MSc thesis (Geochronology)

Slope morphometry of Badlands and their relation to erosion patterns



Calanchi (singular: calanco) represent a typical example of Badlands in the Italian peninsula, which rapidly evolve on clayey terrains. Badlands are considered as 'ideal field laboratories' for studying landscape evolution because they are like miniature fluvial systems in both the spatial and temporal scales.

The aim of this thesis will be to improve the understanding of the role of the slope morphometry in controlling the typologies of dominant morphogenetic processes and their connected landforms. Therefore, the main aim consists in quantifying the magnitude and spatial distribution of erosion rates.

Erosion rates will be measured by using $^{239+240}$Pu in creek sediments and soils and related to the different slope morphometry. To extend the time span and include a very long-term perspective, also meteoric ^{10}Be can be used as a tracer for soil and surface erosion.

The thesis can start anytime and will be supervised by:

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