

## 19. Global division of pedosphere

Soils are distributed on the Earth by certain spatial patterns => *horizontal and vertical zonation of soils*.

### **Horizontal zonation**

It refers to large areas apart from mountains. Horizontal zonation concerns with changes in latitude or, in some cases, with longitude.

- = Segmentation of pedosphere by the change of macroclimatic conditions (temperature decreases) thereby vegetation and other factors.
- *Examples:* East-European plain, northern part of Africa, Northern America.

**Figure 1: Soil pattern in East-European plain** N

<i>Permafrost</i>	<i>tundra</i>	↑
<i>Podzols</i>	<i>taiga</i>	
<i>Grey forest soils</i>	<i>DFs</i>	
<i>Black earths</i>	<i>steppes</i>	
<i>Chestnut-coloured soils</i>	<i>steppes</i>	

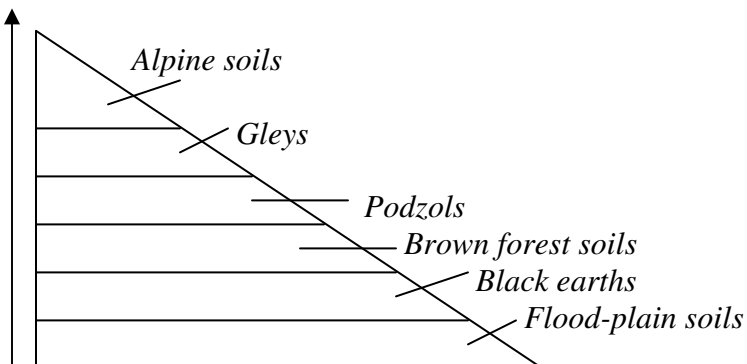
### **Vertical zonation**

It has developed in mountainous areas. In Slovakia, it is the most basic spatial pattern of soils.

- = Segmentation of pedosphere into vertical zones according to increasing altitude hence change of climatic conditions => *temperature decreases and precipitation increases*.
- *Examples:* Malá Fatra mts., High Tatras, Alps, etc.

**Figure 2: Soil pattern in High Tatras region**

Altitude



### **Keywords**

Horizontal/vertical zonation of soils, segmentation, latitude, longitude, spatial pattern, altitude, temperature, precipitation