

Post-normal conservation science fills the space between research, policy and implementation



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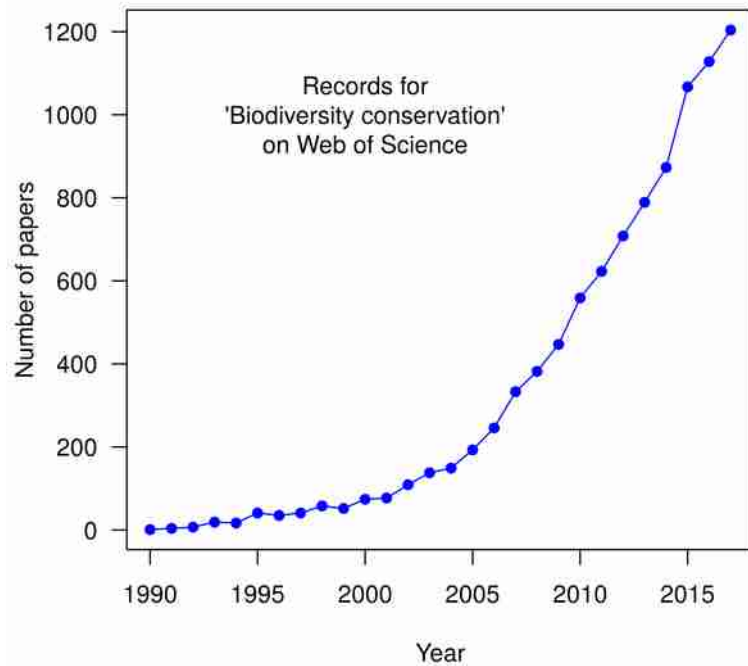
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Independent consultant

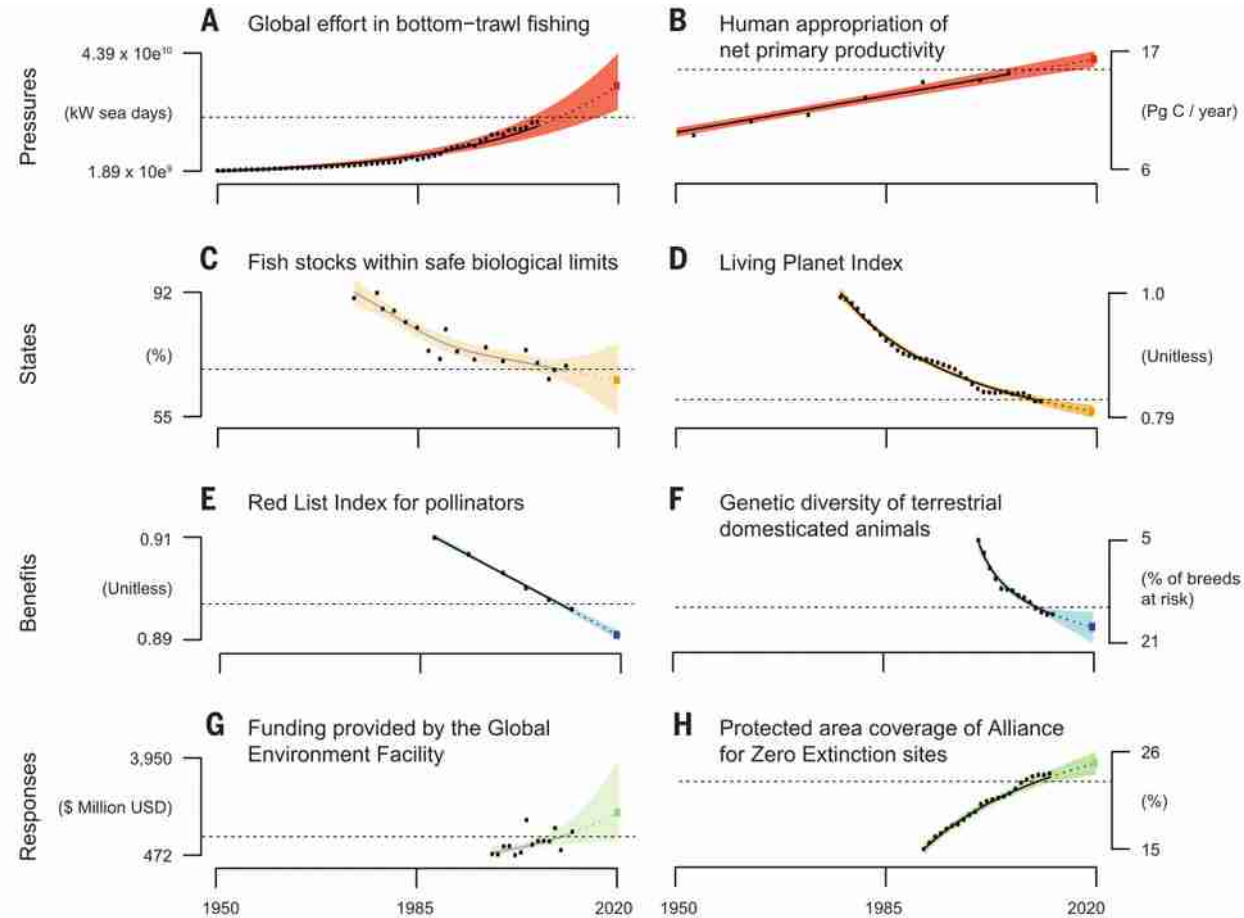
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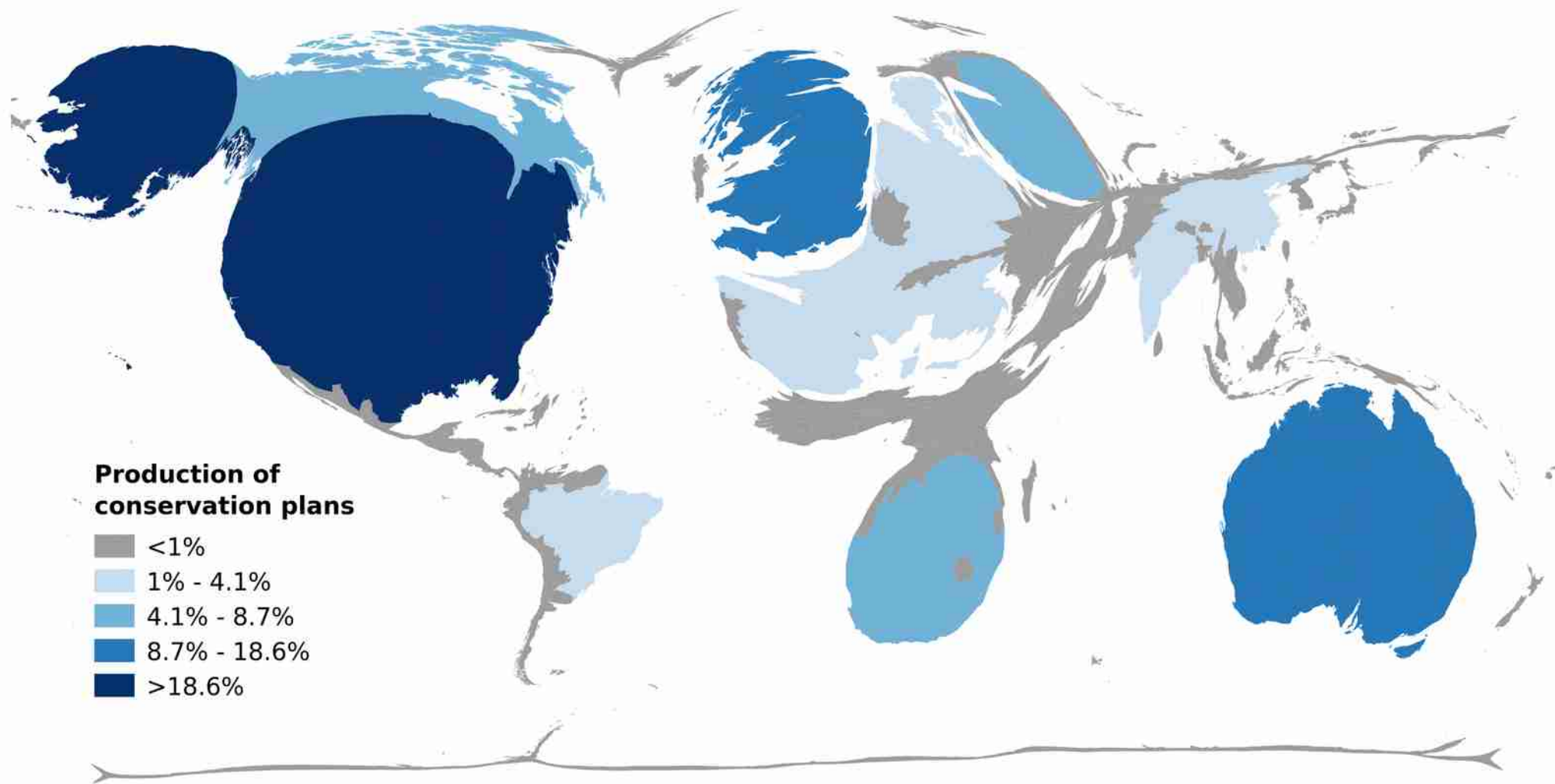
Research



State of biodiversity



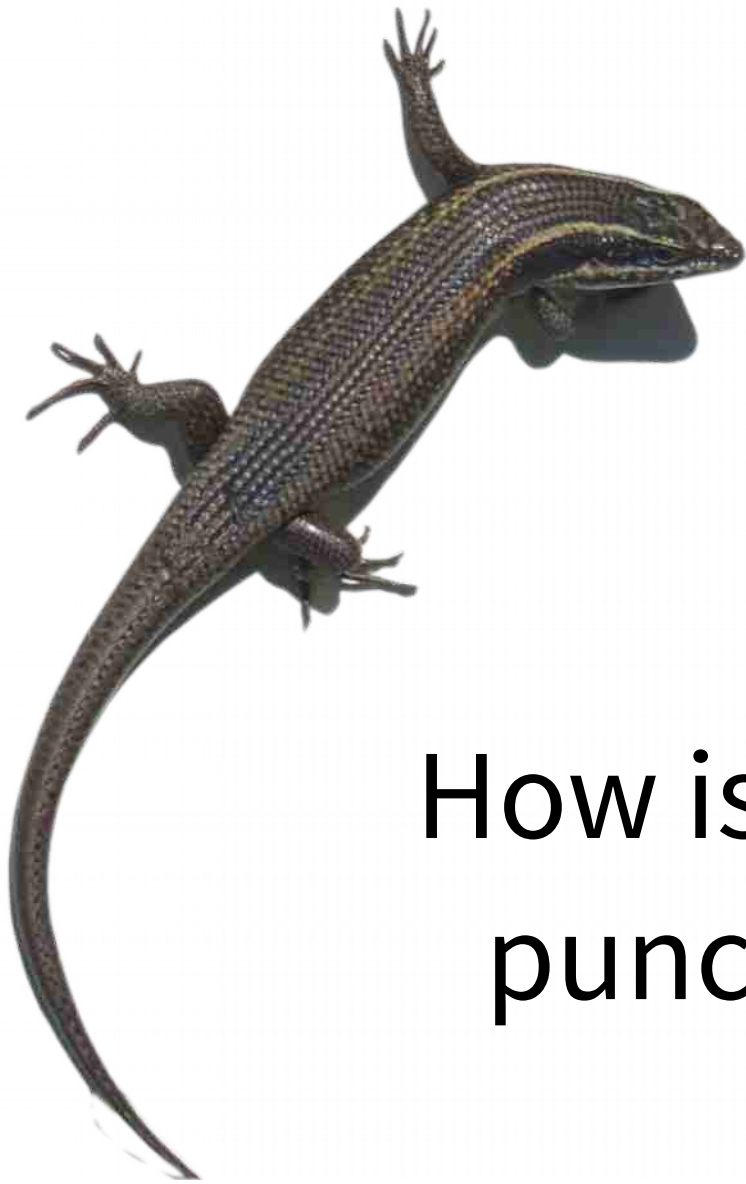
Tittensor et al. (2014) A mid-term analysis of progress toward international biodiversity targets. *Science*, 346, 241-244.



South Africa

- Complex ecology
- Cultural diversity
- Turbulent history
- Economic inequality

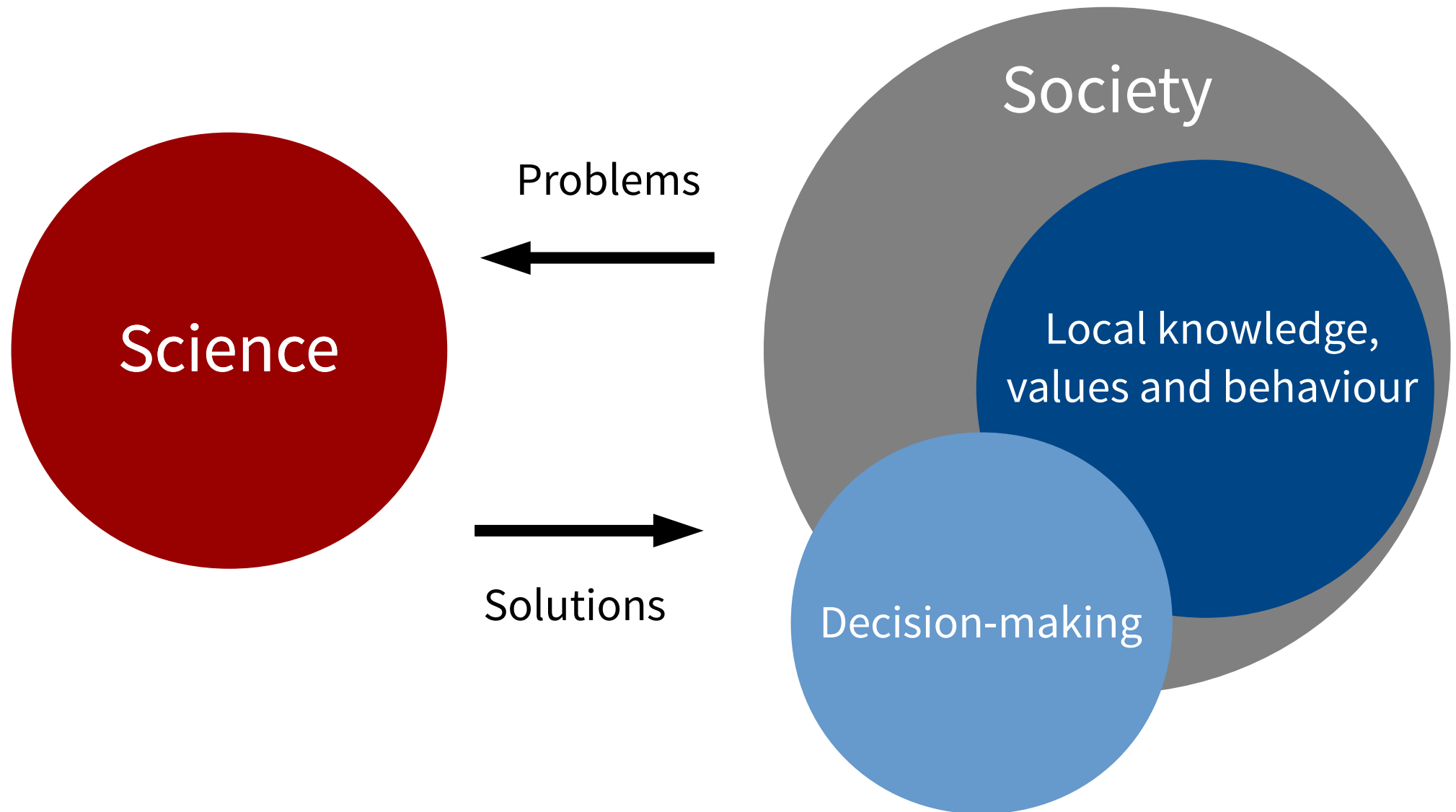




How is South Africa able to
punch above its weight?

Knowing But Not Doing: Selecting Priority Conservation Areas and the Research–Implementation Gap

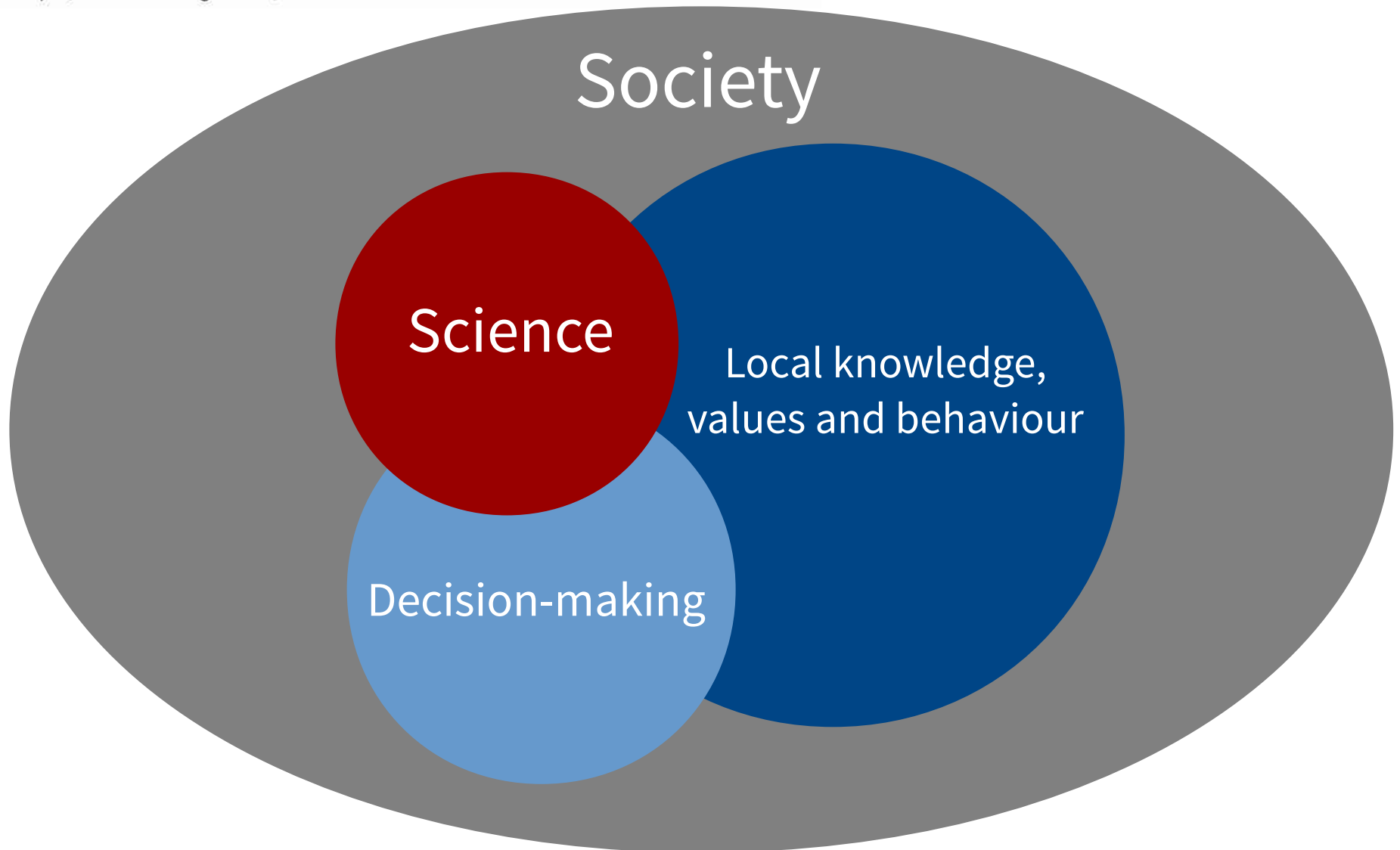
ANDREW T. KNIGHT,^{*††} RICHARD M. COWLING,^{*} MATHIEU ROUGET,[†] ANDREW BALMFORD,[‡] AMANDA T. LOMBARD,^{*§} AND BRUCE M. CAMPBELL^{**}



POLICY PERSPECTIVES

Navigating the Space between Research and Implementation in Conservation

Anne H. Toomey^{1,2}, Andrew T. Knight^{3,4,5,6}, & Jos Barlow^{7,8}



Post-normal science

- Facts are uncertain (unknowable)
- Values are in dispute
- Stakes are high
- Decisions are urgent

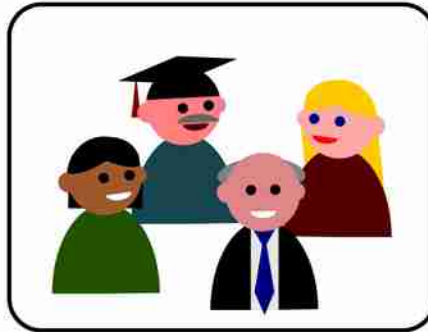
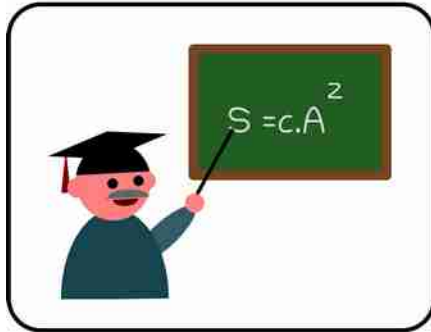


Funtowicz Ravetz (1993a) The emergence of post-normal science. In: R. von Schomberg (ed.) *Science, politics and morality* (pp. 85-123). Springer, Netherlands.

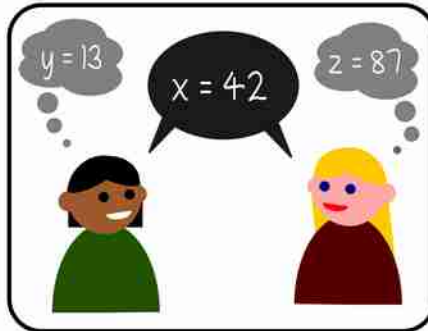
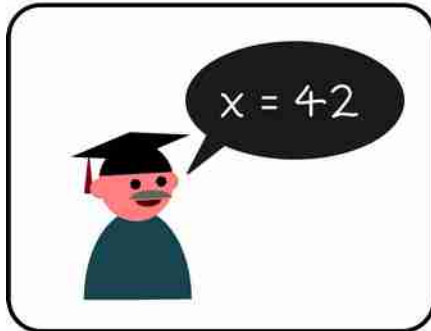
Funtowicz & Ravetz (1993b) Science for the post-normal age. *Futures*, **25**, 739-755.

Normal science

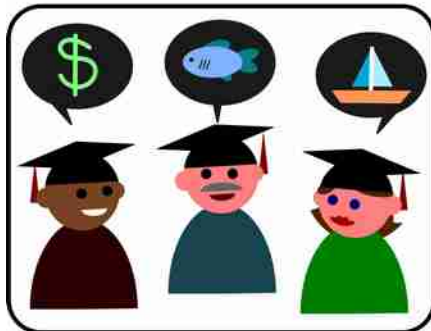
Post-normal science



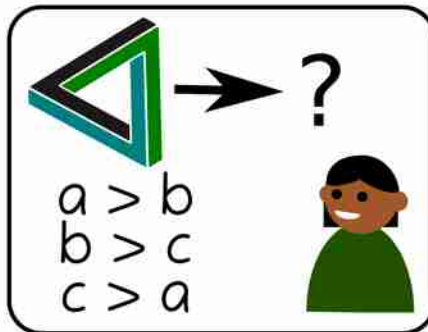
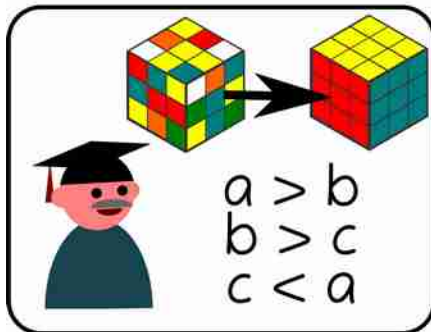
Normal science depends on experts, whereas post-normal science relies on an extended community of peers with diverse backgrounds, experience and expertise.



Normal science depends solely on explicit facts. Post-normal science uses extended facts, which are explicit facts supplemented by tacit knowledge based on individual experience.



Normal science stays within settled scientific paradigms (may be inter- or multidisciplinary). Post-normal science blurs the boundaries between paradigms and is transdisciplinary.

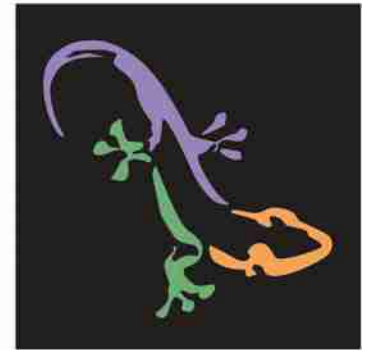
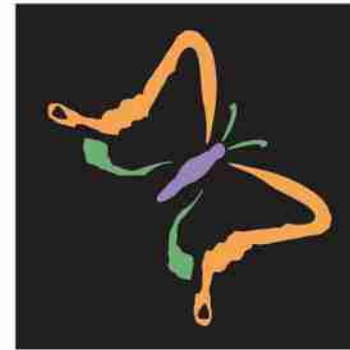


Normal science is essentially a puzzle-solving exercise with clear links between variables. Post-normal science addresses complex and multicausal problems that may be intractable and without simple solutions.

1 – Establish institutional authority

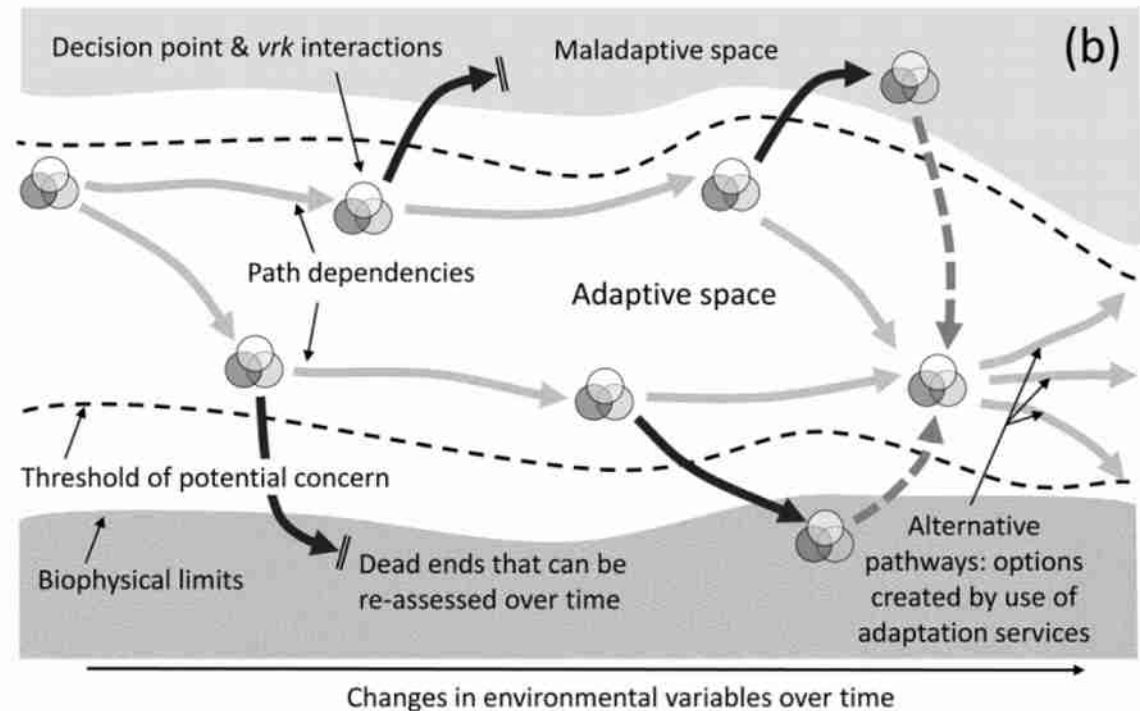
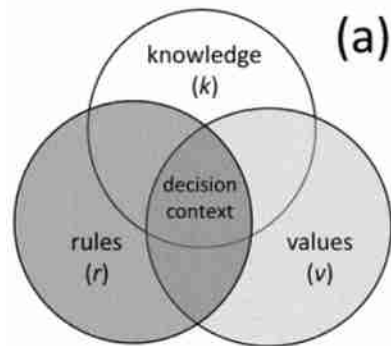
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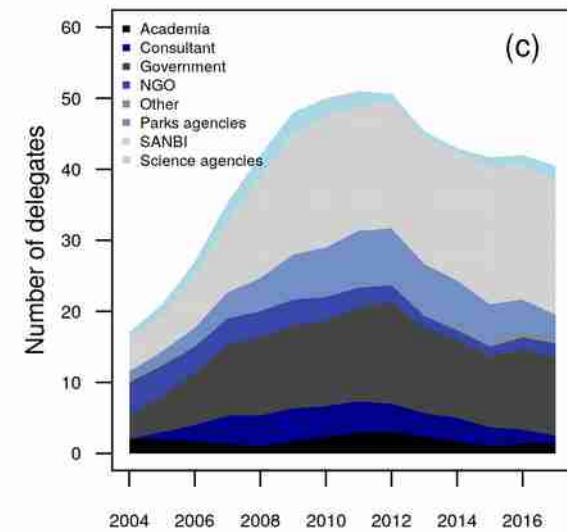
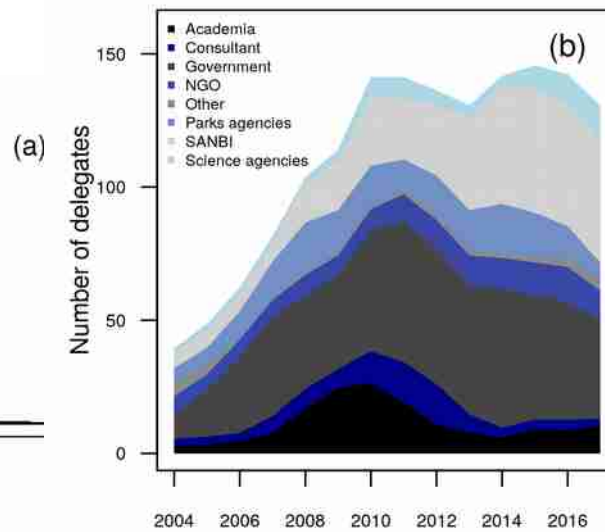
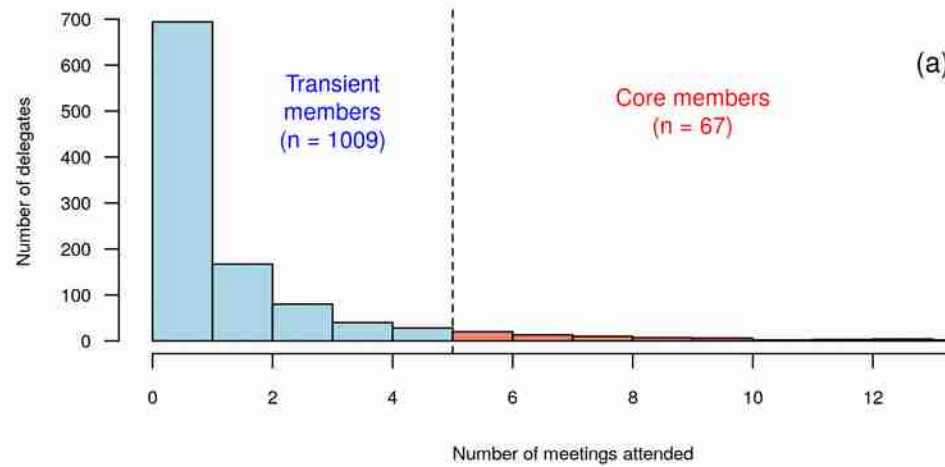
Biodiversity for Life



South African National Biodiversity Institute

2 – Define goals and boundaries of broad adaptive space





Action	Output	Outcome	Impact
Provide a platform for shared learning	e.g. <i>Biodiversity planning forum</i>	Inclusive and accessible multi-stakeholder engagement	Knowledge, values and rules integrated into biodiversity planning
Promote a common language	e.g. <i>Lexicon of Biodiversity planning</i>	Reduced ambiguity and encourage exchange of information	Consistent and unambiguous flow of information
Support access to publications and data	e.g. <i>Biodiversity advisor, BGIS</i>	Transparent and equitable access to information	Planning based on most recently available scientific information
Create pathways for synthesis	e.g. <i>Technical guidelines for CBA maps</i>	Products aggregated to become more than the sum of their parts	Leverage incremental actions into step-changes in progress



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Biodiversity for Life
South African National Biodiversity Institute

Invitation
15th National Biodiversity Planning Forum
19-22 June 2018, Cape St Francis Resort, Cape St Francis, Eastern Cape.



Lexicon of Biodiversity Planning in South Africa
Felix Cotton
Beta version (June 2018)

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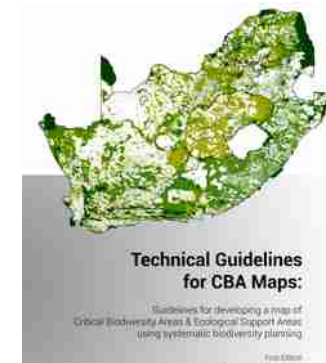
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Biodiversity data
Access point for all critical biodiversity resources and data from SANBI's partners

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Technical Guidelines for CBA Maps:
Guidelines for developing a map of Critical Biodiversity Areas & Ecological Support Areas using systematic biodiversity planning

First Edition
Beta Version (June 2017)

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Conclusion

- Post-normal science fills the research-implementation space



- 1) Establish institutional authority
- 2) Define goals and boundaries of broad adaptive space
- 3) Nurture the extended peer community

Questions

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