



A Common Currency for Building Environmental (Ecosystem) Accounts

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Contacts and Acknowledgements

Acknowledgements

- The Wentworth Group of Concerned Scientists, including analyst Claire Parkes
- The authors of Accounting for Nature, including Pam Green, Dr Eva Abal, Di Tarte, Dr Ian Lowe, Dennis Trewin and Dr Neil Byron.
- Dr Phil Gibbons, Australian National University, Prof Hugh Possingham and Dr Kerrie Wilson, University of Queensland
- Dr Michael Vardon, Australian Bureau of Statistics

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Wentworth Group of Concerned Scientists

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Mr Robert Purves AM, businessman, Director Purves Environmental Trust, Chair, Environment Business Australia.

Dr Denis Saunders AM, ecologist, President WWF Australia, Editor, Pacific Conservation Biology, former Chief Research Scientist, CSIRO.

Prof Bruce Thom AM FTSE, geomorphologist, Chair 2001 Australian State of the Environment Committee, former Vice Chancellor UNE, Chair Australian Coastal Society.

Dr John Williams, agricultural scientist, Commissioner, NSW Natural Resources Commission, and former Chief CSIRO Land and Water.

Prof Mike Young, resource economist, Director, Environment Institute, The University of Adelaide.



Ecosystem Health

- The health (condition/quality) of an ecosystem can be described through indicators
- Ecosystem health indicators are chosen because they reflect function (criteria)
- To be a measure of health the indicator must be set upon a scale of healthy (reference condition) to non-healthy (0-100)
- Reference condition is the status of an ecosystem's components as they would be if significant human intervention had not occurred in the landscape.
- The indicators are combined to give an overall score of health for that ecosystem (0-100).
- Common science practice
- Describing the existing stock of an environmental asset against a reference condition benchmark does not imply or suggest that landscapes should be returned to this pre- disturbance condition.
- It is a scientific method amendable to accounting.



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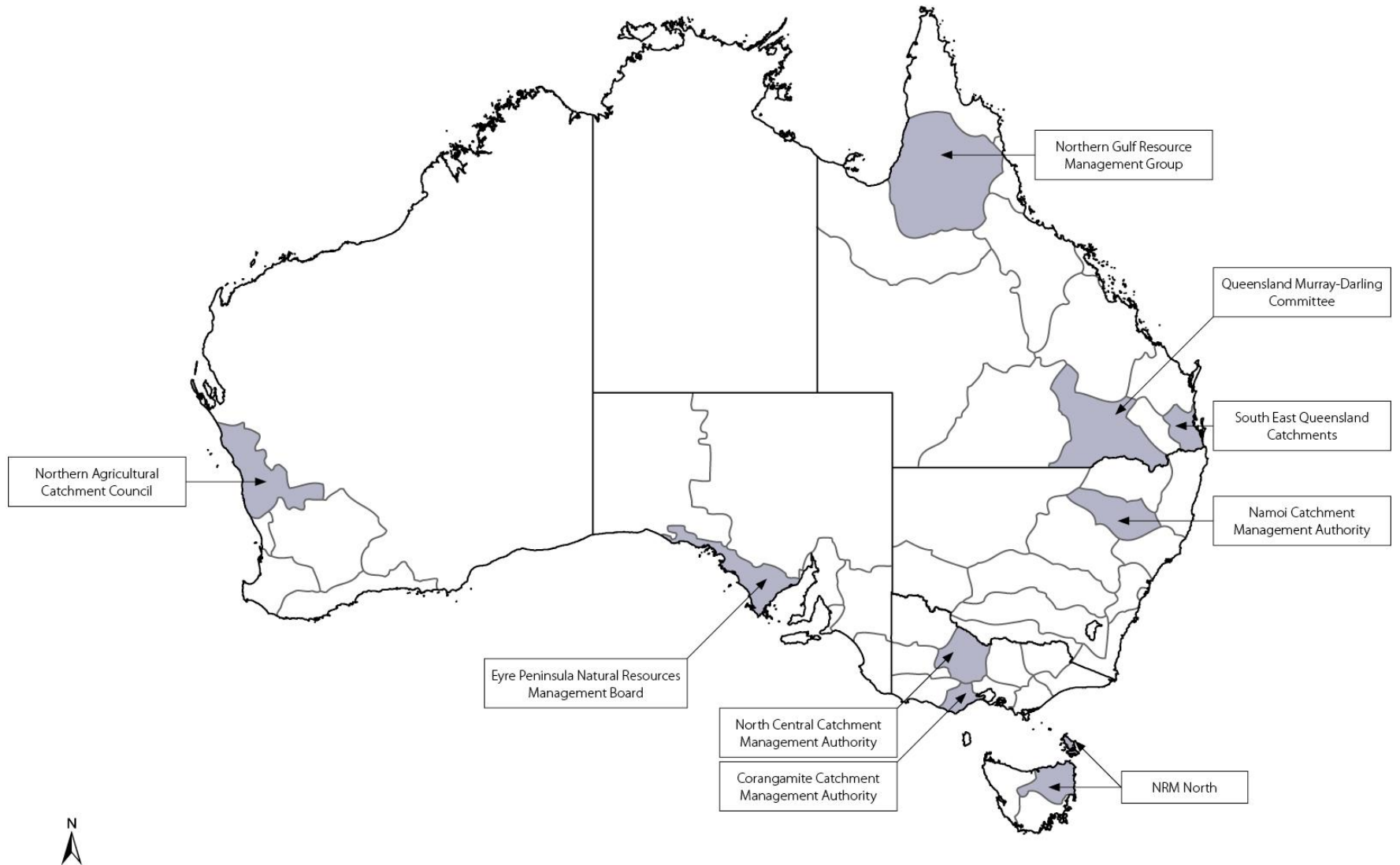
Measuring assets against a common reference benchmark creates a scientifically-based unit of measure

- *a common currency for the environment - Econd.*

This method for measuring the condition of environmental assets can:

- 1 compare the relative state of one asset with another,
- 2 aggregate information at different scales and for different assets,
- 3 account for environmental asset condition, and
- 4 allows indicators of ecosystem condition to be selected as fit for purpose for regional ecosystems rather needing to apply blanket indicators to the continent.

Nine Participating Regions



The Regional Environmental Account Trial

- 1 Australia has 56 regional Natural Resource Management groups
- 2 9 of these are participating in a continent scale trial of building regional environmental accounts in 2011 (see map).
- 3 The trials are using ecosystem indicators against a reference condition benchmark to measure the state and change in condition of their environmental assets.
- 4 The first set of regional accounts will draw on existing data wherever possible to create the environmental (ecosystem) asset stock accounts, and use time series information to establish historical trend accounts.
- 5 The stock accounts be based on a measure of 'condition' and quality, not just quantity.
- 6 Each unique region will produce a terrestrial and aquatic ecosystem account
- 7 The accounts will be comparable and able to build a set National Environmental Accounts

The Regional Environmental Account Trial – Outcomes so far....

Process

- ✓ Establish committees for expert advice and support
- ✓ Drafting Environmental Accounting Standards and Accreditation Manual and Guidelines for Users
- ✓ Beginning accreditation process for regional accounts

Design

- Identified Asset Class of concern. Land and Water (and Marine if possible). (based on SEEA ecosystems)
- Agreed a definition for the environmental assets that make up Land and Water “*these are physical features in the landscape that can be measured in time and space*”
- Guidelines for defining the environmental assets for a region
- Water - Rivers, lakes, floodplains, aquifers etc (based on SEEAW)
- Land – vegetation, soil, fauna
- Quality control standards (indicator selection, data, meta-data)
- Methodology – ecosystem health indicators against a reference condition benchmark
- Methodology - Combining indicators to create an ‘Econd’ for each environmental asset
- Methodology - Spatial scaling of ‘Econds’.

Accounting for biodiversity

- Accounting for biodiversity is one of the more complex elements in ecosystem accounting yet it is an essential component of any system of accounts that attempts to capture the 'value' of the environment and the way it interacts with us – people.
- Biodiversity information will be integrated into the Australian Bureau of Statistics' experimental Land Account for the Great Barrier Reef catchment.
- The best methods for achieving this as well as the potential uses of a land account that integrates information on biodiversity will be explored, in particular the international utility of biodiversity accounting in the context of a revised SEEA
- A simple metric for biodiversity will use land cover as a surrogate to calculate a score out of 100 (Econd) using the well understood relationship between species diversity and area of vegetation.



Environmental Accounts - References

- *Accounting for Nature: A Model for Building the National Environmental Accounts of Australia*, 2008.
<http://www.wentworthgroup.org/uploads/Accounting%20for%20Nature%202nd%20Ed.pdf>
- *Accounting Metrics for Building Regionally Based National Environmental Accounts*, 2009.
<http://www.wentworthgroup.org/uploads/Regional%20Based%20Accounting%20Metrics%20Final.pdf>
- *A Common Currency for Building Environmental (Ecosystem) Accounts - A proposed standard for Environmental (Ecosystem) Accounting for the international 'System of integrated Environmental and Economic Accounts'*, 2010. Paper prepared for the 16th Meeting of the London Group on Environmental Accounting, 25-28 October, Santiago, Chile.
- <http://www.wentworthgroup.org/uploads/A%20Common%20Currency%20for%20Building%20Environmental%20Ecosystem%20Accounts%20Final.pdf>

Organisational Structure

Regional Environmental Accounts Working Group

Role: Oversight of the regional trials and reporting on progress to the NRM Chairs and NRM Ministerial Council

Pam Green (Chair) - Southern Rivers CMA, NSW	Dr Sarah Ryan - ACT NRM Council
Kate Andrews - Northern Territory NRM Board	James McKee - NRM North, Tasmania
Niilo Gobius - Northern Gulf RMG, Qld	Danny O'Neill - National Chairs Working Group

Regional Environmental Accounts Management Groups

Role: Management and Coordination of the regional trials

PARTICIPATING REGIONS	MANAGEMENT COMMITTEE	PARTICIPANT NETWORK
	Role: Co-ordination of Regions engaged in the trials.	Role: Manage the trials in each region
	<i>Pam Green - Chair</i>	
Corangamite CMA	Peter Greig (Chair) or Gareth Smith (CEO)	Leigh Dennis
Eyre Peninsula NRM Board	Cecilia Woolford (A/ PM) or Kate Clarke (CEO)	Sophie Keans
Namoi CMA	Jim McDonald (Chair) or Bruce Brown (CEO)	Francesca Andreoni
North Central CMA	Geoff Williams (Chair) or Damian Wells (CEO)	Mark Costello
Northern Agricultural Catchment Council	Chris King (Chair) or Shelley Spriggs (CEO)	Marieke Jansen
Northern Gulf RMG	John Bethel (Chair) or Noeline Ikin (CEO)	Niilo Gobius
NRM North	Richard Ireland (Chair) or James McKee (CEO)	Project Manager
Qld Murray Darling C'tee	Peter Blundell (Chair) or Geoff Penton (CEO)	Roxane Blakley
SEQ Catchments	Gordon French (Chair) or Simon Warner (CEO)	Noel Ainsworth, David Manning
	<i>Danny O'Neill - Manager</i>	<i>Danny O'Neill</i>

Scientific Standards and Accreditation Committee

Role: Establish scientific standards, and accredit indicator selection, reference condition benchmarks, indices of ecosystem health, and data quality.

NAME	ROLE
<i>Peter Cosier</i>	<i>Chair</i>
Dr John Williams	Land (Agri Systems)
Prof Hugh Possingham	Land (Spatial Models)
Dr Denis Saunders	Land (Ecology)
Dr Mike Grundy	Land (Soil Science)
Dr Ronnie Harding	Environ. Indicators
Dr Richard Davis	Freshwater (Ecology)
Prof Peter Davies	Freshwater (Metrics)
Dr Eva Abal	Freshwater
Prof Bruce Thom	Coasts and SoE Reporting
Jane McDonald	Research Analyst
Danny O'Neill	Project Manager
<i>Peter Greig</i>	<i>Technical Committee</i>

Technical Environmental Accounting Standards Committee

Role: Develop the regional accounting framework and ensure compatibility with national and international environmental accounts.

NAME	ROLE
<i>Peter Greig</i>	<i>Chair</i>
Dr Neil Byron	Resource Economics
Mark Eigenraam	Information Systems
Prof Quentin Grafton	Resource Economics
Dr Tom Hatton	2011 SoE Chair
Dr Judy Henderson	International Reporting
Mark Lound	ABS
Dr Warwick McDonald	BOM
Dr Gary Richards	DCC Carbon Accounts
Gary Stoneham	Environmental Markets
Dr Michael Vardon	Intern'l SEEA Standards
Jane McDonald	Research Analyst
Danny O'Neill	Project Manager
<i>Peter Cosier</i>	<i>Scientific Committee</i>