

Sedimentology of Cenozoic continental deposits in the northern region of Douro river (Portugal).

ALVES, M.I. CAETANO and PEREIRA, D. ÍNSUA.
Universidade do Minho, 4700-320 Braga, Portugal.

In the northernmost area of Portugal the Cenozoic occurs on two different morphotectonic settings: (1) the western area (Trás-os-Montes region) and (2) the eastern, next Atlantic margin (Minho region). Sedimentary cycles were distinguished based on several studies. Sedimentology and geomorphology allowed mapping of the drainage changes and a description of the depositional systems. Information includes lithofacies description and analytical results (texture, grain size, clast analysis, heavy and 2 μ m mineral associations).

In the western area the sedimentary record is mainly Paleogene and Miocene. The first cycle represents alluvial fans kept in strike-slip basins. In the second cycle (Miocene) are recognised two Tectonic Sedimentary Units, both recording the proximal facies of a braided fluvial system. This endorheic system was draining to the Douro Basin (Spain). The Atlantic capture of the drainage promotes glyptogenesis and the sedimentary record became scarce. In the eastern area, near the Atlantic Ocean, the sedimentary record is geographic and stratigraphic limited (Late Pliocene and Quaternary). In this area sedimentation is related to exorheic drainage, formerly stored in depressions. During the Quaternary cycle, fluvial terraces are generated.

Consequently, four main sedimentary cycles are defined during the Paleogene, Miocene, Late Pliocene and Quaternary. The tectonic activity controlled sedimentation and preservation of the older sedimentary record in the western area. Lesser tectonic activity and greater glyptogenesis justify the narrow and newer record in the eastern area.