

Project Summary

Title	The Impact of Climate Change/Anthropogenic Pressures on the Losses and Degradation of Wetlands in Lesotho
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Purpose	The overall objective of this investigation will be to assess and enhance ecosystem services provided by wetlands in the Kingdom of Lesotho for improving water storage and quality in agricultural catchments.
Project Summary	There is sparse information on the wetlands of Lesotho in terms of their characteristics, classification, management and coverage. It is estimated that the total wetland areas in Lesotho occupy about 90,000 ha (1979 estimate) of the total land area (of 30, 350km ²). There is increasing utilization of these wetlands mainly for household utilities and livestock watering. However, most of these wetlands have been degraded as a result of over exploitation coupled with global climatic change. The main objectives of this investigation will be to map the estimate the current area of wetlands in Lesotho using the SPOT/LANDSAT/IKONOS imageries. Attempt will be made to compare and contrast the extent of coverage (ha) in 1979 to 1989 and 2009. Secondly, from all these wetlands, benchmark sites will be identified for detailed investigation using morphologic/stratigraphic, as well as chemical and physical analysis. In order to understand the water storage capacities of these wetlands and understand the relationship between land use and sources of water, isotope labeling techniques will be utilized. In addition, some tested models such as RIVPACS and PC-QUASAR will be used for biological quality assessments and river flow and water quality.
Country and Specific	Lesotho, within the Soil Science Department of the National University of Lesotho.

Location(s)	
Participating Institutions	Department of Environmental Health, Department of Science & Chemical Technology, Department of Agricultural Extension & Education respectively.
Start Date	November, 2009
End date	November, 2011
Amount of Funding	US\$ 59, 987

