

# Topography

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## Concept

Topography is the physiographic characteristics of land in terms of elevation, slope, and orientation.

The elevation of a particular place from the sea level is termed as the topography of that place. It may be high or low. Such as the elevation of a hill may be high but the haor or bill is low. The elevation of Khulna, Patuakhali and Noakhali is almost similar to the sea level.

## Importance of Topography

1. It influence on the **suitability** of land. When topography is low, land is more suitable
2. Topography affects on **water logging** and **drainage** issues
3. It influences on **climate** of a locality. For each 100 meter elevation from sea level, temperature decreases  $0.61^{\circ}\text{C}$ .
4. It influences on **soil erosion**.
5. Types of **tillage** are determined by topography.
6. Topography should be kept in consideration to select an **irrigation method**.
7. When topography is high then it increases the **total area** of land.
8. It determine the **special land management** practices in reducing soil erosion and conservation

## Classification of land type of Bangladesh

Land type	Water level at normal flooding	Suitable crops
1. High land	Above the normal flood level	Various vegetables and orchard trees
2. Medium high land	Maximum 90 cm	T. Aman rice, Aus rice, Jute etc.
3. Medium low land	90 to 180 cm	Aus rice, Aman rice, Jute, Pulses, Oil seeds etc.
4. Low land	180 to 300 cm	Deep water rice, Local Boro rice etc.
5. Very low land	Above 300 cm	Deep water rice

**Source:** BARC (2012) Fertilizer Recommendation Guide.

## Topographic regions of Bangladesh with their characteristics Features

On the basis of topography, the entire county of Bangladesh is divided into three different regions:

1. Flood plain area
2. Terrace area
3. Hilly area



### 1. Flood Plain area

Flood plain area formed by silt deposition of **Padma, Brahmaputra, Maghna** rivers and their tributaries. The average elevation of this region must **below 45.5 m**. This land is **very fertile**.

#### Characteristics of Flood plain soil:

- (i) *Organic matter content* : Medium
- (ii) *Soil pH* : 6.0-8.0
- (iii) *Soil texture* : Sandy loam to clay loam

#### Classification of flood plain area with important crops:

<i>Land type</i>	<i>Important crops</i>
(i) Medium high land	Khariif-I: Aus rice Khariif-II: T. Aman, Jute Rabi: Pulse, Oilseed
(ii) Low land	Khariif: Aus rice, Aman rice Rabi: Pulse, Oil seed, Boro rice
(iii) Very low land	Deep water rice

### 2. Terrace area

Terrace area is consists of Barind area, Garo Hill, Madhupur Tract and Bhawal Tract. Soil is some extent **red and slightly fertile**.

#### Characteristics of terrace soil:

- (i) *Organic matter content* : Low
- (ii) *Soil pH* : 4-6
- (iii) *Soil texture* : Clay
- (iv) *Fertility status* : Low

**Important crops:** Rice, rapeseed and mustard, chickpea, lentil, sugarcane, wheat, jute etc. are grown here. In Madhupur Tract area T. Aman are grown in low area and high land are used for pineapple and jackfruit production.

### 3. Hilly area

Hilly area is consists of Chittagong Hill Tract, parts of Chittagong, Southern part of Comilla, East and southern part of Sylhet and Northern part of Mymensingh.

#### Characteristics of hilly soil:

- (i) *Organic matter content* : Low
- (ii) *Soil pH* : 4-6
- (iii) *Soil texture* : Clay
- (iv) *Fertility status* : Low

**Important crops:** Pineapple, rubber, tea, guava, citrus fruits and other fruit tree are grown here. Some herbaceous are also grown in hilly area by practicing some special technologies like '*Jhum*' cultivation.

