CARROTS, STICKS, SERMONS OR HUGS? DESIGNING COORDINATED POLICY MEASURES FOR THE UPTAKE OF ENVIRONMENTAL MANAGEMENT OPTIONS

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Summary: Environmental policy instruments that encourage the uptake of environmental management measures have traditionally been focused at the level of the individual farm, and have aimed to re-direct the principal farm decision-maker towards adoption of alternative management options using a combination of voluntary and mandatory measures. These have combined incentives, regulations and advice delivered through a variety of channels – or in Kenneth Boulding's terminology: carrots, sticks and hugs. There is now widespread recognition that emphasis on policy designed for the single farm is not a sufficient condition for achieving desired environmental quality targets, in particular where scale and spatial coordination are significant factors in effective uptake. Drawing on research on environmental collective action in Scotland, we draw out some issues with a more collective approach to policy design, and identify some key research challenges that need to be met to make these approaches more viable in the future.

INTRODUCTION

The range of policy options available to government for rural land management spans a wide range in theory, but the options available to specific agencies in practice are much narrower, constrained most clearly by both pragmatic considerations (most obviously financial and personnel resources) and regulatory jurisdiction. The underlying options in providing agri-environmental delivery are essentially four-fold:

- Changing how things are produced to ensure environmental goods and services are part of the process (eg Best Management Practices).
- Changing where things are produced, to reduce pressure on sensitive areas.
- Changing what is produced, to provide a better mix of goods and services, at a range of scales.
- Changing who produces things, to enable specialization in areas of management expertise.

Government and its responsible agencies have a range of policy instruments which can be deployed to bring about these changes, and these can be referenced to Kenneth Boulding's (1989) analysis of power relations. The available ways of bringing about change can be pursued through broadly three strategies – the power of coercion (the stick), the power of exchange (the carrot), and the power of integration (the hug in Boulding's own terminology - or the sermon to emphasise its persuasive rather than supportive element). These are more

often described as economic instruments, regulation (or Command and Control) and moral suasion in the classic policy literature, although this is clearly a more narrow definition than that developed by Boulding. A summary list of the range of instruments available, broadly delineated by these categories, is shown in Table 1.

It is important to note that though these elements are often separated, even quite specific instruments seldom exercise exclusively one kind of power (Frey, 1997). Thus pricing mechanisms for conservation goods not only offer the power of exchange, but send clear signals about the value from the public perspective of the goods that are being offered for exchange. Information provision can help to identify cost savings or profit opportunities that in turn bring their own rewards. Regulatory instruments backed up with the threat of prosecution also send a signal about what is ethically valued, as do market based instruments aimed at delivering similar quality targets but through more flexible mechanisms (Winter and May, 2001). Single instruments are not therefore typically limited to the exercise of only one kind of power, even though this is a convenient way of characterizing them.

As Boulding notes, the hug is by far the most prevalent form of exercise of power, since it strikes to the heart of human relationships and is inherent in all efforts to engage humans in some form of activity. In Boulding's terminology, the hug is founded on 'love', though reservations about the impact of such romantic language on political sensibilities have led to its more common characterization (suggested by Boulding himself) as 'respect'. Thus although the power of exchange can be observed in recruiting farmers into various forms of agri-environmental schemes through payments, the success of these initiatives is still heavily reliant on mutual respect (essentially good will and honesty) on the part of participants, particularly when monitoring efforts are by necessity limited (Colman, 1994; Lowe *et al.*, 1997).

TWO HOLY GRAILS OF AGRI-ENVIRONMENTAL POLICY

Many of the measures listed in Table 1 have been, and continue to be, employed with varying degrees of support and success. There is substantial experience of successful (in enrollment terms) initiatives and schemes, both broad and deep, led by agency project officers, extension staff, NGOs and government departments themselves (e.g. CRER, 2002).

Two key objectives for rural land management have however been fairly consistently elusive – integrated delivery mechanisms, and coordinated uptake. Coordination is used here to refer to the appropriate scale of uptake, whether defined in relation to land area or numbers of participating farmers. Integrated delivery refers to multiple objectives that the state and its agencies hold in relation to the management of rural land, whilst acknowledging that land managers themselves are simultaneously involved in delivering multiple objectives for themselves and their families. These two key priorities add an additional complexity to policy delivery, but one where the challenges are significantly different to the past round of agri-environmental scheme development:

(1) A level of coordination in actions that brings synergy across multiple holdings.
(2) A level of coordination in objectives that brings synergy in multiple outputs.

At a strategic level, the problem is not the number and range of possible individual instruments, but the inability to coordinate these sufficiently at a comprehensive enough scale and for a wide enough scope of objectives. The challenges here are numerous, including budgetary restrictions, jurisdictional boundaries, changing agency remits, competing stakeholder interests and pressures of new European legislation.

In this context the introduction of Land Management Contracts (LMCs) offers a significant opportunity for far greater integration of objectives in delivery. The other challenge – coordination - has however remained relatively underdeveloped in both UK research and policy terms. Undoubtedly this reflects the underlying land ownership structure where examples of collective land management are now largely confined to the management of common grazings. The emphasis on collective action is however gaining prominence and reflects a new frontier for environmental working.

COLLECTIVE INITIATIVES – PULLING MULTIPLE LEVERS

Engagement in collaborative activities can be defined along a spectrum from Individual to Collective (Figure 1). At the individualistic end of the spectrum, farm actions are focused within a single farm boundary and without reference to wider objectives. At the other, collective, end of the spectrum lies full community land ownership, under which the entire decision making process involves collective action. Collaborative or collective activities involving multiple land managers occur along this spectrum, and their advantages in delivering on both agri-environmental and rural policy objectives have received some - though quite limited - attention in past research (e.g. Slangen 1994; Hagedorn, 2002; Franks, 2003).

From the individual land manager's perspective, there are some clear advantages to both modes of operation (Table 2). Although the benefits of cooperation are easily listed, the benefits of individual operation are far more familiar to most land managers. Currently, it is apparent that incentives to move towards more collective forms of action for environmental outcomes are notably weak (Davies *et al.*, 2004). Various types of zoning regulation are the clearest examples aimed at delivering a broad degree of spatial coordination, with specific catchment and habitat initiatives targeting specific objectives more closely.

A principal advantage of collective action lies in its ability to address multiple objectives simultaneously, and to harness Boulding's power of the 'hug' alongside more structured policy instruments. It can create a group which has the capacity to challenge traditional practice, and in which practices can be redefined, whilst simultaneously delivering - with the right supporting structures - direct benefits to participants either in efficiency savings or opening up new sources of revenue (either directly or indirectly) (Hagedorn, 2002). Four key elements of collective action can be characterised as co-learning, co-planning, co-acting, and co-funding. Some activities may be limited to only one of these, but the more intangible elements – co-planning and co-learning – offer the greatest potential to secure attitudinal change over time.

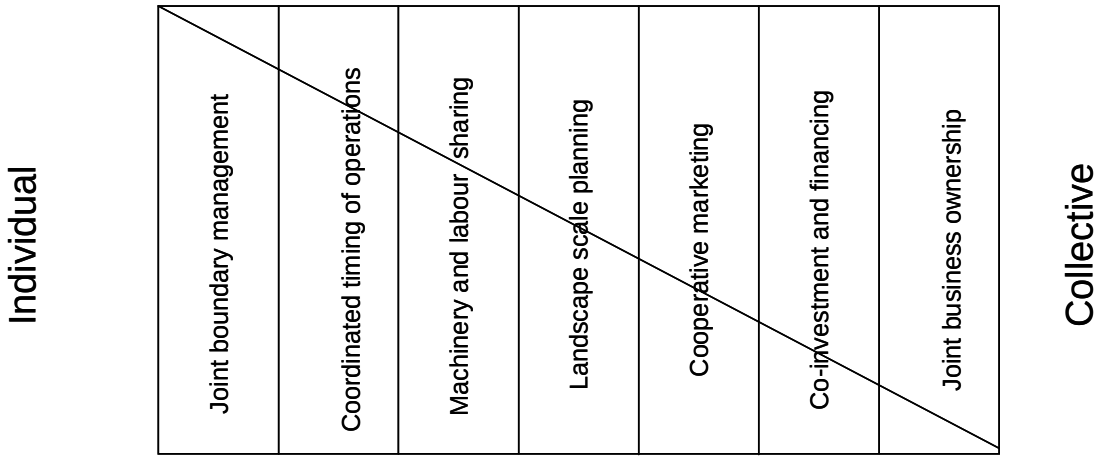

Figure 1. Individual-collective spectrum in farm management

The impetus required to move land managers to a more collaborative approach in environmental management is however very substantial. Collaboration is costly in terms of time, is potentially risky, may take time to develop, can have uncertain objectives, and threaten to constrain flexibility (Franks, 2003). Faced with this prospect, the rewards from collaboration need to be clear, significant and timely. Commercial cooperative ventures struggle with all these factors and their limited penetration in UK agriculture has long been evidence of the difficulty of turning theoretical advantages into reality.

Table 2. Benefits to land managers of Individual and Collective management approaches

Individual Benefits	Collective Benefits
Speed of decision-making	Access to wider expertise
Flexibility in management	More powerful resource base
Personal pride in outcomes	Supportive learning environment
Simplicity in control	Sharing of burdens
Clear lines of responsibility	Potential capacity to specialize
Direct capture of benefits	Realise economies of scale and scope
Enjoyment of autonomy	Stronger voice in negotiation

The driving forces for collaboration in the past have been essentially two-fold – problem-solving, and income generation (see Davies *et al*., 2004) – and these principal motives are unlikely to change quickly. But securing benefits in response to either of these two motives is not inevitable even when the potential benefits of collaboration are clear. Environmental collective initiatives have almost universally in the past relied heavily on the driving force of project officers with time, expertise and access to funding to generate activity. The characteristics evident in generating enduring and productive collaborative action are complex and varied:

- Critical mass to realize collective benefits at appropriate scale.
- Clarity of purpose.

- Rapid and self-evident initial results.
- Outcomes exceed those available through individual effort alone.
- Individual rewards accrue from collective organisation.
- There are opportunities for continuing innovation and development.
- Individuals feel in control of the process.
- Sense of common goals and ownership.
- Appropriate and available training.
- Some secure funding streams to sustain cooperative engagement.
- Voluntary participation due to shared opportunities for gain.
- Strong and inspirational leadership.
- Flexibility in response to new opportunities.
- Continuing positive feedback and information flow to participants.

The extent of collective actions have scale and scope limitations, and not all will meet all these conditions. If collective approaches are to yield more of their potential, significant innovation is needed in mechanisms to deliver on the problems raised by these factors; without such innovation, the potential for moving towards more collaborative environmental initiatives is likely to remain very weak.

CHALLENGES FOR INNOVATION IN SUPPORTING MORE COLLABORATIVE ACTION

It should be noted that not everything worth doing is worth doing collaboratively. What is important is to provide mechanisms to move to the appropriate point on the Individual-Collective spectrum – appropriate defined importantly in relation to the needs of both farmers and agencies, and the circumstances within which they are operating.

Collective approaches need therefore to be constructed from, and responsive to, complex combinations of incentives, regulation and social pressures that can effect these transitions. At present there are many good examples of past collaborative initiatives built on project officers' expertise (Wondolleck and Yaffee, 2000); but to build on this experience in the UK context, developments are needed in several key fields:

(1) in **monitoring systems** that can enable greater clarity in benefits delivery:
- audit systems that send more precise and appropriate signals to managers
- strengthening returns to individual efforts *within* collective ventures

(2) in **understanding the full benefits** of coordinated environmental actions
- provision of evidence on scale and scope benefits from co-implementation
- recognition of the widest possible set of values delivered at the landscape scale

(3) in **leveraging additional rewards** from other sources to reward multi-farm, multi-objective initiatives:
- circumventing the audit controls constraining government expenditure
- tailoring activities to local circumstances and opportunities

(4) in **mechanisms that enable farmers to tap into location-specific environmental expertise**

- stimulating farmer engagement in defining, rather than just delivering, on local priorities
- monitor and demonstration style farms, connected to environmental support groups

(5) in creating **farm-level incentives to increase recruitment** to collective initiatives

- by increasing cooperative rewards linked to larger scale initiatives

(6) in using **collective initiatives as gateways to other desired services**

- specialist training and software (eg in nutrient budgeting) via group membership
- compulsory elements of training in combination with farmer-defined priorities

CONCLUDING COMMENT

Land Management Contracts should provide for a level of integration in agri-environmental policy delivery exceeding past approaches; however delivering coordination across holdings remains exceptionally challenging under prevailing institutional structures. In seeking to re-orientate land managers to greater prioritization of environmental outcomes, Boulding's observation on the power of the hug in particular may be particularly timely. To quote Senator Robert Byrd (speaking in 2003 on a very different topic, the invasion of Iraq):

> 'the real power of America lies not in its will to intimidate, but in its ability to inspire'.

The step from coercion to inspiration is the necessary internalization of values that creates a community of shared interest from a disparate collection of individuals, a point observed two millennia ago by Aristotle (2000). Many, if not most farmers continue to fail to be inspired by the opportunities offered by environmental land management as a core activity, not only because it is a significant change of focus, but because it fails to offer dynamic opportunities for continuing positive innovation, rewards structured to monitorable outputs, flexibility in delivery, and accessible benchmarks for these processes. Group structures are not a panacea for addressing these concerns, but they do offer a channel through which innovative responses to these challenges might be more effectively nurtured.

Table 1. A typology of agri-environmental policy instruments

	Emphasis on use in UK*
Economic	
Transferable property resource rights	-
Land covenants and trusts	+
Negotiated conservation management agreements	+++
Competitive public goods contracts	+++
Posted performance bonds	-
Crop insurance services	+
Hypothecated tax instruments	-
Tax relief and exemptions	+
Input substitution subsidies	-
Equipment upgrade grants	+
Output tariffs	-
Graduated user fees and charges	-
Regulatory	
Offset arrangements/planning concessions	-
Leasing and licensing schemes	+
Producer accreditation schemes	++
Zoning and development controls	++
Statutory procedural regulations	+++
Output/input controls and quotas	++
Persuasive	
Electronic and print media information services	++
Advisory and extension services	++
Process and product research and development	+
Education and training entitlements	-
Prizes and Award Schemes	+
Voluntary Audits and Monitoring	++
Monitor and demonstration farms	+
Producer clubs	-
Discussion forums	+
'Naming and shaming' initiatives	-
Green Benchmarking	+
Mixed	
Product certification schemes/green marketing	++
Industry sponsored producer clubs	+
Cross compliance conditions	+++
Local food initiatives	+
Regional development/diversification initiatives	+
Environmental clubs and cooperatives	-

[* – very little or not used; + low emphasis; ++ medium emphasis; +++ high emphasis]

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