



First report of a coastal lowland acid sulfate soil in Puerto Rico

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Our research team has for the first time identified the presence of an acid sulfate soil in Puerto Rico. Results from a moist aerobic incubation suggest that the area would likely classify as a hyper-sulfidic soil under the Australian classification system. The presence of a sulfuric horizon is also alluded to by the MAI results. Results from elemental analyses conducted in soil profile samples at different depths denote strong correlations between total organic carbon vs both Fe and S; as well as between Fe and S. Strong correlations were also observed between As and Cd, and Al vs both Cr, and Pb. Samples of iron precipitates collected along one of the drainage outlets have been submitted to micro XRD analyses for solid phase identification. There is significant runoff from this field to an adjacent channel that eventually discharges into the main estuary of Puerto Rico. The ecological impact of such export load is currently under evaluation. Digital mapping and geographical information techniques are being combined to develop a probability map of potential CLASS occurrence in Puerto Rico and in the US Virgin islands of St. Thomas and St. Croix. This will enable to establish the extent and potential ecological relevance of acid sulfate soils in these islands.