Geophysical Research Abstracts
Vol. 15, EGU2013-1111-2, 2013
EGU General Assembly 2013

Mapping and classification of geoforms in the Serra de Grândola (Alentejo, South West, Portugal)

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The study of geomorphic processes is the starting point for development and sustainable land management. These processes may cause risks that represent threats to environment, population and human activities. So, studying its genesis is important to find tools that can mitigate threats. In the last few decades, geographic information systems (GIS) have become an essential tool for environmental management. The integration of digital terrain models in GIS has contributed to improve environmental studies and knowledge, as they are a support for modelling geoforms (terrain units resulting from climate and other natural processes and their interactions with the Earth's surface). In this research, geoforms from the Serra de Grândola area (Alentejo, South West, Portugal) are classified according to the most important physical and structural differences. The methodology is based on the Hammond's hierarchical criteria and in the geographical information related to soft-slopes, local relief and terrain profiles.