The major soil types of Europe

HISTOSOLS

Dark soil with high accumulation of partially decomposed organic matter generally developed in wet or cold conditions (from the Greek, *histos*, meaning tissue).

Histosols are composed mainly of organic soil material. During development, the organic matter production exceeds the rate of decomposition. The decomposition is retarded mainly by low temperatures or anerobic (low oxygen) conditions which result in high accumulations of partially decomposed organic matter. Histosols occur mainly in the boreal and sub arctic regions and are also known as peat, muck, bog and organic soil.

***Left:** a typical Histosol landscape from northern Europe;*
***Below:** Histosols are usually black or very dark brown and contain recognizable remains of plants; The **map** shows the location of areas in Europe where Histosols are the dominant soil type.*

Cover 5 % of Europe.

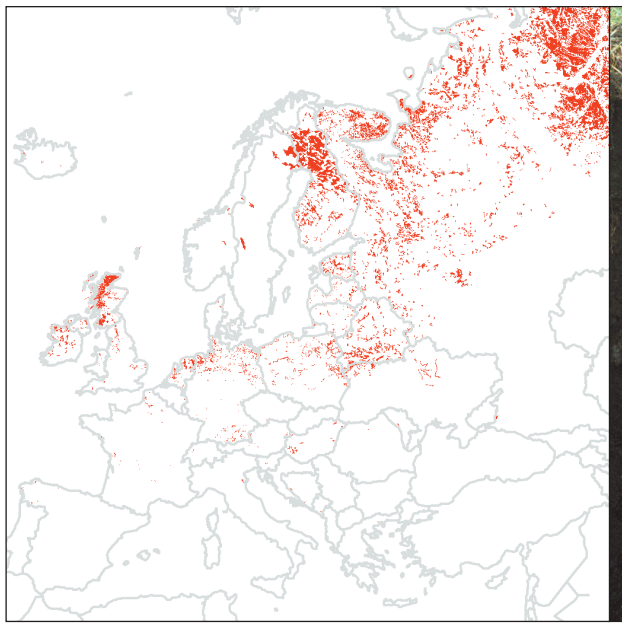
KASTANOZEMS

Soil with surface horizon rich in organic matter and with calcium carbonate or gypsum accumulation in subsurface horizons (from the Latin *castanea*, chestnut, and the Russian, *zemlja*, meaning earth or land).

Kastanozems have a deep, dark coloured surface horizon with a significant accumulation of organic matter, high pH and an accumulation of calcium carbonate within 100 cm of the soil surface. Kastanozems occur mainly in the dry parts of the steppe regions of the world and are shallower and lighter in colour than Chernozems.

***Left:** Kastanozems being "observed" in the field;*
***Below:** Secondary calcium carbonate accumulation occurs close to the surface; The **map** shows the location of areas in Europe where Kastanozems are the dominant soil type.*

Cover 2 % of Europe.



LEPTOSOLS

Shallow soil over hard rock or gravelly material (from the Greek, *leptos*, meaning thin).

Leptosols are shallow over hard rock and comprise of very gravelly or highly calcareous material. They are found mainly in mountainous regions and in areas where the soil has been eroded to the extent that hard rock comes near to the surface. Because of limited pedogenic development, Leptosols do not have much structure. On a global scale, Leptosols are very extensive. Leptosols on limestone are called *Rendzinas* while those on acid rocks, such as granite, are called *Rankers*.

***Left:** in Leptosols, rocks are often close to the surface and many outcrops are visible;*
***Below:** a Leptosol on highly calcareous material, known as a Rendzina; The **map** shows the location of areas in Europe where Leptsols are the dominant soil type.*

Cover 9 % of Europe.

LUVISOLS

Soil with a subsurface horizon of high activity clay accumulation and high base saturation (from the Latin, *luere*, meaning to wash).

Luvisols show marked textural differences within the profile. The surface horizon is depleted in clay while the subsurface 'argic' horizon has accumulated clay. A wide range of parent materials and environmental conditions lead to a great diversity of soils in this Reference Soil Group. Other names used for this soil type include Pseudo-podzolic soil (Russia), sols lessivés (France), Parabraunerde (Germany) and Alfisols (Soil Taxonomy).

***Left:** Luvisols generally occur on well drained landscapes;*
***Below:** note the marked textural differentiation within the soil profile between the surface and subsurface horizons; The **map** shows the location of areas in Europe where Luvisols are the dominant soil type.*

Cover 6 % of Europe.