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BioRem—Database for Remediation of Heavy Metal Rich Habitats and Protection of Their Biodiversity

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Abstract:

BioRem is an open access on-line resource, which aims to document the biodiversity of terrestrial heavy metal rich sites around the globe that are the habitats of specialized metal tolerant organisms (MTOs). A comprehensive inventory of MTOs together with an analysis of environmental conditions and research about the adaptations of MTOs shall support the development of holistic models about the functioning of heavy metal ecosystems and lead to an improved understanding of interactions and adaptation strategies of MTOs. Furthermore, the database enables the identification of plants and microorganisms suited for remediation actions where protection of the population and the environment is needed. Information about scientific data shall lay the ground for the definition of heavy metal habitats with unique bio-coenoses as reservoirs of biodiversity: accordingly, BioRem shall be a resource for education and for dissemination of our knowledge about the ecology of heavy metal rich sites and their habitats, and it shall provide tools for the evaluation of socio-economic strategies for either remediation or preservation of heavy metal habitats. Where needed, alternative strategies for the survival of MTOs shall be developed, hence contributing to the aim of the Göteborg 2010 target to halt loss of biodiversity.