


Innovation, knowledge diffusion, and adaptive management in regulated settings:


Pushing string uphill?




A brief roadmap

- ◆ The rise of regulatory processes
 - ◆ Impact on integration of science in decisionmaking
 - ◆ The case of the Northwest Forest Plan
 - ◆ What's to be done?
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The rise of regulatory processes

- ◆ Growing distrust of institutions of governance
 - ◆ Growing appreciation of complexity
 - ◆ Failure to respond to new uses, values, interests
 - ◆ The quandary: how can ideal of public control be made possible in a world of growing technical complexity?
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The Context

- ◆ The Mantra: “Do No Harm!”
 - ◆ But...What do we do when we don't understand from where harm comes?
 - ◆ Shifting burden of proof
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Regulation “vs.” management discretion

- ◆ In the US, Multiple Use-Sustained Yield Act: “breathes discretion at every pore.”
- ◆ Regulatory oversight has bred an “us vs. them” mentality; regulatory processes seen as the reason why innovation, experimentation are opposed.

Regulatory bodies do have problems

- ◆ Staff and expertise
- ◆ Time
- ◆ Political pressure


- ◆ But...often serve as scapegoats, masking a pervasive risk-averse management culture

Policy Preferences

| | | | |
|------------------|-----------------|---|--|
| | | <i>Agree</i> | <i>Disagree</i> |
| Causation | <i>Agree</i> | A Computation <i>Bureaucracy</i> | C Bargaining <i>Representation</i> |
| | <i>Disagree</i> | B Judgment <i>Collegium</i> | D Conflict ?? |

The Case of the Northwest Forest Plan

◆ The Context

- Public concerns with impacts of forest management
 - Growing scientific concerns regarding species and habitats
 - Concern that management did not reflect current state of knowledge
 - The result? Social dysfunction, political conflict
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Clinton and FEMAT


- ◆ A forest plan grounded in science
 - Process revealed less about what to do, more about what we didn't know
 - ◆ Emergent properties
 - ◆ Secondary-tertiary effects
 - ◆ Interactions between bio-physical and socio-economic systems
- ◆ "Federal government should work together"

Northwest Forest Plan grounded in two-tiered strategy

◆ Short-term

- Reserve-based allocations
- Standards and Guidelines (S&Gs)

◆ Long-term

- Learning-based, evolutionary
 - Adaptive
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But, after 10 years...

- ◆ Little to show in terms of learning, innovation, experimentation
- ◆ Failure to achieve promise/potential of adaptive management
 - “Always been adaptive”
 - Aversion to risk and uncertainty
 - Standards of proof too high


What happened?

- ◆ Internal management barriers
 - Risk-aversion
 - Lack of organisational will
 - Organisational capacity
- ◆ External barriers
 - Ideological
 - Public and political distrust
 - Organisational capacity
 - Legal/statutory interventions

How to encourage innovation and risk-taking?

- ◆ Intrinsic aversion to risk
- ◆ Cross-sectoral (health, technology)
- ◆ Overcoming sentiment that if we can't insure that something is safe, doing nothing is the safest course
- ◆ "No action" is an action, with consequences and risks

What's to be done?

- ◆ Forums for “working through”
 - ◆ Engage regulatory processes
 - Early
 - On-going
 - Mutual learning
 - ◆ Work with stakeholders to acknowledge risk and uncertainty
 - ◆ Recognize limits of scientific prediction
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Is adaptive management the solution?

- ◆ First, if it is, what's the problem?
 - Interaction among scientific complexity, political ambiguity, and the limits of disciplinary-based science
 - Limits of science in predictive role in the policy context

Is adaptive management the solution? (cont.)

- ◆ Adaptive management accepts that policymaking is an experimental enterprise...any new program needs testing and evaluation
- ◆ If policy succeeds, hypothesis confirmed
- ◆ If policy fails, adaptive design still promotes learning

Adaptive management in a regulatory environment?

- ◆ Acknowledging uncertainty
 - ◆ Standards of proof
 - Involves more than traditional confidence limits, given policy context, “noise”
 - ◆ Building political understanding and support
 - ◆ Organisational capacity to respond
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