Physical and social science perspectives on the use of rural catchments

Dr Katy Bennett, Dr Louise Bracken

Dr Elizabeth Oughton and Prof. Jane Wheelock.

Structure of presentation

- Introduction and project aims
- Generic framework for analysis
- Case study
  - River bank fencing
- Moving forward

Introduction

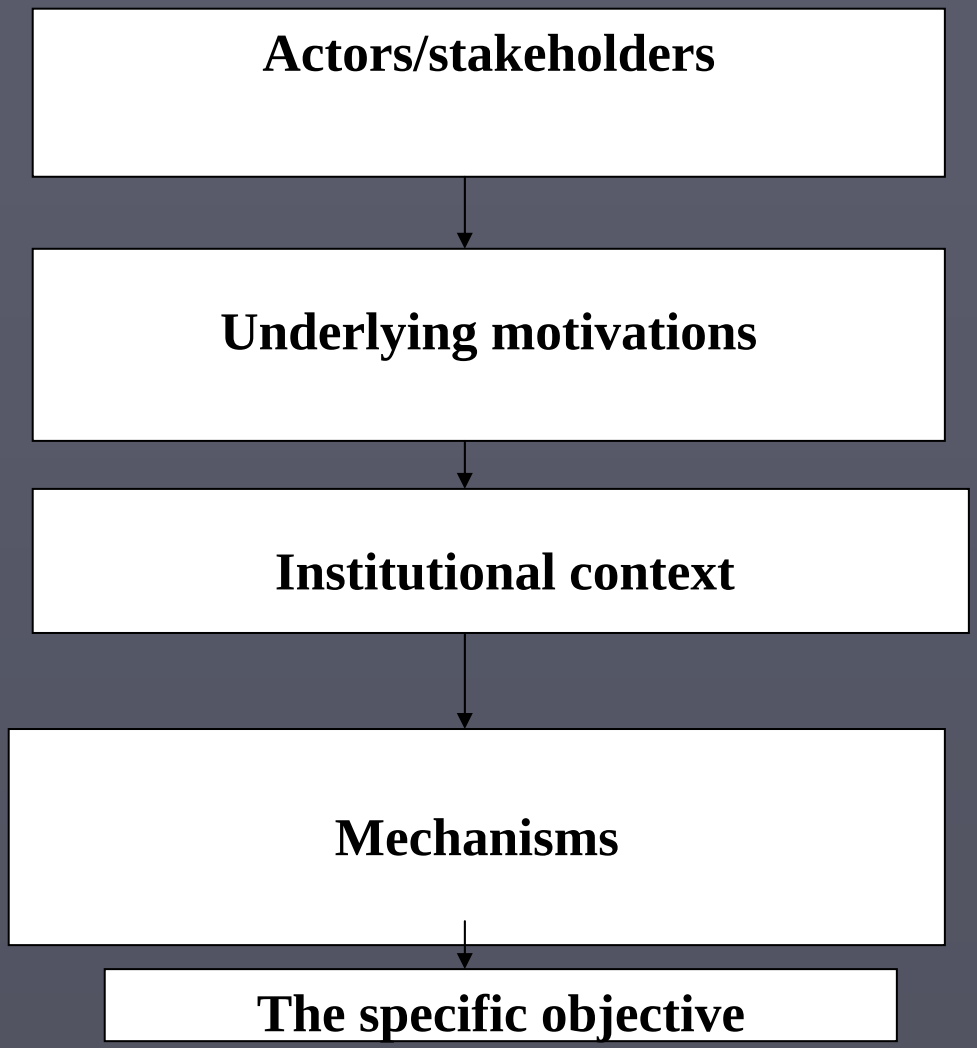
- Aim of research:
- To develop a practical framework for interdisciplinary research between science and non-science based stakeholders.

- Study will provide a conceptual and methodological framework for further research on the multiple interactions of rural populations and landscape resources

Project aims

- Specific objectives are to:
  - understand the different knowledges, claims and practices at play in the rural landscape
  - explore the ways in which information is communicated between different stakeholders
  - identify the points at which human behaviours map onto river catchments, paying particular attention to the relative scale of human activity and physical processes
  - develop a research framework to explore the relationship between human behaviour and physical landscapes
  - build interdisciplinary capacity

Generic framework for analysis



Actors / stakeholders

- Not mutually exclusive groups
- May have common or conflicting interests and priorities
- Individuals may represent the interests of more than one group
- E.g. Conservation agencies; local residents; recreational groups; parish council

Underlying motivations

- All actors can see the range but prioritise differently according to values
- How do actors prioritise values?
- E.g. livelihood creation; enjoyment of ‘natural’ environment; community; desire for transparency of process.

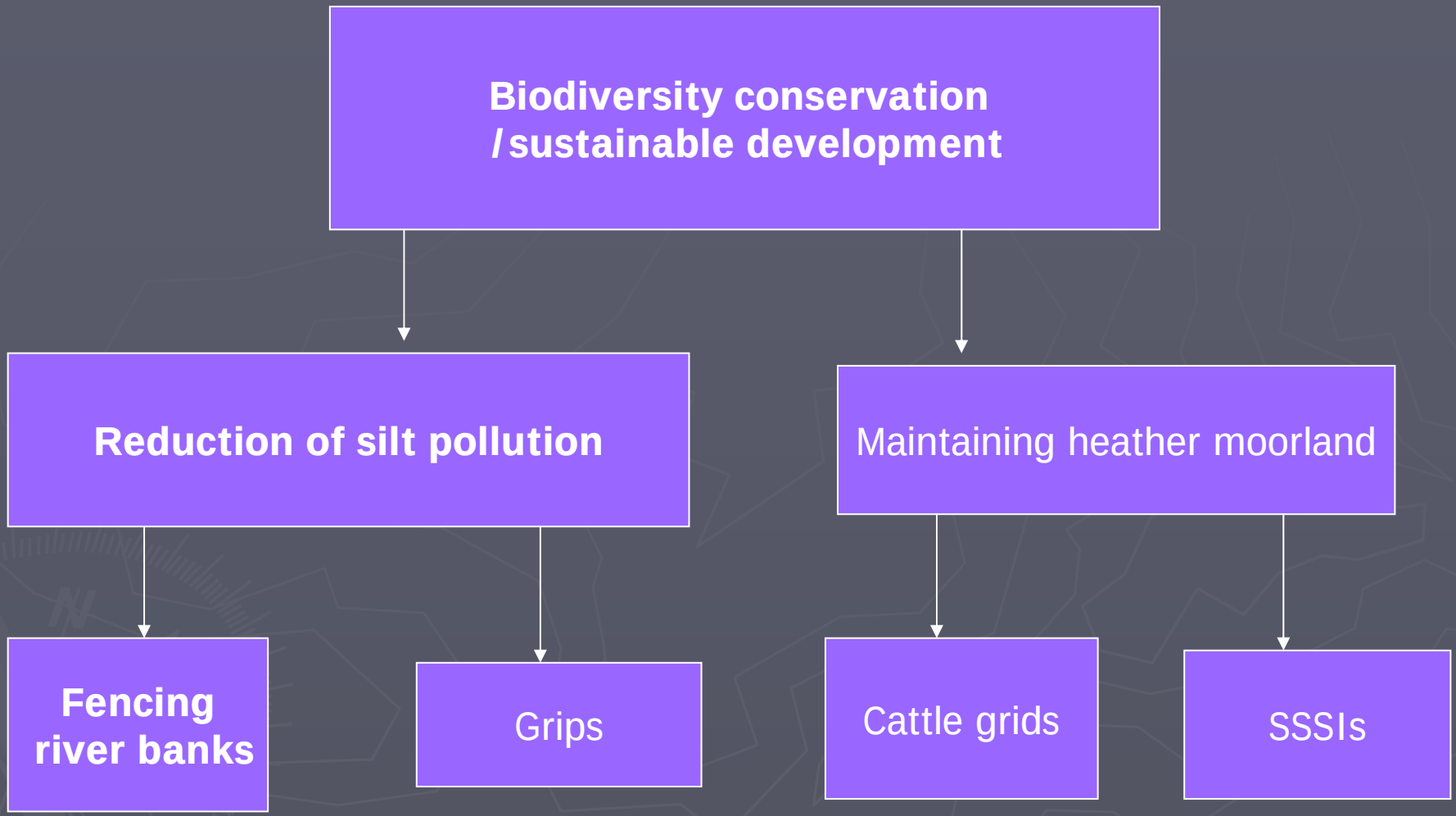
Institutional context

- Organisations
- E.g. NYMNPA; EA; English Nature; DEFRA; EU Commission.

- Rules of practice
- More or less transparent to different actors
- different knowledges may be important
- E.g. markets; habit/tradition; regulation

Mechanisms

- Mainly about practices
- Many practices involve physical/social interface
- Knowledges about practices/mechanisms different for different actors
- Case study to follow


Biodiversity conservation /sustainable development
Reduction of silt pollution
Maintaining heather moorland
Fencing river banks
Grips
Cattle grids
SSSIs

Fencing river banks

- Actors/stakeholders:
  - Local land owners, EA, NYMNPA
- Motivations:
  - Enjoyment of ‘natural’ environment
  - Biodiversity conservation
  - Community
  - Livelihood creation

Fencing river banks: Institutional context:

Organisations

- NYMNPA, EA, farmers, landowners

- Rules of practice:
  - Partnership based on provision of materials and labour
  - Agri-environment schemes

Fencing river banks

- Mechanism
  - Fencing prevents cattle poaching on river banks where livestock would cause erosion and addition of silt to the river. Hence silt supply is reduced.

Fencing river banks

- Communication/conflict
  - Limited number of stakeholders so communication easier and more effective
- Scale
  - Erosion and silt pollution locally associated with cattle poaching; repercussions extra-local
  - Practice of fencing involved agencies within the catchment and beyond, but was undertaken at the land owner scale

Learning from fencing

- Social relationship may influence the choice of physical mechanism
- Ease of management may not achieve the most effective solution.
- Simplicity of response locally approved
- Change in relative significance of institutions (through the CAP and the increased significance of agri-environment)
- ‘Champion’ helps

Moving forward

- The social and physical interrelate at the level of **mechanisms**
- Social context enhances/restricts extent to which physical mechanism goes to meeting objectives
- Need integrated management with objectives broken down into bite size units of practice
- Focus on how power operates across and within scales. How do power relations mediate communication and conflict?