Evaluation of social aspects within the sustainability assessment of soil remediation projects

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Sustainable remediation requires a balanced decision-making process in which environmental, economic and social aspects of different remediation options are all considered together and the optimum remediation solution is selected. Usually more attention is paid to the evaluation of environmental and economic aspects, in particular to reduce the human and environmental risks and to the remediation costs, to the detriment of social aspects of remediation.

This paper investigates, how social aspects are currently considered in sustainability assessments of remediation projects. A selection of decision support systems, used for the sustainability assessment of a remediation project, is analyzed to define how social aspects are considered in those tools. Additionally, the similarity of the considered social aspects with social indicators of the Sustainable Remediation Forum – United Kingdom (SuRF-UK), is addressed. The results are linked to expert’s opinions and the suitability of the Social Life Cycle Assessment (S-LCA) as decision support system is also evaluated.

The consideration of social aspects in decision support systems is limited, only “human health and safety” and “neighborhood and locality” are frequently taken into account, while SuRF-UK identified five indicators to facilitate a holistic consideration of social aspects of a remediation project. The experts interviewed confirmed, that in practice, less attention is paid to social aspects; in fact it is mainly limited to health, safety and nuisance. The S-LCA has the potential to assist in the evaluation of social aspects of a remediation project However, a simplification of its methodology is necessary, and further research concerning this matter is recommended.