



“Gheorghe Asachi” Technical University of Iasi, Romania



EVALUATION AND RESHAPING MODEL OF MINING LANDSCAPE RESOURCES RELYING ON GREEN INFRASTRUCTURE: THE CASE OF THE WEST SURFACE MINE

Tang He*, Qin Zheng

CCTEG Chongqing Engineering (Group) CO., LTD, 400010, Chongqing, China

Abstract

The regeneration of mine sites requires addressing a complex interplay of environmental, economic, and social factors, often making it impractical to rely solely on single-point treatments focused on abandoned sites. Instead, integrating the management of these areas into the broader governance framework of urban green infrastructure networks offers a sustainable approach, aligning regeneration with the continuity and health of regional ecological patterns and processes. This integration is essential for fostering sustainable urban development and ensuring long-term ecological stability.

This paper investigates the West Open Pit Mine, utilizing a hierarchical analysis to evaluate landscape resources comprehensively, focusing on environmental, economic, cultural, and social values. By determining the mine's multifaceted development potential, this study identifies a reshaping model that promotes a symbiotic relationship between the mine's redevelopment and the green infrastructure. This model serves as a foundation for advancing urban regeneration efforts, not only revitalizing the West Open Pit Mine but also contributing to Fushun City's green infrastructure network. The findings provide actionable insights for urban planners and policymakers aiming to harmonize industrial site regeneration with sustainable urban growth, supporting Fushun City's transition towards a resilient, ecologically integrated urban landscape.

Key words: green infrastructure, landscape resource evaluation, mine rehabilitation, West Surface Mine

Received: August, 2023; *Revised final:* May, 2024; *Accepted:* May, 2024; *Published in final edited form:* May, 2024

* Author to whom all correspondence should be addressed: e-mail: tempiotto@yeah.net