

Iraqi Landform Soil Assessment (ILSA): Bulk Soil Analysis Results

The goal was to increase the military's knowledge of the soils in Iraq and to aid in identifying test conditions for equipment at analog locations in the US that represent battlefield conditions in Iraq. We reported our results in 2008. The properties of the samples we analyzed provided useful information on the characteristics of natural and anthropogenic dust in the various locations represented because soil surfaces are a fundamental source of dust in desert regions. The physical, chemical, and mineralogical characteristics of dust are important because they affect its potential to create hazards for human health, and military operations and equipment.

Summary of Project Details: We obtained and analyzed 31 surface soil samples which represented a wide range of geographic locations. We characterized the soil for physical, chemical and mineralogical characteristics. We measured particle size, carbonate content, electrical conductivity and soluble ions, elemental analysis, and mineralogy. We were able to determine the landform and level of anthropogenic disturbance at each sampling site using satellite imagery.

Management Implications:

The results of our analyses were presented in graphic and tabular form, along with maps showing the spatial extent of the landform soil assessments. The results of our analysis from samples taken from Iraq provide the military with a comparative baseline for conditions in Iraq which can be used to identify similar conditions in the US. Those sites in the US with similar soil and landform conditions to Iraq can be identified for use in testing equipment that would be put into use on deployments there.

