

University of Nova Gorica, Graduate School

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INVITATION TO THE LECTURE

entitled

Sustainable remediation of landfill sites

dr. Tjaša Griessler Bulc LIMNOS Company for Applied Ecology, Ljubljana

Thursday, November 30th 2006 at 15:30 Lecture hall 201 of the School of Environmental Sciences, Via Croce 3, Gorizia, Italy

Landfilling is currently the only way of final removal of mixed municipal solid waste (MSW) left over separate collection in Slovenia. In 2006 Ministry for the Environment recorded 59 active sanitary landfills for MSW in Slovenia. 36 of them are constructed properly to operate until 2008. The 23 will be closed since their capacities will be filled up, or as they do not comply with the requirements for the operation. Besides registered active landfills, numerous illegal dump sites can be found, which have to be remediated. All listed open questions on how to restore them in the most sustainable way to prevent long-term negative environmental impacts. Dry cell approach to landfill closure, which eliminates leachate and gas production, disables degradation and final stabilisation of wastes. On the other hand, where excessive leachate is produced, the commonly used treatment processes for removal of contaminants from leachate require high energy and capital inputs and can generate large quantities of by-products.

The presentation is focused on the study, where a prototype was established with a landfill closure enabling leachate infiltration into the landfill body with the leachate collection, treatment in a constructed wetland and irrigation on willow plantation on the closed landfill. The results of treatment efficiency of the prototype will be presented and effects of leachate irrigation on the soil and plant components will be discussed.