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Constructed artificial catchment on mine Jiri Heap

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Here we present plans of artificial catchment, which is recently build, in internal heap of mine Jiri. The aim of the experimental catchment is to allow comprehensive monitoring of the flow of water and nutrients through the ecosystem as well as the exchange of gases between the ecosystem and the surrounding atmosphere. Particularly, the intake of rain water, including dry and wet deposition, surface and subsurface runoff, both in the amount of water flowing and the content of the substances to be discharged, water flow in the soil profile, total radiation, carbon exchange (in the form of CO_2) and the whole ecosystem and soil and atmosphere. The area itself will be divided into four separate catchments each with an area of 0.24 ha of which one-half will be planted by alders (reclaimed), the other being then unreclaimed and left on its own. For each pair of areas (reclaimed and unreclaimed), one eddy covariance tower will be located in the direction of the predominant winds.
The area will then be equipped with container lysimeters, and access chests allowing for the easy implementation of additional ad hoc experiments. The organization of the catchment will resemble condition in two extensively studied chronosequences of post mining sites in the area areas (reclaimed and unreclaimed).