GEOMORPHOLOGICAL MAPPING OF NEAR-SURFACE DEPOSITS: HILLSLOPE EVOLUTION OF THE ADRIATIC PIEDMONT OF THE CENTRAL APENNINES (FELTRINO STREAM BASIN AND MINOR COASTAL BASINS, ABRUZZO, ITALY)

SCALE 1:20.000

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LITHOLOGY AREA DISTRIBUTION

LITHOLOGICAL MAP OF ABRUZZO

Lithology

Continental deposits (near surface)

- Backfill deposits (11)**
 - Caolitic and heterometric deposits constituted by gravel, sand, clay and fragments of waste material. In inactive gravel quarry, they are made up of sand and clay with scattered pebbles and cobbles quarry waste.
- Beach deposits (10)**
 - Sand deposits (a)**
 - Yellowish fine and medium sands, loose or slightly compacted, with cross bedding. Thickness from few to >5 m.
 - Sand-gravel deposits (b)**
 - Gravel is made up of heterometric (size 1-10 cm), polygenic (calcareous and cherty) pebbles and cobbles, with rounded and sub-rounded shape, mainly matrix-supported. Thickness from few to >5 m.
- Alluvial deposits (9)**
 - Mainly silt-clay deposits (a)**
 - Fluvial clays, clayey silts and silts, with level and lenses of sand. Thickness > 5 m.
 - Mainly sand-gravel deposits (b)**
 - Fluvial sands and gravels, with lens and levels of silt and clay. Gravel is made up of heterometric (size 1-15 cm), polygenic (calcareous and cherty) pebbles and cobbles, with rounded and sub-rounded shape, mainly matrix-supported. Thickness from few to >5 m.
- Colluvial deposits (8)**
 - Mainly silt-clay deposits (a)**
 - Grayish-brown clayey silt, with calcareous concretions, calcare levels and locally sandy levels. Thickness < 15 m.
 - Mainly sand-clay deposits (b)**
 - Grayish to yellowish sandy silt, silt and sand, with calcareous concretions. Thickness up to 5-10 m.
- Mainly gravel deposits (6)**
 - Yellowish to brown gravel deposits, from clay to matrix supported, with sand and silt matrix. Calcareous concretions are present. The deposits are in chaotic assemblage or channelled conformably to the slopes. Thickness up to 10 m.
- Mainly silt with pebbles and cobbles deposits (d)**
 - Yellowish to brown silt with clay matrix, with rounded and sub-rounded pebbles and cobbles arranged in lenses with silt matrix or scattered within the main deposit. Calcareous concretions and calcare levels are present. The deposits are in chaotic assemblage or channelled conformably to the slopes. Thickness up to 5-10 m.
- Landslide deposits (7)**
 - Chaotic assemblage of polygenic clay and sand deposits, with conglomerate and sandstone boulders and locally very large landslide blocks. Thickness from few to >10 m.
- Scree slope deposits (5)**
 - Close to widely cemented slope deposit, composed, angular, euheterometric, pebbles and cobbles with poor sandy matrix. Locally conglomerate and sandstone boulders are present. Thickness up to 5-10 m.

Marine to Transition Deposits (bedrock)

- Sand-clay deposits (5)**
 - Gray and gray-green interbedded sand, silt and clay, arranged in level and lenses with planar or cross bedding. Thickness from a few meters up to 10 m.
- Conglomerate and sand deposits (4)**
 - Calcareous and locally polygenic conglomerates, constituted by clast supported pebbles to cobbles in whitish sandy matrix, massive or planar bedded. Lenses of channel sands or clays are present. Thickness from a few meters up to 10 m.
- Marine Deposits (bedrock)**
 - Conglomerate deposits (3)**
 - Light colored calcareous conglomerates, well sorted, moderately cemented, with sandy matrix, clasts are mainly limestone and chert fragments, and are mostly centimetric in size. They are arranged in decimetric layers and lenses, with cross and planar bedding and interbedded pebbles, a few decimeters thick lenses and layers of sands and silts are occasionally interbedded in the lower part of the unit. Thickness from a few meters to <30 m.
 - Sand deposits (2)**
 - Yellowish sandstones and silty-sandstones, from poorly to highly cemented, with grayish, thinly laminated clays and silty-clays interbedded. Yellowish sands and sandstones, frequently bioturbated, with conglomerate lenses, are prevalent in the upper part. Thickness up to 100 m.
 - Clay deposits (1)**
 - Blue-gray clays and marly-clays interbedded with thin sand and clayey-sand levels. The sand/clay ratio is <1. Fossils' content is represented by bivalves and small gastropods. Maximum observed outcropping thickness > 300 m (much higher in depth).

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Tectonic features

- Fault
- Bedding 5°-45°
- Bedding 0°-5°

ELEVATION MAP

SLOPE MAP

DRAINAGE BASINS MAP

HYPSONETRIC MAP

HYPSONETRIC DIAGRAMS for each drainage basin (number 1-8)

BLOCK DIAGRAMS OF HILLSLOPE EVOLUTION

Legend

- Continental deposits**
 - Colluvial deposits: Mainly silt with pebbles and cobbles deposits (s-p)
 - Colluvial deposits: Mainly gravel deposits (g)
 - Colluvial deposits: Mainly silt-clays deposits (s-c)
 - Landslide deposits (l)
 - Scree slope deposits (ss)
- Marine deposits**
 - Conglomerate deposits (co)
 - Sand deposits (s)
 - Clay deposits (cl)