



ANZSoilML: An Australian - New Zealand standard for exchange of soil data

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The Australian-New Zealand soil information exchange standard (ANZSoilML) is a GML-based standard designed to allow the discovery, query and delivery of soil and landscape data via standard Open Geospatial Consortium (OGC) Web Feature Services.

ANZSoilML modifies the Australian soil exchange standard (OzSoilML), which is based on the Australian Soil Information Transfer and Evaluation System (SITES) database design and exchange protocols, to meet the New Zealand National Soils Database requirements. The most significant change was the removal of the lists of CodeList terms in OzSoilML, which were based on the field methods specified in the 'Australian Soil and Land Survey Field Handbook'. These were replaced with empty CodeLists as placeholders to external vocabularies to allow the use of New Zealand vocabularies without violating the data model. Testing of the use of these separately governed Australian and New Zealand vocabularies has commenced.

ANZSoilML attempts to accommodate the proposed International Organization for Standardization ISO/DIS 28258 standard for soil quality. For the most part, ANZSoilML is consistent with the ISO model, although major differences arise as a result of:

- The need to specify the properties appropriate for each feature type;
- The inclusion of soil-related 'Landscape' features;
- Allowing the mapping of soil surfaces, bodies, layers and horizons, independent of the soil profile;
- Allowing specifying the relationships between the various soil features;
- Specifying soil horizons as specialisations of soil layers;
- Removing duplication of features provided by the ISO Observation & Measurements standard.

The International Union of Soil Sciences (IUSS) Working Group on Soil Information Standards (WG-SIS) aims to develop, promote and maintain a standard to facilitate the exchange of soils data and information. Developing an international exchange standard that is compatible with existing and emerging national and regional standards is a considerable challenge. ANZSoilML is proposed as a profile of the more generalised SoilML model being progressed through the IUSS Working Group.