



INTRODUCTION TO GEOGRAPHY



Definition of Geography

- Geography is the study of location and spatial variation in natural and human phenomena on Earth.
- The study of the earth and its features and of the distribution of life on the earth, including human life and the effects of human activity.
- Geography is the science that studies the lands, features, inhabitants, and phenomena of Earth. A literal translation would be "to describe or write about the Earth". **The first person to use the word "geography" was Eratosthenes (276-194 BC).**

Geo: 'the earth'
Graphein: 'to write/description'

Field of Geography

Physical Geography

Physical geography focuses on geography as an Earth science. It aims to understand the physical problems and issues of: lithosphere, hydrosphere, atmosphere, and global flora and fauna patterns

Human Geography

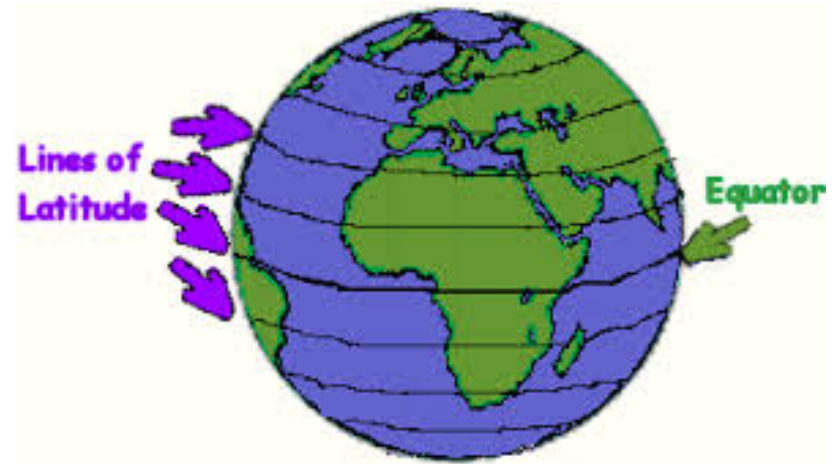
Human Geography is a branch of geography that focuses on the study of patterns and processes that shape human interaction with various environments. It encompasses human, political, cultural, social, and economic aspects.

Geographic Coordinate System

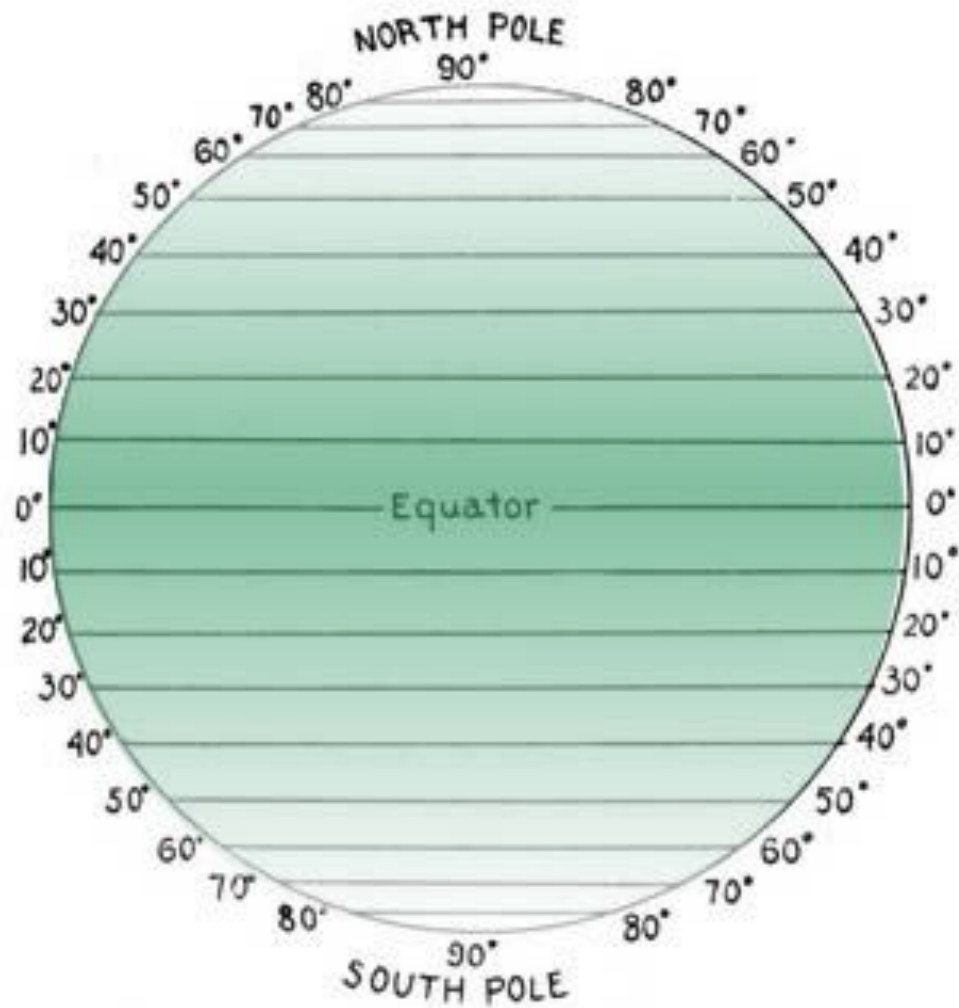
- A geographic coordinate system is a coordinate system that enables every location on the Earth to be specified by a set of numbers or letters. The coordinates are often chosen such that one of the numbers represents vertical position, and two or three of the numbers represent horizontal position. A common choice of coordinates is latitude, longitude and elevation

Latitude

- Latitude is a geographic coordinate that specifies the *north-south position* of a point on the Earth's surface.
- Latitude ranges from 0° *at the Equator to 90°* (North or South) at the poles.
- Latitude is used together with longitude to *specify the precise location* of features on the surface of the Earth.



Lines of Latitude



Some Important Latitudes

Equator (0° latitude)

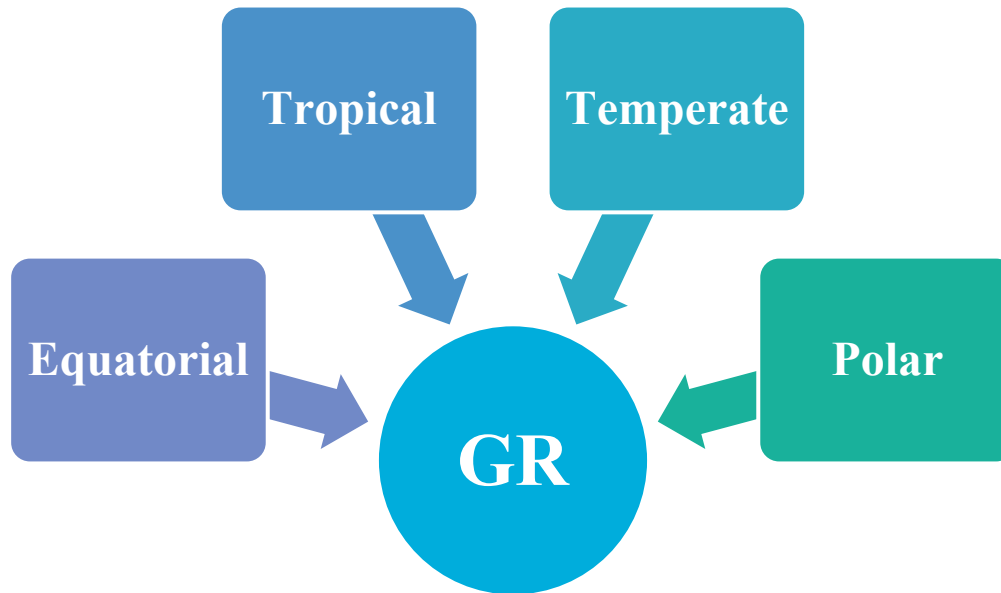
Tropic of Cancer (23.5°
north latitude)

Tropic of Capricorn (23.5°
south latitude)

Arctic Circle (66.5° north
latitude)

Antarctic Circle (66.5°
south latitude)

Geographical Regions (GR) of the Earth



Polar

Temperate

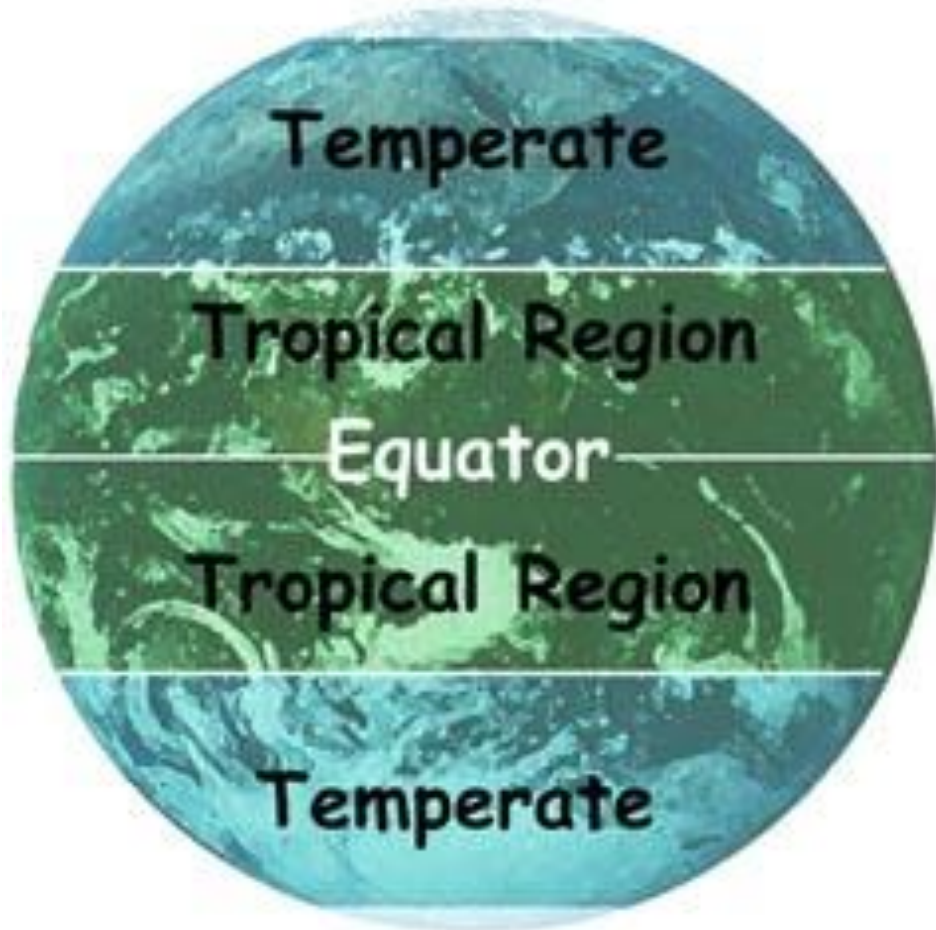
Tropical Region

Equator

Tropical Region

Temperate

Polar



Equator

The Equator refers to the Earth's equator and is an imaginary line on the Earth's surface equidistant from the North Pole and South Pole, dividing the Earth into the Northern Hemisphere and Southern Hemisphere.

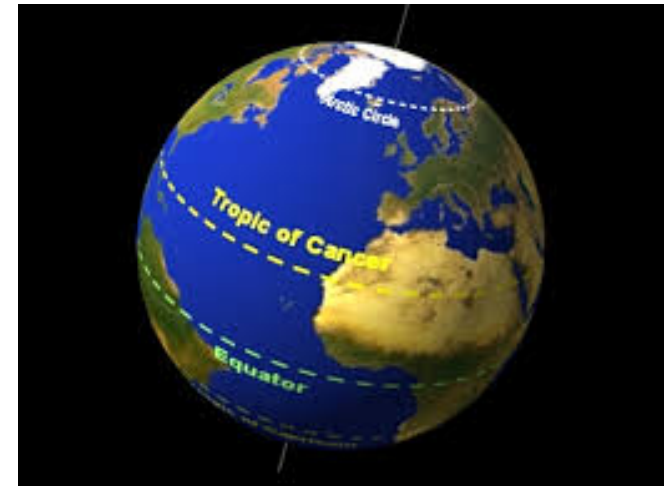
The latitude of the Equator is 0° (zero degrees). The length of Earth's equator is about 40,030.2 kilometres (24,873.6 mi).



Tropic of Cancer

Tropic of Cancer also referred to as the **Northern tropic**, is the circle of latitude on the Earth that marks the most northerly position at which the Sun may appear directly overhead at its zenith.

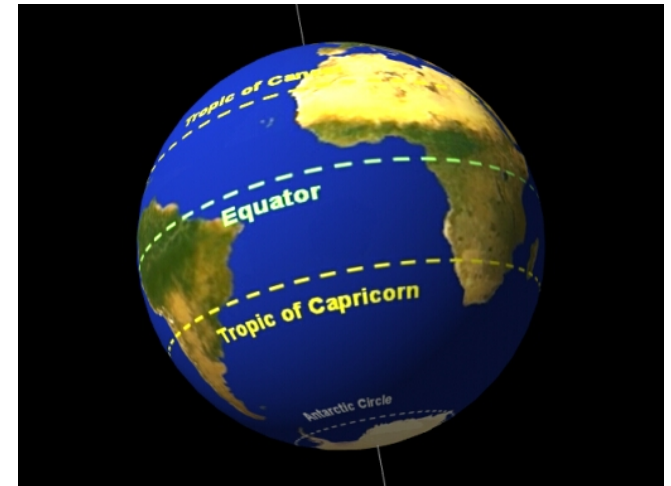
This event occurs once per year, at the time of the June solstice, when the Northern Hemisphere is tilted toward the Sun to its maximum extent.



Tropic of Capricorn

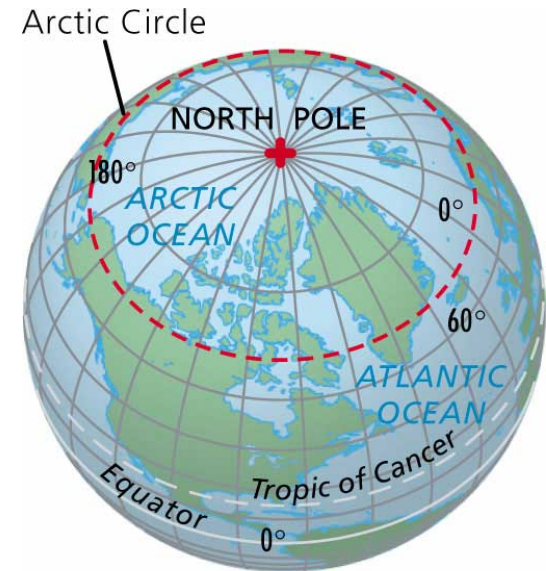
Tropic of Capricorn or **Southern tropic** marks the most southerly latitude on the Earth at which the Sun can be directly overhead.

This event occurs at the December solstice, when the southern hemisphere is tilted towards the Sun to its maximum extent.



Arctic Circle

The Arctic Circle is the most northerly of the five major circles of latitude that mark maps of the Earth. The region north of this circle is known as the Arctic, and the zone just to the south is called the Northern Temperate Zone.

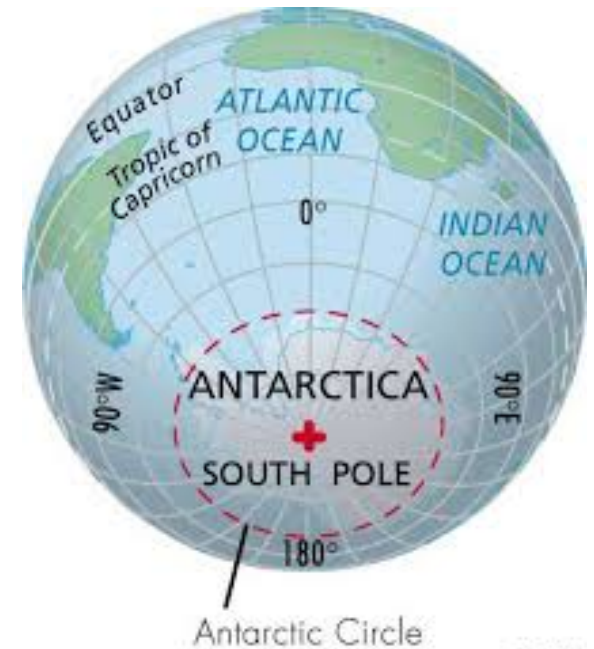


Thom Gillis

Antarctic Circle

The Antarctic Circle is the most southerly of the five major circles of latitude that mark maps of the Earth.

The region south of this circle is known as the Antarctic, and the zone immediately to the north is called the Southern Temperate Zone



Thom Gillis

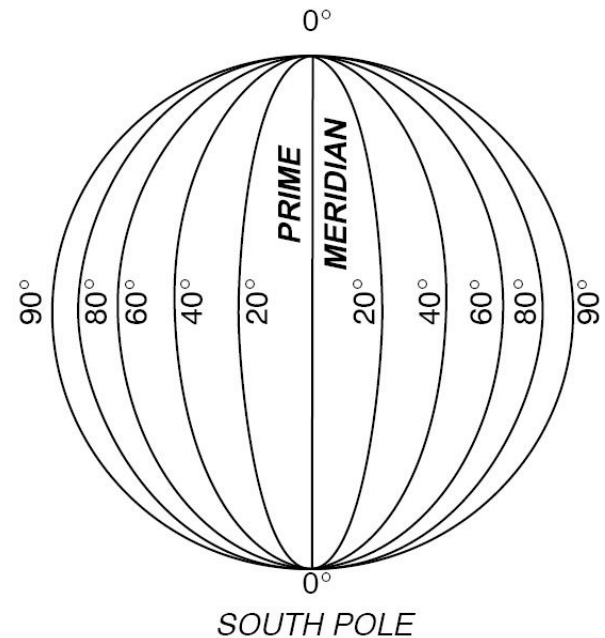
Longitude

- Longitude is a geographic coordinate that specifies the **east-west position** of a point on the Earth's surface.
- It is an angular measurement, usually expressed in degrees, minutes and seconds.



Prime Meridian (Longitude)

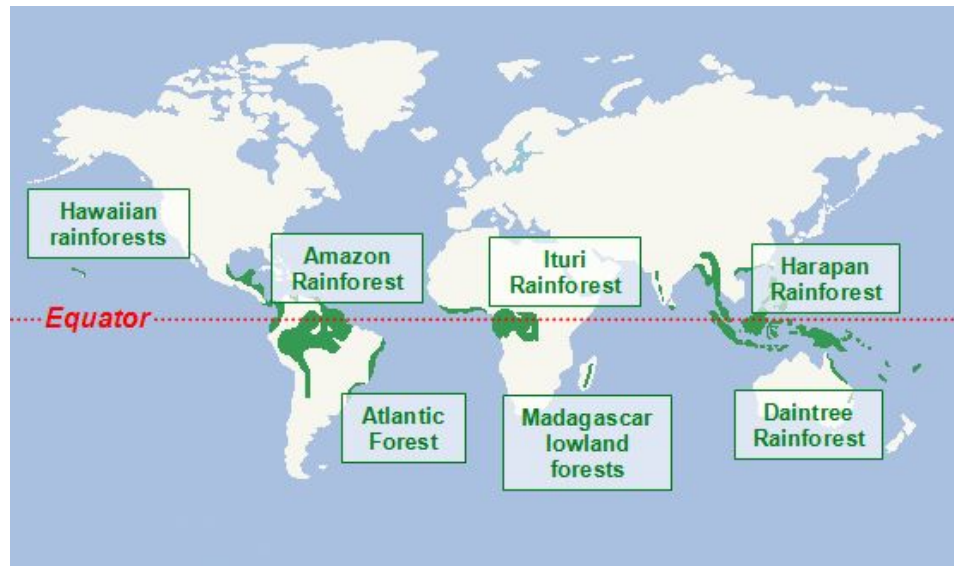
- The **Prime Meridian** is the meridian (line of longitude) at which the longitude is defined to be 0° .
- The Prime Meridian and its opposite the 180th meridian (at 180° longitude), which the International Date Line generally follows, form a great circle that divides the Earth into the Eastern and Western Hemispheres.



Equatorial Regions

Equatorial regions are located in a band around the **Equator** and cover about 6% of the Earth's surface. They are often in lowland areas and have a climate that is hot and wet all year round. Tropical rainforests grow in the **equatorial regions**.

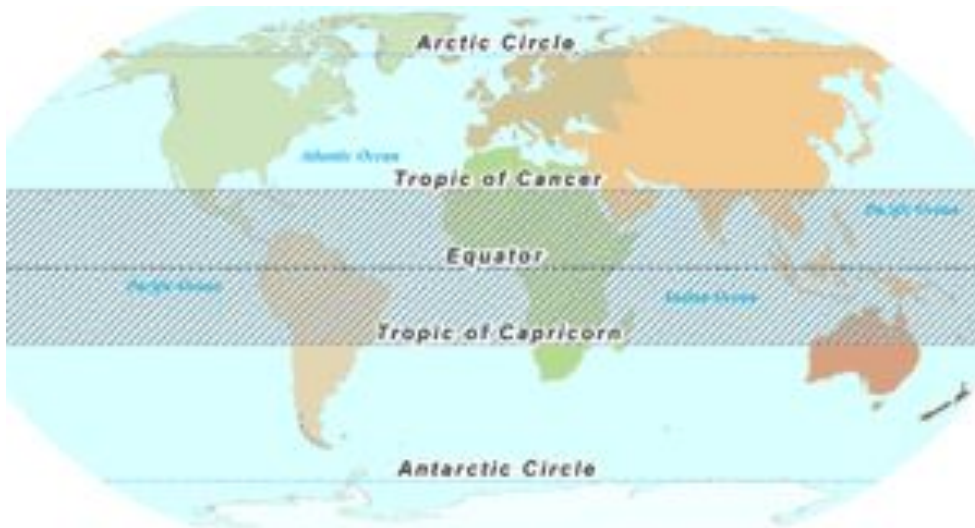
Democratic Republic of the Congo, Uganda, Kenya,



Tropical Regions

The **tropics** are the **region** of the Earth near to the equator and between the **Tropic** of Cancer in the northern hemisphere and the **Tropic** of Capricorn in the southern hemisphere. This **region** is also referred to as the **tropical zone** and the torrid **zone**.

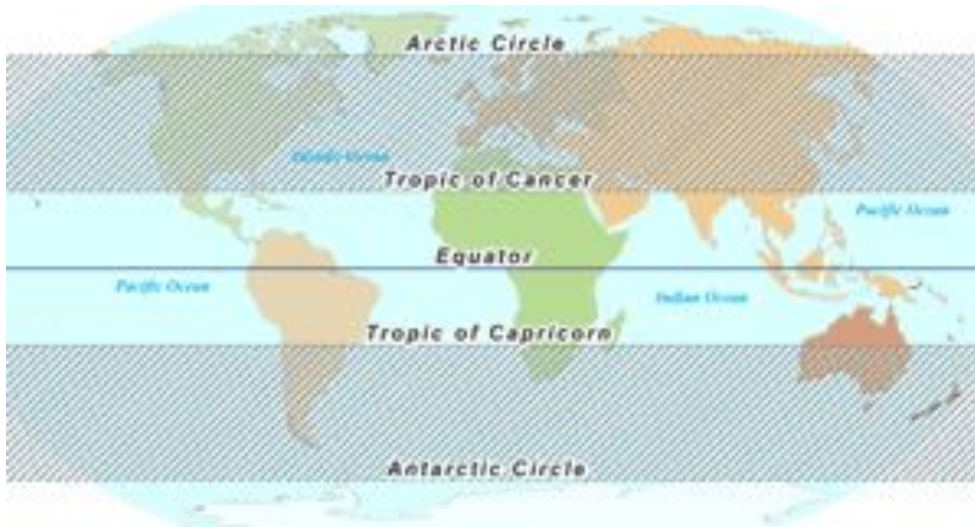
Colombia, Ecuador, Peru,
Bolivia, Colombia, Venezuela,
Guyana, Suriname



Temperate Regions

Temperate region of Earth lie between the tropics and the polar regions. The temperatures in these **regions** are generally relatively moderate, rather than extremely hot or cold, and the changes between summer and winter are also usually moderate.

The United States, Canada, Uruguay, all of Europe, Northern Africa, the Middle East, Japan and New Zealand.



Polar Regions

The **polar regions** of Earth, also known as Earth's frigid zones, are the **regions** of Earth surrounding its geographical poles (the North and South Poles). These **regions** are dominated by Earth's **polar** ice caps, the northern resting on the Arctic Ocean and the southern on the continent of Antarctica.

Canada, Denmark (Greenland), Norway, Finland, Sweden, Iceland, and Russia



Location of Bangladesh

20°34' north latitude to 26°38' north latitude and 88°01' east longitude to 92°41' east longitude



Climate of Bangladesh

Bangladesh has a subtropical monsoon **climate** characterized by wide seasonal variations in rainfall, high temperatures and humidity.

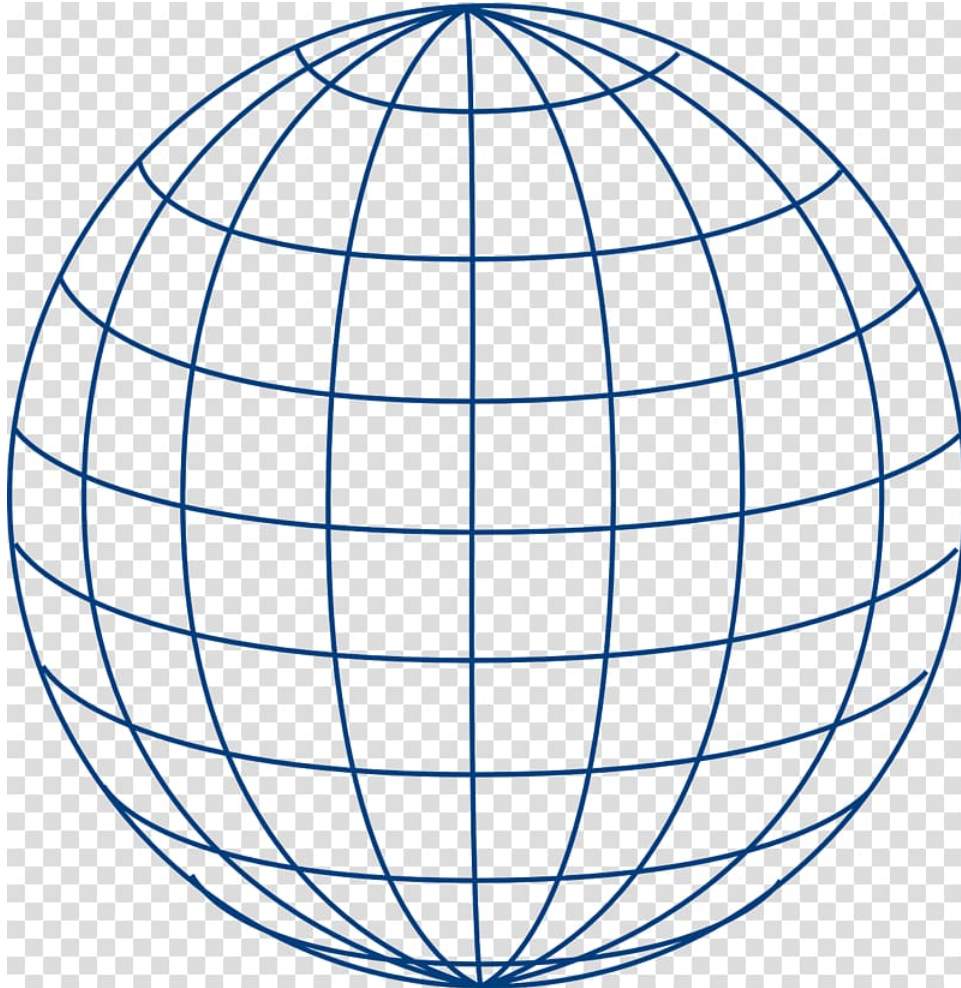
There are three distinct seasons in **Bangladesh**:

A hot, humid
summer from
March to June

A cool, rainy
monsoon season
from June to
October

A cool, dry
winter from
October to March

Summary of lecture





Thank
You