TERN

Australia's land ecosystem observatory

Mark Grant

AP-BON Session
GEOSS Asia Pacific Symposium
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NCRIS
National Research Infrastructure for Australia
An Australian Government Initiative

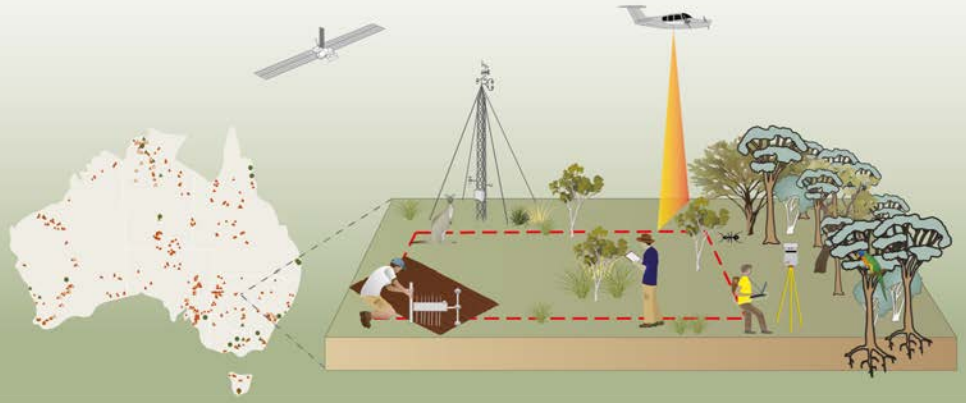
Biodiversity

Land & terrain

Carbon & water

NATIONAL DATA COLLECTION: FIELD, AIRBORNE, AND SATELLITE

TERN's national infrastructure includes on-ground, airborne and satellite data collection with data integration and delivery infrastructure that is designed to deliver information, knowledge and tools that are meaningful at local, regional, continental and global scales.



DATA INTEGRATION, ANALYSIS, AND DELIVERY

more than **600** ecosystem observing sites

more than **2500** open datasets

more than **50** national and international partners

more than **90** year continuity for datasets

more than **1000** peer-reviewed papers using TERN data

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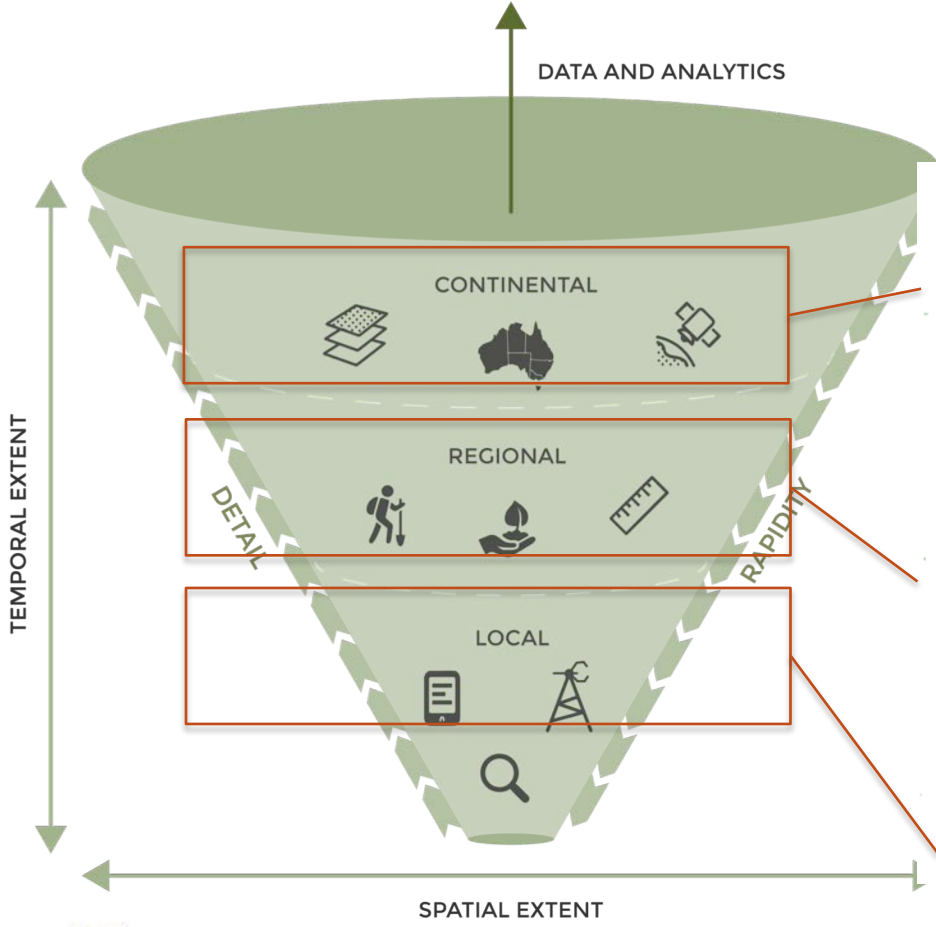
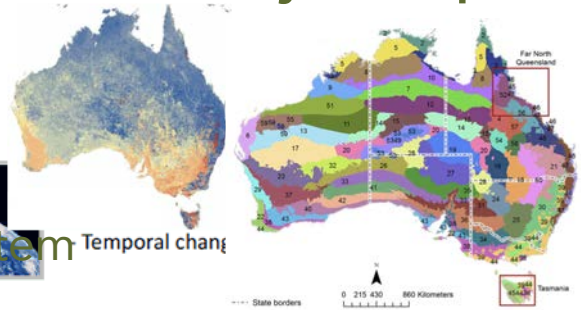
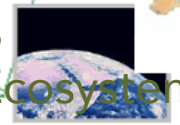
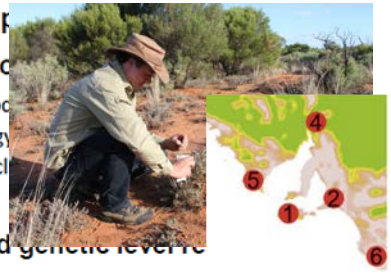


TERN data: key biodiversity examples

- Phenology
- Land cover dynamics
- GEOSS Ecosystem Mapping
- Threatened species/ecosystem
- Biodiversity hotspots
- Carbon, energy, water fluxes
- Ecoacoustics
- Phenocams







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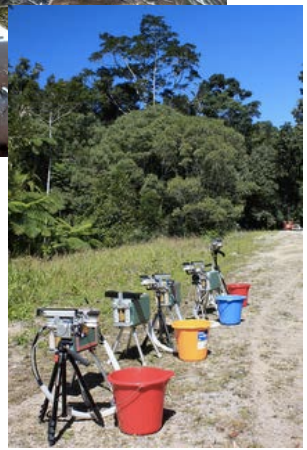
Open infrastructure

Example: plant functional trait data



Social infrastructure

Example: indigenous collaborations in biodiversity data

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Temporal data streams contributing to achieving SDGs

https://sdgs.org.au/projects/

Target (Contribute to progress on the Target, not necessarily the Indicator)	Goal	Indicator (Direct measure or indirect support to the Indicator)
1.4, 1.5	1 No poverty	1.4.2
2.3, 2.4, 2.c	2 Zero hunger	2.4.1
3.3, 3.4, 3.9, 3.d	3 Good health and well-being	3.9.1
	4 Quality education	
5.a	5 Gender equality	5.a.1
6.1, 6.3, 6.4, 6.5, 6.6, 6.a, 6.b	6 Clean water and sanitation	6.3.1, 6.3.2, 6.4.2, 6.5.1, 6.6.1
7.2, 7.3, 7.a, 7.b	7 Affordable and clean energy	7.1.1
8.4	8 Decent work and economic growth	
9.1, 9.4, 9.5, 9.a	9 Industry, innovation and infrastructure	9.1.1, 9.4.1
10.6, 10.7, 10.a	10 Reduced inequalities	
11.1, 11.3, 11.4, 11.5, 11.6, 11.7, 11.b, 11.c	11 Sustainable cities and communities	11.1.1, 11.2.1, 11.3.1, 11.6.2, 11.7.1
12.2, 12.4, 12.8, 12.a, 12.b	12 Responsible consumption and production	12.a.1
13.1, 13.2, 13.3, 13.b	13 Climate action	13.1.1
14.1, 14.2, 14.3, 14.4, 14.6, 14.7, 14.a	14 Life below water	14.3.1, 14.4.1, 14.5.1
15.1, 15.2, 15.3, 15.4, 15.5, 15.7, 15.8, 15.9	15 Life on land	15.1.1, 15.2.1, 15.3.1, 15.4.1, 15.4.2
16.8	16 Peace, justice and strong institutions	
17.2, 17.3, 17.6, 17.7, 17.8, 17.9, 17.16, 17.17, 17.18	17 Partnerships for the goals	17.6.1, 17.18.1

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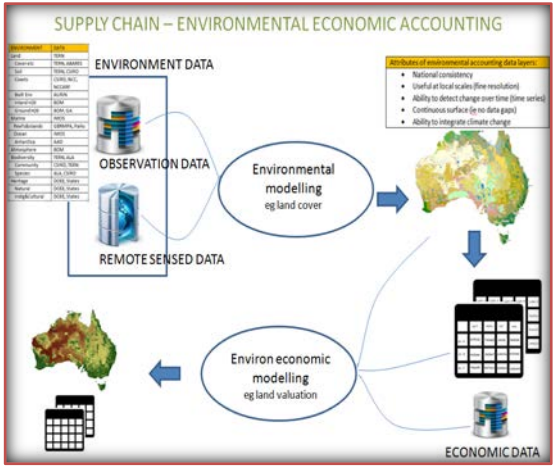
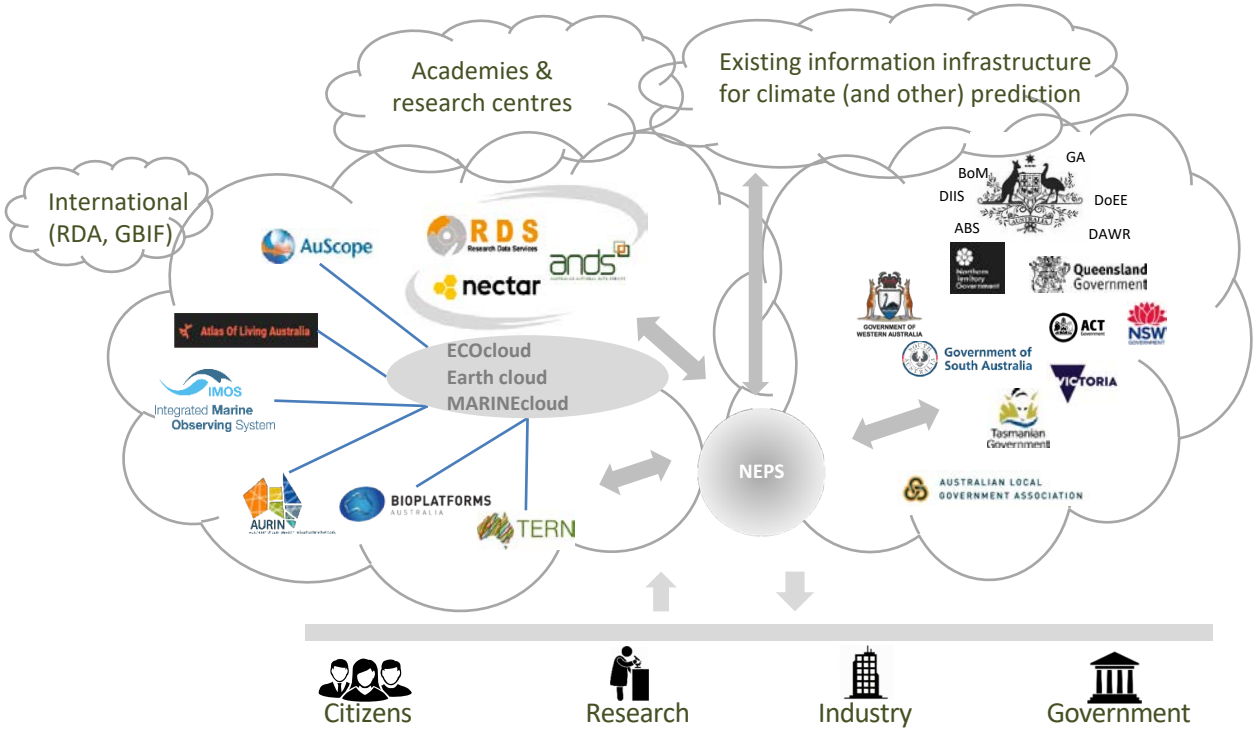
Courtesy: Dr Alex Held

Essential Measures & Environmental Economic Accounting



National Environmental Prediction System



Environmental information community

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Call for collaboration

1. Common attributes
2. Standard protocols

tern.org.au

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