



Caresoil: A multidisciplinary Project to characterize, remediate, monitor and evaluate the risk of contaminated soils in Madrid (Spain)

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Soil contamination can come from diffuse sources (air deposition, agriculture, etc.) or local sources, these last being related to anthropogenic activities that are potentially soil contaminating activities. According to data from the EU, in Spain, and particularly for the Autonomous Community of Madrid, it can be considered that heavy metals, toxic organic compounds (including Non Aqueous Phases Liquids, NAPLs) and combinations of both are the main problem of point sources of soil contamination in our community.

The five aspects that will be applied in Caresoil Program (S2013/MAE-2739) in the analysis and remediation of a local soil contamination are: 1) the location of the source of contamination and characterization of soil and aquifer concerned, 2) evaluation of the dispersion of the plume, 3) application of effective remediation techniques, 4) monitoring the evolution of the contaminated soil and 5) risk analysis throughout this process.

These aspects involve advanced technologies (hydrogeology, geophysics, geochemistry,...) that require new developing of knowledge, being necessary the contribution of several researching groups specialized in the fields previously cited, as they are those integrating CARESOIL Program. Actually two cases concerning hydrocarbon spills, as representative examples of soil local contamination in Madrid area, are being studied. The first is being remediated and we are monitoring this process to evaluate its effectiveness. In the second location we are defining the extent of contamination in soil and aquifer to define the most effective remediation technique.