Monitoring Plant-Stress to Detect Soil Contamination by Buried Explosives:

Jens Bongartz, Caspar Kneer, Alexander Jenal, Immanuel Weber

Anwendungszentrum für multimodale und luftgestuetzte Sensorik (AMLS)
Hochschule Koblenz & Fraunhofer FHR

After a lengthy period of time buried in the ground the explosive compounds of undetonated landmines could leak into the environment, ultimately contaminating the soil. Because plants are rooted in the soil they can be considered indicators of the local environment. The explosives are taken up by plants which will affect the physiology and functioning of the plants. Especially the vital process of photosynthesis will be influcenced, which can be detected by means of optical methods. In the talk an overview of different hyper- and multispectral remote sensing techniques will be given. In particular the spatial distribution of sensor data over larger areas can help to distinguish between natural environmental stress and local environmental contaminations.