

Thematic Volume INLAND ACID SULFATE SOIL SYSTEMS ACROSS AUSTRALIA

Editors:

R.W. Fitzpatrick and P. Shand (CRC LEME / CSIRO Land and Water)

Covering: distribution, properties, significance and biogeochemical processes of inland Acid Sulfate Soils (ASS) across Australia and overseas (Iraq and Brunei)

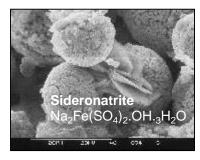
30 Australian and 2 overseas case histories



Chapters on:

- Soil-regolith landscape process models incorporating hydro-toposequence, biogeochemical and mineralogical techniques/approaches
- Proposed new / improved definitions of ASS materials
- Field methods sampling methods, chip trays, geophysics and redox probes
- Laboratory characterisation of sulfidic, sulfuric and monosulfidic black ooze (MBO) materials chemical, mineralogical and geochemical methods.
- Soil morphology and landscapes photographic examples of the wide range of inland ASS soil-landscapes via image gallery on CSIRO's ASS website.
- Mapping remote sensing, GIS, Atlas of Australian ASS.
- Surface water quality issues mobility of major and trace elements in solution and as colloids and nanoparticles
- Groundwater issues clogging of pumps by Al gels
- Frameworks to control and manage sulfidic, sulfuric and MBO materials
- Implications for mineral exploration (geochemical sampling medium)
- Case histories across several mineralised zones and land use settings in Australia: Western Australia (Wheatbelt and coastal plain); South Australia (Mt. Lofty Ranges, Mid-north, River Murray system, York Peninsula, Nullarbor plain; Lower Lakes; South-East); NSW (Tareena Billabong, Dicks creek and others); Tasmania (North East and North West; inland river areas/ peaty areas); Victoria (Dundas tableland; Corangamite, Gippsland, Woorndoo); NT (Adelaide River system, Ranger Mine plains). Overseas: - Iraq Marshes and Brunei.

Sulfuric acid production and dissolution of soil minerals



- Extreme acidity
- Extreme salinity
- Erosion
- Water quality problems (Fe, Al, heavy metals)



Authors from:

- Universities
- Geological surveys
- Research organisations
- Industry

Thematic Volume will be a valuable resource for:

- farmers
- natural resource managers
- soil, regolith and environmental scientists
- students
- anyone with an interest in Australia's unique environment
- mineral exploration

CRC LEME Head Office	postal:	c/- CSIRO Exploration & Mining PO Box 1130 Bentley WA 6102		
	•	(08) 6436 8695		(08) 6436 8560
	email:	crcleme-hq@csiro.au	web:	http://crcleme.org.au

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