

Restoration of ecosystem services in post-mining areas: A Recovery project approach

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Abstract

Ecological restoration of post-mining areas aims to accelerate the recovery of degraded and transformed ecosystems to a good ecosystem status.

Ecosystems impacted by mining are challenging to restore, further diminishing their capacity to generate benefits for society. Therefore, it provides an excellent framework for multidimensional analysing the links between people and the environment.

Links between ecosystems and the economy are often described using the concept of 'ecosystem services'. Ecosystem services represent the flows of value to human societies due to the state and quantity of natural capital.

The ecosystem services concept involves an essential dimension in land rehabilitation and ecological restoration of post-mining areas. A valuation of the ecosystem services provided by different land rehabilitation (Figure 1) and ecological restoration scenarios must be undertaken to assess their contribution to society and evaluate the consequences of alternative actions.



Figure 1. Land rehabilitation in a waste heap

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The research is premised on the notion that management decisions about land rehabilitation and ecological restoration of post-mining areas involve trade-offs among ecosystem services. A quantitative-based assessment of these trade-offs is the necessary ingredient for sound decision-making.

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