



applied sciences



Special Issue Reprint

Spatial Analysis for Landscape Changes

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Recent increasing trends of the occurrence of natural and anthropic processes have a strong impact on landscape modification, and there is a growing need for the implementation of effective instruments, tools, and approaches to understand and manage landscape changes. A great improvement in the availability of high-resolution DEMs, GIS tools, and algorithms of automatic extraction of landform features and change detections has favored an increase in the analysis of landscape changes, which became an essential instrument for the quantitative evaluation of landscape changes in many research fields. One of the most effective ways of investigating natural landscape changes is the geomorphological one, which benefits from recent advances in the development of digital elevation model (DEM) comparison software and algorithms, image change detection, and landscape evolution models.

This Special Issue collects six papers concerning the application of traditional and innovative multidisciplinary methods in several application fields, such as geomorphology, urban and territorial systems, vegetation restoration, and soil science. The papers include multidisciplinary studies that highlight the usefulness of quantitative analyses of satellite images and UAV-based DEMs, the application of Landscape Evolution Models (LEMs) and automatic landform classification algorithms to solve multidisciplinary issues of landscape changes. A review article is also presented, dealing with the bibliometric analysis of the research topic.



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