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Ministry of Environment of the Slovak Republic
Slovak Environment Agency

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CONTAMINATED SITES 2022

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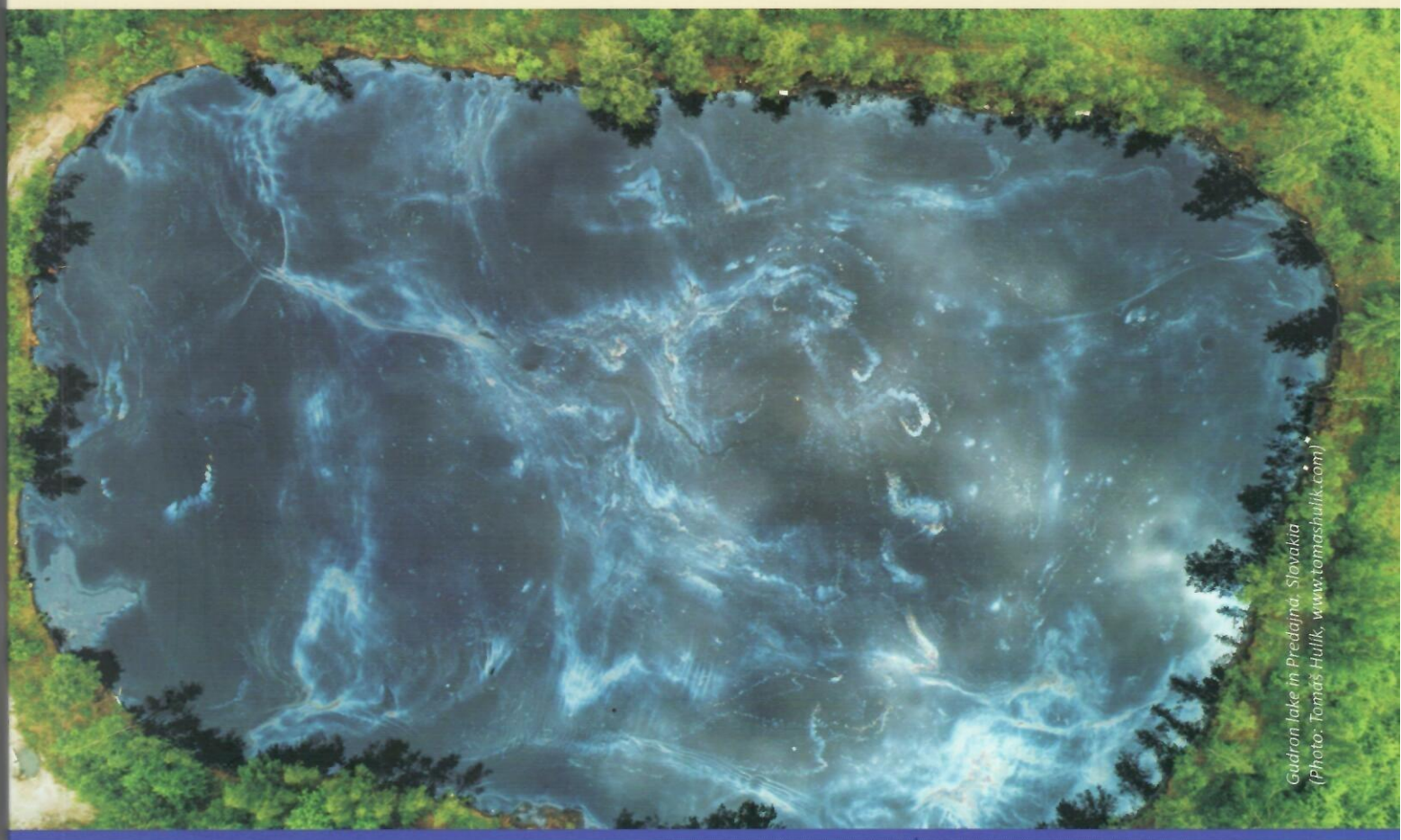

Gudron lake in Predajna, Slovakia (Photo: Tomáš Hulík, www.tomashulik.com)

CONFERENCE PROCEEDINGS

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THE POSSIBILITY OF PLANTING THE FAST-GROWING TREE SPECIES AT THE LANDFILLS OF THE KOLUBARA MINING BASIN

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ABSTRACT
The soil conditions in the surfaces produced by the surface mining of the ore, which need to be recultivated, are accompanied by numerous problems such as overwetting, lack of nutrients, poor functional activity, compaction and destruction of the soil texture.

On the surface mine of field "B" in the settlement of Prkosava within the Kolubara mining basin in the Republic of Serbia (Coordinate: 7453715;4916566), a landfill was formed on which an area of 7.6 ha of deposol land was set aside for the cultivation of woody crops [1] . One part of the separated area was leveled and two average samples were taken from this area and a pedological profile was opened. The second part was in existing condition, with numerous depressions in which water was retained, so that in some places it was overgrown with reeds, willows (*Salix sp.*) and poplars (*Populus sp.*).

In the composite samples sampled at the study site, the mechanical composition, main fertility parameters and content of the total forms of Mn, Cd, Pb, Ni, Cr, Zn, Cu, Co, were determined. It has been determined that the tested soil by texture belongs to clay and clayey loam. It is neutral to slightly acidic reaction, medium provided with humus, nitrogen and readily available potassium, while the availability of readily available phosphorus is low.

Tab. 1 Basic fertility parameters

N°	Coordinate		pH		$CaCO_3$	SOM	P_2O_5	K_2O
	x	y	(H_2O)	(1MKCl)	(%)	(%)	(mg 100 g^{-1})	(mg 100 g^{-1})
			SRPS ISO 1039(2007)		SRPS ISO 10693(2005)	According Kotzmann's method	According Egner-Riehm	
1	7453494	4916487	7.60	6.60	0.00	3.34	8.16	23.08
2	7453824	4916667	7.50	6.40	0.00	3.57	3.31	25.88