

Anthropogenic geomorphology - Change of process dynamics and landscapes

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Human interferences in landscapes are associated with various forms of land use, urbanization, the development of infrastructure, raw material and fuel extraction, and waste disposal. Although humans have interfered into landscape dynamics since they used fire the increasing human impact after the Second World War into landscapes is affecting increasingly the feedback-controlled interaction of the natural processes and the frequency and magnitude of the geomorphologic processes. The effects of human interferences in landscapes are not limited to landforms and morphodynamics. The increasing density of the traffic lines and of the infrastructure for urban and rural lands results in an increasing fragmentation of natural habitats and a reduction of biodiversity. Urbanization, rural land use, mining, and the advent of an industrial agriculture are influencing the interplay of pedogenetic, biologic, and hydrologic systems which in turn, also affect the geomorphological processes and factors controlling the climatic system, such as the albedo and the fluxes of latent and sensible heat.

The extent of human interferences in landscapes suggests that they affect the connectivity of the environmental systems, the energy fluxes on the Earth's surface and the reaction times of the processes at the earth surface by creating different thresholds. This study analyses various forms of anthropogenic landform changes and of human interferences into landscapes and aspects which are related to the different temporal and spatial scales of the human impact on the morphodynamic system.

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