

# PLANETARY STEWARDSHIP & LAND-CARING

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## OVERVIEW

- Acknowledging Stewardship
  - Decolonization
- Australian issues & context:
  - Environmental
  - Agricultural/Social
- The Anthropocene and Planetary Stewardship
  - The importance of sustainable agriculture
- Challenges & Opportunities for Landcare





#### Australian Geographer

ISSN: 0004-9182 (Print) 1465-3311 (Online) Journal homepage: http://www.tandfonline.com/loi/cage20

#### Aboriginal Memories of Inundation of the Australian Coast Dating from More than 7000 Years Ago

Routledge

#### Emu in the sky



Indigenous astronomer Ray Norris explains to ABC Radio Sydney about finding Dreamtime stories among the stars.

Patrick D. Nunn & Nicholas J. Reid







More

Sunday 3 July 2016 Songlines hold the key to a powerful memory technique used by indigenous people around the world. Dark Emu BRUCE PASCOE Dark Emu BLACK SEEDS: sticulture or accident?









The same and the man











Gross value of Australia's agricultural production: \$56 billion in 2015-16.



Australian Agricultural Environments

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# SoE 2016 overview

The main pressures facing the Australian environment today are the same as in 2011: climate change, land-use change, habitat fragmentation and degradation, and invasive species.

In addition, the interactions between these and other pressures are resulting in cumulative impacts, amplifying the threats faced by the Australian environment.





## Key challenges



- An overarching national policy that establishes a clear vision for the protection and sustainable management of Australia's environment to the year 2050 is lacking.
- **Poor collaboration and coordination** of policies, decisions and management arrangements exists across sectors and between different managers (public and private).
- Follow-through from policy to **action is lacking**. Data and long-term monitoring **are inadequate**.
- Resources for environmental management and restoration are insufficient.
- The understanding of, and capacity to identify and measure, cumulative **impacts is inadequate**, which reduces the potential for coordinated approaches to their management.



## SoE 2016 Biodiversity theme

Since 2011, we have improved our understanding of the data, tools and technologies required to achieve balance between biodiversity, human population growth and economic development, however investment and implementation are not keeping pace with the increase in pressures exerted by the key drivers of environmental change. As a result, pressures on biodiversity have mostly increased since 2011, and the status of biodiversity has mostly decreased.

It has been difficult to assess what progress has been achieved in implementing Australia's Biodiversity Conservation Strategy 2010–2030 during the past 5 years. Most targets established under the strategy cannot currently be measured with national-scale data, and some have simply not been achieved.





# SoE 2016 Land theme

During the past 5 years, native vegetation has continued to be cleared, bushfire frequencies have increased, and the number of invasive species has also increased. Many agricultural practices have improved, reducing impacts on the environment, but there is room for further improvement.





# Agricultural/Social issues

- Food and water security & climate change
- Lack of policy focus on agri-environmental and cultural factors
- Land use conflicts: agriculture not highly valued •
- Migration: rural to urban
- Lack of recognition of agri-environmental managers
- Limited government farmer support ullet
- Lack of farm scale data (models, GIS: field data?)
- Pressures on farmers
  - Aging
  - Land values
  - Levels of debt
  - Red tape
  - Technology (access and capacity)
  - **Competing resource demands (environment/development)**

  - Urban perceptions
    Value chain requirements
  - Lack of extension services

#### These are global problems



## **Global pressures**



No systematic global index of environmental sustainability of agriculture currently exists

World Resources Institute (2014)

## Global migration trends....urban vs rural



World population projected to reach 9.8 billion in 2050, and 11.2 billion in 2100 – says UN



WORLD ECONOMI FORUM



## The need for Planetary Stewardship

- In 50 years we tipped from 10,000 year Holocene to the Anthropocene.
- What we do in the next 50 years will determine the outcome for the next 10,000 years.
- We are the generation at that tipping point. We were alive during that exponential journey that took us here, we will probably be alive during the journey that will decide the outcome for the next 10,000 years.
- Emphasizes that sustainable agriculture and sustainable forestry are fundamental pre-requisites to succeed in remaining in the Holocene..... to lead us towards a transformation to sustainability.







Access and Benefitsharing



International Treaty on Plant Genetic Resources for Food and Agriculture

Areas of work Seventh Governing Body Initiatives News Meetings Training

#### About us



The International Treaty on Plant Genetic Resources for Food and Agriculture was adopted by the Thirty-First Session of the Conference of the Food and Agriculture Organization of the United Nations on 3 November 2001.

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ALC: NO

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# **International Obligations**

### Sustainable Development Goals (SDGs):

- Area of productive and sustainable agriculture (voluntarily report)
- Agreed global definition and measures
  - Indicator 2.4.1
- Aichi Targets for Biodiversity (CBD)
  - Target 7: that by 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity
- International Treaty on Plant Genetic Resources for Food and Agriculture:
  - Article 6 (sustainable use policy & legal measures)
- Paris Agreement
  - Climate friendly farming, agriculture included in INDCs
- The United Nations Convention to Combat Desertification
  - Land Degradation Neutrality (LDN)
  - Sustainable Land Management

## What is happening in Australia?



### Australia's Biodiversity Conservation Strategy 2010–2030

#### Natural Resource Management Ministerial Council



food production has become critical. Does sustainable agriculture have the anewers?

Meeting the needs of the present without compromising the ability of future generations to meet their own needs is the key principle behind the concept of watelebility. If natural resources such as soll, natrients and water are used up at a rate faster than they are reglerabled, then the ferming system is unsustainable. Sustainability is also dependent on maintaining a high level of biodiversity, sepecially in the soll and the surrounding environment.

Some of the biggest threats to sustainable agriculture are loss of blodiversity, dryland salinity, acid soils and pests and weeds. Farmers, scientists and agricultural authorities are working together on approaches to deal with them.

Sustainable agriculture is a simple concept that embraces a complex web of scientific and economic issues. Developments in information technology will play a key role in managing the complexity.



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## The current sustainability dilemma......



#### Australia

24.7 million

3 people per sq km

3% First Nations Peoples

URBAN: 87% live in 3% of landscape RURAL: 13% live in 97% of landscape

Of 3% First Nations peoples, 60% live in urban areas Agrarian communities and First Nations Peoples manage most of the landscape



85,000 farms (down 29% since 2012) Predominantly family farms.



Least farmer support in OECD.

## Large area, small population = ?

#### GDP/km2





#### Population/km2



#### 2/3rds of Native Vegetation occurs on land as mapped for Agriculture (ABARES 2012)



### Paradoxes



Increased farmer stewardship (\$3.7 billion per annum): not recognised Increased Local Government stewardship (\$1.9 billion per annum): not recognised Indigenous custodianship (unknown per annum): not recognised

Decline in natural resource condition (measurement and lag problems)

	Sustaining the environment
	Australians aspire to manage the environment sustainably for future generations
Overall progress?	Resources Land use Water use Waste
Technology and Str	tegles Climate
data gap currently ex	ists for sustainable land use
MAP there are sever	al types of data gaps where:
the concept is not ye	t developed enough to measure;
the concept is import	ant for progress but may not lend itself to meaningful measurement;
there is no data of su	ficient quality to inform on progress; or
there is only one dat	a point, so a progress assessment cannot be made.
order to capture the s	spirit of this idea in a measure, further development will need to be undertaken. We will continue to

#### Progress????

- ABS 1996 Report 'Sustainable Agriculture in Australia'
- Natural Heritage Trust Act 1997: definition of sustainable agriculture
- SCARM 1998: indicators for sustainable agriculture
- EMS in Agriculture 2002 2006
  - National Framework
  - National pilots
- NRM on Farms 2004-05 and 2005-06 (ABS data)
- Property Management Systems 2005-2006
  - National approach across jurisdictions
  - Ministerial councils (PI and NRM) CoAG
- National Framework for Property Management Systems (shelved from 2007)
- Sustainable Agriculture Policy development (shelved from 2007)
- Sustainable agriculture grants (Landcare)

#### SUSTAINABLE AGRICULTURE



Primary Industries Report Series Assessing Australia's Recent Performance

A new report initiated by the Standing Committee on Agriculture and Resc (SCARM).

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BMP is the Australian cotton industry's guide for growing cotton in harmony with our natural environment.

> TRUE AUSSIE

BEEF&LAMB

BMP

COTTON

BEST MANAGEMENT

The Australian BMP Cotton trademark is a consumer guarantee that the branded textile product they are buying is made of Australian cotton grown under Best Management Practices by growers who care for our environment. REEF SAFE BEEF

AUSTRALIA WINEGROWING

MCLAREN VALE





# Sustainable agriculture conceptual framework

To demonstrate and trade sustainable agriculture (food, fibre & ecosystem services) **consistent with state, national and international standards/metrics/obligations** through:

- Property management planning systems
  - Legally and scientifically valid
  - Governance systems of integrity
  - Government recognition



Evolving governance 2002 to 2018....

## NRM regions



#### **NRM Governance 2002**



#### **NRM Governance**

2018



*NFP* organisation \_\_\_\_\_\_ for profit organisation

Philanthropic funding ───── Commercial funding

		<i>&gt;</i>
Welfare activity	Welfare activity & commercial activity	Commercial activity
Appeal to goodwill	Mixed motives	Appeal to self interest
Mission driven	Mission and market driven	Market driven
Activity at whatever cost	Cost efficiency considered	Best earning at the cheapest cost
Beneficiary pay nothing	Mix of paid and subsidises services	Market rate prices
Work force of volunteers	Volunteers, below market wages, fully paid staff	Market rate compensation
Capital from donations & grants	Mix of donations and grants with debt	Capital of debt and equity
Suppliers donate materials	Materials supplied at special discounts or sold at premium	Market rate prices

#### The evolution of NFP to for profits

Source: Prakash 2004



# Challenges & Opportunities for Landcare Groups

- Honest broker for all Land-carers
- Governance & resourcing:
  - How to decouple from government control/branding
  - Cost sharing between urban and rural: resourcing
- Sustainable agriculture farm systems
  - Technical support for land managers to implement and monitor sustainable agriculture farm systems
  - Farm scale data opportunity: report the good news stories!



### **Decolonising the Self**



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EQUITY STUDIES STUDENT UNION PRESENTS: DECOLONIZING - OUR MINDS -2013:

# PRACTICING DECOLON'AL

#### WWW.UOFTESSU.COM/DOM2013

DECONSTRUCTING THE NOTION OF "SELF-LOVE" AND "COMMUNITY" AND EXPLORING. THE WAYS IN WHICH INDIVIDUALS PRACTICE LOVE AS A RESPONSE TO STRUCTURAL OPPRESSION AND COLONIAL DOMINATION. PANEL 1: COMMUNITY LOVE PANEL 2: SELF-LOVE

> FEBRUARY 9TH, 2013 10:30AM-5PM

WILLIAM DOO AUDITORIUM 45 WILLCOCKS STREET

Building is accessible. Gender neutral washrooms available Child-minding space provided. ASL interpreters available Refreshments and lunch will be provided.

uoft.essu = gmail.com

# NOURISHING TERRAINS

Australian Aberiginal Views of Landscape and Wilderness

DEBORAR REED BORS

Mosaics of cultural ecosystems, both Aboriginal and European that nourish nature and humans through a variety of STEWARDSHIP CULTURAL SYSTEMS healing Country and ourselves, forming the foundation of a new stewardship form of governance.