

Incorporating valuation, scientific and social evidence into biodiversity delivery

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Delivering what and to whom ?

- Environmental management delivers multiple outcomes
- Stakeholder 'mosaic' is complicated
- Stark differences in fundamental perceptions might be present
- Different things matter to different people, to different extents and for different reasons
- 'Mapping mindsets'

Mental constructs of Biodiversity

Fischer & Young 2007

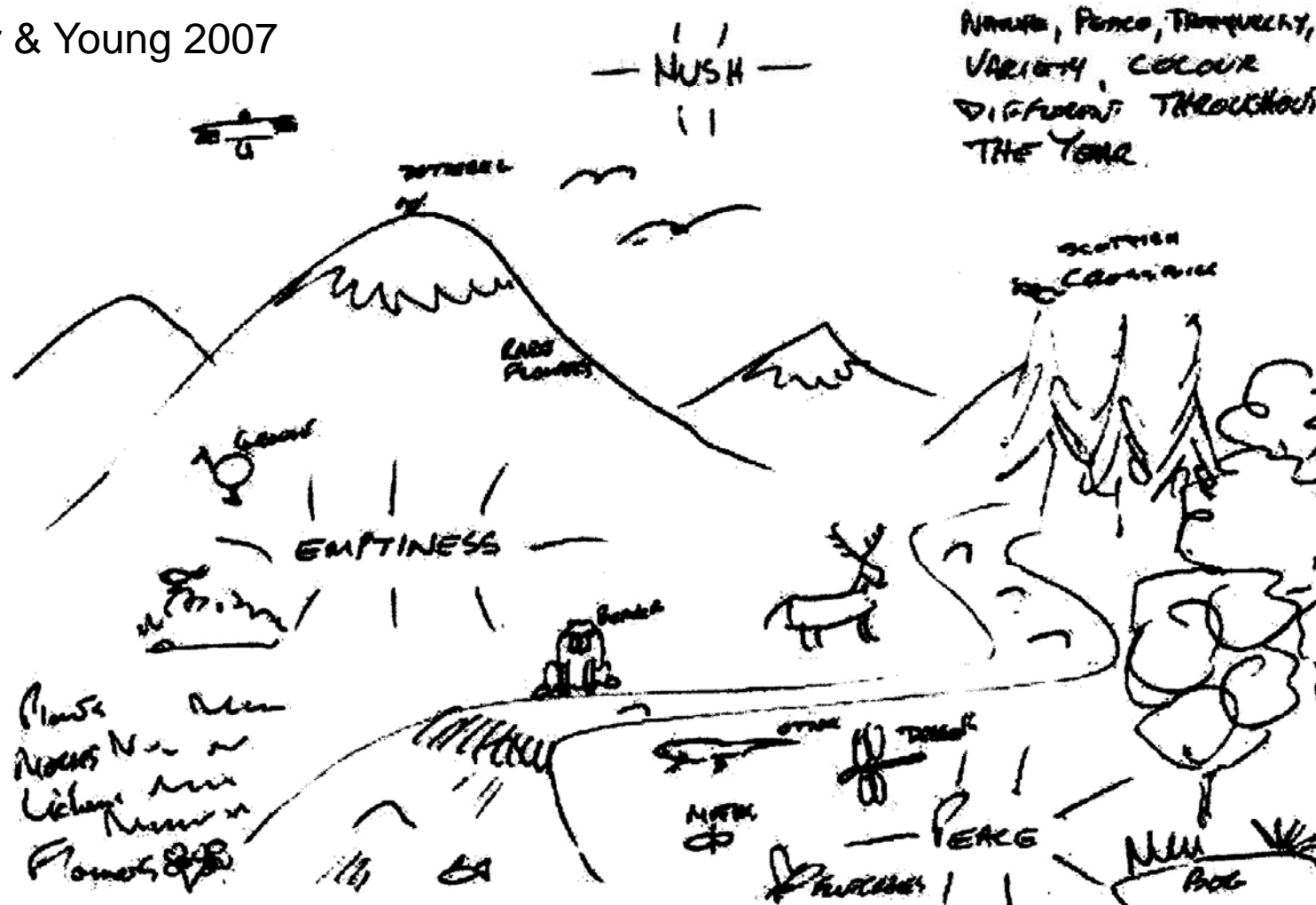


Fig. 1 - "Nature, peace, tranquility, variety and colour different throughout the year" [17].

Mental constructs of Biodiversity

Fischer & Young 2007

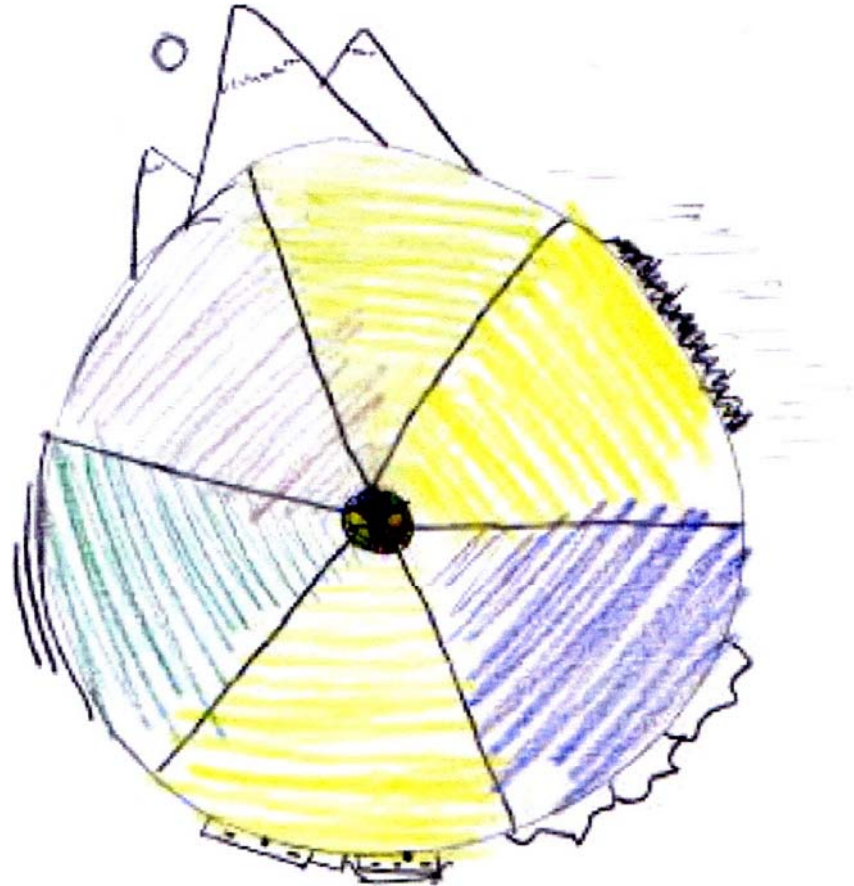


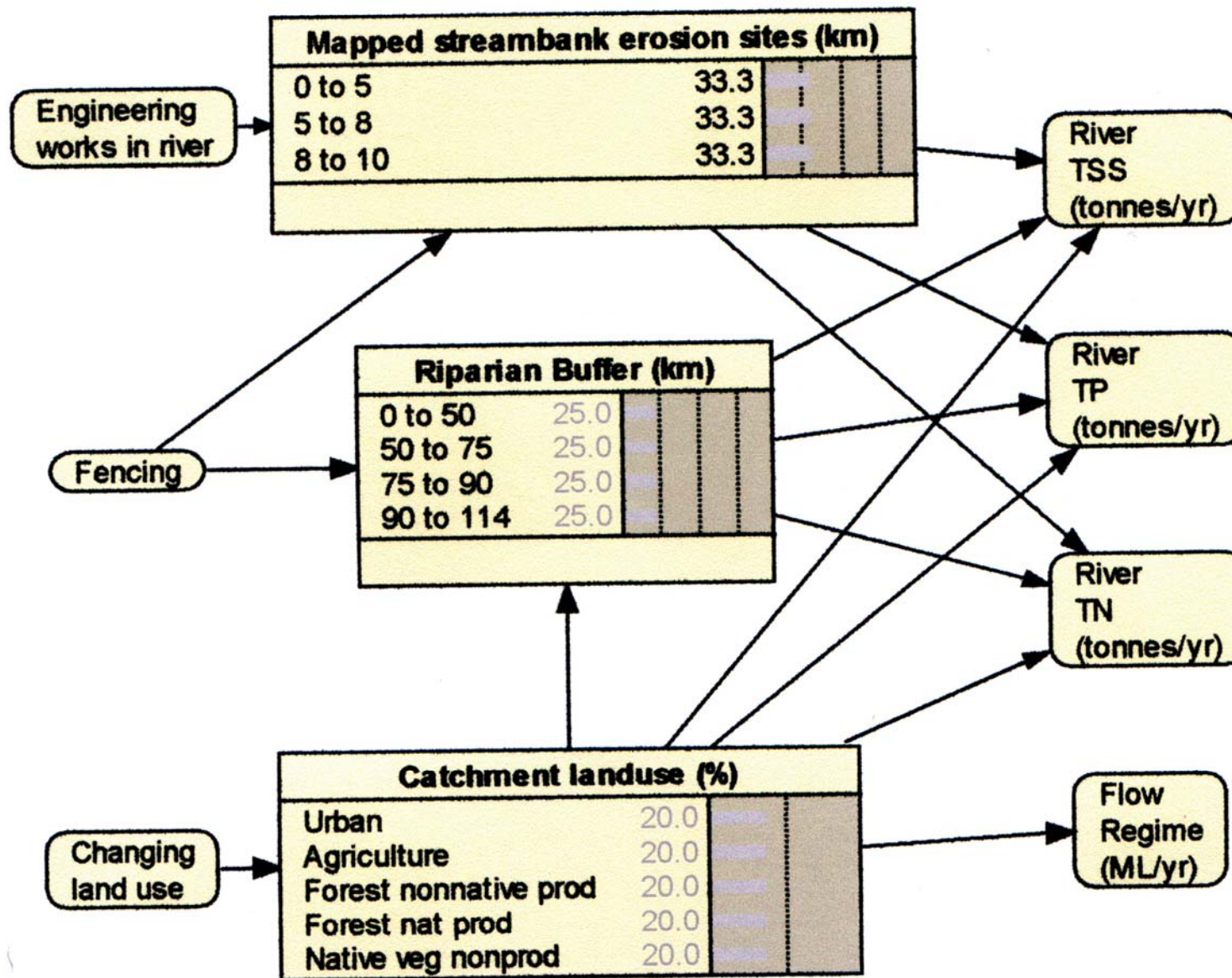
Fig. 3 – “In biodiversity, everything is connected and contained in the same environment, but with no hierarchy”

From 1

Multiple outcomes

- Bayesian Belief Networks BBNs
- Summarise functional linkages within managed ecosystems and identify multiple outcomes of interest or value to stakeholders
- BBNs used for modelling management
- BBNs used for interchanging expertise between stakeholders and for generating consensus on management decisions

6.1 The water quality network



Different types of worth, or values, for a redwood tree

Direct use value

“Once we cut it down and run it through a sawmill, it will make some great houses”

Indirect use value

“The tree is sequestering many tons of carbon which is helping to hold off climate change”

Option value

“Several years from now, we might want to cut it down to make houses”



Existence value

“I have never seen a redwood but I get real pleasure out of knowing they exist”

Bequest value

“I get a warm feeling knowing that someday my grandchildren will see a redwood”



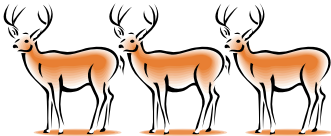





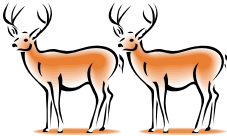
Transformative value

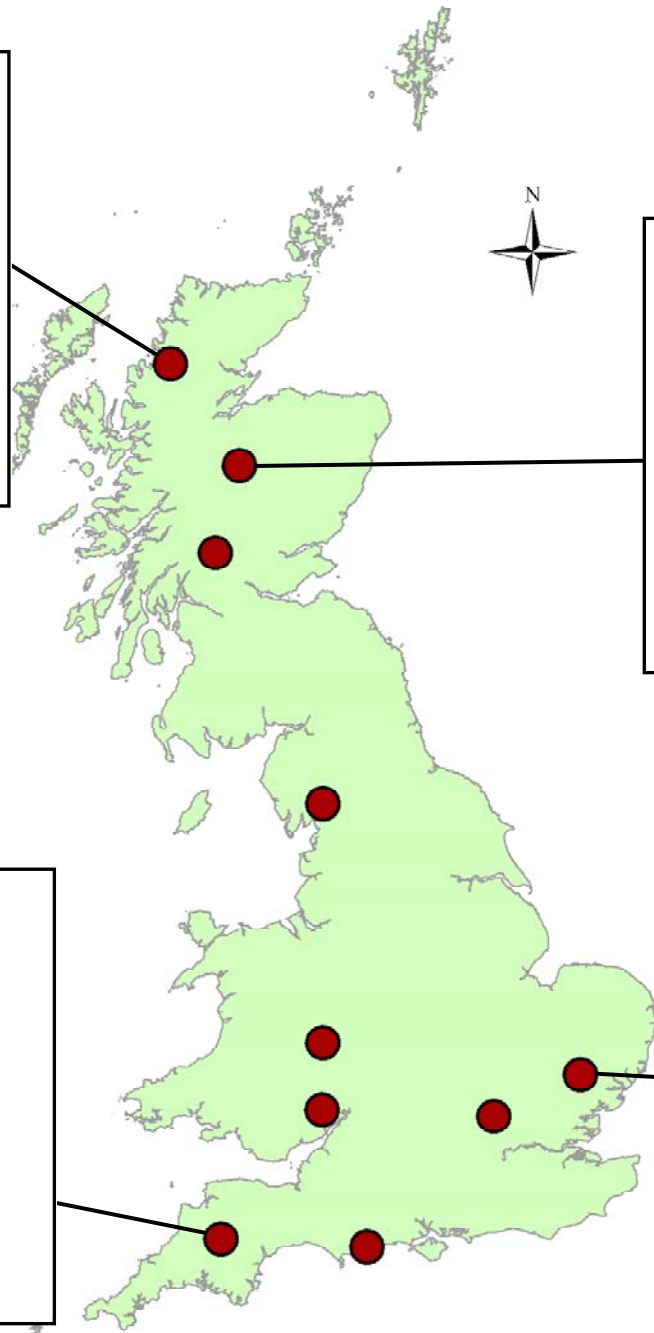
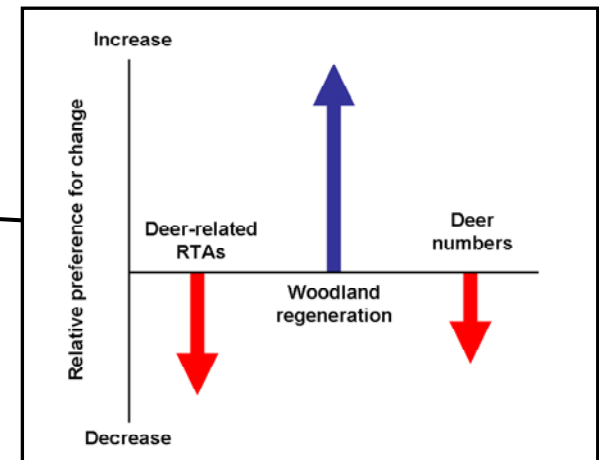
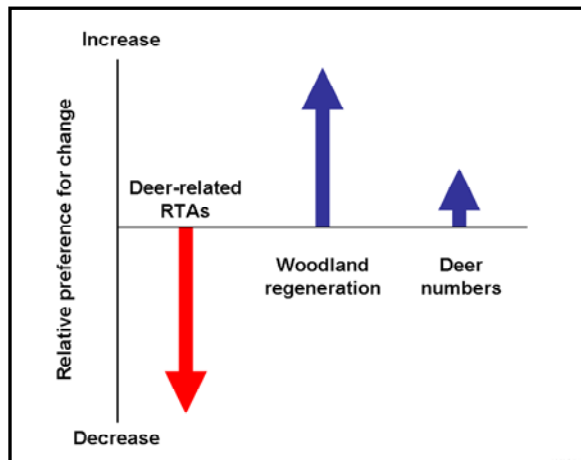
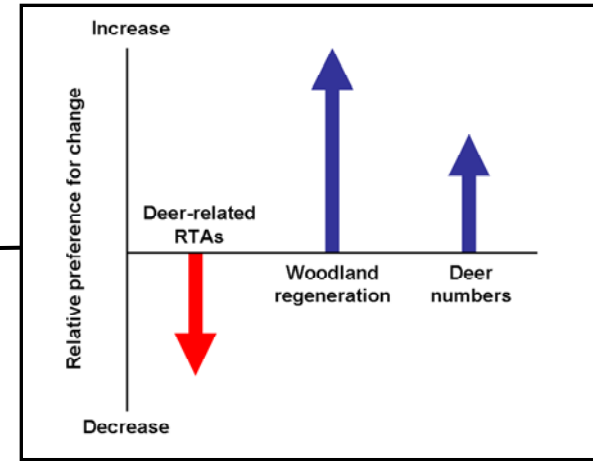
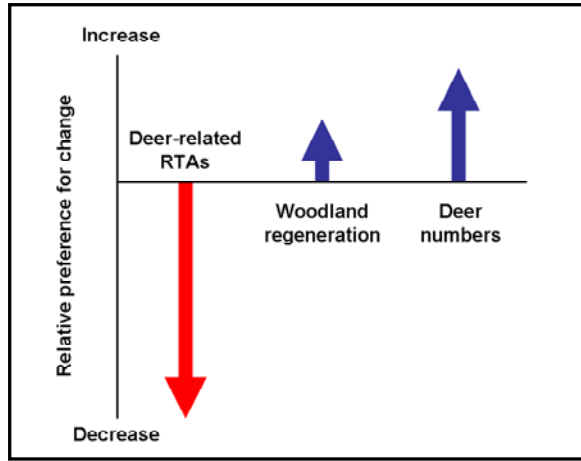
“My view of the world and my life changed the first time I saw a redwood; I am now less materialistic and have a more satisfying life-style”

Values are rooted in preferences

- Different stakeholder groups have different objectives and preferences
- Some sets of preferences are enshrined in legislation - others are somewhat cryptic
- Could the preferences which different stakeholder groups hold for different management outcomes be quantified ?



	RTAs	Woodland regeneration	Deer population	Tick preferred
Option A				<input type="checkbox"/>
Option B				<input type="checkbox"/>
Status quo				<input type="checkbox"/>



RELU deer preferences 'map'

- Choice experiments establish relative preferences for a limited set of outcomes
- Differences between and within stakeholder groups can be quantified
- Too simplistic a portrayal
- Qualitative / nuanced information also required to better inform the roots of conflict and identify routes towards conflict resolution

Mapping mindsets

- Mapping mindsets and investigating the roots of conflict and/or collaboration
 - BBNs in focus groups
 - choice experiments + qualitative data
 - Q methodology to identify discourses
 - Delphi methods to map 'expert' mindsets
- How could these insights be applied to practical environmental management for biodiversity delivery ?

Closing questions

- How can we incorporate valuation, scientific and social evidence into our delivery ?
- Do stakeholders have the same mental constructs of the environment as biodiversity researchers and practitioners ?
- Is knowledge of stakeholder preferences necessary for, or simply a nuisance in, decision making ?
- Do we know enough about biodiversity already to make management decisions ?
- Is the language of ecosystem services ecobabble or a new paradigm for biodiversity management ?
- What might the Biodiversity Partnership do to take these issues forward ?