Understanding the relationships between ecosystem services and poverty alleviation: a conceptual framework

Janet Fisher
GeoSciences, University of Edinburgh
janet.fisher@ed.ac.uk
Conceptual framework review

Development of new conceptual framework

Empirical adaptation of framework

ACES: Abrupt changes in ecosystem services and wellbeing in Mozambican woodlands?
Strengthening conceptual foundations: Analysing frameworks for ecosystem services and poverty alleviation research

Janet A. Fisher a,*, Genevieve Patenaude b, Patrick Meir b, Andrea J. Nightingale c, Mark D.A. Rounsevell b, Mathew Williams b, Iain H. Woodhouse b

Figure 1: Sustainable rural livelihoods: a framework for analysis

- **Policy**
  - History
  - Politics
  - Macro-economic conditions
  - Terms of trade
  - Climate
  - Agro-ecology
  - Demography
  - Social differentiation

- **Natural capital**
- **Economic/financial capital**
- **Human capital**
- **Social capital**
- **Institutions and Organisations**
- **Agricultural intensification - extensification**
- **Livelihood diversification**
- **Migration**

- **Livelihood sustainability**
  - 1. Increased numbers of working days created
  - 2. Poverty reduced
  - 3. Well-being and capabilities improved
  - 4. Livelihoods adaptation, vulnerability and resilience enhanced
  - 5. Natural resource base sustainability ensured

- **Contextual analysis of conditions and trends and assessment of policy setting**
- **Analysis of livelihood resources: trade-offs, combinations, sequences, trends**
- **Analysis of institutions/organisational influences on access to livelihood resources and composition of livelihood strategy portfolio**
- **Analysis of livelihood strategy portfolio and pathways**
- **Analysis of outcomes and trade-offs**
Supports analysis of who and how wellbeing is derived from ES

An ecosystem ‘...involves not only the organism-complex, but also the whole complex of physical factors forming what we call the environment’ (Tansley, 1935; 299).

Ecosystem Services are ‘the benefits people obtain from ecosystems’ (MA, 2005; v).

Access and control form the social and political dynamic through which people interact around ecosystem services.

People are represented at different scales. They are differentiated by characteristics (endowments, entitlements, capitals, preferences and means other than ecosystem services), influencing their ability to access and control ecosystem services.

Human wellbeing incorporates material, health and security factors, good social relations and freedom of choice and action (from Narayan et al. 1999; 2000, adopted by MEA, 2005).

Poverty alleviation is composed of poverty reduction, a process by which people move above a national poverty line, and poverty prevention, the maintenance of a minimum standard of living with immediate needs met, below a national poverty line (Angelsen and Wunder, 2003; 2).

Drivers are ‘natural or human-induced factors that... unequivocally influence ecosystem processes’ (MA, 2005; 64).

External human influences are anthropogenic influences originating beyond the people sector.

Consumption represents the removal of ecosystem services by external human influences.

Cultural exchange represents the interaction between people and external human influences, for instance through technology transfer.

(Fisher et al., in press: Ecosystem Services)
What can this framework do?

Interdisciplinary thinking tool
Inductive tool to structure enquiry in the field
Qualitatively-orientated, but may develop more quantitative/mixed iterations
– system layout allows it to support analysis of dynamics

We’ll use it in
ACES > develop applied guidance
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Human well-being incorporates material, health and security factors, good social relations and freedom of choice and action (from Narayan et al., 1999; 2000, adopted by MEA, 2005).

Poverty alleviation is composed of poverty reduction, a process by which people move above a notional poverty line, and poverty prevention, the maintenance of a minimum standard of living with immediate needs met, below a notional poverty line (Angelsen and Wunder, 2003; 2).

Drivers are ‘natural or human-induced factors that... uniquely influence ecosystem processes’ (MA, 2005: 64).

External human influences are anthropogenic influences originating beyond the people sector.

Through mitigation or exacerbation, people (respectively) reduce, or increase drivers.

Adaptation is a process of ‘deliberate change in anticipation of, or in reaction to, external stimuli and stress’ (Nelson et al., 2007: 395).

Cash from commodified services represents income gained from selling ecosystem-derived commodities, through conventional commodity markets, or more novel payments for ecosystem services.

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Trade-off analysis?

Not designed specifically for trade-off analysis

But, trade-off analysis requires:

Step 1: thorough understanding current situation
Step 2: implications of proposed/actual changes for different groups
Access improves for Group A

Outcomes for Group A
WB  ↑  ES  ↓

Outcomes for Group B
ES  ↓  WB  ↓

Basis of a social-ecological trade-off analysis
Focus on groups > allows prioritisation
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