

ACLEP 2011-12 Summary of annual activity and deliverables

Summary	Deliverables	Web links
1 Coordination and partnerships		
<p>ACLEP plays a key role in supporting a cooperative partnership between key government agencies with responsibility for Australia's soil data and information. It also facilitates interaction between the soils community and key clients such as the National Plan for Environmental Information, the Department of Climate Change, the Murray-Darling Basin Authority and research and education institutions.</p> <p>ACLEP delivered an information report to the National Committee on Soil and Terrain (NCST) suggesting improvements to governance arrangements which could greatly improve the management, availability and utility of Australia's soil data and information assets. The NCST provides strategic direction to ACLEP and ACLEP plays an active role in NCST meetings.</p>	<ul style="list-style-type: none"> • Report – Improving Australian soil data and information governance • NCST agenda papers - Planning for 2011-2012 ACLEP workplan; ACLEP/NPEI opportunities and challenges; Data governance; online data delivery; Development of SoilMapp; ASRIS national data products; national site data collation, ACLEP planning 2012-2013 	<ul style="list-style-type: none"> • http://www.clw.csiro.au/aclep/publications/reports.htm • NCST GovDex website
2 Promote standards and guidelines		
<p>ACLEP develops and maintains guidelines and standards for the collection, collation and management of Australian soil data and information. Guidelines and standards are endorsed by the NCST. ACLEP focus has been on the revision of database schemas to allow inclusion of monitoring data and for</p>	<ul style="list-style-type: none"> • ASRIS Technical Specifications v1.6 June 2012 • SITES v2.0 June 2012 • Contributing to the Australian Resource Information System (ASRIS) – guidelines for the inclusion of your soil data and information 	<ul style="list-style-type: none"> • http://www.asris.csiro.au/methods.html#Method_Downloads • http://www.asris.csiro.au/methods.html#Method_Downloads • http://www.clw.csiro.au/aclep/publications/reports.htm

<p>bringing allowable codes and methods up to date. ACLEP has developed a guideline for agencies, projects and individuals considering contribution of data to the national ASRIS collection.</p>		
<p>3 ASRIS national soil information infrastructure</p>		
<p>ASRIS is a key deliverable of ACLEP. It provides the Australian soil data and information infrastructure. The ASRIS website is maintained to provide visual access to available data. ACLEP has worked to develop specific standard national soil data products, as 250m resolution grids, using the best available data from the jurisdictions. National data products are endorsed through the NCST and made available for download from the ASRIS Themes, National Grids website.</p> <p>ACLEP has been working to improve methods and processes for national data transfer and collation. An information model, called OzSoilML has been developed to represent the soil and landscape features recognised in Australia. OZsoilML has been used to trial web services delivery of ASRIS site and sample data as part of an interoperability demonstrator project with the National Plan for Environmental Information.</p>	<ul style="list-style-type: none"> • Operational ASRIS databases and web visualisation applications • Standard national soil data products • Report – Advancing online delivery of Australian soil data and information • UML information model of soil features and attributes aligned to the Australian Soil and Land Survey Field handbook and ASRIS and SITES data base specifications. • ASRIS web services 	<ul style="list-style-type: none"> • http://www.asris.csiro.au • http://www.asris.csiro.au/themes/NationalGrids.html • http://www.clw.csiro.au/aclep/publications/reports.htm • The URL for the OzSoilML documentation is: http://www.clw.csiro.au/aclep/OzSoilML/1.0.0/Container/doc/OzSoilML-container/index.html • Example URLs for services are provided at the end of this document, including: <ol style="list-style-type: none"> 1. Open Layers to view and query all soil samples 2. Simple WFS of location of soil samples 3. Soil Sample service 4. Soil Specimen service 5. OM Observation service (laboratory results)

4 Upload data to ASRIS

<p>ACLEP has focussed on the collation of soil map data from around the country. New data from Tasmania and the Northern Territory has been added, with updates (including error fixes and some new data) being provided by Western Australia and Queensland. Site specific and laboratory data accompanies samples submitted to the National Soil Archive and these data are added to the national NatSoil database. New samples and data have been processed for Western Australia and the Northern Territory as well as for a number of historic CSIRO research data sets. ACLEP has been working with national carbon mapping, rangeland ecological survey and wind erosion monitoring projects for submission of new data into ASRIS in the future.</p>	<ul style="list-style-type: none">• Best available map and site data collated within national ASRIS data bases	<ul style="list-style-type: none">• http://www.asris.csiro.au/mapping/viewer.htm
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5 Digital soil mapping

<p>Digital soil mapping provides innovative techniques for estimating soil characteristics and properties across the landscape, with depth and over time. DSM is becoming a more operational data creation approach, particularly with the improved national availability of covariate environmental data sets, such as national digital elevation models and terrain derivatives, geophysics and gamma radiometrics and temporal remote sensing products. ACLEP</p>	<ul style="list-style-type: none">• Report - Recommendations for the Advancement of Digital Soil Assessment in Australia. Incorporating the report on the 4th Global Digital Soil Mapping Workshop – Rome 2010• Report - Digital Soil Mapping in ACLEP 2012 and beyond – including reports on ACLEP collaborative projects in Tasmania and the Northern Territory.• Report - Soil mapping priorities for Australia - A plan to address information shortfalls with digital soil mapping.	<ul style="list-style-type: none">• http://www.clw.csiro.au/aclep/publications/reports.htm• http://www.clw.csiro.au/aclep/publications/reports.htm• To be further discussed and progressed by NCST 2012-13
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<p>supports the development of skills and capacity for DSM through training opportunities and assisting jurisdiction based DSM projects where possible.</p>		
<p>6 The National Soil Archive</p>		
<p>The Archive is a key deliverable for ACLEP and a foundational component of the national soil information infrastructure. Promotion of the Archive has seen a steady increase in both submissions and use of specimens. Users have included CSIRO, USA collaboration on Aeolian soils, Vic Dept of Primary industries, NSW Dept Primary Industries, Australian Federal Police and several postgraduate students. Data for over 11,000 samples has been added to the national NatSoil database and over 2,300 specimens have been newly added to the Archive collection. 1,250 sub-samples have had near-infra red scanning completed as part of the archival process.</p>	<ul style="list-style-type: none"> • Operational National Soil Archive • Report – CSIRO National Soil Archive Manual (Karssies, Jacquier, Wilson and Ringrose-Voase 2011) • Brief annual report on submission and use including statistics on number and location of archives specimens • YouTube CSIRO Channel video “Asking new questions of old soils” released November 2011 	<ul style="list-style-type: none"> • http://www.clw.csiro.au/aclep/archive • http://www.clw.csiro.au/aclep/archive • http://www.youtube.com/watch?v=em8m17rgoeE
<p>7 National reports</p>		
<p>The collation of nationally consistent soil data and information provides a unique opportunity to consider the management of Australia’s soil resources from a national perspective. Better fertiliser management is critical to the sustainability of Australian</p>	<ul style="list-style-type: none"> • Report - A strategic framework to improve phosphorus management in Australian cropping (Wong, Grundy, Barson and Paplinska in prep) 	<ul style="list-style-type: none"> • Final draft in prep – to be made available in future on http://www.clw.csiro.au/aclep/publications/reports.htm

<p>agriculture and to the soil resource n which it depends. ACLEP has developed an overview of issues and opportunities for phosphorus management in Australian cropping systems.</p>		
<p>8 Communications and promotion</p>		
<p>ACLEP promotes the sustainable use and management of Australia’s soil resource through the provision of key websites and data visualisation tools. Material has been developed to communicate and promote ACLEP’s key messages.</p>	<ul style="list-style-type: none"> • Updates to ACLEP and ASRIS websites • YouTube CSIRO Channel video “Soils for the Future” released November 2011 • Brochures, publications and promotional materials • Conference paper - Digital soil map data in an on-line, on-demand world. Proceedings of the 5th Global Workshop on Digital Soil Mapping. Sydney, Australia 10-13 April 2012 • Invited presentation - Australian soil data - opportunities and solutions. 2011 Ron McDonald Memorial Lecture, Queensland Branch Australian Soil Science Society, Brisbane. 	<ul style="list-style-type: none"> • http://www.clw.csiro.au/aclep • http://www.asris.csiro.au • http://www.youtube.com/watch?v=rsbA4Z_v5JI&feature=relmfu • http://www.clw.csiro.au/aclep/documents/ACLEP_flyer.pdf • http://www.clw.csiro.au/aclep/documents/ASRIS_flyer.pdf • http://www.clw.csiro.au/aclep/documents/NatSoilArchive_flyer.pdf • http://www.pedometrics.org/dsm_oz/
<p>9 Skills and capacity building</p>		
<p>ACLEP provided support for delivery of national digital soil mapping training event, hosted by the University of Sydney. Attendance by operational officers from each jurisdiction was supported by ACLEP.</p>	<ul style="list-style-type: none"> • Digital Soil Mapping - Getting Operational. An introductory course of practical exercises for Digital Soil Mapping. Sydney University. February 2011 	<ul style="list-style-type: none"> • http://www.clw.csiro.au/aclep/publications/reports.htm

URLs for services are:

Open Layers to view and query all soil samples

http://www.clw.csiro.au/aclep/resources/SoilLocation/wms?service=WMS&version=1.1.0&request=GetMap&layers=SoilLocation:OzSoilML_SoilSample&styles=&bbox=113.734999,-43.515201,153.469001,-11.531899000000001&width=512&height=412&srs=EPSG:4283&format=application/openlayers

Simple WFS of location of soil samples

http://www.clw.csiro.au/aclep/resources/SoilLocation/ows?service=WFS&version=1.0.0&request=GetFeature&typeName=SoilLocation:OzSoilML_SoilSample&maxFeatures=50

Soil Sample service

http://www.clw.csiro.au/aclep/resources/wfs?service=WFS&version=1.1.0&request=getFeature&typeName=osmlss:SoilSample&featureid=soil_sample_899.Morphology.CP302.1.1.1&outputformat=gml32

Soil Specimen service

http://www.clw.csiro.au/aclep/resources/wfs?service=WFS&version=1.1.0&request=getFeature&typeName=osmlss:SoilSpecimen&featureid=soil_specimen_899.Morphology.CP302.1.1.1.1&outputformat=gml32

OM Observation service (laboratory results)

http://www.clw.csiro.au/aclep/resources/wfs?service=WFS&version=1.1.0&request=getFeature&typeName=om:OM_Observation&maxFeatures=10&outputformat=gml32