



Achieving Sustainable Catchment Management

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Overview of Presentation

- What are the challenges facing sustainable catchment management?
- How can we address catchment management challenges?
- Examples of catchment management projects
- Emerging themes and future challenges



The Challenges 1/2

Interdisciplinary

academic research which crosses subject and disciplinary (social and natural sciences) boundaries to deal with problem(s) of common interest; thereby facilitating more holistic thinking, new knowledge and development of theory.

Integrated or integrative

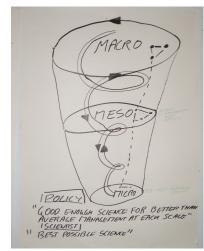
involve academic researchers from different disciplines and non-academic participants (e.g. land managers, decision-makers, public) to address a common goal, reach new insights and achieve more sustainable outcomes.



after Trees, Trees & Fry (2005) Landscape and Urban Planning 70: 177-191

The Challenges 2/2

- Sustainable catchment management requires interdisciplinary approaches
 - Complex interactions between land, water, atmosphere, vegetation and living beings
 - Analysis at multiple scales multiple actors and domains



Policy and end-user relevance requires new forms of research



Conventional vs. Integrated Approach

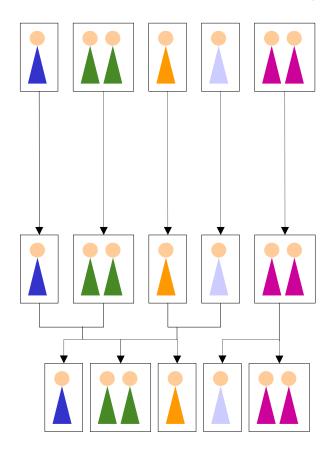
Policy Natural Science → Economics

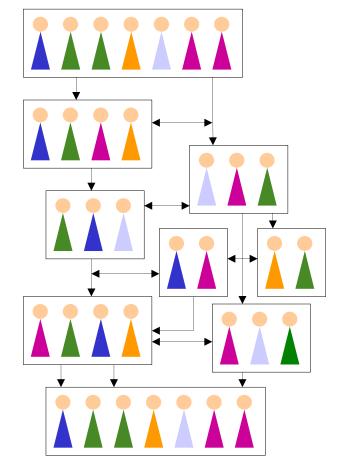
Natural & Social Sciences - People - Policy

PARALLEL + Multidisciplinary



INTEGRATED + Interdisciplinary







adapted/after Trees, Trees & Fry (2005) Landscape and Urban Planning 70: 177-191

Our Scoping Study Approach

- Create a forum for interdisciplinary learning (27+ researchers); workshops and bilateral meetings
- Explore synergies
- Reflect on existing methodological approaches multi-objective interdisciplinary framework
- Identify gaps in databases
- Explore the potential for meta-database
- Define current and potential drivers of change (env., social, policy, techn. & economic)
- Ensure policy relevance through ongoing evaluation of the process

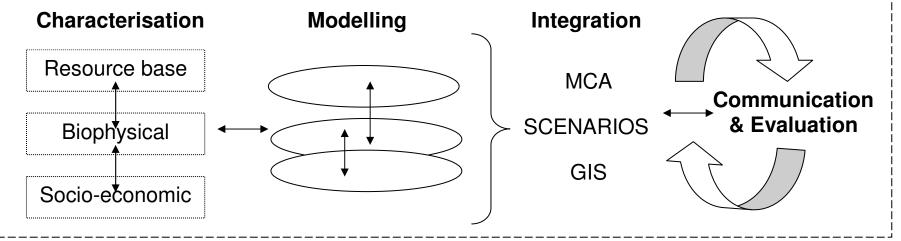




A Framework for Integration

Interdisciplinary & Social Learning – Participation – Deliberation:

taking account of multiple/conflicting/changing values and goals specialists/scientists – stakeholders - interested citizens - policy-makers - resource managers



- Learning and better understanding rather than data collection
- Critical appraisal and reflexivity
- 'Best' scale(s) multiple scales



Overlapping Interests and Issues in RELU Catchment Projects

Framework (Spash, Oughton, Maberly, Cook)

shared epistemology through interdisciplinary discourse & learning social learning: stakeholders – locals/public – national & international science with society (dialogue with and input from actors & stakeholders)

Problem conceptualisation
(Heathwaite, Spash, Cook)
understand diff. perspectives;
find common ground;
identify conflicts & constraints.

Methodology / Approaches (Heathwaite)

understand different perspectives and paradigms; find common / new ground.

Specific Methods & Approaches (Cook, Spash)

feasibility assessment; critical appraisal; identify knowledge gaps.

Scale Issues

(Spash, Oughton, Maberly, Boatman)

temporal – spatial - institutional human activities - (bio)physical processes up-scaling; different contexts e.g. Modelling (Hanley, Spash, Cook)

capacity for integration; compatibility issues; identify gaps.

Data and Information Management (Boatman, Spash)

evaluate requirements; capacity for access, integration and analysis.



Overall Themes Emerging

- Conflict or differences in conceptualising catchments and their problems;
- Different definitions of 'interdisciplinary' and 'integrated' (or lack of agreeing definition and common goals);
- Variety of research questions and methodologies; can create problem in how to integrate methods and models;
- Role of different knowledges and social learning to help with integration and addressing differences;
- Who gets asked and involved? Power.



Ongoing Challenges for RELU

- Interdisciplinary work takes time
 - Productivity lag should be expected
 - Social capital amongst consortium needs to be sustained
- Language facilitates and impedes
 - Terminology can prevent understanding
 - Concepts need to be discussed to be understood
- Professional and institutional barriers to interdisciplinary working
 - Need to feel worth the risk
 - Managerial and organisational support
- Interdisciplinary mind-set
- Openess to different perspectives

