



The environmental science/decision-making interface

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Research Forum: Bringing Together Science and Management

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Researching within conservation biology

- Conservation as a 'crisis discipline'



- 'Conservation biology is an applied discipline that aims to inform practitioners about how best to understand and manage species and habitats.'
 - Also applies to conservation and management of natural resources, and other 'applied' sciences

The field without a template

- There is no set **template** for the integration of scientific research with policy and management

Applied researcher: 'I want to deliver knowledge that is relevant to your needs!'



Land manager: 'I want to integrate this knowledge with existing knowledge and operations!'

Growing Pains:

Themes from the developing conversation

- The deficit model
 - ‘Surely if...’
- ‘Your decisions are based on anecdote and myth!’
- ‘Your research is irrelevant!’
- ‘You aren’t telling us what you need to know!’
- ‘The implications are unclear and aren’t applicable to the local situation and context!’
- And many more...

Integration issues

- Complexity/uncertainty
 - Decisions still need to be made
 - Uncertainty inherent within all scientific inquiry
- Other knowledges and broader context
 - Many decisions based on experience
- Information lag
 - Same incentive structures as traditional science
 - Publications a problem for applied sciences?
 - Intellectual property issues

So what role for science?

- Acknowledgement that science can play an important and valuable role
- Push to use scientific research to guide decisions
 - So research is actively sought to inform decisions...
 - But how to ensure the research is successful?
- Australian Research Council 'Linkage Projects'
 - An objective is to ... 'encourage and develop long-term strategic research alliances between higher education and other organisations...in order to apply advanced knowledge to problems'

Developing 'rules of engagement'

- Potential to look at the specifics of research projects in order to develop a **template**
 - Who came up with the project?
 - Where did the funding come from?
 - What was the level of engagement?
 - Student? Supervisor? Area Manager? Regional Manager?
 - How often did they communicate?
 - What was the final output?
 - And many more...

Adaptive management?

- Concrete meaning hard to pin down in the field
- Model **template** for science/management collaborations?
- Some successful examples of collaborative **planning** overseas, yet still disappointments
- Potential obstacles
 - Disagreement over meaning
 - Potential legal inflexibility
 - Complexity may require staged introduction

How will I figure this out?

- Find instances where scientific research has been sought to improve decision-making
 - ARC Linkage Projects
 - Climate Change Adaptation in the Hawkesbury-Nepean
 - Other examples?
- Review positive and negative feedback from adaptive management attempts
 - Relate to these contexts

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Research dilemmas for applied scientists

- Balancing salience, credibility, legitimacy
 - Salience: relevance to land managers
 - Credibility: rigour and statistical requirements, repeatability, generalisability
 - Legitimacy: has it taken into account all perspectives?
- Applied scientists want to maximise these qualities in their research, yet experience trade-offs
- Publication-focus a problem for applied scientists?