Geophysical Research Abstracts, Vol. 9, 11043, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-11043

Development and application of an integrated in-situ monitoring and remote sensing methodology for the assessment of soil quality and reclamation priorities in old industrial sites

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The industrial history of Europe has left a number of old sites in many European countries, including past mine sites, old chemical plants etc., with increased contamination levels especially in the environmental parameters of soil and water. For the evaluation of contamination, the application of integrated methods including both remote sensing in the large scale, and in situ monitoring of soils and water in the hot spots was developed and is currently being applied in an old mine region in Cyprus. Field measurements and remote sensing data provide the basis in order to identify the areas where intervention is required and for the development of alternative reclamation schemes for the sustainable remediation of these sites. Final remediation schemes are determined based on a number of environmental, technical and economic criteria, taking into account the new, alternative uses proposed by the current plans of the sustainable development of these areas.