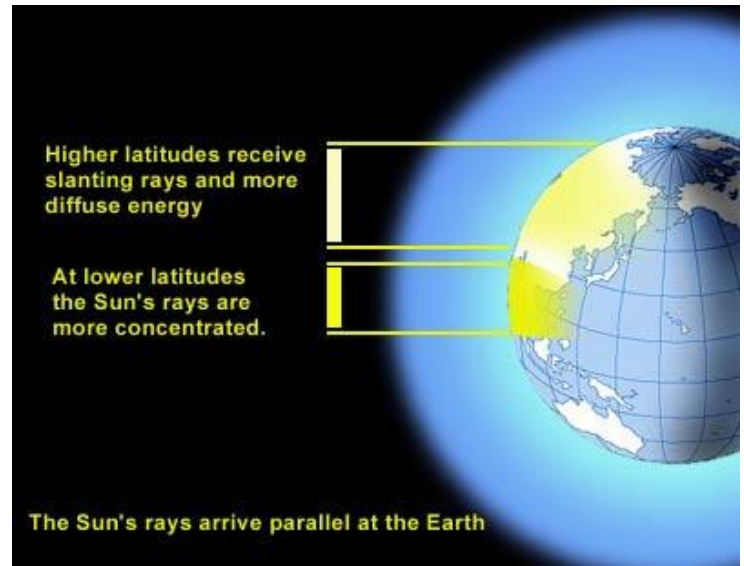


3. Consequences of the Earth's Shape and Motions

Consequences of the Earth's Shape

Earth's globular shape ► unequal amount of solar radiation ► *climatic regions and vegetation zones*



Consequences of the Earth's Revolution around the Sun

1. *Changing of the seasons*
2. *Changing of the length of days and nights*

Consequences of the Earth's Rotation around its own Axis

1. *Change from day to night*
2. *Coriolis force*

This force causes that winds and ocean currents tend to flow to the right from their direction on the northern hemisphere and to the left from their direction on the southern hemisphere (Coriolis effect).

3. *Tides (flow and ebb)*

Tides are caused by the rotation of the Earth and the gravitational force of the Moon and the Sun.

The Moon is Earth's only natural satellite. The length of its rotation and its revolution around the Earth is the same (27,3 days), that is why we can see only **the near side of the Moon** from the Earth's surface. The 4 main moon phases are **First Quarter Moon, Full Moon, Third Quarter Moon and New Moon**.

High tide is useful for river harbours such as London and Hamburg. Tidal energy is used in **tidal power plants** (e.g. La Rance in France).

Keywords

globular shape, unequal amount of solar radiation, climatic regions, vegetation zones, season, Coriolis force, winds, ocean currents, hemisphere, tides, flow and ebb, the Moon, near side, full moon, new moon, spring tide, neap tide, river harbours, tidal power plant

Figure 1: Bioclimatic zones of the Earth

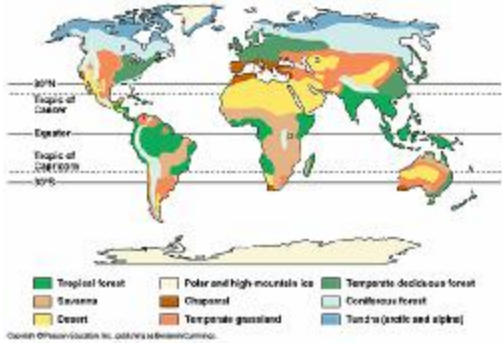


Figure 2: Coriolis effect

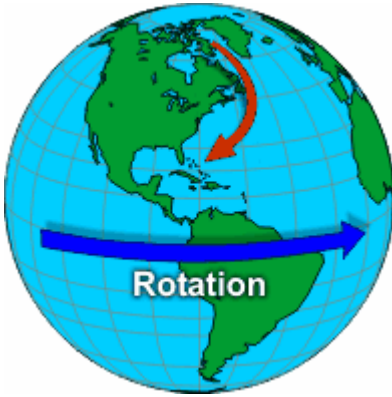


Figure 3: Mechanism of the spring tide and the neap tide

