



Australian
National
University

Science Narratives: Inspiring Participation in Large Landscape Conservation in Australia

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National Wildlife Corridor Plan

- Federal Gov't initiative
- \$10 million over 3 years
+ more from carbon tax
- Climate change
adaptation
- Critical habitat linkages
- Species migration

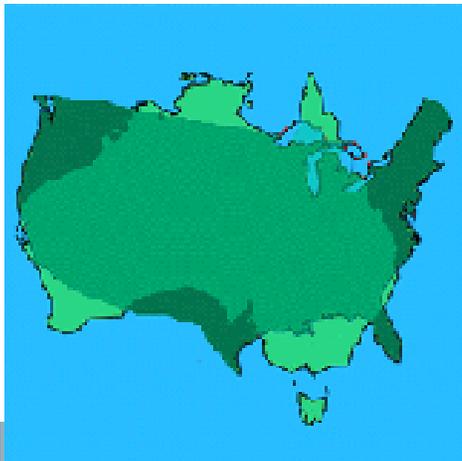
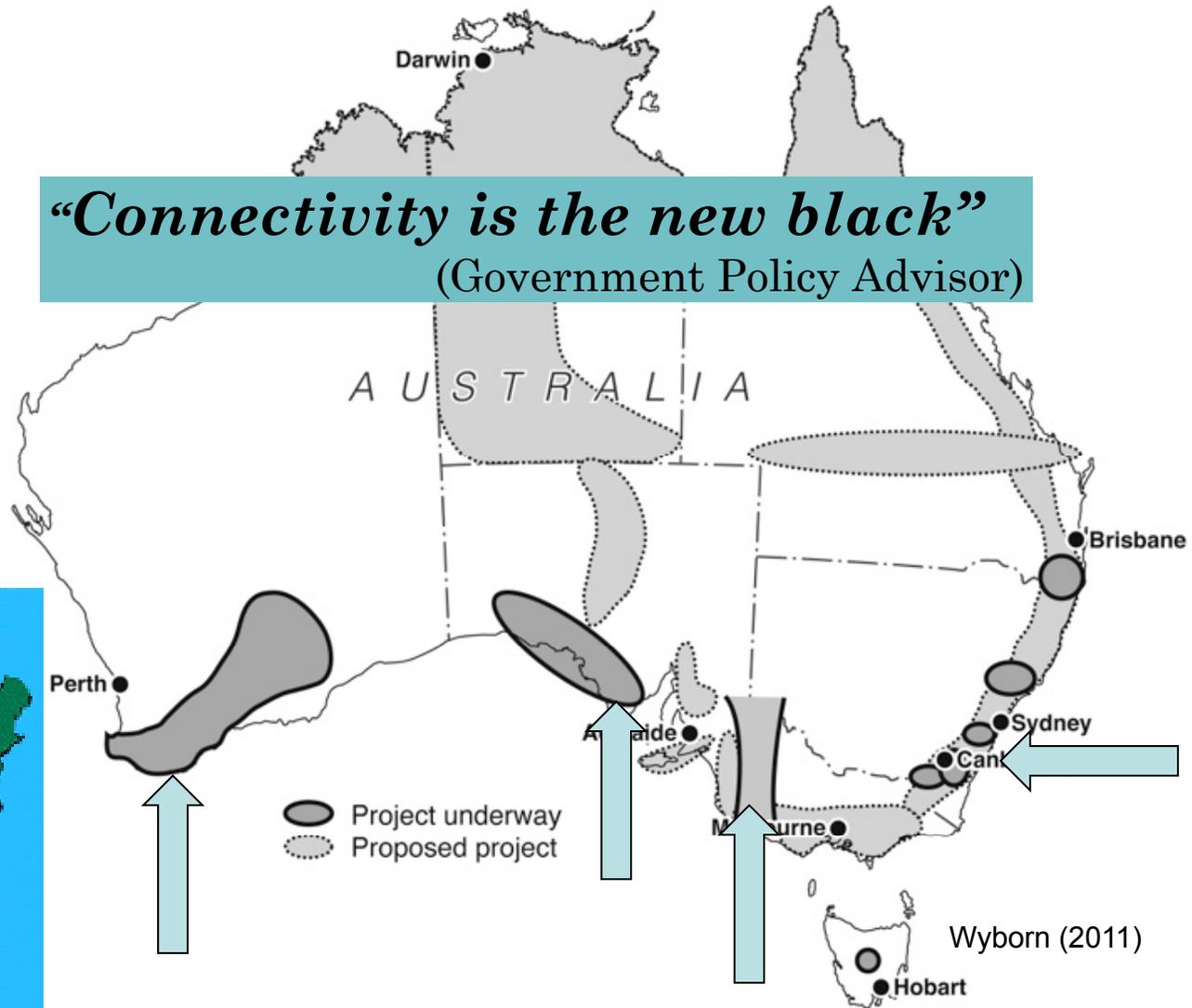


"Corridors give strategic meaning for protecting, for resilience, for adaptation" (Burke 2011)



Major Australian Initiatives

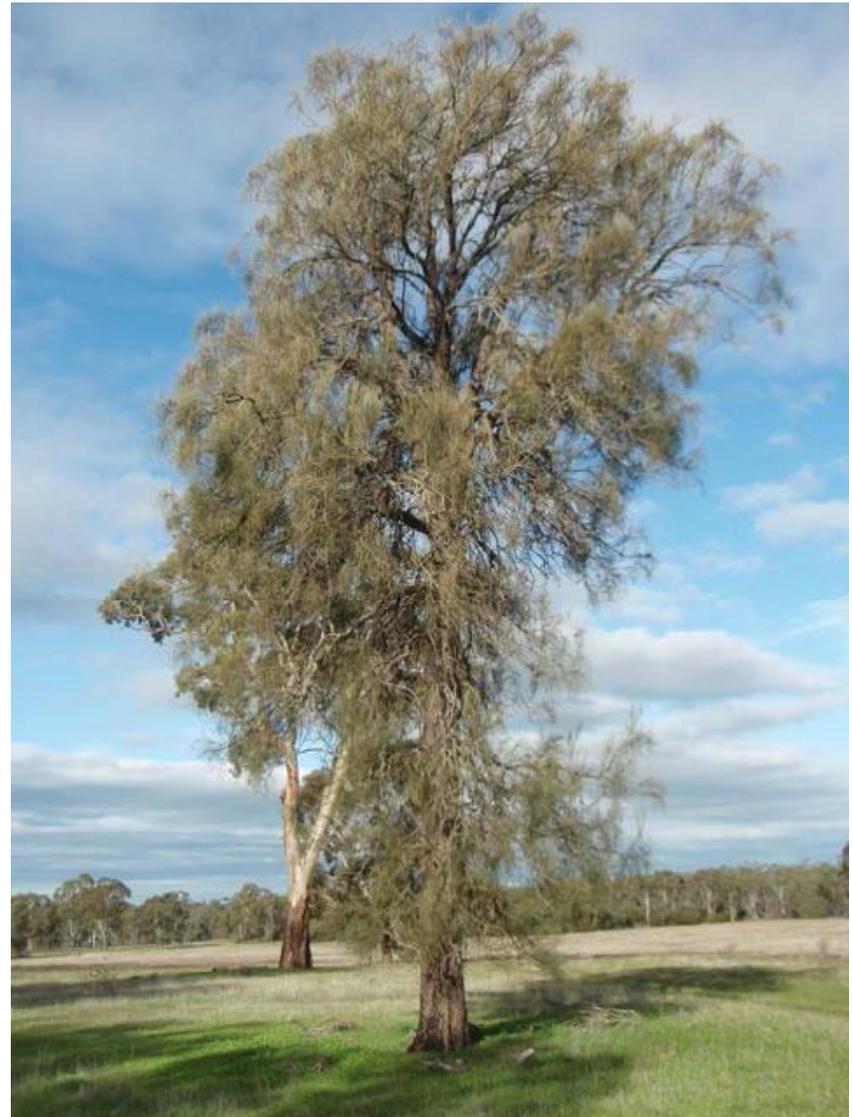
“Connectivity is the new black”
(Government Policy Advisor)



Wyborn (2011)

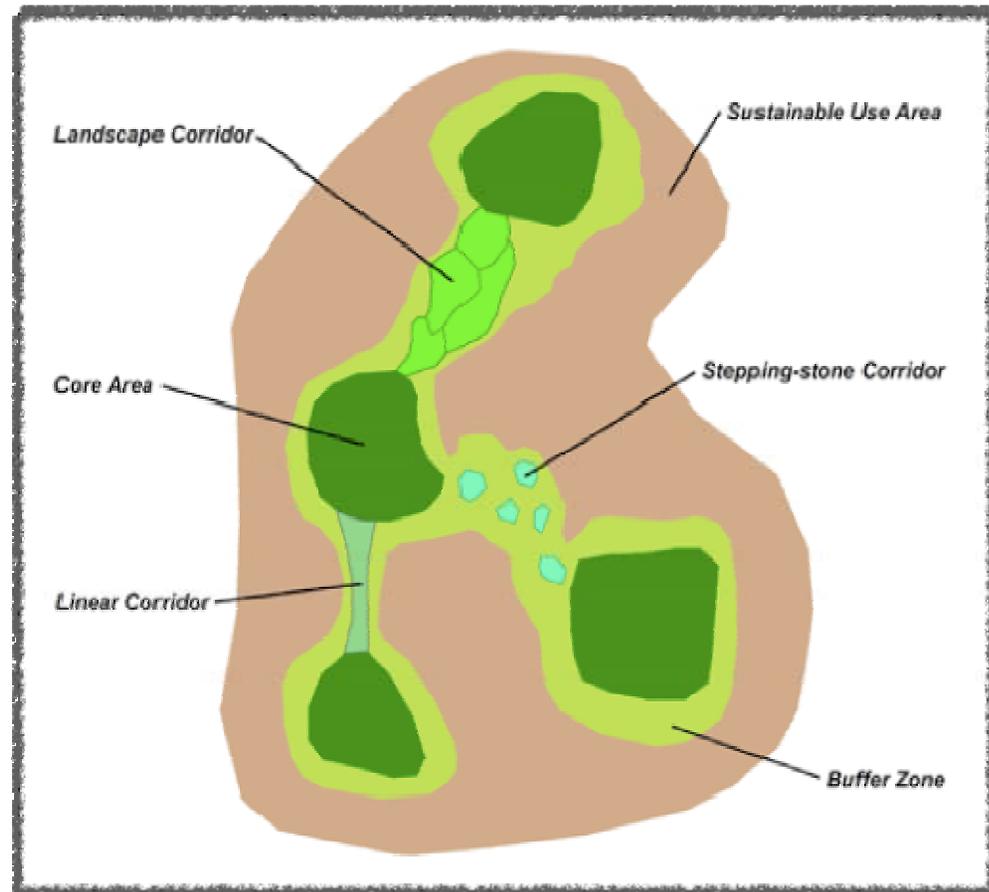
How did this happen?

- Connectivity
Conservation
- Science into practice
- Connectivity narrative
- Deconstructing the
narrative
- Lessons?



Connectivity Conservation

“Protection,
retention and
rehabilitation of
natural connections
among habitats at
the landscape level”
(IUCN 2007)



<http://www.adb.org/Projects/core-environment-program/why.asp>

Connectivity Approach

- Large-scale - 50-500miles
- Long term, strategic approach
- Manage the matrix
- Active and adaptive management
- Integrated, cross tenure conservation
- Seeking additional funding outside of traditional sources
- Climate change adaptation

(Mackey et al 2010)

Overcoming the problem of fit?



Operationalising Connectivity Conservation

- Interconnected system of properties
- Coordination and alignment
- Multi stakeholder collaboration
- Acquisition,
- Private land conservation
- Restoration, protection



“A Socially Inclusive Approach”



“Recognise[s] human aspirations and connectedness to land, social values and management institutions. It is about how **people feel and value natural, interconnected landscapes**. It is about the active involvement of **people**” (Worboys 2010)

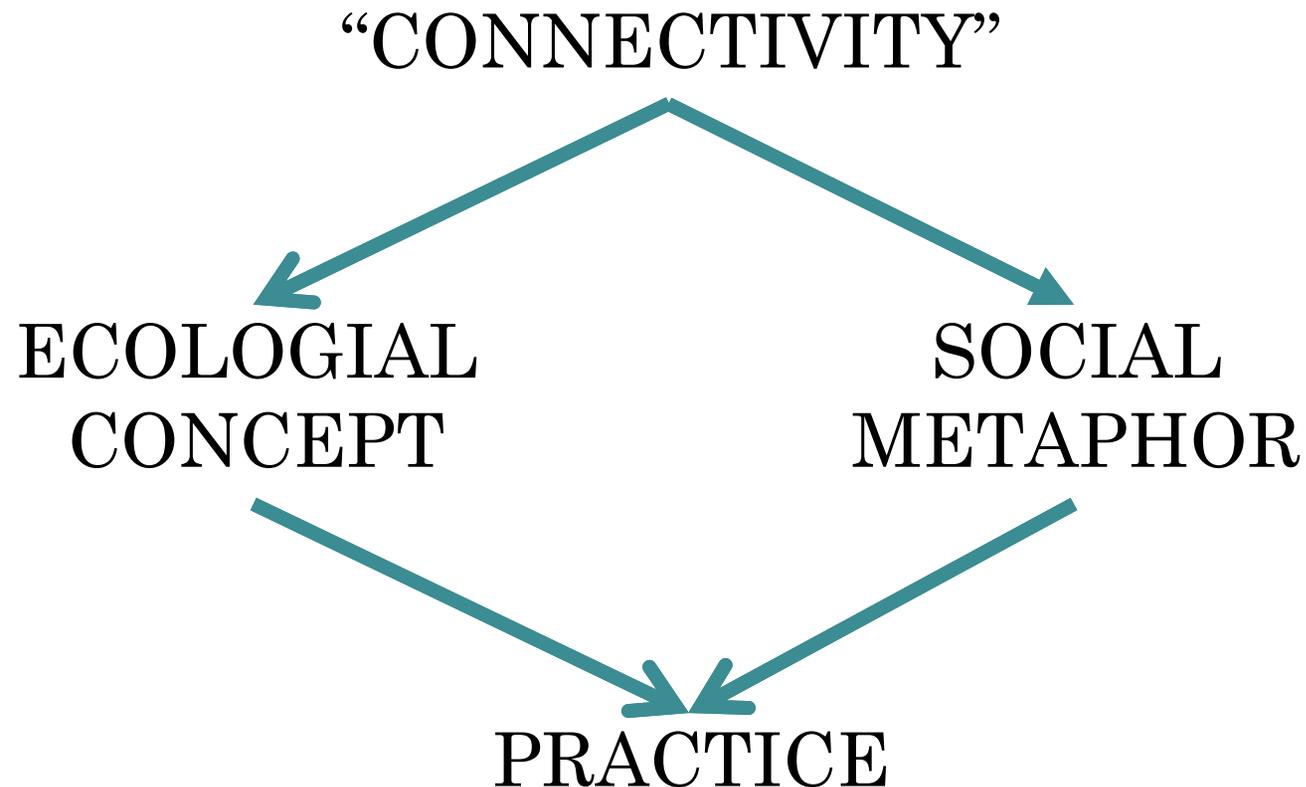
Connecting....

- Continental scale connections
- Micro-scale connections
- Trans-boundary connections
- Connecting cultures
- Connecting on a personal level
- Connecting through sports
- Connecting lands of different altitudes
- Connections between urban and rural lands
- Connections for adapting to global climate change



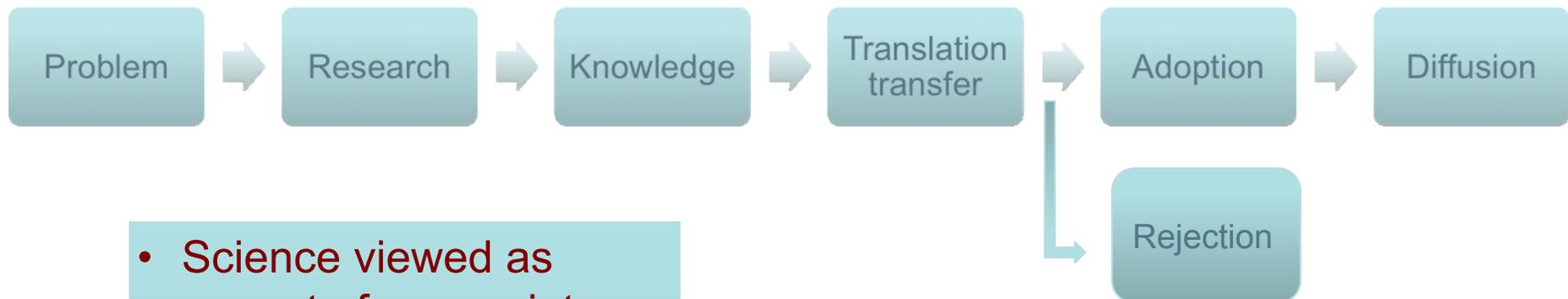


Connecting People, Connecting Landscapes?



Science into Practice

Trickle Down and Transfer Model

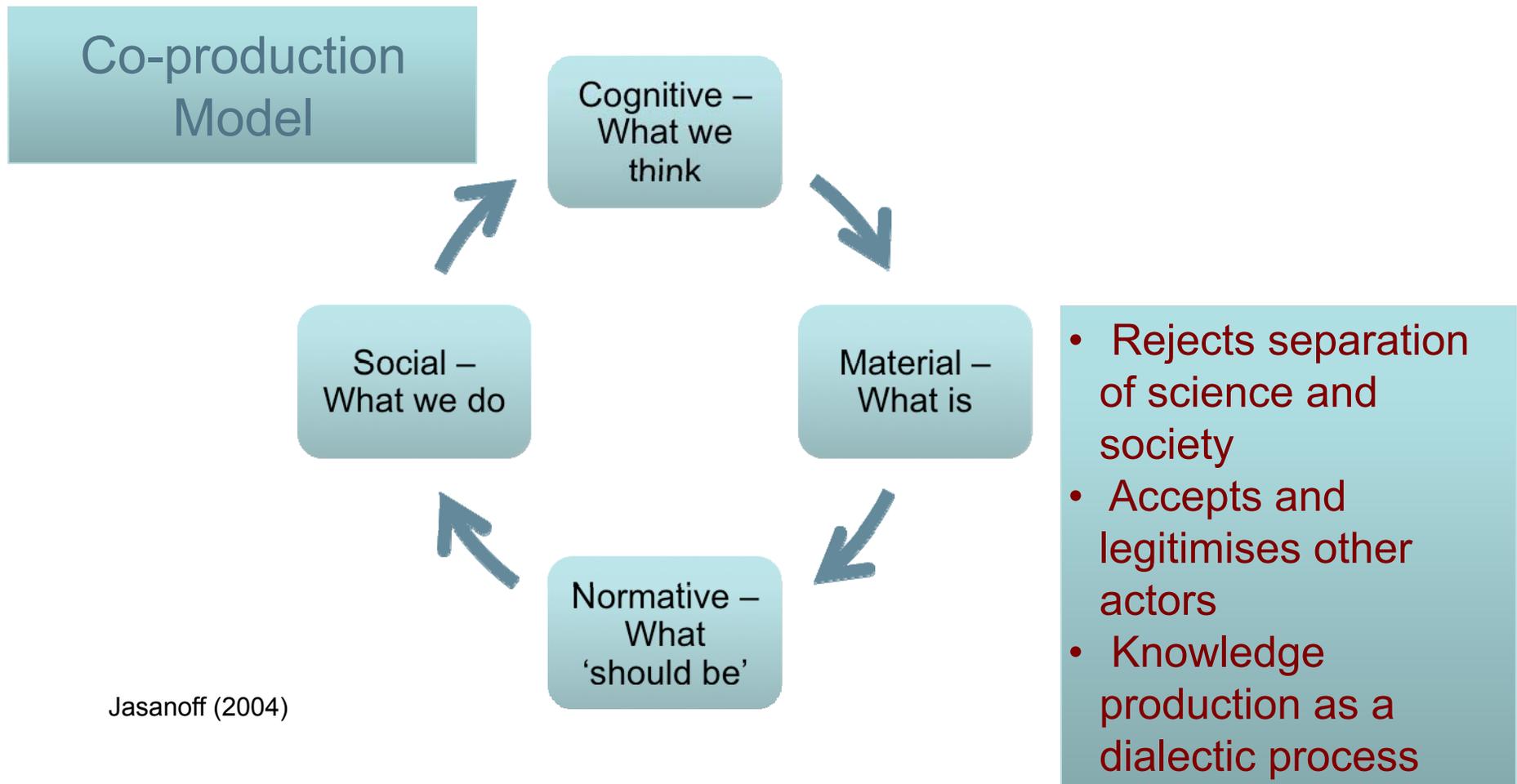


- Science viewed as separate from society
- Practitioners consult expert advice
- Ignores the social and contextual dimensions

van Kerkhoff and Lebel (2006)



An Alternative View





Narratives



<http://bos-sulap.blogspot.com/>

Characteristics of Successful Policy Narratives

- Visibility of proponents and their access to media and power;
- Resonates with widely and deeply held cultural values;
- Strikes chord with a "national mood";
- Prescription entails no radical redistribution of current power and wealth

(Stone 2002)

Science Narratives



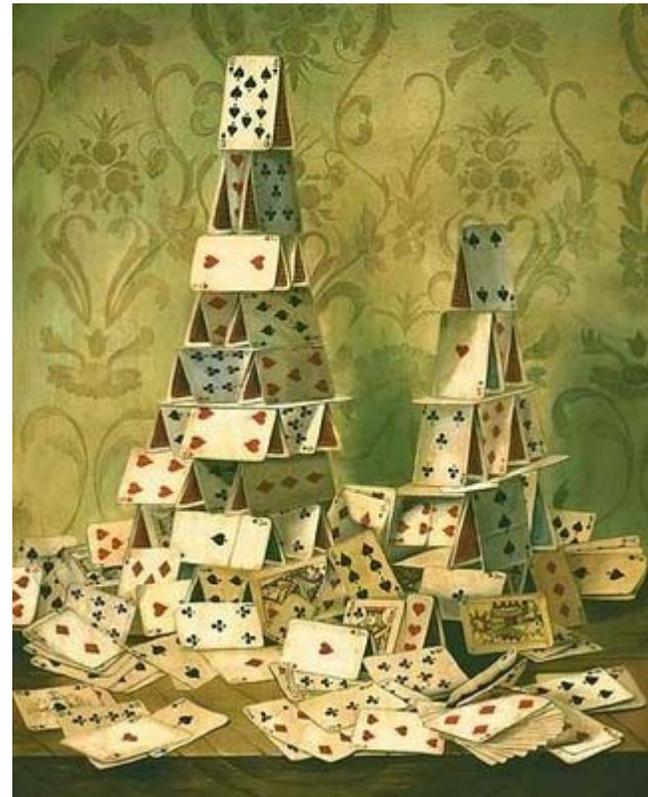
“Scientists create simple stories about human impacts on the environment. These stories, or ‘science narratives’ have a causal component that encapsulate scientific knowledge about a problem... [and] contain normative elements that read policy implications into the causal argument.”

(Keller 2009:11)

Rebuilding the House of Cards

“if our field is to regain the significance it once thought to hold for public policy, it will need, first and foremost, to get rid of the label ‘deconstruction’”

Jasanoff (1999:65)



Methods

- **Participant observation**
 - Linking Landscapes forums
 - Field visits
 - Steering committee meetings
 - Governance working group
- **Interviews:**
 - 4 Academic ecologists
 - 4 NGO staff
 - 3 Government policy advisors
 - 2 Consultants
- **Document analysis**



Setting the Stage

- 20 years of experimentation in devolved and decentralised Natural Resource Management (NRM)
- 56 NRM bodies
- Federal Gov't major funder for conservation/NRM but responsibility with States
- Philanthropic conservation relatively recent



Landcare

- People and place based conservation
- Cohesive group identity, sense of community
- Tangible goals
- Experiential learning
- Ecological outcomes questioned, yet viewed as “inherently good”



WIMMERA CMA

Some Enduring Problems

- Fragmentation – ecological, social and institutional
- Scale – mismatch, fit, interplay
- Boundaries – land tenure, disciplines, jurisdictions
- Threats – land use change, fragmentation, invasive species, inappropriate fire regimes
- Capacity - High rural-to-urban migration, volunteer burnout, loss of faith in Gov't funding



The Plot Synopsis

“The science says we must”
“Connectivity is intuitive”
“Connectivity is all about working together”



One (of many) Protagonist



Linking Landscapes

connecting people and nature

“Natural Defence Strategy for Australia”

- We need to act now – **Urgency**
- We need to work together – **Collaboration**
- We need a national response – **At Scale**

Constructing a Science Narrative

The Beginning:



“...there is a pervasive sense in the Australian community that the countryside is sick, and getting worse, and that our actions are contributing to it whether it is through overgrazing, overstocking, over allocation of water resources weeds, feral animals. You don’t have to have a view on climate change to see that the land is in poor shape.”

(Consultant)

The Crisis...

“As we are rapidly moving into an unprecedented state for our biodiversity and ecosystems, there is a need to transform our policy and management approaches to deal with this enormous challenge. Climate change presents a ‘double whammy’ – affecting species, ecosystems and ecosystem processes directly, as well as exacerbating the impacts of other stressors.”

(Steffen et al 2009:19)



Constructing a Science Narrative

The Middle:



“I think that intuitively it is an appealing concept to conservation groups and to people. Here we’ve got highly disturbed, fragmented landscapes so connect them up. It’s also because it’s something that can be done, at the scale of what individual people can do... you could feel you are actually doing something in the larger continental corridor.” (Ecologist)



The Co-production of Connectivity

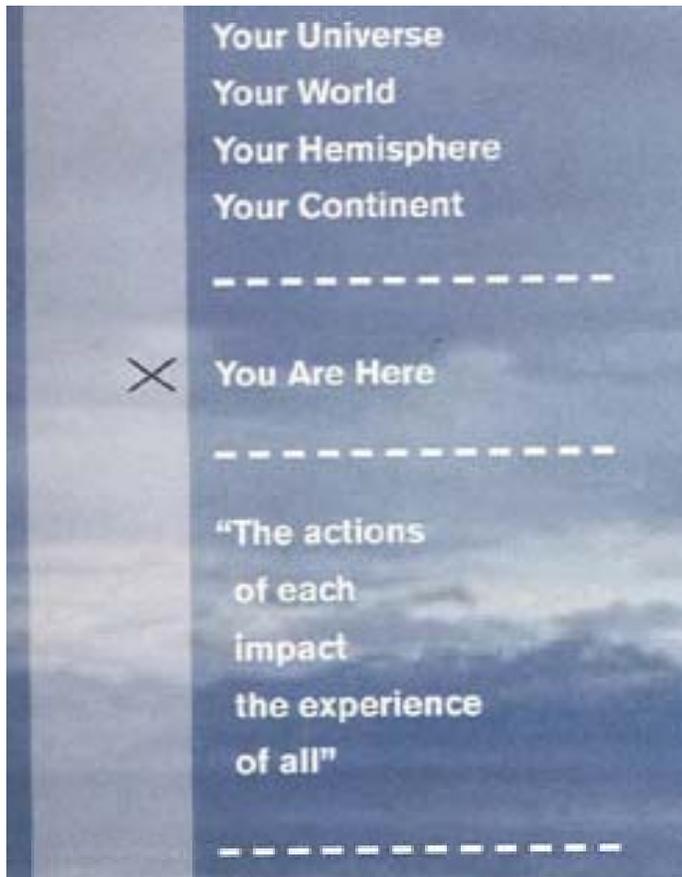


“These landscapes
used to be
connected”

Social memory + embodied knowledge
→ Fragmentation bad, connectivity good



Framing the Individual in the Collective



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Framing the Individual in the Collective



The Controversy...

- Shift towards landscapes and processes (from sites and species) (Mackey et al 2010)
- Corridors to connectivity, structure vrs function? (Doerr et al 2009)
- Lack of empirical evidence to support effectiveness (Hilty et al 2006, Simberloff et al 1992, Williams 2008)
- Climate change orientation? (Hodson et al 2009, Dunlop and Brown 2008)
- Fragmentation bad, connectivity good? (Wiens 2006)

Debate
Conjecture
Uncertainty



Justifications for Connectivity

Instrumental Goals	Species movement; ecological processes; 'bigger is better'; conservation; restoration; enhance condition; ecosystem services; preventing fragmentation; gene flow, population exchange; climate change adaptation
Implementation Outcomes	Way to direct investment; cost effective restoration; prioritisation; conservation on private land; up-scaling efforts
Social Drivers	Stories of connection; 'intuitively appealing'; big, bold and visionary; hope; social glue; collaboration;
Symbolic Drivers	Flagship for large landscapes; capturing the imagination for marketing and leverage; think globally, act locally

Lost in Translation?

“For the broader conservation community for them, connectivity is from the perspective of humans looking at something and saying whether or not this is connected with that. That is where it starts and stops. So the true scientific meaning of connectivity is very different from what the conservation community are doing.”

(Ecologist)



Constructing a Science Narrative

The End:



“at the scale of mega corridors, no one tenure, no one agency is going to be able to do the job so integrating across tenure is critical.”



(NGO Staffer)

Co-production of Governance

- Management for connectivity
REQUIRES
collaboration
- Multi-agency, NGOs and community partnerships
- Cross tenure, cross scale integration?



Deconstructing the Narrative

- Visibility of proponents and their access to media and power;
- Resonates with widely and deeply held cultural values;
- Strikes chord with a "national mood";
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(Stone 2002)

Deconstructing the Narrative

- Visibility of proponents and their access to media and power;
 - Linking Landscapes
 - 2010 election commitment



Deconstructing the Narrative

- Resonates with widely and deeply held cultural values;



“the science lined up with people’s common sense, and that’s a really good place to be if you’re trying to advocate something. Advocating something that is counterintuitive to people is really hard yards.”

(Consultant A)

Deconstructing the Narrative

- Strikes chord with a "national mood";



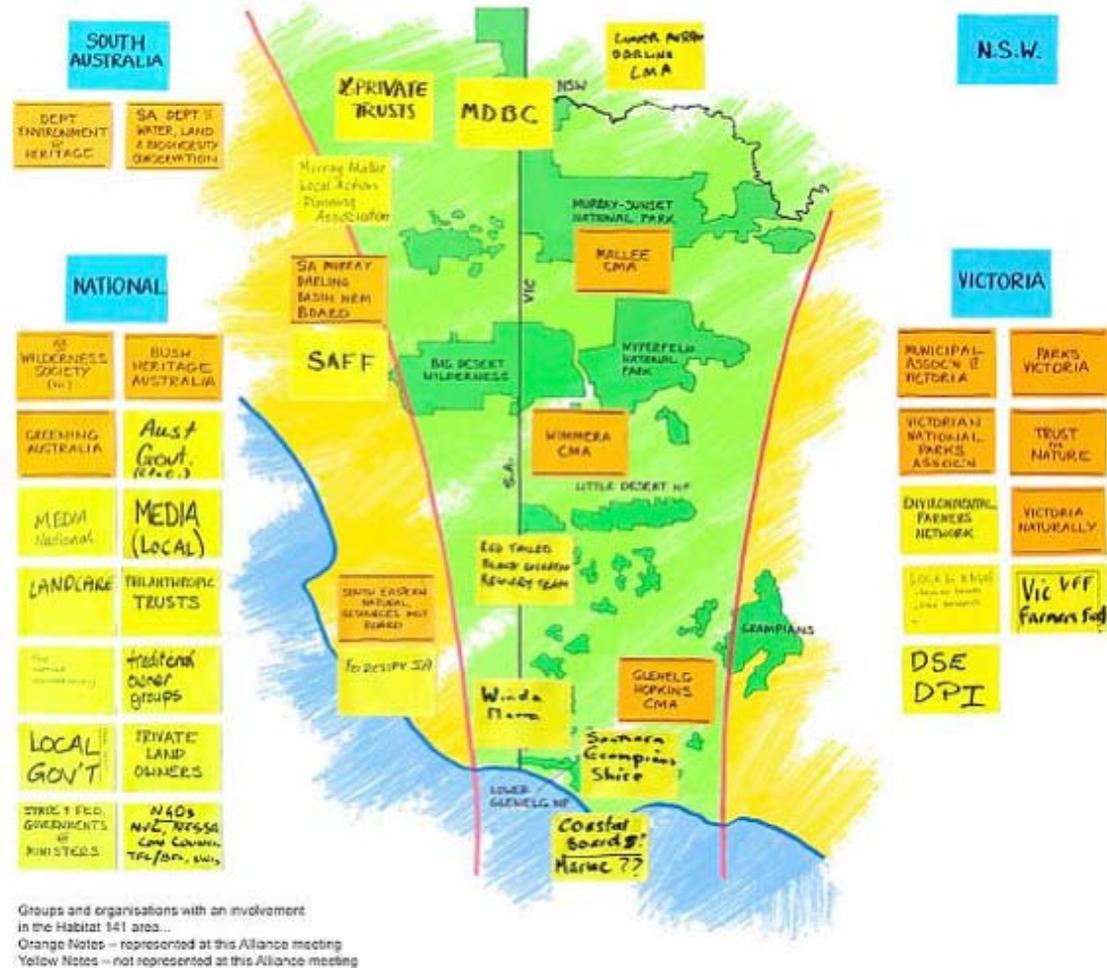
“The fragmentation stories are very negative stories whereas restoration at scale, it is visionary, it’s bold, it’s positive and it is trying to garner the large resources that can be used to effectively conserve Australia’s biota.”

(NGO Staffer)



Deconstructing the Narrative

- Prescription entails no radical redistribution of current power and wealth



Normative Glue

“... agreeing to the vision in a collaborative way has kept us there, to persist until we get there... we know it is rock solid because if we don't have it, we're stuffed... [the vision] is an enormous motivation to keep going with it.”

(Co-Chair H141 Governance Working Group)



A Social Movement or a Religion?

“If you don’t get it, you’re not needed in the project...”

(Gondwanalink project officer)



“We definitely understand each other, I just wish more people would understand us...”

(Gondwanalink CEO)

“I’ve never converted an atheist, I don’t ever see myself converting one of those connectivity people.”

(Ecologist)



Connectivity as a ‘Flagship’



“The main benefit that I can see is that we need... large-scale restoration and if having it connected gives people a vision for making it large scale then great... I think there’s no doubt that it’s useful, but whether the primary usefulness is whether they’re connected or not I’m not convinced...”

(Ecologist)

Conclusion

- Science moves in mysterious ways – it is central to the story but not through trickle down and transfer
- Connectivity has been co-produced within this social, material, cognitive and normative context
- Blurring of boundaries has fostered a national conversation
- Science narrative lens illustrates the nuanced interplay between science a practice as a process of diffusion rather than bridging a chasm
- Co-production of governance rather than problem of fit?

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