

# Εφαρμοσμένη και Αστική Γεωμορφολογία

Άννα Καρκάνη  
Νίκη Ευελπίδου



## METADATA

**Title:** Applied and Urban Geomorphology

**Other Titles:** -

**Language:** Greek

**Authors:** Karkani, A., Laboratory and Teaching Staff, UOA,  
Evelpidou, N., Professor, UOA

**ISBN:** 978-618-228-116-1

**Subject:** NATURAL SCIENCES AND AGRICULTURAL SCIENCES

**Keywords:** Geomorphology / Urbanization / Urban  
environment / Natural hazards / Human-induced hazards

**Bibliographic Reference:** Karkani, A., & Evelpidou, N. (2023). Applied and Urban Geomorphology [Undergraduate textbook]. Kallipos, Open Academic Editions. <http://dx.doi.org/10.57713/kallipos-350>

## Abstract

Before humans left their first footprints in Africa, the Earth's surface was shaped solely by the natural geophysical processes of climate, tectonic uplift, volcanism and erosion, sediment transport and deposition. While these processes continue to shape the relief, human societies have increasingly acquired the ability to act as a new force of geomorphological change, adding to and interacting with pre-existing natural forces in shaping the relief through activities such as fires, the ploughing of land for agriculture, the construction of settlements, dams, mines, roads, and other infrastructure. Therefore, a full assessment and understanding of the formation and evolution of today's landforms requires an understanding of the anthropogenic processes that have contributed to their formation. Applied Geomorphology focuses on geomorphological environments and the processes that involve societies. It includes the application of geomorphology to answer research questions of geomorphological importance to society and to find solutions to a variety of social-environmental problems affected by landforms and geomorphological processes. In other words, Applied Geomorphology can be defined as

geomorphology at the service of society and man. In this context, this book focuses mainly on applications of Geomorphology and on changes in the geomorphological environment due to human interventions, as well as on natural geomorphic processes that affect man. It aims to understand the changes brought about by anthropogenic activities in the geomorphological environment and to manage and assess risks such as floods and erosion. The book analyses the main methods and techniques used in geomorphology, anthropogenic interventions and the alteration of the relief, the effects of urbanisation, and the assessment of geomorphological risks, such as erosion, floods and landslides. The interaction of man with the environment, and the effects of anthropogenic interventions on geomorphological phenomena and vice versa, are described. In addition, case studies from the Greek area are presented and analysed. Overall, this book aims to contribute to a better understanding of the contribution of the human factor to the transformation of natural relief, the environmental impacts and the geomorphological hazards that can lead to a multitude of environmental changes with human implications.

