



Governance for Australia's national soil data resource

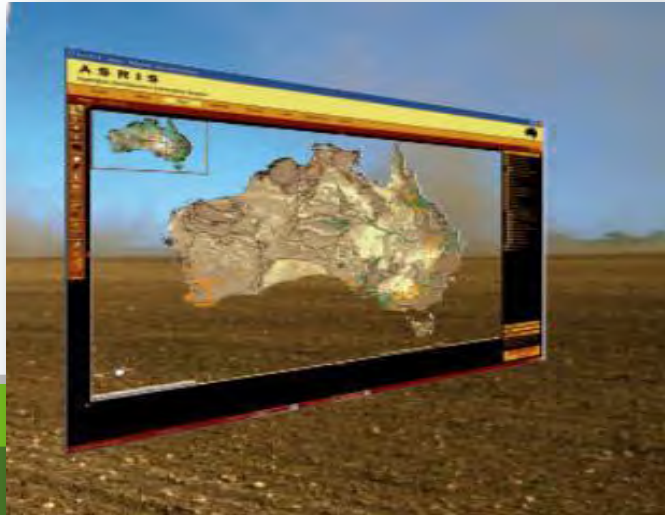
Roles, responsibilities and opportunities.....

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National soil data - vision

- A cooperative national approach – gov, research, industry, private
- Ongoing collection, collation, monitoring and reporting
- Best available soil data across Australia
- Standards based data delivery
- Easily discoverable and accessible data
- Useable and useful information for ALL



The national soil information infrastructure

We have a loose collaborative national model –
ACLEP, NCST, ASSSI...

Soil field survey and data standards

ASRIS and the Australian National Soil Archive

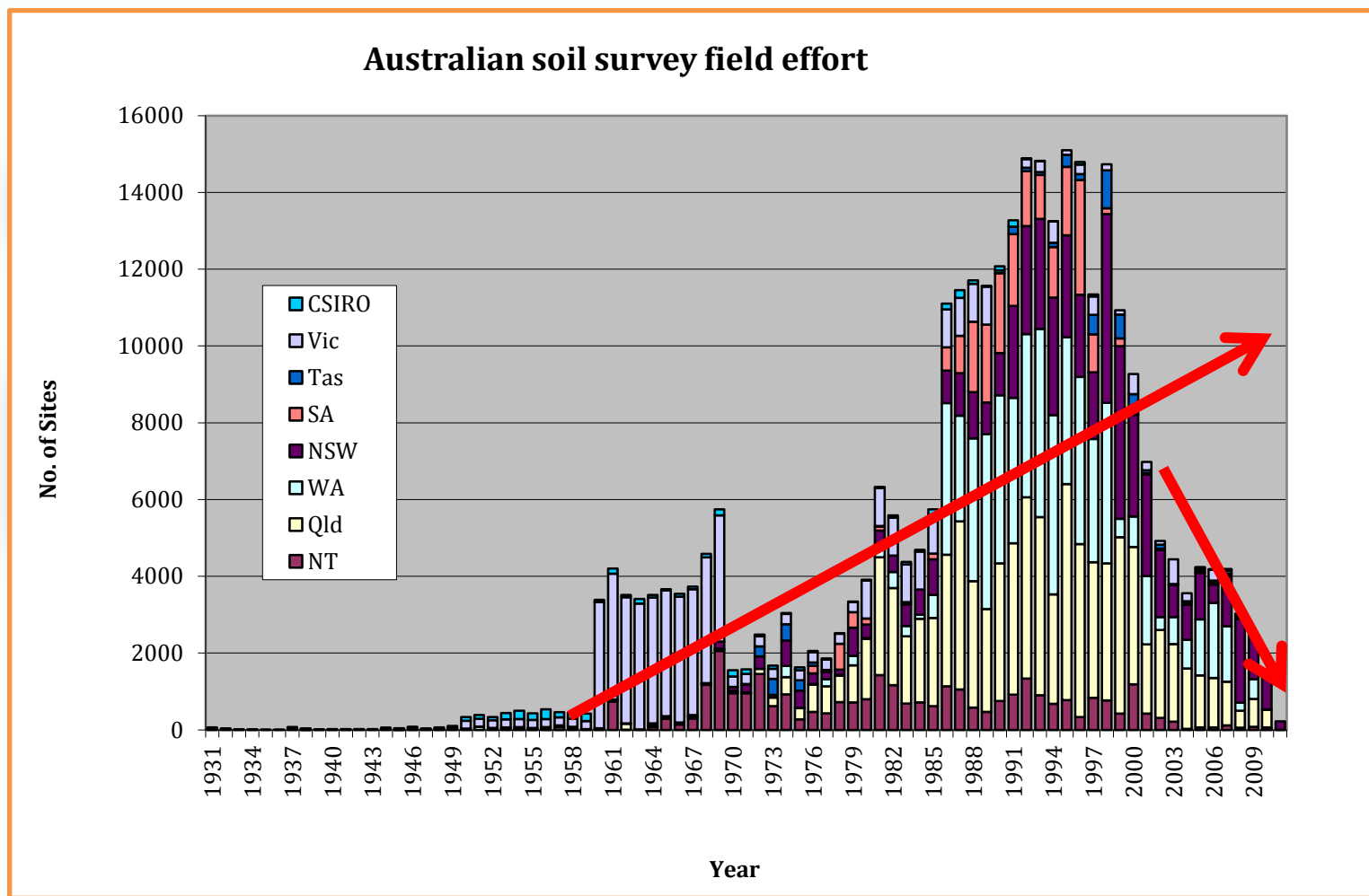
State and Territory information systems

Lots of portals and data sets

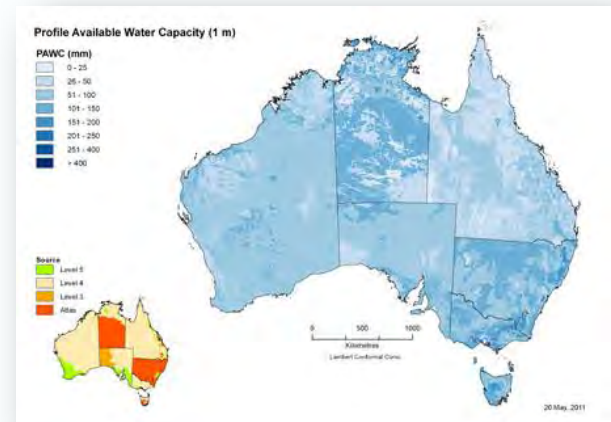
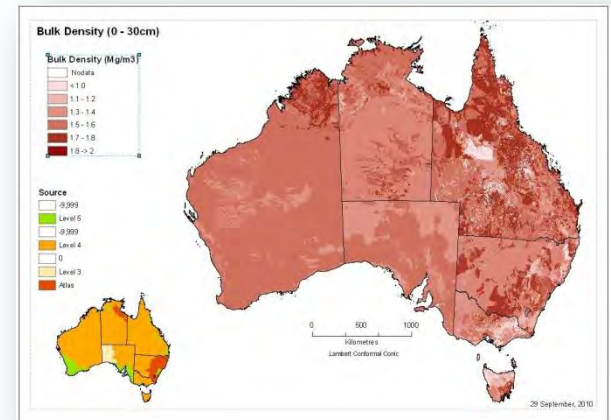
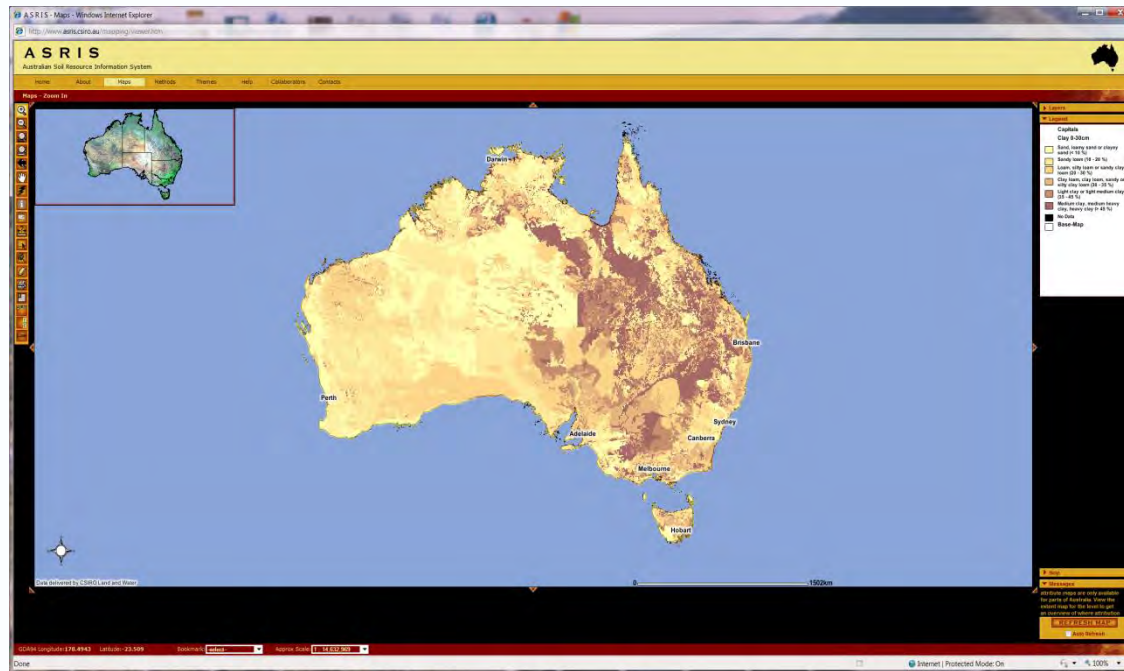
Off-line data - research, private, industry.....



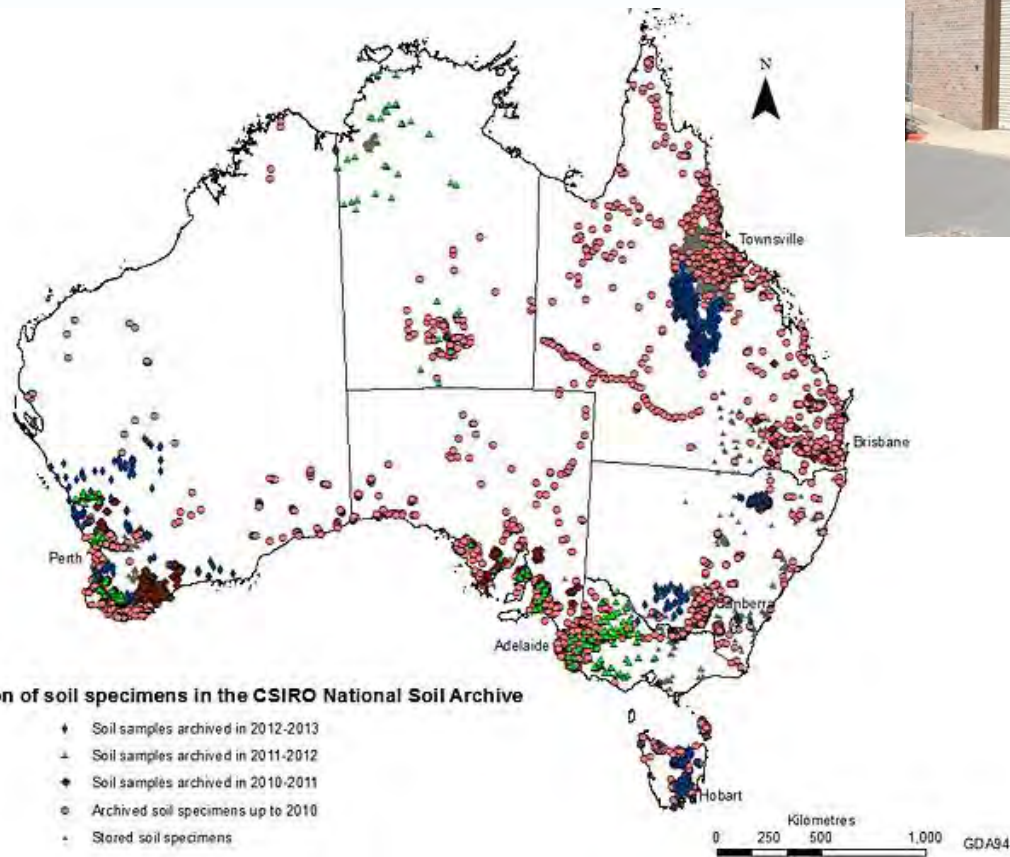
National cooperative approach – boom and bust?



ASRIS national soil data products



CSIRO National Soil Archive

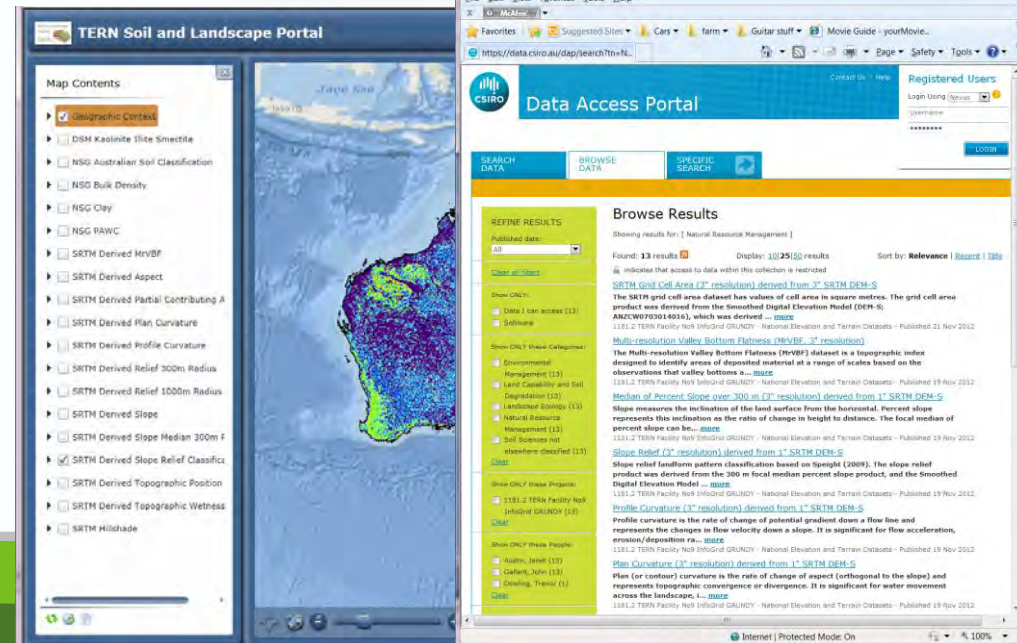


Approx. 70,000 specimens

TERN Soil and Landscape Facility



- TERN Soil Facility website and data visualisation portal
- Fine resolution estimates of functional soil properties
- SRTM DEM and terrain derivative data products
- CSIRO Data Access Portal
- Online, openly accessible data services

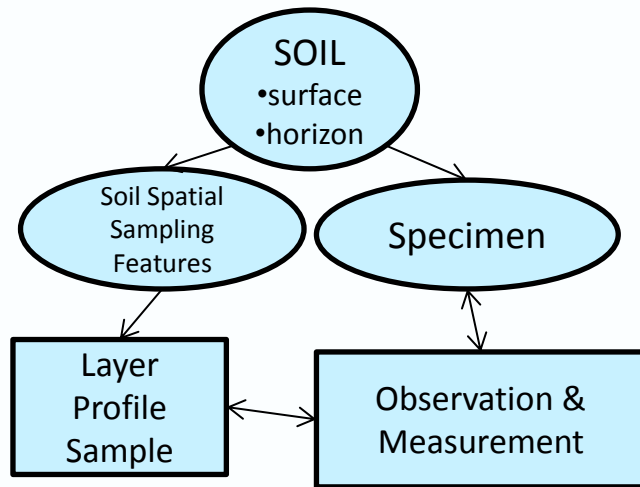


Mobile soil data

- *SoilMapp* - CSIRO's first app, launched Jan 2013
- Dynamic online connection to CSIRO managed soil data bases – ASRIS and APSol. Potential for crowd sourcing
- Best available, location specific soil data from states/territories assists planning and management decisions
- National impact - ~700 downloads per month from government, research, private industry, general public
- International potential, Landcare Research NZ, GlobalSoilMap, Global Soil Partnership etc.



National and international interoperability



Towards the future?

Distributed soil data collection and management

Greater adoption of national and international soil standards

Development and implementation of data exchange standards

Better access and integration of soil data

User development of client applications



Soil data bank –
Access to standard soil data
from thousands of providers
anywhere, anytime
through your own application

So, what if.....

Farmer Joe wants to improve his yields

GOVERNMENT

He sends a query to get the best available soil data



RESEARCH

some new soil sampling, and high tech digital soil mapping to the available soil data bank

PRIVATE SECTOR



He makes well informed decisions

AG INDUSTRY



He records the management inputs and yield outcomes and assesses the improved profitability

Using integrated farm management software



THEN.....

With continuous data improvement, they all lived happily ever after



Can cooperation only get us so far.....

When times get tough,
The tough get dispersed.....

Cooperative Federalism has
limits.....(capacity, skills,
resources, willingness?)

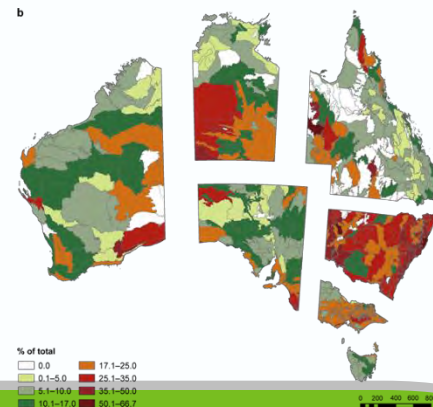
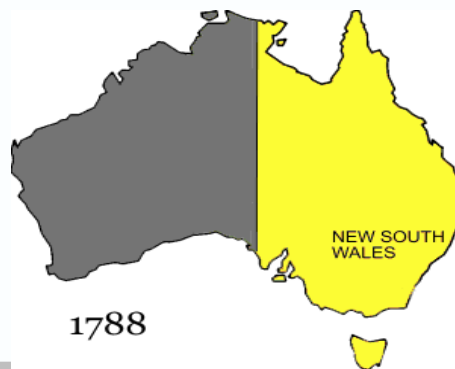
Priorities, attitudes,
resources ALL need to be
shared.....

Who will help me bake the bread?



Why is data governance important?

- the **sustainable** use and management of the world's resources is **dependent** on environmental **information** systems and on processes which connect systems and improve data access and use
- there are **significant hurdles** in achieving this with environmental information
- the necessary underlying **change** has to be in **processes, people and institutional settings** – the governance arrangements



Governance issues and opportunities

“Establishing national data governance is **the most important first step** required to improve the accessibility and use of Australian soil data and information”. (ACLEP2012)

- Options for improving governance –
 - do nothing
 - strengthen existing cooperative arrangements
 - formalise an inter-governmental agreement
 - implement a nationally agreed, mandated program
- Recommendations –
 - Identify an authoritative mechanism
 - National soil information standards
 - Implement agreed roles and responsibilities
 - National data collection, collation and dissemination



A.S.A.P. in the National Soil RD&E Strategy

The Australian Soil Assessment Program (ASAP) would be delivered through seven integrated Streams of activity which would provide –

1. Coordination and user engagement
2. Soil data collection, survey and assessment
3. Monitoring and forecasting
4. Information systems
5. Support facilities including laboratories and soil archives
6. Research and development, and
7. International engagement.

Foundational requirements

ACTION 1 – Australian governments **establish an enduring national mandate** for the management of Australia's soil information. (6-12 months)

ACTION 2 – Establish a national **institutional mechanism** to deliver the Australian Soil Assessment Program. (6-12 months)

ACTION 3 – Support and strengthen the National Committee on Soil and Terrain and the Australian Collaborative Land Evaluation Program to facilitate interim **planning and prioritisation** of activities, including engagement with stakeholders. (Immediate and ongoing)

Establish the GOVERNANCE arrangements

Improving access and use of Australia's soil data and information assets

- Mandated cooperation and coordination
- Links between government, research, industry and private sectors
- Open access and licensing
- Data collection, collation, standards and tools
- New data feeds and continual infrastructure improvement
- Support development of new applications and use

Outcome = sustainable management of Australian soils