

The World Climate

These notes are your ultimate revision weapon to revise The World Climate. We've distilled years of previous exam questions (PYQs) into one powerful, concise resource. Everything you need to know, nothing you don't.

- **PYQs, Decoded:** All key concepts from past exams, organized and simplified.
- **Revise in Record Time:** Short, precise, and designed for last-minute review.
- **Focus on What Matters:** Master high-probability topics and boost your confidence.

Factors Influencing Climate and Weather

Causes of Day-Night Variation



- The seasonal variation in the length of day and night is caused by:
 - The **revolution of the Earth around the Sun**.
 - The **latitudinal position** of a place.
- **Note:** The Earth's rotation on its axis causes the daily cycle of day and night, but **not** the seasonal variation in their length.

Factors Affecting Temperature

- The **annual range of temperature** is much higher in continental interiors compared to coastal areas.
 - **Primary Reason:** The **thermal difference between land and water**; land heats up and cools down faster than water.
- The main factor that determines the climate of any area is its **latitude**.

World Climatic Zones

Equatorial Climate

- **Location:** Found between **5° to 8° latitude** on either side of the equator.
- **Countries:** Congo, Gabon, Zaire.
- **Characteristics:**
 - Rainfall throughout the year.
 - Very low average annual temperature range.
 - Typical daily weather: clear mornings, buildup of heat, formation of dark clouds by afternoon, followed by **convictional rainfall** with thunder and lightning.
 - Highly conducive for plant growth but can be challenging for humans.
- **Exception:** **Ethiopia** does **not** have a typical equatorial climate due to its highland topography.

Tropical Savannah (Sudan) Climate

- **Characterized by:** A definite **dry season** and a **wet season**.
- It does **not** have rainfall throughout the year.

Mediterranean Climate

- **Characteristics:**
 - Summers: **Warm and dry**.
 - Winters: **Mild and wet**.
 - Vegetation includes **evergreen oak trees**.
- **Found in:**
 - Central Chile
 - Cape Town (South Africa)
 - Adelaide (Australia)
 - California (USA)
 - Rome (Italy)

- **Not found in:**
 - The **Pampas** of Argentina (which has a temperate climate).
 - **New York** (which has a humid continental climate).

Steppe Climate

- **Description:** Extreme climate with scanty rainfall.
- Historically, the people in these regions were **nomadic herders**.
- This best describes the **Central Asian Steppe** region.

Desert Climate

- **Arid regions** cover the maximum percentage of the Earth's surface among the given options.

Regional and Seasonal Rainfall Patterns

Monsoon Climate

- **Found in:** Bangladesh.  IASbook
www.iasbook.com
- **Characterized by:** A distinct seasonal pattern, **not** heavy rain all year.

Winter Rainfall

- Rainfall in the winter season is a defining feature of the **Mediterranean climate** (e.g., Italy).
- **Other examples:**
 - **Norway** experiences significant winter precipitation (often as snow).
 - **Chile** (specifically its central zone) has a Mediterranean climate with winter rain.
- **Not a characteristic of:**
 - China (dominated by summer monsoon).
 - Brazil (varies, but largely summer rains).
 - Nigeria (summer rains).

Continent-Wide Climate Patterns

- The continent of **Asia** has all types of climatic zones due to its vast size and latitudinal extent.

Detailed Climate Type Analysis

Equatorial Climate

- **Example:** Congo basin.
- **Characteristics:** Rainfall throughout the year (no distinct dry season).
- **Correction:** The year is **not** divided into four main seasons.

Mediterranean Climate

- **Example:** California.
- **Characteristics:** Rainy winters and dry summers.
- **Cause:** Rainy winters are due to the shift in global wind belts, placing the region under the influence of the **Westerlies** during winter.
- **Correction:** Summer does **not** receive more rain.

Monsoon Climate

- **Example:** Bangladesh.
- **Characteristics:** Highly seasonal rainfall.
- **Cause:** Associated with the **shifting of planetary pressure belts**.
- **Correction:** Rainfall does **not** necessarily occur all year.

Savanna Climate

- **Example:** Sudan.
- **Characteristics:** A tropical grassland climate with a distinct wet and dry season.

China-Type Climate

- **Characteristics:** A temperate climate where rainfall occurs **throughout the year**. Data shows warm summers and cool, wet winters.

Western European / Marine West Coast Climate

- **Characteristics:** Rainfall throughout the year with a mild temperature range. Cool summers, mild winters, and no dry season.
- **Ports** in Northwest Europe are open year-round due to the moderating influence of the **South-Westerly winds** and the North Atlantic Drift.

Global Climate Extremes

Wettest Place

- **Mawsynram** (India) is the wettest place on Earth. Cherrapunji is also known for very high rainfall.



Coldest Place

- **Verkhoyansk** (Russia) is one of the coldest places on Earth.

Hottest and Driest Places

- **Hottest Place:** Sahara Desert.
- **Driest Place:** Atacama Desert (Chile).
- **Coldest Continent:** Antarctica.

Climatic Phenomena

El Niño and La Niña

- **El Niño:**
 - Develops in the **Pacific Ocean**.

- Characterized by unusually **warm** ocean temperatures in the equatorial Pacific.
- Has an **adverse effect** on the Southwest Monsoon in India.
- **La Niña:**
 - Characterized by unusually **cold** ocean temperatures in the equatorial Pacific (not the Indian Ocean).
- **Both** are associated with short-term climatic predictions and can affect monsoon rains.

Pressure Belts and Winds

- Climates like the **Mediterranean** and **Monsoon** are associated with the **shifting of planetary pressure belts**.
- The **Westerlies** are a dominant wind belt influencing European and Mediterranean climates.

Climate Identification from Data

- **Cool summers, mild winters, rainfall throughout the year with a winter maximum:** Indicative of the **Western European type**.
- **Hot, dry summers and mild, rainy winters:** Indicative of the **Mediterranean type**.
- **Sharp peak in summer rainfall and high summer temperatures:** Indicative of the **Monsoon type** (e.g., China type).

Ecological Terms

- **Hekistotherms:** Plants that grow in **very low-temperature** conditions (e.g., in alpine or polar regions).

Know More About The World Climate:

- [The World Climate – Old Year Questions](#)
- [The World Climate One Liner Questions & Answers](#)