - Nagaland and Manipur to the east.
    - Meghalaya, Tripura, and Mizoram to the south.
    - West Bengal to the west via the Siliguri Corridor (Chicken's Neck), a narrow strip of land connecting Assam to the rest of India.
- **International Borders:** Assam also shares international borders with Bhutan to the north and Bangladesh to the south.

Area and Dimensions

- **Total Area:** Assam covers an area of approximately **78,438 square kilometers**, making it the 16th largest state in India.
- **Shape:** The state is predominantly elongated in shape, with its narrow width in some regions stretching between 80 to 100 kilometers.
- **Length and Breadth:**
    - Maximum length: About **750 kilometers**.
    - Maximum breadth: Approximately **80 kilometers**.

Strategic Importance

1. **Silchar-Guwahati Connectivity:** The state is a crucial connector within northeastern India, with Guwahati acting as the hub for trade and transportation.
2. **Silk Route Legacy:** Assam historically served as a part of the trade routes connecting Southeast Asia with India.
3. **Gateway to Northeast:** The **Siliguri Corridor**, a 22-kilometer-wide strip, makes Assam a critical region for India's security and connectivity.

Physiographic Features

1. **Brahmaputra Valley:**
   - The Brahmaputra River dominates Assam, flowing across the state for about **650 kilometers**.
   - This fertile valley is flanked by the Eastern Himalayan ranges on the north and the Meghalaya Plateau on the south.
   - It is one of the most agriculturally productive regions in India, known for rice and tea cultivation.
2. **Barak Valley:**
   - Located in southern Assam, it is drained by the Barak River and its tributaries.
   - The valley is smaller in comparison but equally important, with Silchar as its administrative center.
3. **Hills:**
   - Assam has two major hill districts:
     - **Karbi Anglong:** Known for its rich biodiversity and tribal heritage.
     - **Dima Hasao (formerly North Cachar Hills):** Features rolling hills and forested landscapes.

Climate and Vegetation

Assam's location within the tropical and subtropical zones significantly influences its climate, characterized by high rainfall and humidity.

1. **Climate:**
   - Summers: Hot and humid, with temperatures ranging from **28°C to 35°C**.
   - Winters: Cool and dry, with temperatures ranging from **6°C to 22°C**.
   - Rainfall: Receives an annual average rainfall of **2000 to 3000 mm**, primarily from the Southwest Monsoon.
2. **Vegetation:**
   - The state is home to **tropical wet evergreen forests**, **deciduous forests**, and grasslands.
   - Key biodiversity hotspots include **Kaziranga National Park** and **Manas National Park**, both UNESCO World Heritage Sites.

Administrative Divisions

- Assam is divided into **35 districts**, grouped into five regions:
    1. Upper Assam
    2. Central Assam
    3. Lower Assam
    4. North Assam
    5. Barak Valley
- Major Cities:
    - **Dispur:** The capital of Assam.
    - **Guwahati:** The largest city and the commercial hub.
    - **Silchar:** A key city in the Barak Valley.
    - **Dibrugarh:** Known as the Tea City of India.

Economic Significance

1. **Agriculture:**
    - Assam is predominantly agrarian, with rice, tea, and jute being the primary crops.
    - The state is the largest producer of tea in India, contributing over **50% of the country's tea production**.
2. **Oil and Natural Gas:**
    - Assam has rich reserves of crude oil and natural gas, with important refineries in **Digboi**, **Numaligarh**, and **Bongaigaon**.
3. **Tourism:**
    - Assam's biodiversity, cultural heritage, and religious sites attract tourists from around the world.

Challenges

1. **Floods:**
    - The Brahmaputra River and its tributaries frequently overflow during the monsoon, causing devastating floods.
2. **Erosion:**
    - Riverbank erosion significantly impacts the agricultural and habitable land in Assam.
3. **Infrastructure:**
    - Despite its strategic location, Assam faces challenges in infrastructure development due to its topography and frequent natural calamities.

Physiographic Divisions of Assam

Assam, a state nestled in the northeastern part of India, is a land of diverse landscapes, ranging from fertile plains to rolling hills and verdant forests. This diversity is a direct result of the state's unique physiographic divisions, each with its own distinct characteristics.

Broadly speaking, Assam can be divided into three primary physiographic regions:

1. The Brahmaputra Valley

This is the most dominant and extensive physiographic division of Assam, formed by the Brahmaputra River and its tributaries. It stretches for about 720 km across the state, with an average width of 80-100 km. The valley is characterized by:

- **Flat fertile plains:** These are primarily alluvial plains formed by the deposition of sediments carried by the Brahmaputra and its tributaries. The soil is rich and fertile, making it ideal for agriculture, particularly rice cultivation.
- **Riverine features:** The Brahmaputra River, with its dynamic nature, has given rise to various riverine landforms such as sand bars, river islands (chars), oxbow lakes, and meanders. These features contribute to the unique landscape and biodiversity of the valley.
- **Varied elevation:** While generally flat, the valley also exhibits some elevational variations, with higher areas along the northern and southern edges.

2. The Barak Valley

Located in the southern part of Assam, the Barak Valley is formed by the Barak River and its tributaries. It is smaller than the Brahmaputra Valley and is characterized by:

- **Narrower plains:** The valley is relatively narrower compared to the Brahmaputra Valley, with hills rising on either side.
- **Undulating terrain:** The valley features a more undulating terrain with low hills and hillocks interspersed with the plains.
- **Fertile soil:** Like the Brahmaputra Valley, the Barak Valley also boasts fertile alluvial soil, supporting agriculture and a variety of crops.

3. The Karbi Anglong and North Cachar Hills

This physiographic division comprises the central hilly regions of Assam, including the Karbi Anglong and Dima Hasao districts. It is characterized by:

- **Dissected hills:** The region features a series of hills and plateaus, dissected by numerous rivers and streams.
- **Varied topography:** The topography is quite varied, ranging from gentle slopes to steep hills and deep valleys.
- **Forest cover:** A significant portion of this region is covered by forests, harboring rich biodiversity.

In addition to these primary divisions, Assam also has some smaller, distinct physiographic units:

- **The Mishmi Hills:** Located in the easternmost part of the state, these hills are rugged and heavily forested.
- **The Khasi and Jaintia Hills:** These hills form the southern border of Assam, shared with Meghalaya. They are known for their unique landscapes and high rainfall.

Impact of Physiography on Assam: