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HAZARDSCRC

WHAT TO DO WITH UNCERTAIN SCIENCE: PRACTITIONER EXPERIENCES FROM VICTORIA, NEW SOUTH WALES AND THE NORTHERN TERRITORY

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Australian Government
Department of Industry,
Innovation and Science

Business
Cooperative Research
Centres Programme



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SCIENCE AND PRACTITIONERS

Practitioners need science which is:

1. Translatable
2. Predictive
3. Defensible

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But science is inherently uncertain:

1. Historical
2. Instrumental
3. Interventionist

(Neale and Weir 2015)

BARWON-OTWAY, VICTORIA



Map of Barwon-Otway area showing land managed by state agencies (credit: Andrew Edwards)

HAWKESBURY-NEPEAN VALLEY, NEW SOUTH WALES



Photos: Liz Clarke, Jessica V

GREATER DARWIN AREA



Batchelor, NT



Gamba Grass

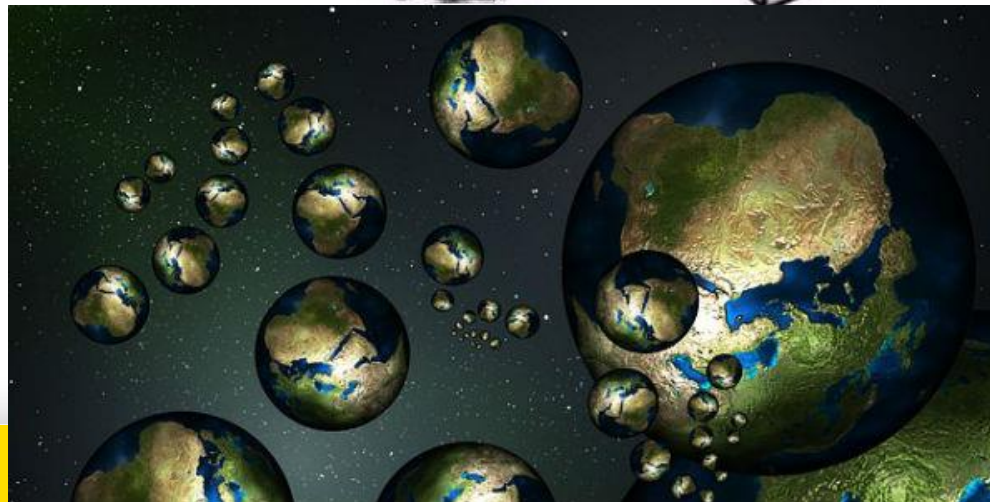
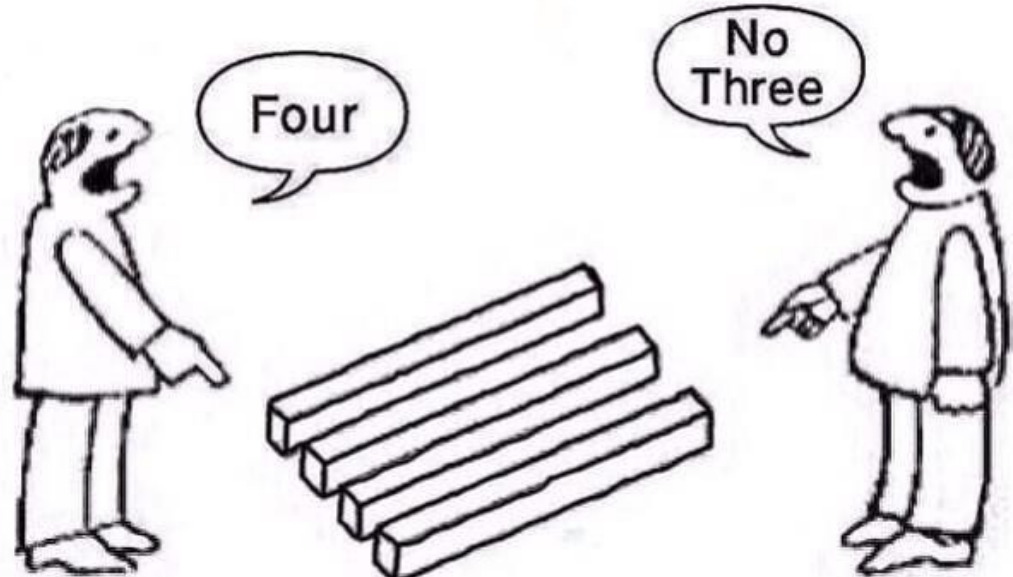
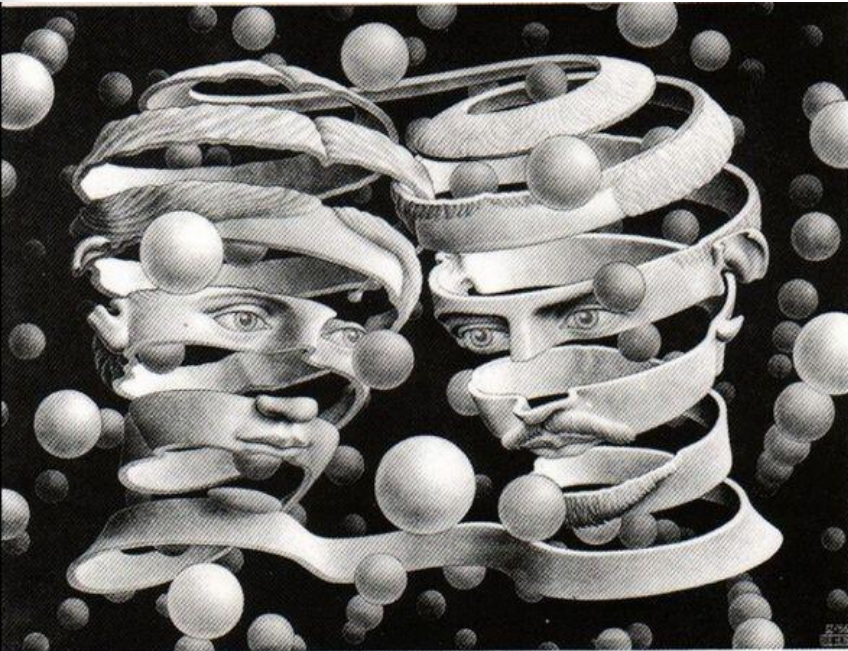
Photos: Tim Neal

EMERGING FINDINGS



Photos: Jessica W

PERSPECTIVE AND REALITY



RISK, CERTAINTY AND CONTROL



“For every complex problem
there is a simple answer, and
it is wrong”
H.I Mencken

THREE KEY MESSAGES FOR MORE COMPREHENSIVE RISK MITIGATION

- uncertainty and complexity need to be embraced (eg: in operations, in standards, in policy), but not exploited
- risk mitigation to be matched with skills needed, rather than privileging one form of expertise
- Continue to develop a culture of critical reflection on what is 'normal', including greater support for innovation

NEXT STEPS FOR OUR PROJECT

HNV findings and synthesis → more results → more feedback to industry.

EG: next set of communication opportunities:

- Darwin report back in May
- CRC showcase in Adelaide in July
- AFAC 2017 in September
- Synthesis workshop with case studies in September

Also, regular end user newsletter, Hazard Notes, Annual Report, Final Report, and industry and academic journal articles.

Alberta Case Study, Lac la Biche, August 2017. Principal funding from the Alberta Provincial Government and undertaken in collaboration with the University of Alberta.

MORE INFORMATION

Visit our BNHCRC project page for more details, including our newsletters

Publications

- Neale T. Burning Anticipation: wildfire, risk mitigation and simulation modelling in Victoria, Australia. *Environment & Planning A*, 2017
- Neale, T., Weir, J. & Dovers, S. Science in Motion: integrating scientific knowledge into bushfire risk mitigation in southwest Victoria. *Australian Journal of Emergency Management* 31, (2016).
- Neale, T., Weir, J. & McGee, T. K. Knowing wildfire risk: Scientific interactions with risk mitigation policy and practice in Victoria, Australia. *Geoforum* 72, (2016).Google Scholar
- Neale, T. & Weir, J. Navigating scientific uncertainty in wildfire and flood risk mitigation: A qualitative review. *International Journal of Disaster Risk Reduction* 13,255-265 (2015).
- Wodak, J. & Neale, T. A critical review of the application of environmental scenario exercises. *Futures* 73, (2015).

THANKS

Case study partners and participants

End user team:

Monique Blason (Department of Premier and Cabinet, South Australia); Don Cranwell (Metropolitan Fire Service, South Australia); Chris Irvine (State Emergency Service, Tasmania); Leigh Miller (Country Fire Service, South Australia); Ed Pikusa (Fire and Emergency Services Commission, South Australia); Dylan Rowe (Department of Environment, Land, Water and Planning, Victoria); John Schauble (Emergency Management Victoria, Victoria); Patrick Schell (Rural Fire Service, New South Wales)

The rest of the project team:

Dr Christine Hansen (University of Gothenburg); Associate Professor Tara McGee (University of Alberta); Associate Professor Michael Eburn (ANU); Professor Stephen Dovers (ANU); Professor John Handmer (RMIT)

