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Phytoremediation of Heavy Metals Contaminated Soil - Future Opportunities: A Review †

Gunjan Garg [1], Sapna Meena [1], Garima Awasthi [1], Seema Manwani [1,*]

[1] Department of Life Sciences, Vivekananda Global University, Jaipur, 303012; princegarg3706@gmail.com (G.G.); sapnameena41775@gmail.com (S.M.); gariimaa21@gmail.com (G.A.); seema.manwani@vgu.ac.in (S.M.);
* Correspondence: seema.manwani@vgu.ac.in (S.M.);
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Abstract: Industrial manufacturing, mining activities, domestic waste, and agricultural use of metal and metal-containing compounds have resulted in the accumulation of toxic metals into the environment. Metal pollution poses severe inferences for human health and the environment. Unlike other organic substances, metals cannot be degraded; thus, they must be eliminated during the clean-out process. Some of the heavy metals are deadly even in minute amounts, and some can be mutagenic, carcinogenic, and endocrine disruptors, while others can cause behavioral and neurological problems in infants and children. Therefore, remediation of heavy metals polluted soil can be a potent alternative for reducing the nixious effects on ecosystem health. Phytoremediation is a cost-effective and eco-friendly approach. Keeping in view the preceding facts, this paper attempts to access the current status of phytoremediation for heavy metals removal from contaminated soils, as well as its future potential. Phytoextraction and Phyto stabilization are highlighted as the most promising and alternative strategies for soil restoration.

Keywords: contamination; phytoremediation; phytoextraction; phytostabilization.

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Conflicts of Interest

The authors declare no conflict of interest.