



## **Vegetation as indicator for sub-surface pollution**

**S. Trapp** and M. Larsen

Environment & Resources DTU, Technical University of Denmark, DK-2800 Kongens  
Lyngby, Denmark; stt@er.dtu.dk

Measurement of vegetation samples is an alternative, cheap method to drilling to find about sub-surface pollution. The objective of our work is to determine by field experiments and by mathematical modeling the relation between subsurface and above-surface contamination, find indicator species (deep-rooting plants) and identify typical chemicals that can be analyzed to determine the type and extent of subsurface pollution.

There are several field sites in Denmark, e.g., Vassingerød former asphalt works, Axelved former tank filling station, Søllerød former gas work and Hasselager former waste deposit & scrap metal yard, where wild vegetation and tree plantations (a total of ca. 5 hectares of phytoremediation field trials) grow, and where the subsurface pollution has been mapped. Existing mathematical models will be used to select indicator chemicals that are plant mobile. If persistent, these chemicals will be found in vegetation above polluted soils. Using soil and vegetation samples from field sites, the correlation between subsurface and above-ground contamination is experimentally established. First results will be presented (if available in April 2005).