

## **Ecological restoration of road embankments in Austria Prospects and limitations**

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Sustainable rehabilitation and restoration of slopes and road embankments should lead to an appealing landscape with satisfying ecological value: no flora falsification, high biodiversity, establishing valuable plant communities, in-situ conservation of rare species, use of regional wild seeds. For establishing regional wild plants, soil preparation following the requirements of the site specific target vegetation type has to be done. As a substrate diaspore-free, humus-poor top soil with low nutrient content should be used. Regional wild plants are not suitable for the restoration of humus and nutrient-rich areas. The following methods can be used for setting up extensive meadows and turfs with regional wild species on road embankments: Seeding of wild collections or the use of seed coming from either hay threshing or hay mulching. Generally, seed density should be between 1 and 5 g/m<sup>2</sup>, a de-mixing of the seed mixture has to be avoided. Fertilisation has to be reduced to a maximum of 4g N m<sup>-2</sup>. For the conservation of rare plant species or rare plant communities, the use of sods is a successful, well-established method.

Ecological restoration or rehabilitation, using sustainable plant or seed material combined with optimised application techniques ensures sufficient protection from erosion and enables a reduction of costs, if mid term follow up costs are calculated too: reduced use of fertiliser, reduced maintenance costs, reduced failures, more stable systems.