

Local Nature-Based Solutions for Global Future: The Case of Rehabilitation of Mining Degraded Landscapes in Sub Saharan Africa

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Mining in sub-Saharan Africa has greatly impacted both the aquatic and terrestrial ecosystems either through pollution or landscape transformation. In the past, attempts to restore the degradation landscapes have not yielded any positive results because most of the efforts focused interventions not based on the ecological resilience and functional traits of the native species. The current approaches focus on developing ecological restoration models as well as sustainable silvicultural systems based on, in case of polluted ecosystems, the heavy metal extraction and phytostabilization potential of native species as well as the functional traits of soil macro & microbe species and how these functional attributes could be exploited to enhance their potential application in the restoration of the degraded ecosystems. The presentation explores the concept of disturbance-recovery processes as the basis for developing ecological models (nature-based solutions) appropriate for managing the Sub-Saharan African ecosystems.