The value of landscape stewardship for managing social-ecological systems

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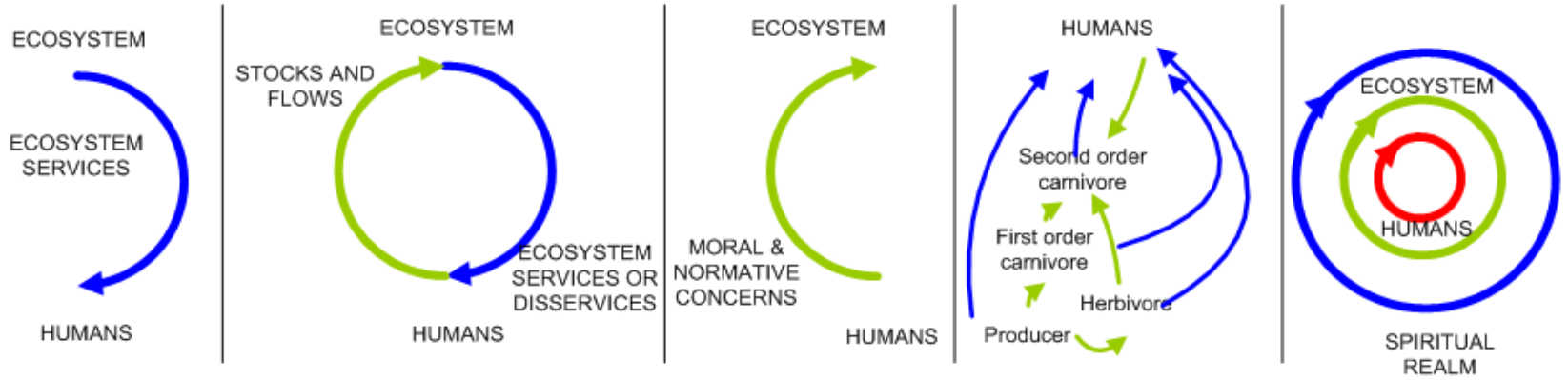
Understand and integrate multiple metaphors of human-environment relationships into decision-making

	ECONOMIC PRODUCTION	CLOSED LOOP PRODUCTION	STEWARDSHIP	WEB OF LIFE	ECOCULTURAL COMMUNITY
ECOSYSTEM MANAGEMENT ETHIC	Humans have a right or entitlement to use ecosystem services as long as they can pay for them	Humans have a right or entitlement to use ecosystem services as long as those can be used sustainably or properly substituted by equivalent natural or human made services	Human's moral concerns drive the protection of ecosystem services	Humans are one part of a wider ecological system and have a responsibility to understand the impacts on the various components of the broader system	Humans have a responsibility to manage ecosystems based on the connections among the spiritual, physical and social worlds



Raymond, C.M., Singh, G., Benessaiah, K., Bernhard, J.R., Levine, J, Nelson, H., Turner, N.J., Norton, B., Tam, J & Chan, K. (2013). Ecosystem services and beyond: Using multiple metaphors to understand human-environment relationships. *BioScience* 63(7): 536-546.

Multiple understandings of stewardship – for example:

- Resilience perspective

  Activities or strategies for maintaining and enhancing a variety of ecosystem services, with particular attention to learning and building adaptive capacity to manage uncertainty (Chapin et al. 2009, Folke et al. 2009, 2011, Olsson et al. 2010, Seastedt et al. 2013)

- Environmental psychology perspective

  Perceived human care for nature and landscape through active and careful management (Steg et al. 2013)

- Civic ecology perspective

  Pathway of engaging urban society in actions that integrate environmental, community and individual outcomes in a way that reflects local cultures and environment, and the knowledge of city residents (Krasny and Tidball 2012)

- Policy and planning perspective

  Stewardship as an agri-environmental scheme

  - Voluntary
  - Strict rules and regulations
  - Narrow set of values recognised
  - Delivered top-down
  - Focus: farm scale

- Range of other perspectives

  E.g., religious, corporate

Guiding question for the innovative session

How do we integrate a range of understandings and applications of landscape stewardship into social-ecological systems research?

- Promote learning
- Build adaptive capacity
- Manage uncertainty
- Promote care for nature
- Cater for individual and collective goals and outcomes
- Mobilise multiple forms of knowledge
- Promote democratic governance

Session outline

Speakers	Topics
Christopher Raymond	Rural landscape stewardship
Erik Andersson	Urban landscape stewardship
Lisen Schultz	Biosphere stewardship
Christo Fabricius	Stewardship and systems in transition
Harry Biggs	Conservation planning and biodiversity stewardship
Georgina Cundhill	Landscape stewardship and collaboration
Maria Tengö	Reflections from conversations about stewardship
GROUP DISCUSSION	Approx. 35 minutes

Questions for the audience

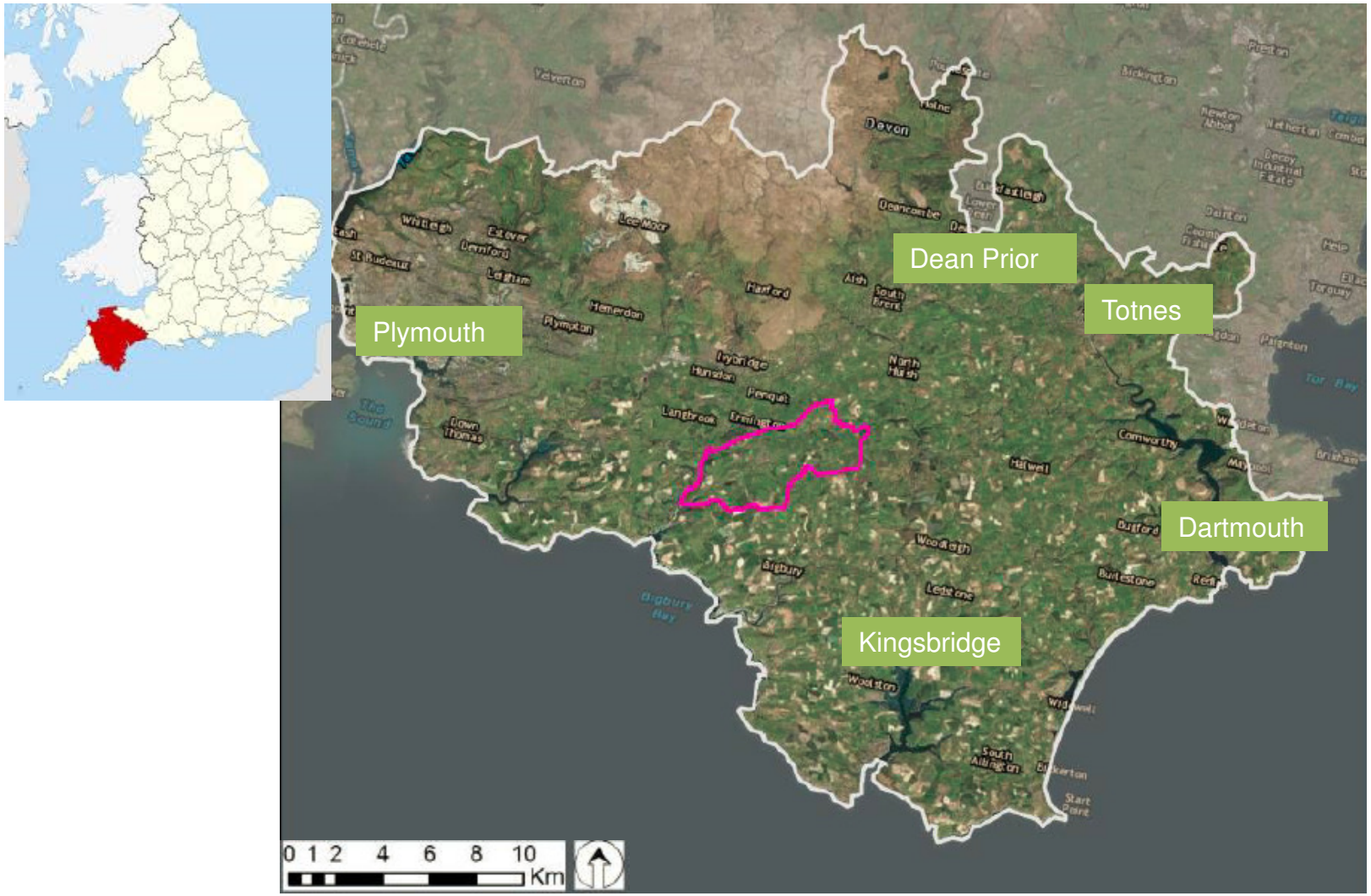
How do notions of stewardship add value to our discussions about the ‘good’ Anthropocene?

What is missing from current conceptualisations and applications of stewardship?

HERCULES

Comparing local understandings of rural landscape stewardship and landscape values in SW Devon, UK

SW Devon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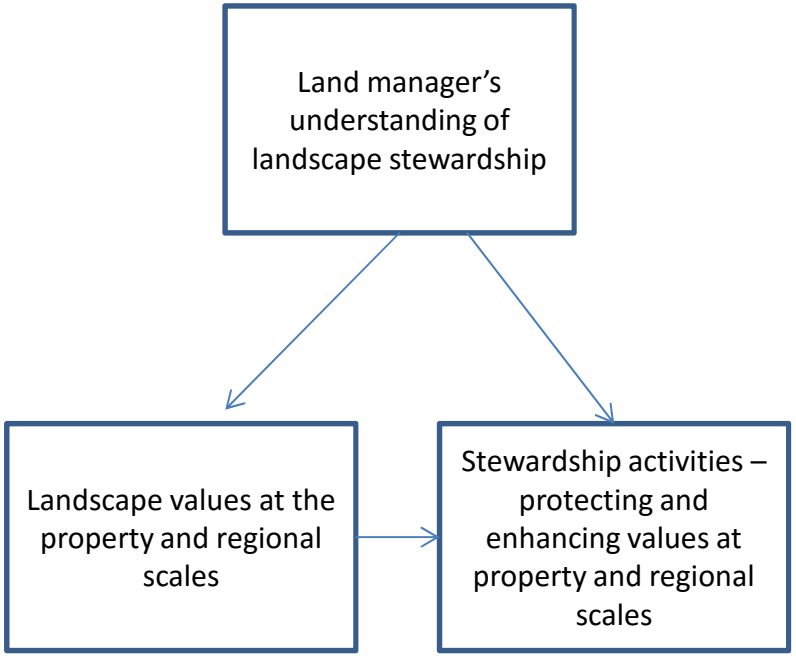
Objectives

Explore the relationships between landscape values and land management activities by different types of understanding of landscape stewardship



Raymond, C.M., Plieninger, T., Fagerholm, N., Bieling, C., and Martin-Lopez, B (2015). The farmer as a landscape steward: Exploring the relationships between landscape values, landscape stewardship and ecosystem management. *AMBIO*.

Methods

Sample

- 13 small-holders (< 5 acres), 14 medium-holders (5-100 acres) and 13 large-holders (> 100 acres)

Semi-structured interviews

- background to interviewee and their farm;
- understanding of landscape stewardship;
- three most important landscape values on the property,
- three most important landscape values across the region, and;
- how the interviewee manages for these landscape values.

Analyses

- in-depth analysis of understanding of landscape stewardship
- applied thematic analysis - presence or absence of landscape values and management activities by stewardship type (Braun and Clarke 2013)

Understandings of landscape stewardship

Environment

- looking after the land in an environmental way, managing the environmental features, stewarding these features for future generations, taking care of the environment, and implementing measures that encourage wildlife

Production

- keeping land productive / the preservation of traditional farming techniques

Holistic

- recognised the interactions, and sometimes the interdependencies, between ecological and production systems, and highlighted the role of maintaining or enhancing landscape diversity by supporting a patchwork of different land uses

Instrumental

- a formal government scheme to support environmental actions. Emphasis was placed on environmental agreements and land managers being paid to do something to support the natural environment.

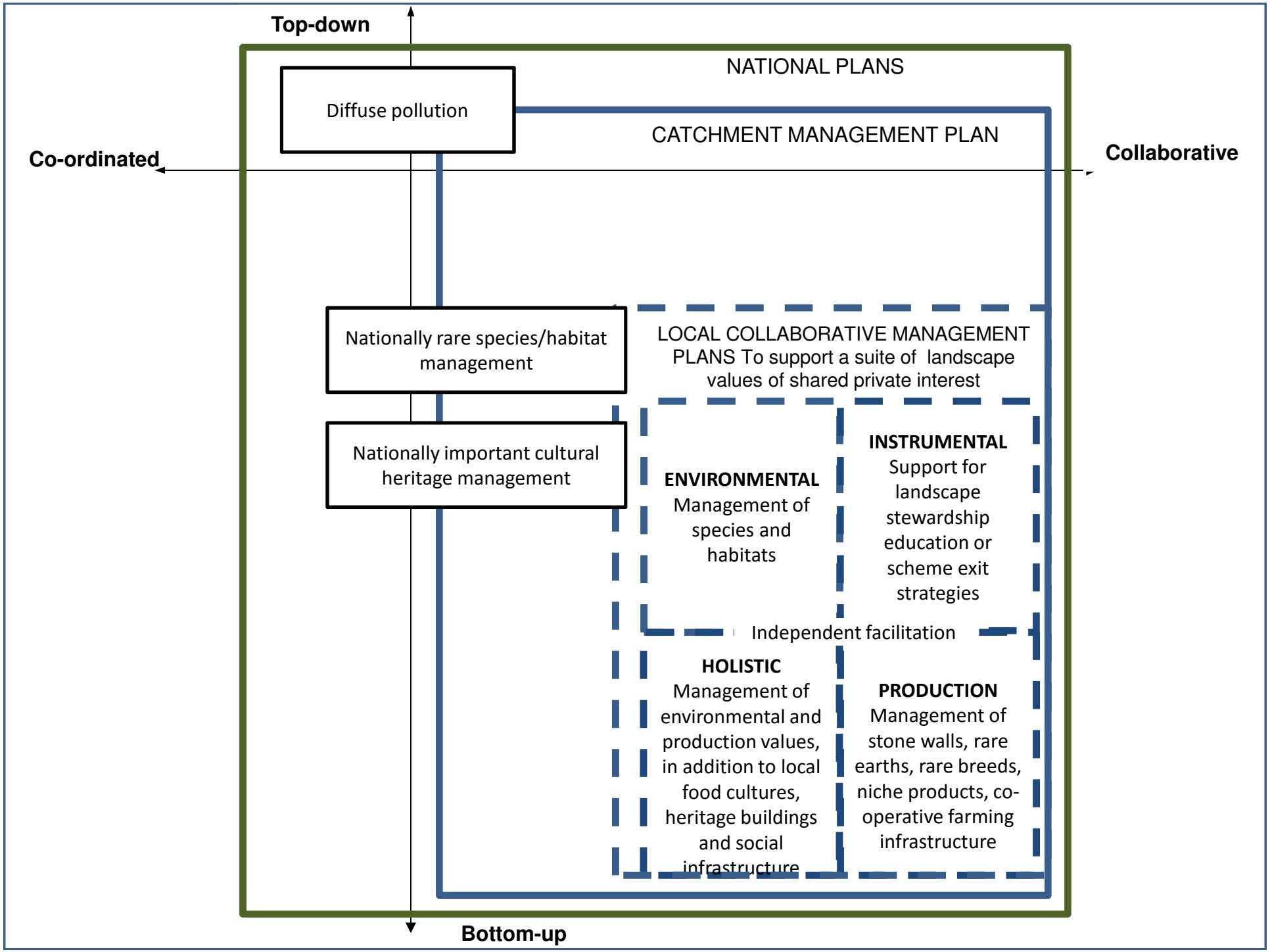
Holistic frame of landscape stewardship

HERCULES

"To me, landscape stewardship is to keep what we've got, i.e., the patchwork fields, the hedgerows, the natural hedgerows that people think are natural but they're not, they're man made. The overall look of the place, if you like, yet still be actively farming with that. And also look after all the wildlife within that landscape as well. This nonsense of the environment or farming, it's not like that; the two sit together and one works with the other, and if you haven't got the environment right, the farm won't be right, and if the farm's not right, the environment won't be right. It's this mix."

Landscape values and understanding of landscape stewardship

Landscape Values - Property	All Interviewees (N = 40)		Environmental (N = 10)	Production (N = 6)	Holistic (N = 13)	Instrumental (N = 11)
	# respondents per theme	%	%	%	%	%
Social relations	25	23.1	25.8	22.2	20.0	26.3
Sense of Place or 'Home'	8	7.4	√	√	√	√
Sense of community	12	11.1	√	√	√	√
Educating people/creating food culture	5	4.6	√	X	√	X
Quality, local food production	19	17.6	22.6	11.1	20.0	10.5
Producing quality food	6	5.6	√	√	√	X
Producing local food	10	9.3	√	X	√	√
Development of niche food markets	3	2.8	√	X	√	√
Biodiversity	17	15.7	16.1	0.0	17.5	26.3
Native communities (e.g., woodlands)	8	7.4	√	X	√	√
Native species	9	8.3	√	X	√	√
Cultural heritage	16	14.8	12.9	11.1	20.0	10.5
Diversity of landscape types	11	10.2	√	√	√	√
Ancient feeling - protecting the past	3	2.8	X	√	√	X
Heritage buildings and archaeology	2	1.9	X	X	√	√
Recreation, tourism and lifestyle	11	10.2	9.7	16.7	10.0	5.3
Rural lifestyle	9	8.3	√	√	√	√
Delivers my income	2	1.9	X	√	√	X
Care for animals or land	10	9.3		22.2	7.5	15.8
Care for animals	7	6.5	X	√	√	√
Caretaker of land for future generations	3	2.8	X	√	√	X
Aesthetic and inspiration	10	9.3	12.9	16.7	5.0	5.3
Beautiful views	5	4.6	√	√	√	√
Clean and tidy landscape	5	4.6	√	√	√	X
Totals	108	100.0	100.0	100.0	100.0	100.0


Top-down
NATIONAL PLANS
Diffuse pollution
CATCHMENT MANAGEMENT PLAN
Co-ordinated
Collaborative
Nationally rare species/habitat management
LOCAL COLLABORATIVE MANAGEMENT PLANS To support a suite of landscape values of shared private interest
Nationally important cultural heritage management
ENVIRONMENTAL
Management of species and habitats
INSTRUMENTAL
Support for landscape stewardship education or scheme exit strategies
Independent facilitation
HOLISTIC
Management of environmental and production values, in addition to local food cultures, heritage buildings and social infrastructure
PRODUCTION
Management of stone walls, rare earths, rare breeds, niche products, co-operative farming infrastructure
Bottom-up

Key messages

- Multiple perspectives on stewardship in the scholarly literature
- Land managers can have a variety of understandings of landscape stewardship, with each understanding linked to a distinguishing set of landscape values and land management activities
- Work towards a more tailored and targeted approach to the delivery of agri-environmental schemes post 2020