

Critical Issues: Land and Soil

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LAND
MONITORING
FORUM

Outline

- Workshop sessions to identify issues
- LMF and LMG independently but some common critical issues
- Collectively 17 issues identified (5 common)
- Overlap with existing issues
- **Top six**

Critical Issue:

Valuing soil environmental services

- Methods to enable RCs to place financial and non-financial values on soil environmental services for determining tradeoffs for policy.
- Valuing 'natural capital' in a robust, defensible and transparent way that is capable of wide application across all natural resources.
- **Previously identified:** (☆☆☆☆)

Critical Issue:

Improved soil and land use information

- **S-map:**
 - Essential tool for policy developers and land managers; provides national consistency, access and interpretation
 - fills in the gaps of very patchy soil information used in NZLRI (large areas of 1:250,000 scale)
 - critical for catchment models
- **Land use information:**
 - Availability (updates), quality and cost – limits RC work now
 - Agribase, LCDB etc. – integration/consistency
- **Previously identified:** SRU and ECO portfolio

Critical Issue:

Soil contaminant accumulation

- predominantly fertiliser related but not exclusively
 - Copper chrome arsenic – a lot of unknowns
 - Zn – facial eczema, powerlines
- Cd, fluorine
 - Cd working group finishing
 - new strategy – priorities and tiered guidelines
- biological effects
- gaps: spatial, modelling, accumulation rates
- **Previously identified:** (☆☆☆☆)

Critical Issue:

Understanding impacts of nutrients and sediments on estuaries and coastal environments

- Land use effects on nutrients and sediment generation and transport and effects on estuaries, lakes and the coastal environment
- Empirical, evidence based approach to policy development integrating management of contaminants aligned to contaminant fate and environmental consequence
- **Previously identified:** (☆☆☆☆)

Critical Issue: Land use impacts on water quality

- Still need links between farm scale and catchment scale, cumulative effects, transfer pathways and attenuation of nutrients and contaminants through soil and vadose zone
- Links to accuracy of models; quality of soil and land input data; groundwater data
- **Previously identified:** SRU and ECO portfolio

Critical Issue:

Cumulative effects of activities on ecosystem structure, function and resilience

- Improved understanding of natural ecosystem complexity, diversity and resilience, and the cumulative effects of on-site and off-site activities on natural systems
- **Previously identified:** (☆☆☆☆)

A Soil Strategy for New Zealand

- A Soil Strategy for New Zealand
 - would set out a national vision to improve the sustainable management of soil and tackle degradation within a specified timeframe.
 - provide a national framework to ensure more effective policy co-ordination and realisation of policy goals and outcomes relating to the sustainable management of soils.
 - identify focus:
 - sustainable use of agricultural soils,
 - the role of soils in mitigating and adapting to climate change,
 - protecting soil functions during construction and development,
 - preventing pollution and dealing with historic contamination.
- Evidence document
 - document providing a detailed analysis of the evidence on why soils are important and the pressures being faced