



Applied and Environmental Soil Science

Special Issue on  
**Integrated Approaches to Soil Contamination  
Monitoring**

# CALL FOR PAPERS

Top soil is a very important environmental compartment for many reasons, like it being the medium where plants grow, carbon accumulates, and so forth. But it also represents the "sink" where a wide range of waste materials, in very heterogeneous chemical forms, are disposed of and accumulate. This fact may allow contaminants to move downward the soil profile and reach subsurface and groundwater reservoirs. Agricultural activities can lead to land contamination due to the improper use of pesticides, agrochemicals, fertilizers, conditioners, and several other materials. The problem of contaminated land is exacerbated by industrial activities, including waste disposal and accidental spills that can also contribute to extensive contamination in the near surface environment. Dangerous contaminants can impact the characteristics and productivity of the surface soil as well as the subsurface and valuable natural resources conditions. Soil pollution threatens human health, quality of foods, and groundwater but affects also the quality of the air.

Surface and subsurface soil monitoring and characterization can be challenging since chemical analyses at sampling points are local providing an inadequate model of the subsurface. Thus, novel, cost-effective, and multidisciplinary methods are needed to accurately describe surface/subsurface soil contamination whilst monitoring the evolution of the contamination over time producing time lapse models. Continuous advances on characterization methods (such as automated acquisition systems of subsurface parameters), changes in regulatory standards, and the development of remediation systems further complicate this task.

With this special issue, we aim at bringing together scientists from different disciplines, with research focused on surface soil and subsurface contamination. Furthermore we want to highlight recent research advances on characterization and monitoring methods and identify the pathways for their implementation to industry, agriculture, and society to encourage their adoption.

Potential topics include, but are not limited to:

- ▶ Surface soil monitoring techniques
- ▶ Innovative methods for monitoring and characterization (in soil and waters, etc.) (e.g., geophysics, remote sensing, spectroscopy, and others)
- ▶ State-of-the-art field sampling and interpretation of the data
- ▶ Synergistic site characterization (established and novel methods)
- ▶ Proposals and Inputs to international policy on soil protection

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/aess/iasc/>.

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