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Soil microbiome from postmining ecosystems from Kabardino-Balkaria, Russia

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The soil microbiome is critical to the restoration of soils, destroyed by human activity. The dynamics of changes in the soil microbiome was investigated from the two overgrown gravel-sand quarry dumps in the North Caucasus (Kabardino-Balkaria, Russia). Samples were taken in the quarries of contrasting soil types (Calcareous Chernozem and Umbric Gleyic soils) under the various types of reclamation. Samples were taken from 10 points from a quarry with meadow soil and from 11 points from the Chernozem. The 16S ssu gene libraries were sequenced from soil DNA. The difference in microbiomes between the control points and the points where the soil is restored was statistically significant. The disturbed Gleyic soil is characterized by an increase in the representatives of Acidobacteria, for Chernozem of the genera *Niastella*, *Ramlibacter*, *Microvirga*. On the Umbric Gleyic soil without reclamation, significant heterogeneity was shown, in contrast to Chernozem with different types of reclamation. In different soil types, the response of the soil microbiome to soil restoration was significantly different, which in turn should influence the choice of the strategy for the restoration of anthropogenically disturbed soils.