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Microbiological description of self-overgrowing spoil heaps and sand quarries in Nordwest Russia

Aleksei Zverev[1,2], Anastasiia Kimeklis[1,2], Grigory Gladkov[1,2], Arina Kichko[1,2], Evgeny Andronov[2,3], and Evgeny Abakumov[1,2]

[1]Applied Ecology, St. Petersburg State University, Saint-Petersburg, Russia
[2]Laboratory of microbiological monitoring and bioremediation of soils, All-Russian Research Institute for Agricultural Microbiology, Saint-Petersburg, Russia
[3]Genetics and Biotechnology, St. Petersburg State University, Saint-Petersburg, Russia

Self-overgrowing recovery of disturbed soils is one of important processes in reclamation of disturbed soils. Different types of anthropogenic disturbances followed by variety of soil types and their genesis leads to different bacterial communities, envolved in reclamation processes. Here we describe regional self-overgrowing soils in two location (Novgorod region, Northwest Russia). We analyse top level of industrial disturbed soils after coil mining (spoil tips with extremely low pH, and overburden soil) and sand quarry dumps followed by local undisturbed soils.

We perform 16s amplicone sequencind (v4-region) by Illumina MiSEQ and chemical routine analysis (pH, C, N and other). We provide alpha- and beta-diversity analysis, followed by CCA and analysis of differential abundance of taxa.

Sand quarry dumps and regional soils looks common on phyla level, and represent common soil phyla like *Proteobacteria*, *Actinobacteria* and *Verrucomicrobia*. Alpha-diversity metrics aslo are similar, despite difference in beta-diversity. Overburden soil and soil from spot tips, by contrast, is very different even in phylum level. Main

intermediants here are *Actinobacteria*, *Chloroflexi и Nitrospirae*. Also they show extremely low alpha-diversity metrics.

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