

REVITALIZATION'S FUTURE OF LANDFILL AS A LAND ASSET

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Abstract

As ancient as civilization, dumps and landfills are still the final disposal place for products, where the life cycle of materials ends. The Industrial Revolution at the turn of the 18th and 19th centuries was a stepping stone over which the first attempts at environmental thinking began. Nowadays, the approach of environmental awareness regarding waste has evolved to advanced recycling systems, zero waste, and beyond the zero waste concepts with prospected up-to-date transformation in the future. Furthermore, non-material values are emphasized, including ecosystem services and recreation resources. Strategic land management, by revitalizing old dumps and closing existing landfills, becomes more and more attractive for territory planners. The implementation of revitalization is complicated as each dumpsite must be evaluated individually. The stumbling blocks relate to historical and still existing environmental pollution assessment and the site's geotechnical specifics, as the main task includes preventing pollution from being discharged into surrounding areas. Performed revitalization cases reveal that the land's value afterward significantly increases as the territories can be used as real estate assets, industrial parks, and recreation areas. The study evaluates old abandoned dumps in their revitalization perspectives under real estate planning dimensions, amended with the ecosystem services recovery. Site-specific peculiarities of soil, biota, and climate interacted by industrial activities are the aspects that should be included in the equation of future revitalization perspectives. Environmental, economic, and social domains are the pillars in analyzing the potential of regained assets from various, not only monetary, outlooks. Environmental engineering, landscape architecture, and advanced technologies in step with established cultural and economic targets, involving the *Triple helix* approach where NGOs, municipalities, and industry mutually interact, lead to sustainable land use. The study is supported by project No.1.1.1.2/VIAA/3/19/531, '*Innovative technologies for stabilization of landfills - diminishing of environmental impact and resources potential in frames of circular economy*'.

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