

Burton, Rob J., Mansfield, Lois ORCID: <https://orcid.org/0000-0002-0707-2467> , Schwarz, Gerald, Brown, Katrina M. and Convery, Ian ORCID: <https://orcid.org/0000-0003-2527-5660> (2006) Social capital in hill farming: report for the International Centre for the Uplands, Penrith, Cumbria. International Centre for the Uplands, Penrith, UK.

Downloaded from: <http://insight.cumbria.ac.uk/id/eprint/1212/>

Usage of any items from the University of Cumbria's institutional repository 'Insight' must conform to the following fair usage guidelines.

Any item and its associated metadata held in the University of Cumbria's institutional repository Insight (unless stated otherwise on the metadata record) may be copied, displayed or performed, and stored in line with the JISC fair dealing guidelines (available [here](#)) for educational and not-for-profit activities

provided that

- the authors, title and full bibliographic details of the item are cited clearly when any part of the work is referred to verbally or in the written form
 - a hyperlink/URL to the original Insight record of that item is included in any citations of the work
- the content is not changed in any way
- all files required for usage of the item are kept together with the main item file.

You may not

- sell any part of an item
- refer to any part of an item without citation
- amend any item or contextualise it in a way that will impugn the creator's reputation
- remove or alter the copyright statement on an item.

The full policy can be found [here](#).

Alternatively contact the University of Cumbria Repository Editor by emailing insight@cumbria.ac.uk.

Social Capital in Hill Farming

Report for the Upland Centre

Authors: Burton, R.*, Mansfield, L.^a, Schwarz, G.*, Brown, K.* and Convery, I. ^a

* Macaulay Institute, Aberdeen

^a University of Central Lancashire

A note from the authors

The following work is based on a survey of upland farmers in Cumbria in 2004/2005. This involved interviews with 44 local farm families – 8 of which were repeated at a later date to discuss issues that arose from the public survey. The majority of interviews included spouses/business partners and some potential successors. To place the issues in a social context, focus groups were held, some involving only members of the farming community and others incorporating other stakeholders from the area. The study was spread across all three main areas of Cumbria – the Lake District, Howgills and Orton Fells, and the Pennines.

While we cannot claim statistical representativeness, we have obtained opinions from a broad cross section of the farming community. The conclusions themselves have been made in consultation with all four members of the research team involved in field work. All are highly qualified, experienced in fieldwork, and specialists in understanding upland/marginal farming systems – two specifically on hill farming in Cumbria. The conclusions, therefore, are based not only on the interviews here, but also our collective understandings of marginal farming and we are confident that this is an accurate picture of agricultural social capital and public goods provision in Cumbria. The policy section was written by a member of the team who specialises in public policy analysis and, again, has focused on upland farming environments. We emphasise that the opinions presented in this report are our personal views and do not necessarily represent those of the Macaulay Institute, the University of Central Lancashire or SAC Edinburgh.

We would like to express our gratitude to all members of the Cumbrian farming community who gave up their time to participate in this study. Thanks to Dr Robin Pakeman for advice on bracken issues and the ecology of upland farming. Also, thanks to Kit Nicholson and Ian Soane of the International Centre for the Uplands for their helpful comments on an earlier draft of the report.

Dr Rob Burton

Dr Lois Mansfield

Dr Gerald Schwarz

Dr Katrina Brown

Dr Ian Convery

Index

	Page
Chapter 1: Introduction	1
1.1 Introduction	1
1.2 Aims and objectives	4
1.3 The DEFRA report on hill farming	8
1.4 Conclusion - outline of report	10
Chapter 2: Context and Methodology	12
2.1 The study area	12
2.1.1 The character of farming in Cumbria	12
2.1.1.1 <i>The Pennines</i>	15
2.1.1.2 <i>Orton-Howgill Fell complex</i>	16
2.1.1.3 <i>The Lake District</i>	17
2.1.2 Foot and Mouth – a significant event	18
2.1.3 Common land	20
2.2 Methodology	21
2.2.1 Family interviews	21
2.2.2 Semi-structured individual farmer interviews	24
2.2.3 Focus groups	26
2.2.4 Policy analysis	27
2.3 What is ‘traditional farming’?	28
2.3.1 Maintaining a balance between farming and the environment	31
2.3.2 Maintaining traditional communities	31
2.3.3 Maintaining traditional livestock systems	32
2.3.4 Maintaining traditional social practices	33
2.4 Conclusion	34
Chapter 3: Social Capital and Co-operation in Upland Farming	35
4.1 Introduction	35
4.1.1 Co-operative behaviour in Cumbria	36
4.2 Outlining co-operative action and social capital	37
4.2.1 The production of local foods	38
4.2.2 The bed and breakfast trade	39
4.2.3 Farmers’ participation in local village life	41
4.2.4 Hay making/silage making	42
4.2.5 Shearing	43
4.2.6 Fell gathering	43
4.2.7 Neighbouring	47
4.3 Social networks beyond the farm gate	48
4.3.1 Farm based activities	49
4.3.2 Family interests	51
4.3.3 The wider community	52
4.4 Conclusion	53

Chapter 4: Public goods provision by farmers	55
4.1 Introduction	55
4.2 Priority in public goods provision – a comparison with public perceptions	57
4.2.1 Environmental public goods	58
4.2.1.1 <i>Plants and wildlife</i>	58
4.2.1.2 <i>Peace and tranquillity</i>	62
4.2.1.3 <i>Landscape</i>	62
4.2.1.4 <i>Stone walls and tidy farms</i>	64
4.2.2 Interaction with the public	66
4.2.2.1 <i>Farmers as landscape historians, interpreters and educators</i>	66
4.2.2.2 <i>Farmers as part of the cultural landscape</i>	69
4.2.2.3 <i>Accommodation providers</i>	70
4.2.2.4 <i>Tourism providers</i>	72
4.3 Farmers and the public	73
4.3.1 Farmers' perception of the demand for public goods	73
4.3.2 Having the public on the land	74
4.4 Conclusion	75
Chapter 5: Upland farming in Cumbria: developing a conceptual model of change	
5.1 Introduction	78
5.2 Current issues in social capital/public goods provision	78
5.2.1 House prices and the division of houses, buildings and land	78
5.2.2 The impact of the loss of small farms on gathering	82
5.2.3 Gathering and land management	85
5.2.4 The effect of succession on public goods provision	94
5.3 Conclusion – a conceptual model of change	100
Chapter 6: A policy for the uplands?	104
6.1 Introduction	104
6.2 The ERDP 2000-2006	105
6.3 The ERDP, social capital and public goods provision through farming in Cumbria	108
6.4 Conclusion	118
Chapter 7: Summary and conclusion	120
References:	132

Figures

Figure 1: The relationship between social and human capital and public goods provision	7
Figure 2: Location map of upland areas in Cumbria	13

Figure 3: Agricultural land use trends in Cumbria 1974 to 2003	14
Figure 4: Schematic diagram of themes emerging from the focus group interviews	28
Figure 5: Structure of a traditional upland farm	30
Figure 6: Upland farm in the Lake District	30
Figure 7: Social capital generation and decline through co-operative activities in upland agriculture	38
Figure 8: The Rough Fell Breeders Association – DVD cover	50
Figure 9: Number of children per family in each area	51
Figure 10: Age profile of farmers in each area	52
Figure 11: A comparison of farmers' perception of the benefits of upland farming with that of the public in Cumbria and Manchester	57
Figure 12: Scenarios of social capital change within fell grazing	84
Figure 13: Influence of land tenure on succession chances	95
Figure 13: Flow diagram of current influences on direct and indirect public goods provision in the uplands	102
Figure 14: Total ERDP expenditure 2000-2006	107
Figure 15: The relationship between social and human capital and public goods provision – the case of upland farming in Cumbria.	128

Chapter 1: Introduction

“Paying farmers to produce environmental goods that taxpayers want, rather than surplus food, seems self-evidently better use of public money. However, it ignores farmers’ psychology. Like anyone else, *they need a sense of purpose and motivation*. Most farmers love the land and enjoy caring for it, but they want to make their primary living from produce.” (Warren, 2002:106 – emphasis added)

1.1 Introduction

The development of farming in the UK has been well documented. From a position immediately post-WWII where political emphasis was placed on the goals of securing food supply and supporting rural communities, to the arguably excessive power given to the farming lobby in negotiating subsidy levels in the 1960s, and the benefits provided by joining the Common Agricultural Policy in 1972, agricultural development proceeded largely on the basis of an extremely generous system of production oriented subsidies. As a consequence, farming grew to follow a ‘productivist’ model whereby emphasis was placed on maximising food production through the application of intensive production approaches and increasing biochemical application (Wilson 2001). Financial rewards for farmers were thus obtained through increased agricultural production. However, beginning with the emergence of environmentalism as a political force in the late 1970s, the problems with oversupply and budgetary issues in the 1980s, and health issues that emerged in the 1990s and 2000s (e.g. BSE, foot and mouth, e-coli), problems associated with intensive agriculture have forced successive governments and government agencies to rethink the role of agriculture in British and European society.

While there are many parts to the changing role of agriculture, in essence, whether one terms it as ‘post-productivism’ or ‘multi-functionality’, what it is about is the change from a production oriented countryside to a production oriented countryside and, along with it, a move for farmers away from a specialised producer tied in with distant markets to a small local businessman or environmental manager (Marsden,

1999). In particular, in their role as an environmental manager, increased emphasis has been placed on the provision of public goods which may be defined as:

“A public good is a resource from which all may benefit, regardless of whether they have helped provide the good – I can enjoy public television whether or not I contribute any money, and I can enjoy the parks in my city even if I do not pay municipal taxes ... Public goods are also distinguished by the fact that they are non-rival in that one person’s use of the good does not diminish its availability to another person.” (Kollock, 1998: 188–189).

Public goods provision is an important plank of British agricultural policy – to a greater extent than other European countries such as France where a more rural population leaves the Rural Development Regulation (RDR) more focused on maintaining rural communities. Lowe et al. (2002: 15-16) observe in this context that

“The social justification both of modulation and of the various measures under Article 33 of the RDR is not so much agricultural survival as *the provision of broader environmental public goods for a society* that places particular value upon them. Similarly, farming’s long-term role is that of developing and responding to particular market opportunities resulting from shifting social demands on the countryside (quality food, regional food chains, farm tourism and countryside management).”

Policy designed to facilitate the provision of public goods in the UK is not a new phenomena. Initially, in the late 1980s, schemes such as the Community Forest Scheme (Countryside Commission, 1990) were initiated for the dual purpose of reducing agricultural surpluses and, at the same time, providing leisure facilities for an increasingly mobile urban population (Burton, 2004). These early measures however tended to be on a voluntary basis as a result of a strong belief in the rights of the individual landholders under the Thatcherite doctrine of the time (Potter & Adams, 1989) in combination with a long tradition of subsidising agriculture to produce agricultural goods where ‘public goods’ were seen largely as externalities. Through the 1990s however, the EU became increasingly concerned with justifying to the public the provision of subsidies to the farming community and, at the same time, viewed the provision of public goods as a means of justifying continued support for agriculture both to their own populous and, importantly, to the negotiators of the

GATT trade agreement (Marsden, 1999; Grant, 2003). As a consequence EU policy moved for increased recognition of the role of agriculture as a provider of public goods (through a new 'multifunctional' role for agriculture) and the importance of protecting the environment (Council of the European Union, 2000).

Along with this new emphasis on environmental protection has come a subtle change in our very definition of public goods. In addition to environmental benefits associated with the term today, Brunstad et al. (1995) argued that public goods in agriculture included food security, the preservation of agricultural landscapes (including wildlife and biological diversity), and the prevention of depopulation in remote areas. This clearly places more emphasis on food production as a public good as well as the preservation of rural communities as a public good in itself – in other words, public goods were associated with agricultural production as much as with environmental protection – a perspective that is uncommon today.

To fulfil the new environmental role for agriculture there has been a shift in emphasis towards agri-environmental policies as a means of both providing subsidies to a farming population still largely reliant on the government and, at the same time, maintaining and enhancing valuable environments and landscapes. The implementation of government schemes such as the Environmentally Sensitive Area (ESA) scheme or, more recently, the Countryside Stewardship Scheme (CSS) has seen a sharp rise in payments for public goods provision. In particular, schemes such as the ESA which have been shown to have very little impact on farmers' management regimes and yet can provide a substantial income (as well as access to funding for farm improvements) have been popular across the UK (Whitby et al., 1996; Wilson, 1997). Whilst it has been largely a success in terms of supporting rural communities, agri-environmental policy is not unproblematic in terms of its ability to provide public goods. Hodge (2001) outlines three issues concerning the generation of public goods in agriculture.

- 1) Demand is diffuse but unevenly spread across the population.
- 2) Supply is non-point and there are inherent difficulties in measuring and monitoring outputs.

- 3) Supply is also often unpredictable, depending on ‘natural’ conditions and difficult to manage.

Thus it is evident from Hodge’s analysis that we are at a very early stage of development in terms of understanding the public goods supply from agriculture, as we still have only a limited understanding of how to produce the public goods (i.e. how best to manage farmland to provide the environmental benefits), how to monitor public goods where it can be determined that there are goods being generated¹, and equally importantly, which members of the public we are producing goods for and how they should be distributed. Potter (1996: 173) described the use of agri-environmental schemes as “one of the largest scale *experiments* in the use of quasi-market incentives to influence and reward behaviour and encourage innovation in the production of public goods.”

In terms of providing public goods through policy, the role of facilitator has been left to the Rural Development Regulation (RDR) whereby, given that there will be no additional resources from Brussels, money must be removed from current production-related payments and redirected to the achievement of social and environmental objectives (Falconer & Ward, 2000).

1.2 Aims and objectives

One thing certain about the provision of public goods in the countryside is that they are not provided by policy, they are provided by people. What the public has come to understand as a landscape worth valuing, such as the windswept images of the Scottish Highlands or the leafy hedges of the South Coast of England, are not simply historical relics, but are part of our cultural understanding of ‘valuable countryside’ and therefore are also the driving forces behind contemporary policies on public goods provision. These are the landscapes that attract the tourists of today. It is vital to remember, however, that these landscapes emerged as a result of an interaction

¹ Part of the problem in terms of the provision is in the problem of monitoring as, as Meinzen-Dick et al. (in press) observe, the provision of public goods is a matter of quality as well as quantity.

between people and the environment. This leads us to the first important aim of the study.

Aim 1:

To investigate the extent to which the landscape (and thereby public goods supply) is dependent on the traditional farming practices that have shaped it in the past.

If the landscape is dependent on traditional farming communities another important issue emerges. It has been observed recently that, as many human resource and environmental issues are in fact essentially social issues, a key to developing sustainable communities (in developed as well as developing societies) is the maintenance of social capital (Roseland, 2000; Pretty & Ward, 2001).

The term social capital has many different meanings. However, social capital in its strictest sense comprises “Those characteristics of social structure or social relations that facilitate collaborative action and, as a result, enhance economic performance” (Johnston et al., 2000: P746) or “those features of social organisation, such as trust, norms and networks, that can improve the efficiency of society by facilitating co-ordinated actions” (Putnam, 1993). This focuses essentially on the trust, common rules, and connectedness between people that gives them the confidence to invest in collective activities. Pretty & Ward (2001) make the observation that there is a strong connection between effective environmental management and social capital, not only in instances where people are managing common resources such as grazing lands or fisheries, but also in any situation where the management of an individual resource is facilitated by group co-operation. Upland farming in the UK frequently involves groups of farmers sharing common grazings in a system of communal land management that has existed for centuries. The traditional management of these communal lands that has resulted in the generation of the landscape has thus been supported, at least in the past by strong systems of social capital.

In addition to aspects of social capital, traditional farming practices are also sustained by systems of human capital. Human capital comprises the *knowledge, skills,*

tradition, practices and motivation that are the cultural products that farmers (in this case) use to guide their everyday activities - it is, “the inherent characteristics of people that make them productive” (Throsby, 2003). Human capital plays an essential role in the creation of both economic and social capital (Bubolz, 2001) and is therefore again an extremely important part of the economic success of a region. Like social capital human capital is not fixed but varies. In particular, as Kristensen & Thenail (2004) observe, human capital is reduced as farmers become older and disengage from agriculture or work off the farm and therefore again disengage from farming communities. Thus changes in the demographic profile of farming communities or changing the farming role towards a more multi-functional approach to agriculture involving diversification can have consequences for the overall level of human capital, which in turn can influence the levels of social capital and the systems of environmental management.

Many studies relating to social capital have tried to find indicator variables for social capital such as socio-economic background, civic engagement, participation rates in voluntary groups or survey questions about generic levels of trust (e.g. Putnam, 1993; Anderson & Miller, 2003; Roche, 2004). What we are more interested in, however, is the relationship between social capital and co-operative behaviours between farmers and other farmers (horizontal links) and farmers and other groups (vertical links). In particular, the study will focus on the value of social capital in maintaining traditional forms of co-operative land management and thereby enhancing public goods provision. The basic conceptual model of the relationship between these components is shown in Figure 1.

While the obvious form of co-operative management is management of common lands, the research also focuses on locating other areas where the collective work of the farming community adds value to that that could be achieved were the community members working individually. Further, it seeks to develop a greater understanding of the influence of social capital on co-operative behaviour and, similarly, the links between co-operative behaviour and public goods provision.

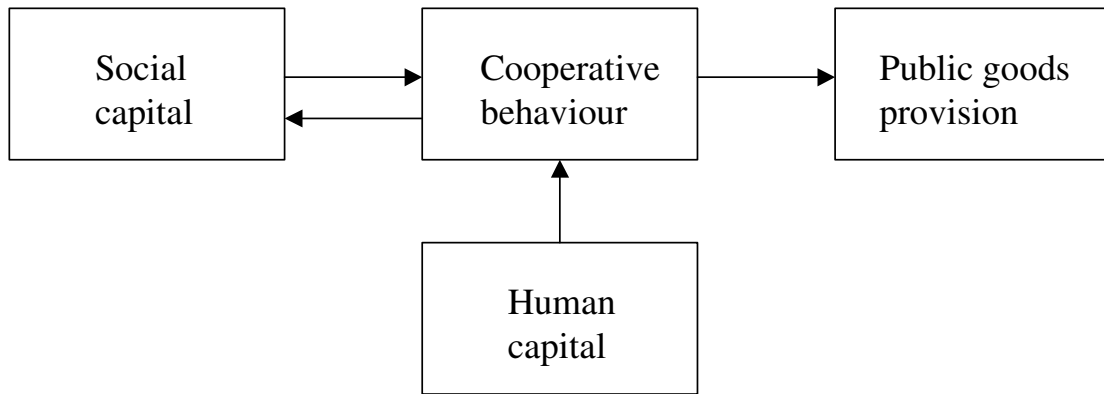


Figure 1: The relationship between social and human capital and public goods provision.

It may be hypothesised, therefore, that it is due to the social and human capital currently accumulated within upland farming systems that the landscapes of today exist and, therefore, for them to continue to exist and deliver the landscapes people enjoy it is vital to investigate the importance of maintaining traditional farm families on the land. Consequently, the second aim of this study is:

Aim 2:

To investigate the importance of maintaining social capital to maintaining traditional farming practices and landscapes.

A final objective of the study is to develop an understanding of the connections between economic, social and environmental components of upland farming communities and, importantly, how changes to one part of the system (in particular the loss of social and human capital through the loss of smaller traditional farmers from the region) are likely to influence other parts of the system². In other words we wish:

Aim 3:

² From the category of ‘smaller farmers’ we specifically exclude the kind of lifestyle farmers (i.e. farmers with a house and a few hectares of land) that Marsden et al. (2002) observe are increasing in number throughout the country. Rather we are referring to smaller farmers who can manage the farm on a traditional basis (see Chapter 2 for a definition of ‘traditional’).

To develop a holistic conceptual model of the relationship between social capital and the environmental management of the upland regions.

Of particular concern here is understanding weaknesses in the system that could, through, policy measures in the upcoming revisions to the RDP strengthen the system to maintain human and social capital as well as the traditional means of managing the landscape. This is particularly important because some of the areas concerned, such as the Lake District, are currently undergoing somewhat of a social transformation as a result of in-migrants – whether tourists, retired people, or those coming to set up a business in the region (IEEP, 2004 a&b). The impact on social structures as well as the economy of the region (largely through greatly inflated house prices) can have a considerable impact on the sustainability of the local rural community and can, therefore, influence the level of human and social capital retained. While we can hypothesise, we need to know what impact this has on the delivery of public goods by farmers. In particular, given the *experimental* nature of our understanding of public goods provision (Potter, 1996), it is essential to be sure that social changes in the traditional farming communities will not have serious repercussions for both the environment and the tourist industry that relies on it.

1.3 The DEFRA report on hill farming

In 2004 a report commissioned by the Rural and Resource Economics Division, DEFRA to provide “An assessment of the impacts of hill farming in England on the economic, environmental and social sustainability of the uplands and more widely” was published (IEEP, 2004 a,b & c). This report provided a very broad analysis of the relationship between social, economic and environmental factors in upland areas in the UK under the remit to “...identify, explain and, as far as possible, quantify the impacts of hill farming in England on the economic, social and environmental sustainability of the uplands and more widely.” (IEEP, 2004a, 7). As this study provides a comprehensive summary of aspects of hill farming in the UK such as production types, farm labour profiles, and land use, we do not propose to repeat it here but simply refer the reader for a more general picture of hill farming to this report.

The general findings of the report as laid out in the executive summary point to a number of key conclusions, in particular (IEEP, 2004d).

- It is difficult to justify high levels of public expenditure on the basis of the number of jobs sustained by agriculture alone
- The sustainability of many parts of the Less Favoured Areas (LFA) within the hill farming areas is dependent on the continuation of tourism activities.
- Hill farming has both positive and negative impacts on the environment through standard agricultural practices and activities such as grouse moor management
- There is little risk of land abandonment as demand for hill land remains strong in most areas.
- Hill farming is strongly associated with the cultural identity of upland areas and provides an element of continuity and sustainability to the local communities.
- The sustainability of the uplands will rely on the support of the public to help hill farming adapt and evolve towards a more market led orientation.

While this provides a good general summary of upland farming across England, it is of limited use in terms of understanding how to develop policy to provide public goods in upland regions. The main problems are as follows. First, the remit of the report to investigate economic, social and environmental sustainability and its relationship to upland farming across the whole of England means that many of the issues dealt with have been dealt with on a fairly superficial level. Critically, the report does not attempt to synthesise the data into a conceptual framework to enable the identification of areas where policy could be effectively targeted to achieve specified outcomes. Second, while it reviews many of the issues relating to public goods provision such as landscape and community cohesion, the report does not deal specifically with the issue of public goods provision by farmers. This is vital as, while the report acknowledges that the support of the public is essential to help farmers to adapt, it does not investigate specifically the reciprocity of the arrangement nor where policy support might provide the desired public goods.

1.4 Conclusion – outline of the report

This study aims to address the issues by using a combination of intensive interviews with farmers from across the Cumbria region and (generally peer reviewed) literature to establish whether there is a case for developing Rural Development Program measures specifically targeted at upland communities in order to ensure public goods provision in the future. The basic structure of the report is as follows.

Chapter 1: *Introduction*. Chapter 1 comprises an introduction to the issue and the aims of the project.

Chapter 2: *Context and Methodology*. Chapter 2 sets the environmental and social context for the study and outlines the multi-method approach used in the study as well as defining ‘traditional farming’.

Chapter 3: *Social capital and co-operation in upland farming*. This chapter looks at the importance of co-operative behaviour and social capital in upland farming. It identifies the areas in which social capital has been changing and, using the information gained in the farmer surveys, outlines how important co-operative activities are within the farming community.

Chapter 4: *Public goods provision by farmers*. Chapter 4 again employs the results from the fieldwork, this time to detail how farmers contribute to the provision of public goods in the region. The chapter further seeks to explore discrepancies between how the public evaluates public goods provision by upland farmers (see Report 1) with how the farmers themselves assess it.

Chapter 5: *Upland farming in Cumbria: developing a conceptual model of change*. In Chapter 5 we draw together results from the farmer survey with the literature to develop a conceptual model to explain the relationship between the current changes in the farming industry and their potential impact on the provision of public goods. The chapter identifies a number of areas in which public goods provision is likely to be influenced.

Chapter 6: *Policy for the uplands: options for future development.* Chapter 6 draws on the conceptual model to identify potential problems in public goods provision in the region and identify potential policy options to enable the sustainable provision of public goods.

Chapter 7: *Conclusion: a future for upland farming?* Finally, we draw together main points from the previous chapters to speculate on the possible future development of farming and public goods provision in the region.

Chapter 2: Context and Methodology

This chapter is divided into 3 parts. The first provides an introduction to the study area in Cumbria including both the geography of the region and, because of its impact on the region, a brief recounting of the 2000/2001 foot and mouth epidemic. The second part outlines the methodology followed in the study. Finally, because of the importance of traditional farming to the argument, we look briefly at what traditional upland farming actually is – both from the perspective of the current farmers and through the literature.

2.1 The study area

While this study aims to draw conclusions relevant to hill farming across the UK it is focussed specifically on Cumbria. Cumbria can be divided into 3 distinct upland massifs, the Pennines, the Orton-Howgills complex and the Lake District (see figure 2).

The character of each of these areas varies in terms of the geographical, economic, land ownership and historical positioning of the uplands and, consequently, hill farming and farm management systems vary between the areas. This section of the report provides some background information on the character of farming in Cumbria as a whole and the three upland massifs individually to illustrate the variation in farming practice.

2.1.1 *The Character of Farming in Cumbria*

Agriculture in Cumbria is recognised the main driving force responsible for shaping the landscape and vegetation patterns of the county (Cumbria County Council, 1997; LDNPA, 2004). As the main Environmental Audit for the county notes:

‘Historical continuity of farming has brought about the contrast between improved valley fields, enclosed fellside

and unenclosed fell tops, as well as the traditional built features and the rural communities central to Cumbrian culture.' (Cumbria County Council, 1997: 91).

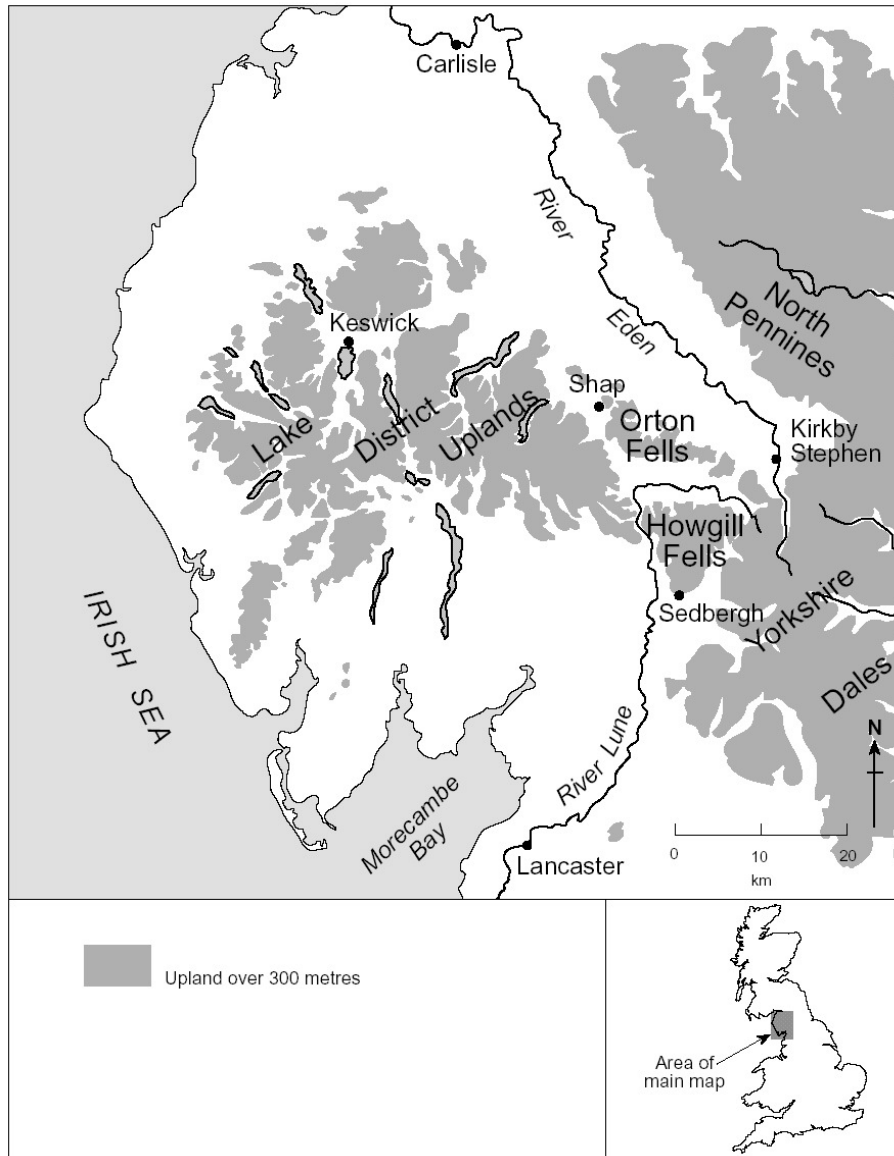


Figure 2: Location map of upland areas in Cumbria

Over 60% of the agricultural land in Cumbria is Grade 4 and 5 compared to the English average of 21% (MAFF, 1994). Typically the farming is dominated by sheep, beef and dairy production. Within the upland areas themselves extensive sheep production – integrated to a lesser extent with management of suckler herds or beef

cattle – forms the basis of production, and it is on these types of farms that this social capital project focuses. The reason for maintaining extensive sheep production is the harsh environmental conditions experienced on the fells. This leads also to the dominance in upland areas of hardy local sheep varieties – in particular, Herdwicks, Swaledales and Kendal Roughs which also have different distribution patterns around the three upland areas. The harsh farming conditions are recognised by European agricultural policy through the Less Favoured Areas Directive (75/268) with much of the uplands involved in this study also falling into the designation of Severely Disadvantaged Areas.

Figure 3 (Sources: Cumbria County Council, 1997; DEFRA, 2004) shows that permanent grassland is the dominant agricultural land type in the area and that it has been increasing in area between 1975 and 2003. This is possibly as a result of agricultural improvement of rough grazing areas which have declined considerably over the same period – although this may in part also be due to a steady increase in the area of woodland since 1974. Over the last decade the area in permanent grassland has begun to decline and cropping areas increased, reversing previous trends. To some extent, the figures have been distorted by the recent Foot and Mouth outbreak which has encouraged farmers to diversify away from livestock production.

	1975	1984	1994	2003	%change 1975 to 2003
Grassland <5yrs	49423	47076	44137	39373	-8.0
Grassland >5ys	226398	237672	253360	257713	+13.8
Rough grazing	149253	136678	127727	118893	-20.3
Sub total (%)	91	92	92	91	
Crops & fallow	34788	30487	24145	28022	-19.3
Farm Woodland	3526	5719	8481	9074	+157.3
Other land	1984	2807	3549	3151	+32.0
Set Aside	0	0	1784	2916	incalculable
Sub total (%)	9	8	9	9	
Total Agr Area (ha)	465372	460438	463183	459142	-1.3

Figure 3: Agricultural Land Use Trends in Cumbria 1974 to 2003

Related to the changes in agricultural land use is the decline in the numbers of livestock resident in the county at time of Census. Between 1975 and 2003 there has

been a decrease of 7.5% in the sheep and lamb population and a 48.0% decline in cattle and calves (Cumbria County Council, 1997; DEFRA, 2004). The rapid decline in cattle is due to agricultural policy favouring sheep production over cattle, a trend supported by evidence from the farmer survey as many of the farmers interviewed originally had larger herds of suckler cows than they do now. This decline has led to more complicated farm management systems and, according to farmer reports, the spread of less desirable plant species such as bracken that are more effectively controlled by cattle than sheep.

The landscape of Cumbria is recognised as valuable public resource through a range of national and EU designations. Around one third of the county is occupied by the Lake District National Park (from which our Lake District farmer sample was drawn) and the far south east corner forms the northern edges of the Yorkshire Dales National Park (forming part of our Orton – Howgills sample). Two AONBS exist, one of which is the upland North Pennines AONB running along the eastern edge of the county and includes some farms from our Pennine sample (the rest of the sample were drawn from land outside the AONB). The county also has two Environmentally Sensitive Areas. The entire Lake District is within an ESA – covering almost the same geographical area of the Lake District National Park – and some of the northern and western most extremities of the Pennine Dales ESA.

The high value scenery and habitats of the county have provided the opportunity for many farmers to diversify through the recreation and tourism related enterprises and through the adoption of agri-environment initiatives in addition to the standard ESA payments, for example, the Sheep Wildlife Enhancement Scheme, Countryside Stewardship Scheme and Farm Woodland Premium Scheme. The nature of the various upland areas in Cumbria is as follows.

2.1.1.1 The Pennines

The Pennine massif runs along the eastern side of the county of Cumbria, forming part of a much longer chain running over 400 km along the north-south axis of central England into Scotland (see Figure 2). Within Cumbria the geology varies greatly and thus the Pennine landscapes traversed differ substantially from south to north in the

county. This variation is characterised by the Joint Countryside Character Map published by English Nature and the Countryside Commission in 1996 (English Nature, 1998). The fundamental geological variation represented by the Upper and Lower Carboniferous provides softer limestone terrain in the south and middle part of the county running northwards into a more wild landscape of the North Pennines AONB.

This great variation in landscape has made it difficult to make generalisations about the hill farming in this massif as farming systems have adapted to variable landscapes. In the southern part of the area the farms have small quantities of inbye leading straight out onto steep open fells, such as Mallerstang Edge. Moving northwards, the farms spread out onto wider valley bottoms on either side of the Cross Fell ridge. These farms have larger inbye areas with more options to grow fodder crops and then running up onto expansive fells. Data collated in this project demonstrates this through the greater level of walled fells in the Pennines in contrast to open hefted fells in the Howgills and Lake District areas.

2.1.1.2 Orton – Howgill Fell Complex

This area is, in fact, two distinct sub-massifs dissected from each other by Ravenstonedale, along which the A685 runs to join the A66 to the M6 at the Lune Gap. The Orton and Howgill sub-massifs are distinct from each other, identified as separate Character Areas. The Orton sub-massif is a distinctive block of limestone upland comprising limestone scars and pavements. The fells here are divided into three distinct landscapes: a fringe of rolling farmland, a core of limestone areas of open moorland (English Nature, 1995). The area has a long history of human habitation with evidence of Bronze Age settlement. The open fell areas are considered important in terms of their vegetation because they support some of the last extensive tracts of ‘lowland’ heath in the county. A number of farmers who have grazing rights on Crosby Ravensworth fell formed part of the farm survey for this area and joined focus groups.

In contrast the Howgill Fells are topographically separated from other upland massifs in Cumbria. They are formed from a combination of Silurian siltstones and sandstones

which have been heavily glaciated. The effect has been to produce a landscape of extreme slopes and altitudinal variation over extremely short distances. Most farms have small amounts of inbye and access to large expanses of open fell. In the past the Howgills have been severely overgrazed but current management regimes (as prescribed largely through agri-environmental schemes) have led to an absence of over-wintering on the fells by which has released grazing pressure to some extent. The area is off the main tourist route and consequently the choice of diversification options is limited. A number of farms surveyed in the area diversified through adding value to farm produce and undertaking direct marketing schemes in order to increase farm incomes.

2.1.1.3 The Lake District

The third area forming this study lies in the central area of Cumbria and comprises some of the highest uplands in England. That the area is extremely geologically diverse is reflected in the vernacular architecture of each 'dale'. This dale landscape is made up of a 'spoke and wheel' arrangement derived from a radial drainage pattern centred on the Scafell range which was glaciated around 14000 bp. The effect is a series of dales each with its own cultural character developed through continuous farming practices since the arrival of people 5000 years ago. The classic hill and upland farming systems exist here whereby sheep are gathered from the fells at different times of year and then driven down to the farm at the valley bottom and installed on the inbye and intake land, only to be returned to the open fells a few weeks later.

The Lake District was designated a national Park in 1951 primarily because of the natural beauty of the area but also as the result of a long campaign by 'influential individuals' seeking its designation (Sandbach, 1978: 500). Eckton (2003: 308) summarises that the Lake District National Park:

“totals 2292 km², consisting of predominantly a glaciated mountain and valley landscape, incorporating England's highest peak Scafell Pike at 978 m above sea level and 16 freshwater lakes amongst them Windermere, Coniston Water and Ullswater. The UK National Park designation was conferred on the area in 1951 utilising The National

Parks and Access to the Countryside (1949) Act. The purpose of the legislation was to facilitate the preservation and enhancement of the area's natural beauty and to offer opportunity for public open-air recreation and enjoyment of the scenery within the designated areas (Lake District National Park Authority, 1994)."

The establishment of a National Park has contributed to the Lake District becoming a focal point for tourism in the county, arguably at the expense of the other two upland regions. In terms of upland farming this is a double-edged sword. On one hand, it creates a range of diversification opportunities for farms with minimal gross margins, but at the same time the requirement of preserving natural beauty and providing for tourism and recreation places a range of constraints and management problems on farmers. In the past, there has been a long history of disputes of the appropriateness of different tourist activities (Bell, 2000).

2.1.2 *Foot and mouth – a significant event*

Within Cumbria 77% of farm holdings are livestock farms accounting for 82% of the value of farm outputs, but as many other farms have small livestock enterprises, cattle sheep and dairy farming account for 90% of agricultural land uses. Franks et al. (2003) observe in the context of the foot and mouth outbreak that this high dependency on livestock has left farming in Cumbria particularly vulnerable to changes in support payments and agricultural reform. Between the period of 1995 and 1999 incomes in £ per hectare were declining while fixed and variable costs remained the same. Following 1999 the foot and mouth outbreak in the area meant that many farm incomes collapsed completely and without government compensation it is likely that many of the farm business in the area would have collapsed similarly. As farm incomes have fallen, at the same time (with the exception of the foot and mouth year) tourism has taken over from farming as the principal business sector, with an estimated value of between £536 and £620 million in 1998 compared to agriculture's £383 million in 1998/1999 (Franks et al., 2003).

The 2001 foot and mouth outbreak damaged livestock farming as well as other (non-farming) rural businesses (Franks et al., 2003; CRE, 2001). This was particularly so in the more remote, upland parts of the county characterised by the lower income, small

hill farming sector, strongly linked with tourism in areas of outstanding beauty (Bennett et al., 2002). Indeed the synergy between farming and tourism, for example farm accommodation and catering, compounded the problem.

The virtual closure of the countryside for almost a year meant anxiety and hardship for those involved in tourism (including farms offering accommodation) whilst village shops and pubs upon which rural communities rely all year round and which are themselves reliant on seasonal trade for their survival, also suffered (Cumbria Foot and Mouth Disease Inquiry, 2002). This had in part led to a loss of self-esteem, an increasing sense of isolation among livestock farmers and called into question ‘a whole way of life’ and social identity. The impacts of FMD continue to resonate through the hill farming community. Aside from emotional impacts, many farmers are still trying to come to terms with changes in legislation and licensing which have fundamentally altered their working lives (Convery et al., 2005).

Much has been written about the traditions of hefting during the FMD epidemic (e.g., Cumbria Foot and Mouth Disease Inquiry, 2002). It is customary for livestock to be replaced on a rolling programme, thus the older members of the flock/herd know the geography of the farm and will know where to drink, where to eat, where the shelters are and which gate a dog wants them to go to when it sets off round the field. The mass culls of 2001 signified also a loss of knowledge of complete herds and flocks of livestock. There was a clear sense that for many focus group respondents, things have not got ‘back to normal’ after FMD. For example, one farmer noted that:

“We have problems with sheep from 8 miles away, from Middleton. This year there were 1500 strays when there should have only been 350 sheep on the fell. The shooting sends the sheep over, the sheep have lost their hefting instinct (post-FMD), if they’re disturbed then they don’t know where they ought to be.”

Another farmer remarked that:

“They don’t feel like my sheep, it’s like looking after someone else’s kids... you know your own sheep...my heart’s just not in it any more.”

And a general distrust of governance:

“I don’t trust the tests they’re doing on the heather up on the fell, they test up to the fence, test after stock, and say look we’ve cut sheep numbers, I don’t know... It was a bloody mess up there.” (during FMD)

As Convery et al. (2005) indicate, the 2001 FMD epidemic created deep fissures in the lifescapes of Cumbria, so that much of the taken-for granted world, identity and sense of meaning changed. The events of 2001 thus transcended the loss of the material (traumatic though this undoubtedly was) and became also the loss of the conceptual (the loss of the meanings associated with this lifescape). Foot and mouth, therefore, did much to redefine the vertical relationships of social capital between farmers and the public, local businesses, and politicians.

2.1.3 *Common land*

One essential feature of upland agriculture in Cumbria is the fact that many farms share common grazings around the fells or heaths. These common grazings are generally rough pasture shared by a number of ‘commoners’ with farms in the surrounding valleys – with each farm allocated a quota for the fell or ‘fell rights’. As a consequence, many aspects involving the use of commons are negotiated between members of the common rather than being divided into exclusive individual rights – an activity requiring considerable co-operation and therefore dependent on the social capital built up within farming communities. Short (2000) observes that the origin of common lands was simply that they represent areas where there was no requirement for ‘rights’, i.e. when the areas around villages were gradually enclosed the open areas decreased but tenants and labourers continued to graze the uncultivated areas which became ‘commons’. The area designated as Common Land in the UK has not, he suggests, changed significantly since the 1700s.

Short and Winter (1999) contend that the reason common land has been subject to such a low intensity of management in the past has been largely because the system is held together by multiplicity of rights and right holders. In other words, part of the reason for the continued existence of these areas of high scenic and environmental

value (Short, 2000) has been the shared management regimes of the local farmers or, more specifically, to the difficulties in developing what is a shared resource. In addition to sharing the land, the nature of the commons means that farmers also need to share many of the tasks involved in common land management, for example, it is critical to farmers that the gathering of sheep (when there is more than one heft on the common) is done as part of a collective effort. Failure to do so would result in a much less efficient gather – with potential economic consequences for all farmers on the common. As a result, the common grazings require high levels of social capital in order to operate properly and continue to produce the sort of landscapes that are “extremely important for wildlife” (Short, 2000: 123) that we have today in the Cumbria region.

2.2 Methodology

The methodology was established under the hypothesis that there are 4 main areas where the impact of social capital on public goods provision may be socially discernible these are (in order of the scale of connections):

- 1) Within the family unit (parents and successors/potential successors)
- 2) Within groups of farmers sharing common grazings
- 3) Across the broader farming community (horizontal links)
- 4) Between the farming community and other communities in the area - farmers, the public, businesses (vertical links)

As a result, the study employed a multi-method approach to data collection (see Sobels et al., 2001) to obtain assessments of each of the four ‘social capital’ areas. This resulted in 3 different strategies being employed.

2.2.1 *Family interviews*

Family interviews were designed to (a) provide an in-depth understanding of social capital, human capital and public goods provision and, in particular, the relationship between these aspects and the functioning of the farm family unit, and (b) to explore

issues of relevance to the main semi-structured survey of farmers. As we wished in this instance to focus on longer established ‘traditional’ farmers, the selection of candidates was through requests to a number of organisations including the National Trust, Farmlink, Rural Futures, a former head of Newton Rigg (agricultural college) and the Federation of Cumbria Commoners. The selection criteria for the farmer were that they should be:

- Typical family hill farms
- Of a range of sizes
- Geographically spread (covering the Lakes, the Orton/Howgill fells and the Pennines)
- Some with successors and some without

The groups were asked to advise on the criteria for each of the farms selected. As a result, 8 farms were drawn from the suggested list of 30. Effort was made to ensure that not all of the farmers were selected by the same groups – i.e. not all National Trust farms – but that they came from a variety of sources. From the 35 farms on the list, 8 were selected representing three size categories small (2 farms, medium (3 farms) and large (3 farms). These farms were distributed in all 3 areas, the Pennines (1 farm), the Orton and Howgill Fells (2 farms) and the Lake District (5 farms). The focus on farms in the Lake District reflects that, as a result of its high tourism potential and level of in-migrants to the area, both social capital and public goods provision are likely to be more important issues in this region.

As the family study was designed to obtain a very in-depth view of social capital and public goods generation on a family farm, it involved a research procedure which reflected this requirement. The research was conducted in three stages.

First, initial contact involved a round table discussion with the family. For this farmers were asked that all family members working on the farm were involved. This enabled the study to explore the relationship between farmers and successors and any differences in terms of views towards public goods provision that may exist. This resulted in the following distribution of family members:

Farmer, wife and three sons	1
Farmer, wife and one son	2
Farmer and wife	4
Farmer	1

The first round of interviews were to discuss general issues based on the following themes.

- Background of the farm (structural features)
- Intergenerational knowledge transfer
- The family's participation in social networks
- Beliefs about public goods provision
- Perceptions of current agricultural policy.

Owing to the exploratory nature of the interviews a qualitative research methodology was employed with investigation of the themes amended as new information became available. Interviews – averaging one and a half hours in length – were recorded at the time and transcribed at a later date. Information from this stage of the research was fed into the construction of the semi-structured farm surveys as well as advising on topics for discussion of the horizontal and vertical focus groups. Interviews were conducted between 18th and 22nd October 2004.

Second, farmers were asked to keep a farm diary for a period of 2 months between November and December. The purpose of this was twofold. First, it provides an indication of how much the farmers are co-operating with their neighbours and in what contexts – although, admittedly, only over a very narrow time-frame. Second, it provided farmers with an opportunity to report on events from the past as they remembered them, possibly prompted by events that occurred in the everyday running of the farm.

Third, a second round of family interviews was conducted between 17th and 20th of January. The purpose of these interviews was (a) to obtain any reflected opinions on

the issues from the farmers, (b) to feedback information from the public survey for comment from the farmers – i.e. trying to match what the public viewed as important from a public goods provision perspective with the farmers’ perspective of public goods, and (c) to discuss some of the issues that had arisen from the focus groups and the interviews with farmers from common grazings. Again, interviews were recorded and transcribed, this time lasting an average of approximately three-quarters of an hour.

2.2.2 *Semi-structured individual farmer interviews*

The individual farmer interviews focussed on the integration and role of traditional hill farmers within the social capital networks and examined the impact of the current and potential erosion of traditional practices on the economic viability of the region. Asking the farmers about past, current and future hill farming practices allowed us to identify the key dimensions of hill farming systems in Cumbria, particularly the social dimensions, map the scope and variety of each element, and explain the linkages between them.

An even spread of interviews was achieved over the three key areas of Cumbria: Pennines (12), Orton and Howgill Fells (12) and Lake District (12). While the original target number for each area was 15, the coincidence of our fieldwork with one of the main times of year for stock gathering precluded the completion of the target number of interviews in the time available.

Within each of the three geographical areas, three dales were selected at random using a cluster sampling process. The aim was to interview five farmers within each dale. One farmer in each dale was selected at random from the bottom right hand corner of a randomly selected 1km square on the 1:25,000 OS map grid within the catchment area of the dale. The ‘snowballing’ technique, whereby the initial informant gives contact details of further informants, was used thereafter to follow the social network until four further farmers had been interviewed. Approach was made by telephone to arrange face-to-face interviews and farmers interviewed at their convenience.

A questionnaire was devised to cover the key issues of: the size and nature of each farm; the role of the farmer in social networks; the transfer of knowledge and skills; informant's understanding of the relationship between farmers and the public; and informant's views on current and future agricultural policy. The preliminary findings from the family interviews allowed the refinement of the questionnaire. The questionnaire comprised a combination of quantitative and qualitative questions. Closed quantitative questions were used to capture numerical and categorical information about the farm, the social networks and the farmer's motivations for cross-comparisons. Open-ended qualitative questions were used to enable in-depth analysis of how and why farmers understand the key dimension of the hill farming system as they do, and how and why this affects their behaviour, allowing expression of these issues in the farmer's own words.

An informal pilot study preceded the main survey in order to test and refine the questionnaire. As a result the questionnaire was shortened and some questions were clarified. The interviews were conducted between November 1st and December 17th 2005. They lasted an average of one and a half hours; although farmers were given the opportunity to stop the interview after 45-60 minutes since this was the time they had agreed to.

The numerical and categorical data were recorded in writing at the time of the interview. Responses to the more open-ended and qualitative questions were tape recorded, with permission to tape record the interview sought at the beginning of the interview. Field notes were also taken after each interview to record any thoughts about what was seen and discussed that was not recorded at the time, thoughts about the dynamics of the exchange, and any ideas about how various findings tie together and relate to the issue in hand.

The quantitative data were analysed using the SPSS computer package to produce some descriptive statistics about the nature, extent, motivation and social networks of hill farming in Cumbria. It was possible to compare and contrast these factors between, for example, different farm sizes and different geographical areas.

The interview transcripts and field notes were subject to qualitative analysis using the NVivo computer package. We developed and refined a code of key themes and concepts, which provided a map of the breadth and depth of the social dimensions of hill farming, and provided a structure within which key relationships between different people, behaviours, values and circumstances could be identified and explained. First, we read through and noted all the recurring themes, issues and concepts. Second, the list was continually revised in an iterative process as each transcript was re-read until a workable structure was achieved with minimal overlap or omission. Categories were sorted and resorted into key themes and sub-themes and links were made between categories. This technique enable an examination of how hill farmers understand and attach meanings to various objects, people, practices and ideas, and how they produce and negotiate knowledge through particular discourses and performances.

2.2.3 *Focus Groups*

In addition to the semi-structured farm interviews and the farm family interviews a series of four focus groups were conducted both exclusively with respondents from within the farming community (horizontally tied focus groups) – including one commons grazing committee – and between members of the farming community and other members of the community, namely, the public, local businessmen, conservation groups, and agricultural service industry providers (vertically tied focus groups). Discussions within these groups aimed to provide an in-depth analysis of the nature of social capital in the uplands areas of Cumbria, socially negotiated and established by the actors themselves. Thus they provided farmers with the opportunity to discuss issues outside of the family environment, and compare their own experiences of farm practices with other farmers to provide perspective to the individual responses. Respondents were paid participation fees to cover travel costs and encourage participation.

Focus group meetings took place over December 2004 – February 2005. All meetings were held at the George Hotel in Penrith, apart from one horizontal meeting with a common grazing committee which took place in a local village hall. Attendance for focus group meetings varied between 10 – 12 individuals, recruited using both

purposeful and snowball sampling. Each focus group commenced with a brief (10 to 15 minutes) introduction to the aims and objectives of the project. A semi-structured approach was adopted³, which facilitated discussion around the key themes of the project (Relationships, succession, traditions, knowledge, agricultural traditions, diversification, insider/outsider), whilst also allowing the flexibility for respondents to raise additional (and relevant) areas of discussion. Each focus group lasted formally for 2 hours, though many respondents continued discussions after this time.

All focus group meetings were taped and transcribed. Data were analysed using the constant comparison method, where each item is compared with the rest of the data to establish and refine analytical categories (Pope *et al.*, 2000). Data were stored in Atlas Ti.

The key themes to emerge from the focus groups included control, knowledge, succession, community and product. Figure 4 presents a schematic representation of these themes. It is based on grounded theory approach to data analysis from focus group empirical data and illustrates complexity and interconnectedness of the hill farming community and social capital.

2.2.4 *Policy analysis*

The final component of the research involved utilising the findings from the three data collection components of the study to undertake a policy analysis looking at whether there was a need to make special provision under the Rural Development Regulation to ensure the survival of traditional farming in the upland regions. The analysis was based on the development of a conceptual framework that identifies how the various components of the traditional farming system such as hefting, environmental management, public goods provision, social capital, and succession are linked. Development of this framework was done as the result of consultation between all members of the research team thus its development is based not only on the data

³ Questions were developed to help prompt the group discussions. These included what is traditional hill farming? What role does social capital play in traditional hill farming? What is/has been threatening traditional hill farming? How should policy for hill farming be delivered? As well as issues around rural futures and succession.

gathered for this project (bringing together all three components of the research), but also on the collective research experience of all those involved in the fieldwork – all of whom have experience working in upland environments and/or marginal farming communities. Through looking at upland farming as a system the analysis identifies areas where policy could aid in the maintaining the upland rural communities in a manner that provides both an effective solution for farmers and the effective provision of public goods in the future. Suggestions as to what policy options may be optimal for upland areas and issues concerning the national applicability of such policies are also raised.

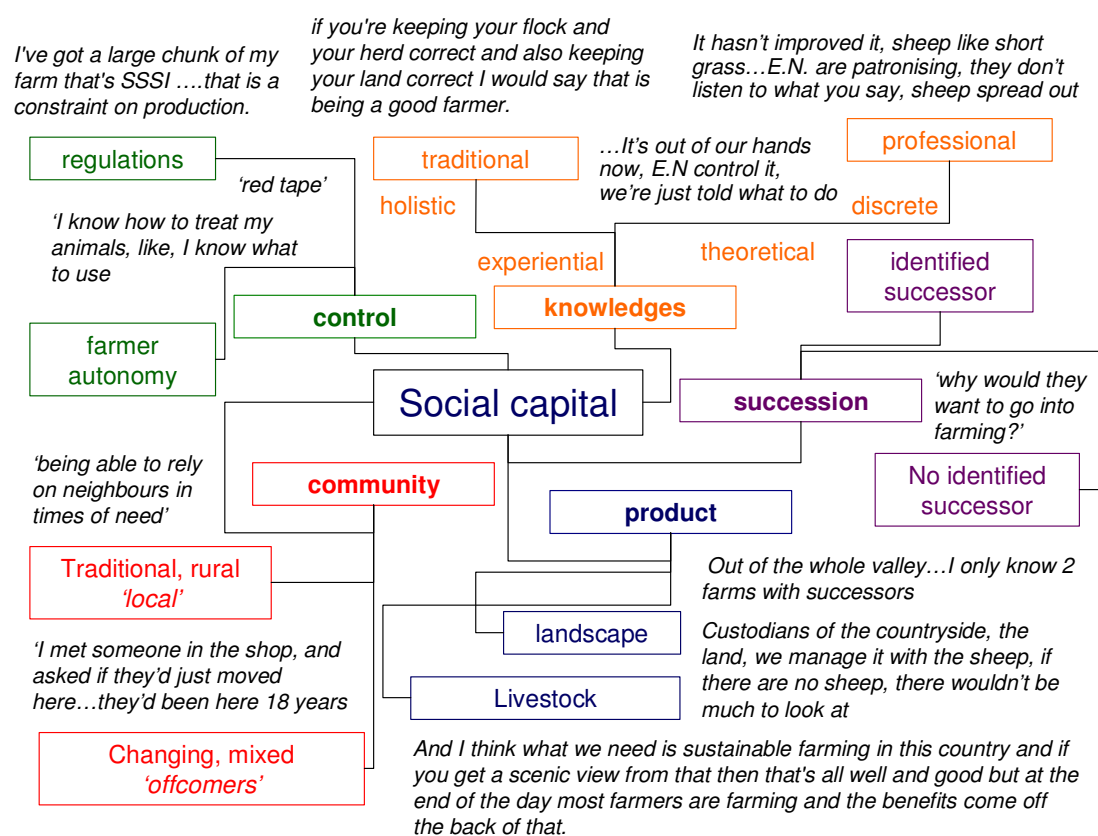


Figure 4: Schematic diagram of themes emerging from the focus group interviews.

2.3 What is traditional farming?

In this section we briefly outline, using the farmers' own perceptions of traditional farming what 'traditional farming' in Cumbria entails. On a more conceptual level,

there are two important features to note about traditional systems. First, 'tradition' is not necessarily exclusive of change. The dictionary definition of 'traditional' suggests it means "Belonging to or of the nature of tradition; handed down by or derived from tradition; loosely customary, conventional" (Shorter Oxford Dictionary). While 'traditional' ideas are passed from one generation to another, the nature of culture would suggest that this is often transferred through the cultural lens of the time as well as potentially incorporating new ideas and, in this way, tradition from one generation may be different to traditions from the next. Thus tradition is not about 'preservation' of a fixed ideal such as a particular landscape aesthetic. Second, and leading on from the previous observation, tradition is predominantly cultural and not structural. As 'tradition' focuses on the transfer of practices and ideas from one generation to the next rather than the transfer of structures, maintaining 'traditional' farming systems in areas like Cumbria should be more about preserving the links between one generation and the next than it is about preserving structures such as stone walls and buildings. Once stone walls are no longer managed by farmers they will no longer be 'traditional', they will simply be the physical manifestation of a historical culture.

In terms of the structure of upland farms, Figures 5 and 6 illustrate the traditional pattern although, as noted above, variation between the three main massifs in Cumbria and local features ranging from geology to historical farm development mean that the actual pattern is somewhat more varied. The farm typically comprises intake land, inbye land and moorland. With the moorland (increasingly with agri-environmental schemes) providing the summer grazing and the sheep being brought down to the inbye land (or taken off the farm completely) in the winter. The system typically comprises a combination of cattle as well as sheep, with the cattle helping to maintain the quality of the pasture through grazing areas where the vegetation is too rough for sheep and clearing bracken through trampling.

The farms themselves can serve as a tourist attraction as, typically in the area, traditional farms are comprised of stone buildings and large areas of stone walling – which are an important feature of the Cumbrian landscape. While these are still practical in as stock boundaries, it is important to note that they would not be part of contemporary farming practices were farmers to follow the most economic methods

from a production point of view. At the time of their historical construction farmers had substantial quantities of both family and hired labour available for winter work such as walling. However now, with the number of farmers on the farms declining the structure of the farming industry would not support stone walls as an economically viable option. Consequently one of the important roles of the ESA and CSS in the area is to pay farmers to maintain the traditional stone walls.

A Typical Cumbrian Hill Farm

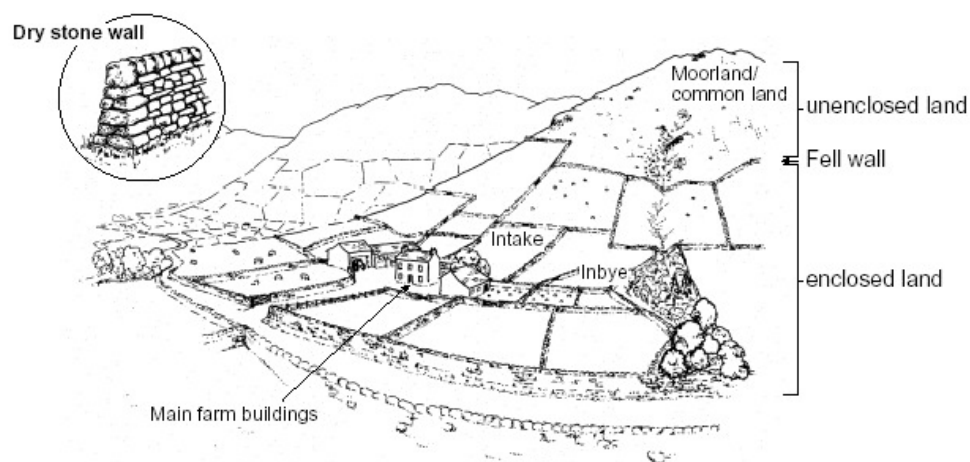


Figure 5: Structure of a traditional upland farm (Drawing: L.Mansfield)



Figure 6: Upland farm in Lake District (Photograph: R.Burton)

While the above description outlines the structure of traditional farming, what is equally important is the social and public aspects of traditional farming. From farmers' descriptions of traditional farming these can be classified as falling into 4 main areas:

2.3.1 Maintaining a balance with between farming and the environment

First, farmers believe that traditional farms are environmentally friendly and that, promoting wildlife is a by-product of traditional farming methods. In particular when asked what farmers do to promote wildlife the answer is often to maintain traditional farming practices such as not overgrazing heather moorland (farmer 2) or simply following traditional grazing regimes (farmer 1). The logic of the argument is that there is still a substantial amount of wildlife on traditional farms after centuries of traditional farming, therefore traditional farming is good for wildlife. There is evidence to support this in that it is uncontroversial to suggest that low-intensity farming systems – such as those employed by upland livestock farmers – have direct conservation benefits for the countryside (Signal & McCracken, 1996).

2.3.2 Maintaining traditional communities

Second, traditional farming is also about maintaining communities and the social networks that have long existed between farm families and farm businesses. For example, farmer 5 was asked why farmers were against the splitting up of a farm in his local area

“It’s just tradition. It’s like I say, that farms’ got quite a bit fell stock and they were going to let it off to farmers that don’t have any experience gathering fells so it was going to have repercussions on all the surrounding farms. They sheep were going to be taken off so there was going to be sheep going everywhere. It was just going to break the whole hefting system up. It was also lost bloodlines. That farmer’s been there for 60 years and they’re respected breeders. We wanted to keep that farm going.”

Here the farmer sees the connections between farms in a region, their contribution to the overall genetic stock of the region, and their participation within the fell farming

network as part of 'traditional farming'. A reason for the inclusion of particular farms as part of the farming 'tradition' is likely to be that in order to maintain the existing traditional fell management system, the presence of farms willing and able to participate in these practices is essential.

2.3.3 *Maintaining traditional livestock systems*

Third, traditional farming in the area also has a strong association with traditional farming practices, which, as farmer 4 suggested are as likely to be attributable to the limited options of how to manage grazings which, in his case in the Orton-Howgill Fells, he suggests are:

"You can breed Herdwick sheep and you can breed Swaledale sheep and you can have suckler cows ... either breed suckler cows or buy store cattle in just to keep a bit of muck for the land ..."

As far as traditional farms in the uplands are concerned, the focus (as noted above) is invariably on sheep with suckler herds providing more of a sideline enterprise – often for reasons of environmental management such as to keep sward length down, or as farmer 4 suggests, to "keep a bit of muck on the land" (also see Evans et al., 2003). Other farmers from the Lake District maintained that, as a result of the terrain in the area, the job still followed the traditional 'dog and stick farming' as it was simply not possible to use a quad bike or a motorbike (farmer 5). The maintenance of traditional practices may not be a willing part of farming in the area – given the importance farmers attach to innovation and being seen as progressive (Gasson, 1973) – however, to this day there does not appear to be a more effective way of farming in the upland regions of Cumbria. Tradition thus plays an important role in upland farm management as farmer 4 suggests

"Well you need to know how to look after your flock in the traditional way really. You know, fell sheep are different to lowland sheep. You can't just buy them in and put them onto the fells you've really got to breed them up there so they're native and used to the area really."

‘Native and used to the area’ includes breeding sheep with tick resistance as, without the built in resistance of traditional herds, farmers observe there would be a considerable decrease in animal welfare. In addition, farmers breed sheep for their own particular heft. Hefting refers to the ability of certain breeds of sheep (in particular Scottish Blackface, Kendal Rough, Herdwick and Swaledale) to maintain a home range group structure. This is essential in areas of common grazing where there are frequently no boundaries between the flocks on one farm and another. Research into hefting instincts in sheep has demonstrated that hill sheep follow particular movement patterns which are “probably an elaboration of a movement pattern adopted from her mother in the first summer of life” and further, that once hefted properly, the sheep (Scottish Blackface in this case) “adhere[d] to a common area and did not mix indiscriminately with sheep from adjacent groups” (Lawrence & Wood-Gush, 1988: 25). This system – which is essential for the traditional management of upland grazing areas – is dependent on the knowledge of range and the boundaries with other groups of hefted sheep being passed from one generation of sheep to the next (Hewson & Wilson, 1979). In essentially ‘teaching’ each other the boundaries of the heft and largely managing themselves in terms of their geographical distribution, hefted sheep are an enormous economic asset to upland farmers and important for the maintaining of traditional farming.

2.3.4 *Maintaining traditional social practices*

Traditional farming is also associated, to a lesser extent, with the traditional practices associated with hill farming – not simply farming practices but also social practices that have been associated with the practice of hill farming. In keeping with the reciprocal arrangement between structure and action, traditional hill farming practices have developed as a result of the physical and social limitations of hill farming in the region. There has been a strong tradition of co-operation in the fells as a result of the difficulties of, for example, gathering sheep on common land and of mechanising many of the practices associated with upland hill farming.

“Once upon a time there would have been a lot of co-operation with regards to shearing sheep, and everybody had the communal clipping day, and all the neighbours went and

helped clip everybody else's sheep. That's no longer necessary because you've got contract shearers. (farmer 19)"

Similar issues have been raised by farmers as concerns the gathering of silage (wife - farmer 8) as well as threshing (farmer 1) where the actions required in everyday farming practices became associated with co-operative social traditions in the region. It is clear in this respect that as the nature of farming is changing due to new commercial arrangements and technological developments this aspect of traditional farming life is changing.

2.4 Conclusion

In this chapter we have outlined the nature and structure of traditional upland farming in Cumbria as well as detailing a methodology for the investigation of the influence of social capital on public goods provision. It has been established that farmers in the uplands region of Cumbria operate a traditional system of land management that fits with the geology and climate of the area they are farming. For the management of these areas, however, the presence of common grazings means that farmers frequently have to co-operate in order to ensure profitable farming by traditional means. This has become, as much as anything, part of the culture of the uplands region. The next chapter looks this in more detail, focusing on the way co-operation between farmers and their neighbours improves the economic position of all those in the area and aids in the provision of public goods.

Chapter 3: Social capital and co-operation in upland farming

4.1 Introduction

Social capital is important to public goods provision. Without social capital, or “characteristics of social structure or social relations that facilitate collaborative action and, as a result, enhance economic performance” (Johnston et al., 2000: 746), many aspects of social life that involve co-ordination between or within social groups would be greatly impoverished. In areas such as the uplands where there are a number of groups with potentially different perspectives on the future of the region – for example, tourists, farmers, in-migrants and environmentalists – social capital may play a key role in ensuring that public good provision means public goods for all. Farmers have two main areas where this is important, namely, the provision of environmental and leisure facilities via the management of agricultural farmland, and the provision of accommodation for tourists to the region. Of these, the most important issue is undoubtedly the management of the environment which, while it has in the past been an externality to agriculture, is becoming increasingly regarded as a service that farmers should provide in order to justify agricultural subsidies. It has been noted that there is a strong connection between social capital and environmental management (Pretty & Ward, 2001). For areas such as the uplands where some of the most environmentally sensitive land is common land and, therefore, relies on farmers managing the land through trust and communication, social capital may be extremely important indeed – although social capital also plays a key role in any situation where the management of an individual resource is facilitated by group co-operation (such as catchment management).

In this chapter we seek to establish a link between co-operative activity and social capital. As illustrated in figure 1 (page 6), there is a hypothesised relationship between co-operative actions and the development and maintenance of social capital as it is through successful interactions (those that achieve a positive outcome for those

involved) that social capital is built and sustained. In this we deal with three questions:

- 1) What are the areas in which farmers have co-operated in the past and how are they connected to the development of social capital?
- 2) How important is social capital to the continuation of these co-operative activities?
- 3) What changes are occurring in the co-operative activities and what impact are these changes having on social capital generation?

In dealing with these issues we provide the necessary background for the investigation of the issue of the importance of maintaining social capital for ensuring the supply of public goods, which we elaborate on in Chapter 4. In this chapter we look at areas where co-operative action is, or has been important, on a case by case basis, illustrating the issues involved with examples from the Cumbrian case-study work and supporting arguments where possible with examples from the literature.

4.1.1 Co-operative behaviour in Cumbria

There is little doubt that there is less co-operative behaviour in Cumbria now than in the past as a result of the mechanisation that has occurred across agriculture in the UK, the decrease in time available for co-operation, and the continuing decline in the number of farmers in the region. However, in other areas such as tourist provision there have been chances to increase levels of co-operation. From the interviews with farmers we isolated 7 main areas where co-operation is either high now, or has been high in the past. These can further be broken into 3 categories: (1) increasing activities where the co-operation levels are becoming higher, (2) continuing activities where older traditional activities still require co-operative action, and (3) diminishing activities where co-operative action has been replaced by either mechanisation or changes in business practices. Thus the main co-operative activities can be classified as:

Co-operative activities that are increasing

1. The production and marketing of local foods – such as ‘Kentmere lamb’

Co-operative activities that are decreasing

2. Participation by farmers in the local community through, for example, membership on the Parish Council
3. Harvest activities such as hay-making and silage-making
4. Shearing

Co-operative activities that are continuing

5. The provision of bed and breakfast accommodation
6. Gathering the fells on common grazings
7. Neighbouring – the general practice of assisting neighbours

4.2 Outlining co-operative action and social capital

Figure 7 illustrates the main components of co-operative social capital generation amongst the farming community in the study region. Each of the bars represents the activity over a hypothetical time span (note, no actual dates can be given thus this diagram is simply indicative), with the vertical axis (for each bar) representing the proportion of the activity continuing. The diagram suggests in general an overall decline in both the levels of co-operative behaviour in the farming community and, at the same time, the overall levels of social capital. Broken down into their individual components, the analysis of changes in co-operation and social capital pattern is as follows.

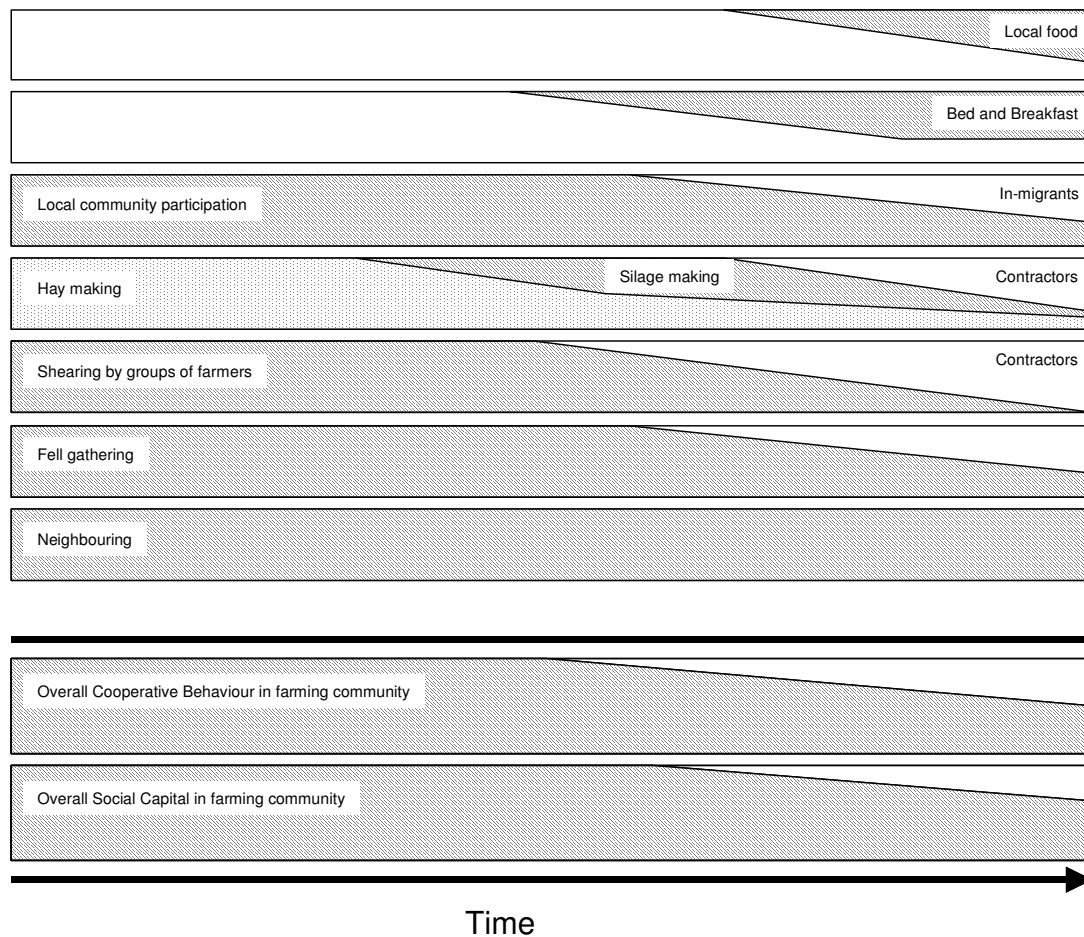


Figure 7: Social capital generation and decline through co-operative activities in upland agriculture.

4.2.1 *The production of local foods*

For a number of fell communities one farmer in the valley (generally one of the smaller farmers) had opened a direct marketing business locality and sheep breed's identity as a marketing ploy. For example, farmer 6 was involved in a marketing triangle of 'light lamb' to restaurants in London, farmer 5 whose neighbour runs a direct marketing scheme but buys lambs at a premium from four other farmers in the valley, and farmer 3 was involved in a scheme to use the name of the valley to market light lamb to local restaurants. While this behaviour is in general co-operative in that other farmers in the valley agree to provide the produce for the business, most of the examples we found were not truly 'co-operative' ventures in the sense that they were established collectively, but rather were collective actions established by individual entrepreneurs. As a result, the level of social capital generated and co-operative

behaviour required after start-up in this instance is not particularly high. However, as Meerta et al. (2005) found that farms with high levels of social networking were more likely to diversify than those without, it is possible that social capital (in terms of getting the co-operation of neighbours) played an important role in the initial establishment of the Cumbrian businesses. This is one area in which social capital generation is on the increase.

4.2.2 *The bed and breakfast trade.*

For smaller farmers bed and breakfast is often an important part of the farming business as a means of cashing in on the tourist potential of the region and thereby compensating for the loss of agricultural income. Some farmers' wives reported strong collaboration in that, when one B&B is full and an enquiry is made, the enquiry is passed onto another B&B proprietor within the social network. Thus B&B owners with strong social capital and social networks are economically advantaged over those that are not. Árnason et al. (2004) in investigating the Isle of Skye – a predominantly hill area in Scotland – found a similar network between farmers' (and crofters) wives offering bed and breakfast accommodation. Essentially, for a small industry such as the B&B industry, the lack of advertising capital as well as the temporary and transitional nature of the patronage means that social capital may be an important aspect of maintaining the industry. Co-operation through the bed and breakfast 'networks' is, however, extremely variable. On farms following the Coast to Coast path the social network may be quite strong. The wife of farmer 5, for example when asked if Bed and Breakfasts pass customers along observes

“We have everybody else's numbers and we pass them on ... We are right on the coast to coast path which is one of the most popular walks there is at the moment so we ask people where they're going and pass them on. *We all work together.*”

However, while some farms have extensive networks, others have only a limited range of contacts, often only within the local area. For example, farmer 10 when asked the same question notes:

“I would do ... well yeah, only in the local vicinity really. We do this Stay on a Farm which is not an agency but it's a, you pay a subscription for the advertising, and the tourist board register it.”

It is apparent from this and other examples that it is not enough to simply rely on local social networks for attracting custom to the bed and breakfast industry.

Owing to the fact that it is often the farmers' wife who manages the B&B enterprise, this aspect of social capital building does not contribute to the social capital networks of farmers directly but builds up the interfamilial social capital. Social capital networks sustained by the farmer's spouse provide an example of the increasing importance of the spouse in the farming business. According to statistics (STEAM, 2004) the economic impact of tourism has increased consistently since the foot and mouth outbreak to levels now higher than pre-outbreak. A further advantage of tourism in Cumbria is that, unlike many other areas, the influx of UK tourists is relatively evenly spread throughout the year (for example, in 2002, the split was: 1st quarter 20%, 23%, 32%, 4th quarter 25%) and 10% of the visitors stayed in bed and breakfasts (STARUK, 2004).

Figure 7 indicates that the provision of farmhouse bed and breakfast may be stable or declining. This is for three principal reasons. First, as it is smaller farms that are more likely to be engaged in bed and breakfast provision, any decline in the number of small farms (such as that that is currently occurring in the area) will clearly result in a diminishment of the B&B supply. Second, the economics of farm B&B provision may be discouraging farmers from this form of provision IEEP (2004c: 19) cite the Cumbria Tourist Board as being concerned at a current *oversupply* of accommodation in the region, as is evident by low occupancy rates in many areas. Accompanying this is the notion that 'word of mouth' is not sufficient any more as most bookings are done in advance over the internet or through central accommodation organisations (farmers 11 and 18). Third, it was noted by some farmers that many farmers' wives are leaving B&B provision for outside employment because of the high standards demanded by tourists.

4.2.3 *Farmers' participation in local village life*

There is little doubt from the interviews that there has been a decline in the levels of social capital generated through the communal sharing of tasks in the local community. In particular, the Lake District has seen a substantial rise in the number of people moving into the area leading, in addition to an influx of in-migrants with different cultural and social ideals, to dramatically rising house prices. While we were unable to locate figures for the number of people moving into the area the fact that the area is in high demand can be seen in that in 2004 house prices increased by 46% over a 12 month period (<http://news.bbc.co.uk/1/hi/business/3618415.stm>). According to farmers the impact of the in-migrants has been, in some cases, to force locals out of many of their traditional roles in village life. For example, farmer 3 suggests that people moving into the Lake District are not mixing with the farming communities and are seeking to obtain positions in local village life.

“Well quite often you find that they come in and the first thing they want to do is get on the parish council or something like that where they can put their point across. That’s happening everywhere. They just don’t seem to want to mix with our way of life really”.

This is not a new phenomenon. For example, Cloke et al. (1997) observe that the movement of newcomers into a rural area can result in the effective ‘colonisation’ of the local community by specific socio-cultural groups and that this tends to become a struggle for power between ‘insiders’ and ‘outsiders’ (also see Woods, 1998). As farmers’ roles in local communities diminish, the co-operative action between them – and between them and local villages – is likely to diminish and with it their social capital generated (although as farmer 6 noted, having one farmer on village committees is useful as they are generally the only ones with heavy machinery). On the other hand, any decrease in the public role in the local community may be compensated for in terms of social capital by an increase in their public role within farming organisations as many farmers were involved in, for example, sheep breeders associations or the auction mart. It does, however, certainly represent a loss in the amount of vertical social capital generated between farmers and the local community. While there is an impact from in-migrants on farmers’ desire to participate in local

communities, it should be noted that at the same time the declining levels of labour on the farms has meant that farmers simply do not have as much time to become involved as in the past.

4.2.4 *Hay making/silage making*

The preparation of animal feed for the winter is one area where the substitution of capital for labour has had a major impact on the level of co-operation amongst farming communities over the last decades. Prior to substantial mechanisation the co-operation of a large number of the community was required to perform tasks. Farmer 1's wife observed that she no longer has to take large lunches out into the fields for the local farmers as she did when a girl.

“When I was there, there was the hay team and it was great fun, wasn't it. I mean, I haven't made big meals to take out into the fields for years now whereas that used to be a big part of my farm work. Cooking for everyone and taking it to the field.”

The performance of farm tasks as a community provided an opportunity for the generation of social capital as farmers were able to judge who was pulling their weight within a community and who was not. Further, as farmer 1's wife observes, in providing the community with 'fun' the act of hay making was performing a social as well as an economic role. While much of the work is now mechanised, harvesting hay and silage is still a time where some degree of co-operation is common between farmers. For example, farmer 4 observes with respect to hay baling and co-operation between neighbours

“If something's happened to your machine and you're really busy and your neighbour's got one you'll lend each other things. Yeah. It's the done thing really. *Because you could be in the same position next week couldn't you.* If it's going to rain and you've got some hay to bail or whatever you want it now don't you.”

While contractors have largely overtaken co-operative actions, the use of contractors and co-operative work is not necessarily exclusive as wife 8 describes:

“Even at silage time you get the contractor in but sometimes the neighbours help to come in with another trailer and tractor.”

4.2.5 *Shearing*

Another farm based co-operative activity that is gradually dying out from the uplands area is shearing. This provided again a need for the community to work together for the economic benefit of all. For example, farmer 19 suggests

“Once upon a time there would have been a lot of co-operation with regards to shearing sheep, and everybody had the communal clipping day, and all the neighbours went and helped clip everybody else’s sheep. That’s no longer necessary because you’ve got contract shearers.”

Farmer 6 suggests that part of the reason for shearing not being a shared activity between farmers anymore is simply due to the lack of young people entering farming farms – “There’s no young lads on farms now willing to bend their backs and clip sheep”. However, other farmers have suggested that as with stone-walling, contract shearing is an ideal way for young farmers or agricultural workers to supplement their income (e.g. farmer 3, 19) – suggesting the pattern could vary on a region by region basis. In the case of sheep shearing, rather than being an issue of changes in the mechanisation of agriculture, it is more a combination of changes in the ability of farms to attract successors, and the business model under which farmers operate which is undoubtedly more contractual. While sheep shearing is no longer a group activity, as with silage and haymaking there is still an additional need for labour.

4.2.6 *Fell gathering*

In terms of areas where co-operation is required, the gathering of the commons is undoubtedly the most important. The situation is summed up by a resident of one of the highest fell areas in the Lake District (farmer 19) – although this is a perception which is widespread across the upland farming community:

“... hill farming really does need a spirit of co-operation. Maybe not as much now as it did, because there’s lots of jobs now that’s more mechanised ... But you still need co-operation for things like gathering the common, gathering the fell. You still need to be able to trust your neighbour. You still need to be able get sheep back.”

It is important here to distinguish between the gathering of the fell and activities such as harvesting and shearing. In the case of harvesting, mechanisation has largely resolved the need for a substantial and concentrated supply of labour whereas with shearing the demise of co-operative work has been due to the introduction of more effective business models. However, it is evident that neither of these is likely to provide solutions to the need to gather the fells. In terms of mechanisation the issue is that the structure of the upland fell areas simply will not accommodate large-scale affordable mechanisation. Labour can be substituted to some extent by quad bikes or motorbikes, however, particularly in the Lake District, many areas in Cumbria are simply too rugged to enable mechanised access to the highest points.

“These fells have been shepherded. They’re shepherded the way now as they were 200 years ago with a dog and a stick. You know, there’s no flying around on motorbikes or whatever on the high fells so they’ve got to be managed as they were years ago” (farmer 5).

Farmer 6 similarly observes the difference between his fell and that of his father and brother, noting that the increased difficulty is largely the result of the topography of the area and the presence of ‘rock ridges’.

“My common’s good too. I can just about do it all on my own. It’d be hard work with a good team of dogs I can do that on my own but some other fells couldn’t, for instance, for my brother my Dad it needs a team of 6 of them to gather. That’s the one further up, cos it’s just rock edges and all sorts whereas mine, between us we can do it can’t we.”

Nevertheless, it is indubitable that quad bikes and motorbikes in most areas have filled a role in enabling farmers to cope with the loss of neighbouring farmers from the commons over recent years. Farmer 3 suggests the advent of the quad bike may have been the factor that has enabled upland farms to be by a single operator.

“You know well they, they’ve virtually done away with one man you know because the, the amount of work that one man can do with a quad bike is you know it’s sort of unbelievable really.” (Farmer 3)

Bikes, while increasing the mobility of the farmer, do not, however, negate the need for the farmer to be on the hill and operating dogs to gather the sheep – nor do they negate the need for co-operative action amongst farmers. Without fences dividing the fell areas any attempt at gathering without neighbours gathering their flocks simultaneously would simply result in scattering sheep to other parts of the common. In this context, farmers have observed the need for maintaining the co-operation of the neighbours in fell management. The following example is fairly standard practice for farmers using commons and displays both the traditional approach to gathering and the need for co-operation and therefore social capital amongst the farming community.

“Interviewer: Do you co-operate with other farmers?”

Farmer 4: Our neighbouring graziers we contact each other and go up on pieces right next to each other at the same time so we get most of the sheep in at once.

Interviewer: And how many of you do this?

Farmer 4: Well at the top end maybe 4 or 5 graziers meet up at the top end of the valley there’s maybe 5 or 6 of us go because they come up from different sides you see and we all sort of pace off together because they move around at the tops you see. If we went and nobody else went we’d run among their sheep and vice versa so we gather them all at once. It’s best if you can do things together really.”

The other alternative to substituting machinery for labour is to employ contract labour for fell gathering as has been done in the case of shearing. However, again, hiring in labour is extremely difficult in fell farming for two main reasons. First, effective fell gathering is dependent on an intimate knowledge of the fells themselves, thus, unlike shearing where contract labour can be brought from almost any part of the world, it is not possible to, on a short term basis, employ non-local labour for fell gathering. Integrated with this problem is that any labour used must also have his/her own dogs

and again, the dogs have to know the fells in order to be able to work them properly. For example, farmer 18 observes:

“You have to get the dogs accustomed to the hill they are going to gather on as well. Get them used to that. You can buy a dog and get it accustomed eventually mostly they grow up on the farm and they know the fell that they are gathering.”

As with human labour on the fells, farmers observed that it would simply not be possible to work the fells without dogs, for example “We can’t substitute dogs no. We couldn’t operate without dogs.” (Farmer 20). As with the hefting system, dogs are commonly trained by allowing them to run with other dogs, i.e. the most effective way of training dogs is, as with the sheep and people, a long association with the farm (e.g. farmer 12, farmer 8). An additional issue raised for hired labour was health and safety as the high fells can be dangerous in cloud and it is essential in some areas to know your way around. Farmer 8, when asked what the problems were with hiring in labour to work the fells observes:

“... the people that was coming in wouldn’t know the land either. If fog come down you can get lost as easy as anything. We just keep walking because you eventually know you come to somewhere you know. Whether it’s a stream you know which stream it is if it’s a fell wall you know which fell wall it is ... and you follow it. But somebody that didn’t know the area if fog come in ...”

The second important reason why labour cannot be substituted is that, fell gathering is also dependent on knowledge of the sheep themselves. Farmers reported that hefted sheep know the fell area and the same sheep are likely to occupy the same positions on the fells and behave, when herded, in a similar way – the sheep know where to run and the farmer and the dogs know where they are likely to run to. In addition, some farmers reported that in adverse weather conditions knowing the sheep helps farmers develop an understanding of where they may have been likely to be. Farmer 3 notes that this is not the case with hired labour

“... somebody from outside coming in well he’s not going to know any of that which you know takes that takes a long time to learn and probably at times could prove costly to you.”

Clearly labour is the most critical factor in terms of efficient fell farming, and this is strongly reflected in many farmers concerns that there are simply not enough young farmers in the area to take over the farms in the future (e.g. farmer 3, all others). This concern is further magnified by the issue that fell farming is much more physically demanding than lowland farming because of the physical nature of the work and lack of mechanisation. For example, farmer 5 observes that at 47 he's beginning to feel a bit old to be up on the high fells and another farmer (farmer13) noted that at 65 he still has to walk 15 miles with dogs to do the gathering, to which he comments at his age "... you want to be sitting on your arse in a tractor you don't want to be bloody struggling like I am."

4.2.7 *Neighbouring.*

The final area that requires co-operative work is not any specific farm tasks but rather refers to the role of neighbouring farmers as a stand-in labour supply – supporting each other when they require additional assistance. This is still both an extremely important role for farmers and an extremely important source of social capital as farmers create and examine social bonds between members in the community. All farmers acknowledged that there is informal exchange between neighbours of machinery and/or labour. In this case social capital is certainly of economic value as the exchange removes any of the transaction costs that would be incurred were this to be done on a contract basis. For example, the second eldest son of farmer 1

"Well the likes of this lad next door. If it was all done as business we'd be tallying up exactly what he did here and I did over there. Whereas this way ... with just a phone call you can borrow him. Because if it wasn't a family farm ... what with rules and regulations it's bound to make it difficult. But because it's family farms it's not a problem like."

In addition, neighbouring provides a labour source that can be utilised both at very short notice and for very short periods of time – making it much more flexible than contracting. Farmer 1's son goes on to explain that the failure to comply results in a

loss of social capital for the non-participating farmer as he would be likely to inform other members of the farming community that the individual was not participating.

“Interviewer: At what point would you decide that somebody hadn’t co-operated enough?”

Farmer 1 - Son 2: It’s not like they’d say anything. It’s more you’d *talk about them in the pub* and say that they haven’t done the work. There’s nothing official to it at all.”

As with gathering, neighbouring is likely to remain an area in which farmers co-operate – particularly if the number of people employed on the farms continues to decrease and farmers’ spouses are increasingly employed in off farm work. One area in which the level of social capital is diminishing, however, is in the vertical social capital between the farmers and the local community. A number of farmers observed that in the past there was a lot more neighbouring between the village folk and the farming community. For example, farmer 5 who was from a village background rather than from a farm but now farms a moderate size upland farm suggests

“It’s a different ball game to what it was when I was a lad. We used to jump on the back of the tractor at hay time and things like that.”

This is perhaps a major loss for the farming community as, in addition to providing a workforce, the lack of experience gained by village people on farms is likely to reduce the number of new entrants that come into farming this way, and the wider community’s understanding of farming.

4.3 Social networks beyond the farm gate

The hill farmers interviewed as part of questionnaire survey demonstrated a variable level of social networking beyond the farm gate. In this instance ‘beyond the farm gate’ refers to any activity off the farm unit itself. The nature of these networks can be summarised into 3 main areas:

- 1) Farm based activities
- 2) Family interests
- 3) The wider community

Each of these four areas extends the farm/ farm families social network in different ways geographically and socially.

4.3.1 Farm based activities

Typically many of the farmers met up with other farmers socially in a number of venues. The most common was gathering, shepherds meets, agricultural shows, auction marts and sheep breed groups. The auction marts will be used as an example to explore this type of social networking. Many of the farmers (92%) met up socially with other farmers at auction marts, this is often extended to after the mart for social events in the local eateries, mart bar or other pubs. Most farmers, around 80%, went to one particular mart. However the remaining 20% demonstrated a much greater geographical spread of auction marts. One farmer, for example, from Ravenstonedale regularly used 6 different auction marts throughout the north (Middleton-in Teesdale, Barnard Castle, Hawes, Penrith, Appleby and Cockermouth). Another farmer noted how he could not understand why so many farmers went to the mart with 4 or 5 sheep to sell. His wife suggested that perhaps these farmers went for the social contact alone, particularly as many in this group seemed to be unmarried or older people. This suggests the marts are performing a strong social welfare function as well, and perhaps warrants further investigation.

Another interesting package of social networks to emerge was the Discussion Group. All farmers in the semi-structured survey belonged to at least one discussion group which met regularly either through the winter or all year to talk about farming issues. Typically the meeting would include a meal, a guest speaker and time for debate.

An interesting social grouping is the 'sheep breed' groups, these organisations enable groups of farmers to work co-operatively to access new markets and act as a lobbying force. Within Cumbria there are three identifiable groups: the Herdwick Association, Rough Fell Association and Mule Breeders Association. Each of these is a point of

contact for farmers who focus on the stocking and breeding of one sheep breed. Within Cumbria and nationally the most well known is the Herdwick group who have helped farmers secure alternative markets for meat and fleeces, such as carpet, thermal insulation and trademarking the lamb meat. The Rough Fell Association has produced a film to raise awareness of their breed and its unique cultural history (Figure 8) (RFSBA, 2005).

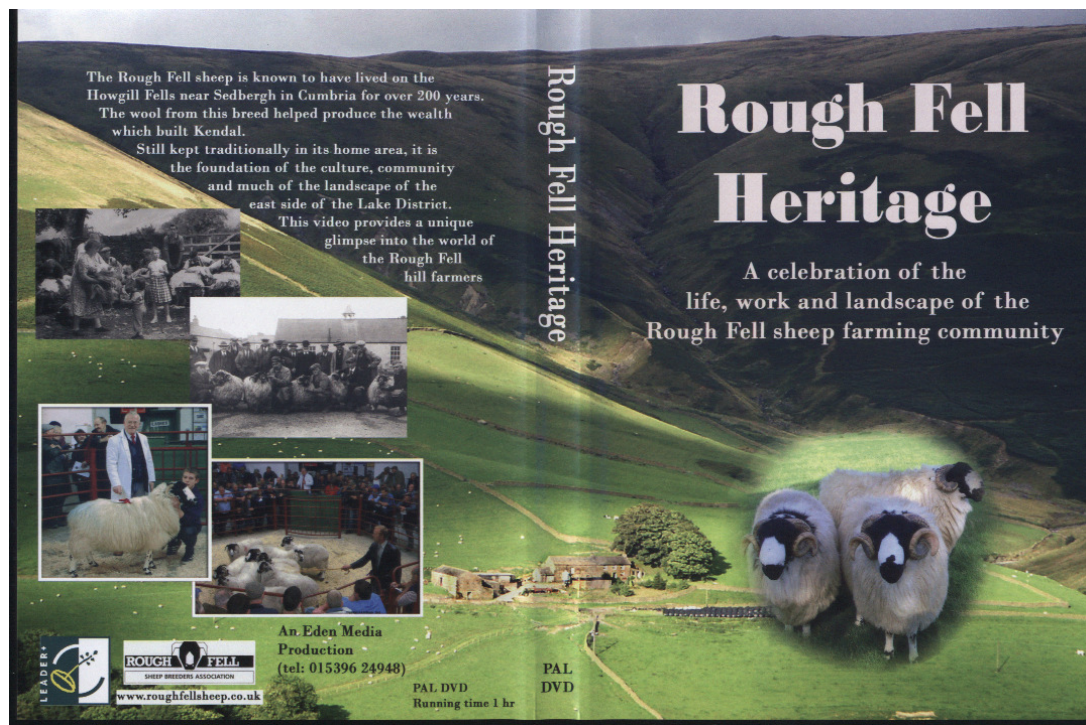


Figure 8: The Rough Fell Breeders Association – DVD cover

One final social grouping that has recently emerged is the Federation of Cumbria Commoners (started 2003). Membership includes any person who has registered rights on any common in Cumbria. The group has begun to act as a lobby on behalf of many farmers with hefted common land in terms of the Single Payment Scheme, Cross Compliance and the new Parliamentary Commons Bill currently going through its second reading (FCC, 2005). Farmers in the survey have joined this group notably from Patterdale, the northern Howgills and Crosby Ravensworth Fell. Given its objectives, this organisation demonstrates how close public goods and hill farming are particularly with respect to Objectives 3, 4 and 7.

4.3.2 *Family interests*

These affected those farmers with younger families whose non working time is devoted to children's activities. In this way the farmer and partner interact with a wide network of non farming organisations. Good examples include sports clubs, Guide & Scout Associations and School functions. In terms of the sample, 58% of interviewees had children, roughly half of which were still living on the farm.

What is also interesting about the families in the survey is that substantially fewer farmers in the Lake District had children as shown in Figure 9. In fact, 75% of Lake District farmers surveyed had no children, this will lead to inheritance problems, an issue explored by the Fell Farming Traineeship Scheme (Mansfield, 2004). In terms of social networks under discussion here, it eliminates one of the main ways in which farmers interconnect with other groups in their community. In complete contrast, few Pennines and Orton-Howgill farmer groups had no children (8.3% and 25% respectively).

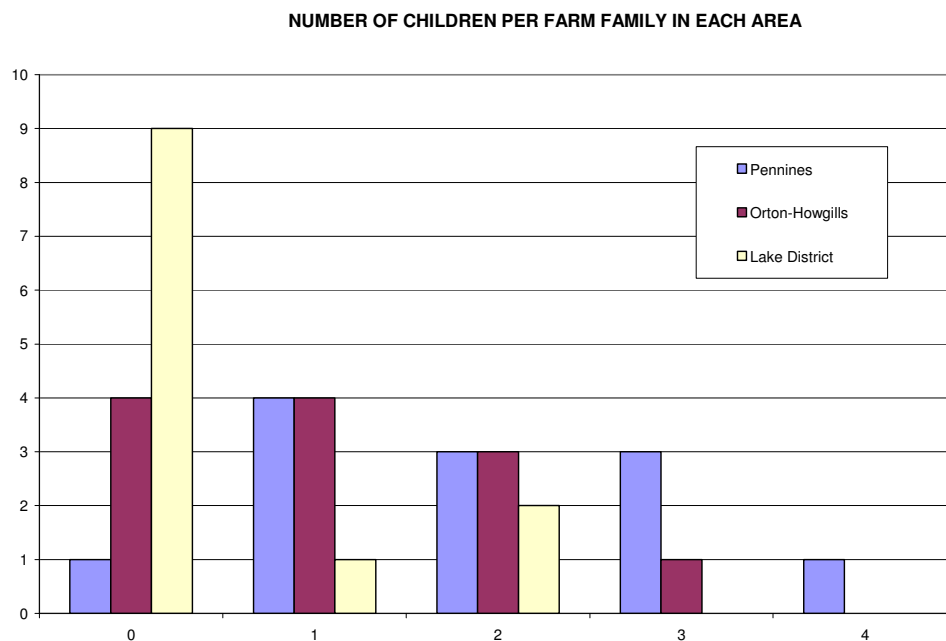


Figure 9: Number of children per farm family in each area

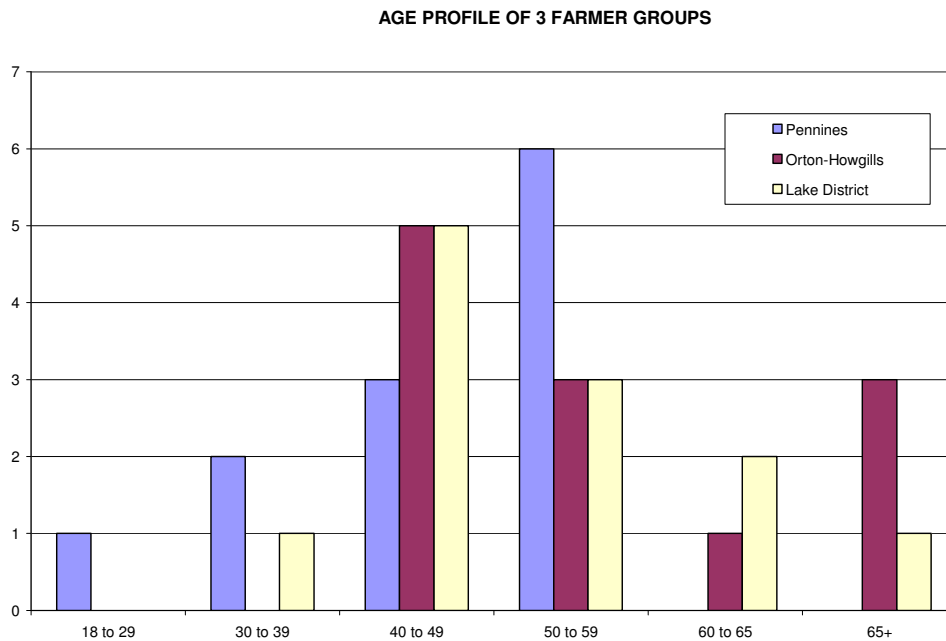


Figure 10: Age profile of farmers in each area

Compounding this lack of children-centred social networks, are the age profiles of the three groups of farmers. Figure 10 shows that the Pennines farmers are substantially younger than the other two groups. Coupled with the lack of children in Lake District group, this magnifies the social isolation of this group of farmers, which is also reflected in the discussion above regarding farmers attitudes to farming values, where the Lake District Farmers scored statistically lower than the other two groups. Age, lack of families and lower social integration is leading to lower social capital in this group than in the other groups.

4.3.3 *The wider community*

The wider community related to social networks that exist beyond the farmer's farm interests and that of their direct family. To this end the following were identified across the 3 area groups:

- Village events
- Parish Council membership

- TV programme participation
- Church – Anglican and Methodist, births, deaths & marriages
- Leisure courses eg. stick dressing
- Casual chats in pubs
- Meeting up with friends locally who are from outside the farming community

Again, the differences between the groups emerges when the farming values data are acknowledged here. With the Lake District Farmers expressing low scores related to the local wider community in terms of the need to maintain good relations with them.

It would seem that the farming communities of these three areas have extensive social networks beyond on the farm gate. The breadth of these networks is however, a function of their immediate family. Younger families seem to have deeper more broad social networks, whereas older farmers with no offspring have narrower social networks. This is also a geographical phenomenon whereby the Lake District has lower levels of social linkage than the other two areas.

4.4 Conclusion

Fell gathering is an area where environmental conditions limit farmers' ability to move away from older traditional systems and, as such, the requirement of co-operation for fell gathering means that there is an important role for social capital amongst farmers in the region. Numbers of farmers in the fells are dropping and, as numbers decline and as it becomes more important that everybody becomes involved in gathering on the commons, the *importance of social capital is likely to increase* at the same time as the mechanisms for generating social capital through co-operative actions are diminishing. It is evident from figure 7, however, that while some forms of co-operative activity are declining, others – more in keeping with the new multi-functional roles for agriculture such as the direct marketing of farm produce – are increasing. But the question is whether this is likely to compensate for the loss in other areas.

From the perspective of maintaining traditional farming approaches, the key area where social capital is required is clearly in the environmental management of the fells as without the co-operative action of farmers management is likely to prove difficult. As the community spreads into different areas of a multifunctional farming regime and the traditionally cohesive network of farmers – which is now restricted largely to neighbouring and the gathering of the fells – begins to break up, it is likely that fell management will become increasingly difficult. Any decline in the number of farmers in the area will place further stress on this system to the point where the traditional management systems (co-operative fell management) may not be effective anymore. The big question is, if this happens, how is it likely to impact on the ability of farmers to provide public goods such as landscape, environments for public recreation, and biodiversity? This issue is dealt with in the following chapter.

Chapter 4: Public goods provision by farmers

“Farmers like to farm. They don’t like to take sheep off the hill. It’s frustrating. If you can look at somewhere and say “that’s good for sheep” and you’ve worked on it and made it good for sheep and you get paid money to take them off and you can see it all the time getting worse ... it’s frustrating.” (20 year old son of farmer 1).

4.1 Introduction

The concept of a role for farmers as providers of public goods is new for farmers. Going back to the original purposes of the CAP that have been applied over the last 50 years and could be said to form the ‘core’ of the ‘productivist ideology’, article 39 of the 1957 Treaty of Rome outlined the objectives as:

- 1) to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production, in particular labour;
- 2) thus to ensure a fair standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture;
- 3) to stabilise markets;
- 4) to assure the availability of supplies;
- 5) to ensure that supplies reach consumers at reasonable prices.

Emphasis on these objectives through policy led to the development of a ‘productivist’ approach within agriculture, i.e. “A commitment to an intensive, industrially driven and expansionist agriculture with state support based primarily on output and increased productivity” (Lowe *et al.*, 1993: P206). It has been argued by some that this ideological approach to agriculture has been adopted by the farmers themselves as part of the farming culture (e.g. Wilson, 1997; Walford, 2003). However, this concept of farmers being *ideologically* focused on production is not without problems. In particular, as Burton (2004) observes, there is a difference between an ideology and just effective business practices. Thus it could be argued

(e.g. Egoz et al., 2003) that farmers are ‘productionist’ rather than ‘productivist’ in that they are focused on production but not productivity as an ideology.

It should be noted from the Treaty of Rome objectives that in the past the ways in which farmers were seen as providing public goods were quite different to the current situation. In particular agriculture had an important role throughout the post-war period of ensuring food supply (Mather, 1988). Although this is not a public good in the strict sense, many farmers saw it as their public duty to produce food for the nation as, in fact, had been emphasised to them during the war years. Even when change came in the 1980s and 1990s it was not driven by the notion of encouraging farmers to become providers of public goods but rather by a combination of an increase in environmental concern amongst the general public (including public ‘bads’ such as pollution) and a potential budgetary blow-out for the European Union as the costs for supporting the CAP continued to escalate. While the provision of ‘public goods’ was always inherent in the notion of improving the environment, its arrival as an explicit objective of agriculture did not really occur until the mid to late-1990s as the European Union sought a means of bringing the CAP into line with the subsidy reductions agreed in the 1992 Uruguay round of the GATT agreement (Grant, 2003). Within the reform package for the CAP, the EU argues that the “The specific role of agriculture as a provider of public goods should be recognised” and further, that “This is all the more important in order to muster public support to the process of further liberalisation of trade in agricultural products.” (Council of the European Union, 2000: 5).

From a policy perspective, the problem of developing a contemporary policy that will secure a continuous supply of ‘public goods’ in upland areas is primarily that, due to the reconnect nature of the change of emphasis to the role of farmers as providers of public goods, very little is known about both what the public wants and how farmers can supply the ‘market’. To investigate this issue, this chapter looks at the public goods provision by farmers in the uplands. It is based on a comparison of the findings of the public survey with farmers’ general attitudes towards these issues and is divided into three main areas – (1) environmental public goods (plants and wildlife, peace and tranquillity, landscape, and stone walls and tidy farms), (2) interaction with the public (farmers as local historians, landscape interpreters and education providers,

farmers as part of the landscape, farmers as accommodation providers, and farmers as tourism providers) and (3) farmers' perceptions of their relationship with the public (farmers' perceptions of the demand for public goods and how they ought to engage with the public on their land).

4.2 Priority in public goods provision – a comparison with public perceptions

The methodology of repeating the family interviews following the completion of the survey of the general public allowed us to get the farm families to evaluate the public goods provision (importance of particular public goods from upland farming) on the same scale as the general public. While the sample size is small, responses were remarkably consistent and substantially different from those of the general public, therefore we suggest that this is likely to be a representative view from farmers across the region. Farmers were asked, using a set of cards, to rank the following in order of the most important (1) to least important (8) in terms of the benefits provided by upland farmers (figure 11).

	Cumbria farmers	Cumbria public	Manchester public
1. Traditional farming skills	1	5	6
2. Small family farms	2	4	8
3. Strong local culture	3	2	5
4. Traditional buildings and stone walls	4	6	7
5. Wildlife	5	1	1
6. Community culture	6	3	3
7. Scenic views	7	8	4
8. Peace and tranquillity	8	7	2

Figure 11: A comparison of farmers' perception of the benefits of upland farming with that of the public in Cumbria and Manchester

From the information in figure 11 we can summarise the main differences between farmers and the public perceptions of public goods as:

1. Wildlife was ranked as comprehensively the most important benefit by both the urban and rural public samples, but only fifth by the farming community.
2. Whereas farming skills, family farming, local culture and tradition are ranked by farmers as being the 4 most important benefits of upland farming, the sample of non-rural general public (Manchester) ranked them as the 4 least important.
3. 'Peace and tranquillity' in the countryside appears to depend on the environment from which the sample is drawn. In particular, the closer to the Cumbria area the individual is, the less they are likely to see it as peaceful and tranquil.
4. Traditional buildings and stone walls were, perhaps surprisingly, more important to the farming sample than to either of the samples from the general public. This may reflect a lack of understanding amongst the public that stone walls are part of the farming system rather than being historical relics.

In addition to asking farmers to rank the public goods, farmers were asked to explain why the rankings were given as they were. The following section looks at the areas in which the public and the farmers' perceptions of public goods differ, as well as reviewing other areas where public goods may be provided.

4.2.1 Environmental public goods

4.2.1.1 Plants and wildlife

It was apparent that most farmers are not particularly knowledgeable about what plants there is on their farm and, in general, excluding land in ESA schemes, have no specific approach to its management. For example, farmer 2 when asked if any area of the farm is managed for wildlife, observes, "No, we don't actually. We just are aware of them there but we don't manage it any different." Wild plants were generally seen as an externality to the farming practice and appear to hold very little interest to the majority of the traditional farmers interviewed.

For example, farmer 5 when asked what important plants there were on the farm replied:

“Heather, er ... basically heather seems to be the most important one. There’s other ones in wetlands and that but I’m not really into plants ... I don’t go out to damage the countryside but I won’t start counting how many flowers there are in the wood.”

And farmer 4:

“Well, this is it, we don’t know because we’re not ... what do you call them ... botanists.”

This reflects a pragmatic view to the conservation of plant species that was common to most farmers. In some cases, farmers seemed to get enjoyment from seeing the growth of plants (for example, the heather recovery after the removal of grazing pressure following foot and mouth – farmer 3), but were generally not interested enough to learn more about the species that were on the farm. Rather than viewing plants as a gardener may (i.e. knowing the names and how to care for the plants), farmers tend to see them as part of the landscape, for example:

“Farm 1 – Son 1 (22 years old): On the bank edge there, what are those yellow ones that keep popping up in the springtime? Primroses, quite a few of them pop up on the bank edges.

Farm 1 - Wife: and there’s those little flowers that you get by the waterside. You should know them.

Farm 1 – farmer: I don’t know the names of flowers. I can tell you the colours.”

Again, this emphasises plant conservation as an externality to farming. It should be noted that this perspective was common to all the traditional farmers interviewed in the family interviews, regardless of the size of the farm. Only one of the farmers (from the Cumbria semi-structured sample) showed any interest in plants outside of

agriculture, however, even he added that satisfaction is still received mostly from agricultural production roles:

“ ... it’s nice to see wild flowers and it is really. *We take cameras now when we’re gathering to look at them and identify them ...* but at the end of the day I’m still a farmer and the feel-good factor of selling, *I sold a tup for £3,800, a Swaledale, only the second one I’ve ever sold, and the feel-good factor from that was tremendous.*” (Farmer 16)

In terms of wildlife on the farm, there seemed to be a greater knowledge in terms of the species that are relevant to farm management (e.g. ‘pests’ such as rabbits, or those that nest on the farm requiring adaptive behaviour such as weaving the tractor around the nests when harvesting or taking care when trimming hedgerows) or recreation (e.g. birds of prey that are likely to affect grouse numbers on the heather). For example, farm family 1 managed to list as birds on the farm herons, grouse, blackbirds, magpies, black cock, swallows, kestrels, and buzzards. Farm family 2 again listed a range of animal species (blackcock, pewits, curlews, grouse, deer, foxes, badgers, and hares) but again, when asked what plant species were on the farm could only think of heather.

Although farmers had problems with identifying plant species this should not suggest that they do not enjoy seeing the wild plants of animals. For example, farmer 10 commented

“I spent the day with English Nature going to gather the sheep out of the crags and they were showing me flowers and such like. *It was quite interesting.*”

Or Farmer 5 on the appearance of otters on his farm:

“I don’t know why they’ve suddenly appeared. *It’s nice to see them.*”

Similar comments were made about the abundance of hares, the return of heather and the presence of birds on the farms. It is not clear whether the public would be more aware of the plant and animal species in the uplands or not, but it would appear that in

order for farmers to be able to enhance the provision of public goods they need to know more about the species they are dealing with and how to manage them. Incremental changes to the environment such as those that result from a gradual increase of stocking rates are unlikely to be noticed, but farmers clearly observed changes when the grazing pressure was released (on some farms) as a result of rapid destocking because of the foot and mouth epidemic (for example, heather regrowth – farmer 3, plants flowering – farmer 1, spread of bracken – all farmers). The point is made by farmer 3:

“You’re just having to run faster and faster and a lot of these things have suffered you see. Without farmers really realising. And now where there’s been a big decrease in stock people are now realising that these things are coming back.”

In order to ascertain whether the ESA and countryside stewardship schemes were having any impact on the overall approach of farmers to public goods provision, farmers were asked whether entering into an ESA scheme had any impact on the way they managed other areas of the farm. None of the farmers interviewed believed that their entry into a conservation scheme had influenced their behaviour on other parts of the farm and most shared the opinion that unless there were payments for managing the land for public goods provision, they could simply not afford to spread the management practices across the farm. In fact, it is relatively common to practice intensive agriculture on the areas not managed for conservation purposes as in the example of farmer 6.

“About 50% of our farm is in stewardship and the other isn’t so there’s one half of the farm which is growing flowers and the other half of the farm is intensive so I’m actually able to fatten stock.”

This is one of the problems associated with public goods, i.e. that as they are open to access for all, finding sources to pay for public goods provision outside of government (who represent the public) is difficult. It appears as if, even when involved in conservation scheme (as all 8 family interview farmers were), farmers continue to view environmental public goods largely as an externality to agriculture rather than a priority.

4.2.1.2 *Peace and tranquillity*

The ranking of ‘peace and tranquillity’ as the least important of the public goods provided by upland farming is interesting in the context of its ranking as the second most important by the Manchester public. From the interviews, however, it became quite clear why farmers do not consider that they provide the public with ‘peace and tranquillity’. While compared to Manchester the countryside is a peaceful place to visit, for farmers the countryside is a working environment and is therefore not associated with rest and recreation. Further, much of the work is done with machinery and therefore, for farmers, upland farming is neither peaceful or tranquil. Some farmers suggested that the very reason the countryside is not peaceful is the increasing presence of the general public – demonstrating exactly how difficult the provision of public goods for all groups is going to be. For example, farmer 7 observed that the general public were very helpful during the foot and mouth crisis in terms of keeping out of the countryside, and he added, [smiling] “*It was very very quiet and peaceful*” – while at the same time ranking peace and tranquillity as the least important of the benefits from hill farming. The level of peace and tranquillity in upland regions is more likely to be attributable to the expectations and past experiences of the public rather than any intrinsic value of hill farming.

4.2.1.3 *Landscape*

As with peace and tranquillity, the role of the countryside as a working countryside means that farmers do not share the same concepts of landscape that the general public or pressure groups have. Studies suggest that farmers generally appreciate landscape from a different perspective, for example: through observing arable landscapes farmers are able to judge the status of neighbouring farmers (Burton 2004); farmers in marsh areas see ditches as drains, rather than the wildlife habitats that conservationists see them as (Burgess et al., 2000); and farmers engage with the landscape more in terms of ongoing practices than as a set of scenes and objects to be appreciated aesthetically (Setten, 2004). Farmers in Cumbria would appear to take a similar perspective such that the concept of ‘scenic views’ means very little to them. Stone walls are field boundaries for keeping in sheep, and farm buildings are there for

machinery or livestock. Farmer 3 makes the observation “It’s one that you don’t look at everyday. It’s all just taken for granted” suggesting that, as the countryside for farmers is an ordinary everyday object, there is little concern for it as a cultural ‘landscape’. This is not to suggest that farmers have no appreciation of the landscape; it simply isn’t a priority. For example, Farmer 2 describes a farm near his where 40 years ago stone walls were taken down and sold in order to make the field sizes larger.

“Farmer 2: When farming was bad a lowland farmer brought it and sold all the stone walls because he couldn’t be bothered to wall them and now it’s just one big field.

Interviewer: What sort of differences are there?

Farmer 2: there’s no shelter ... *just doesn’t look right for the area.*”

Note how this farmer combines the farming value of the landscape ‘there’s no shelter’ with a general assessment of the impact of the loss of the stone walls on the landscape ‘it doesn’t look right for the area’.

The other important aspect of landscape for farmers is that there is a strong belief that they have been responsible for the creation of the landscape in the first place, and therefore that *the landscape is farming* – not simply a cultural interpretation of the environment. For example, farmer 3 observes

“Well anybody you ever talk to they, you know, the first thing they say they always say “oh isn’t this beautiful” ... I have on odd occasions asked them “well what’s beautiful?” “all this scenery”, you know they just seem to think that this scenery is how God created it”

This perception is tied to a general concern that the public, unlike the farming community, do not realise the connection between landscape and farming practices (e.g. farmer 2, farmer 5). However, at the same time there was a broad appreciation that one of the main motivations for the public visiting the area was to view the landscape – for example, farmer 4 observes that it is the scenery that the public

generally talk about when they come back to the bed and breakfast on his farm and farmer 2 that this is one of the things he likes to see the public enjoying on his farm.

4.2.1.4 *Stone walls and tidy farms*

Stone walling and building maintenance is an area where the provision of public goods (in the form of a well managed landscape) and farmers objectives are in complete alignment. For stock management keeping stone walls in good condition is as essential as it is as an important characteristic of the region – particularly the Lake District – and for farmers keeping the farm ‘tidy’ is a symbol of good farming practice. This is not unique to the Lake District. Studies of agriculture across the world have shown that having a ‘tidy farm’ is an objective of most farmers in developed economies, for example, in southern Germany (Retter et al., 2002), the Canterbury plains of New Zealand (Egoz et al., 2001), the central plains of the United States (Nassauer, 1997), and the upper Yorkshire Dales of the UK (McEachern, 1992). Farmers without tidy farms risk being seen as bad farmers by their colleagues (Nassauer, 1997; Burgess et al., 2000; Orescryn and Lane 2000; Egoz et al., 2001) and can be the subject of criticism by other farmers within the community (Burton, 2004). This is also evident in the Cumbrian case study although, as farmer 15 suggests that a ‘bad farmer’ is:

“Anyone that has a mess, their walls are down and they are leaving a mess everywhere and muck and no respect to other people’s thoughts and feelings ...”

That maintaining the walls and buildings is not necessarily for the sake of public goods provision can be seen in the discussion with the wife of farmer 2 who, in response to her husband suggesting that farmers keep the fields tidy and landscape looking nice observes “... *But not intentionally for the general public.*”

It is interesting, given how important the stone buildings and walls are as a characteristic feature of the upland landscapes, that farmers ranked the maintenance of traditional stone walls higher than either of the public surveys. Further, given the amount of money ESA schemes are paying for the maintenance of stone walls and buildings, if the public survey results are accurate, it brings into question the targeting

of ESA money for wall restoration. For the farmers, however, this is one of the best features of the ESA schemes as the lack of labour prior to the advent of ESA schemes meant that wall maintenance was often the first to suffer. Farmers also thought the public would rank stone walls high, thus placing their own values on those of the public. For example, this quote emerged from one of the focus groups:

“Public like to see nice tidy farms with walls up, 90% of public would notice if walls were up or down.”

Comments from farmers suggest that in permitting farmers to achieve the objective of maintaining a tidy farm, the ESA scheme has been extremely popular from this perspective – although far less so from the perspective of the restrictions placed on grazing and farm management (public goods which do not directly contribute to the ‘farmed’ appearance of the farm). For example, farmer 7 assessed of the ESA scheme as

“It’s been good. It’s been good for rebuilding walls and doing barns up, getting new roofs and that sort of thing. It’s been a godsend really.”

And farmer 5

“Where it has been quite good ... there’s a lot of old traditional buildings that have been done up with local slate and stone. That has enhanced the environment. A lot of wall restoration has been done.”

“I mean, there’s real ESA schemes, you’ve got the traditional buildings that have been renovated, there’s areas of stone walls that have been renovated, so yes, I guess you can see the impact of the scheme is high” (farmer 19).

Despite these positive impacts on ESA land, one farmer reported that the arrival of the ESA scheme distorted the market for stone wall provision which, he suggested, more than tripled the cost of wall construction 18. Similarly, farmer 16 observes “I had a good contract waller. He’s got very expensive now” and farmer 14 “We’ve taken out a walling scheme on our ESA and we can’t get anybody to wall for us.” If this is

typical of the area, it suggests that ESA payments may have an impact on the appearance of the countryside outside of the ESA areas (and therefore public goods provision there) as farmers may be unable to afford repairs to stone walls at ESA rates. Further, farmer 5 reports that the money from stone walling is so good that his farm labourer left to become self employed doing walling for other farmers. Given the difficulties farmers have finding labour to work on farms this could be an important drain on the resources of the farm and influence the farmer's ability to manage the farm. On the other hand, it may also provide a useful non-farm income for smaller farmers. Another source of displeasure with the walling was that it can symbolise a real diminishment in farmers' role in production, as a farmer in one of the focus groups wryly pointed out:

“Erm, if you look into stewardship schemes now, putting walls up left, right and centre, why are we putting walls up if we're not going to be keeping stock? I mean we are de-stocking and putting walls up, it seems ridiculous.”

4.2.2 *Interaction with the public*

4.2.2.1 *Farmers as landscape historians, interpreters and educators*

A number of farmers gave examples of where the public was unable to make the connection between 'landscape' and farming activities basically essentially as a result of a lack of knowledge of farming activities – a conclusion also reached in the focus groups. In particular, farmers are concerned that the public does not realise the landscape implications of stock removal from the land which, the farmers suggest, will be an increase in bracken and brambles (e.g. farmers 3, 9 & 16)

“If you don't have these [farming goods] you won't have this – upland landscapes. This is what the public have to realise. You know your sheep have to be on the fells to look after the landscape” (farmer 4).

“I don't think the general public realise what would happen if the stock went off. It's the stock and the farmers that maintain and have created the landscape that we have today” (farmer 3).

Farmers perceive that the urban publics' low ranking of the farming related advantages of upland farming (which they were informed of after being given the items to rank) is largely attributable to the fact that they do not understand the connection between the two. The question is, do farmers have a public role in helping the public make this connection? If this is the case, then clearly farmers' knowledge of the landscapes and how they are created are clearly of benefit to the general public in that they perform a role as 'landscape interpreters' enhancing the public's enjoyment of the area and educating them about the agricultural practices producing it – as farmer 20 suggests:

“the public are absolutely crying out for somebody to actually explain to them why that area of land there has a wall round it, and the bit behind it doesn't.”

And the wife of farmer 4

“You can be putting a wall gap up and somebody ... walkers are going to come past and they're going to stop and watch you and they're going to talk to you and one thing leads to another and you're telling them all the farm history in the end.”

Farmers, particularly smaller farmers who have a long historical occupancy of an area, are in an ideal position to provide this service to the public – interpreting the landscape and explaining the history of farm development. Although there was no assessment made of it in the public surveys, from farmers responses this is a 'public good' they are already providing. In the qualitative family interviews, farmers were asked whether they talk to the general public while they were working on the farm. The result was that by far the majority of farmers have already developed for themselves a role of landscape interpreters and educators:

“[I'll speak] As often as they'll speak back if I've got time. But the general public ... if the general public genuinely want to talk, if they come over when you are working stock and they are asking questions that are meaningful ... and they are interested in what you are doing, then you will talk to them for quite a while” (farmer 14)

“You meet people out on fellside and they sort of look the other way and you say ‘good morning it’s a nice day’ sort of thing and then after a bit they’ll start to talk to you and about half an hour later they’ll say ‘you talked to us and we don’t even know our own next-door neighbour’, and they really enjoy to talk.” (farmer 9)

In particular (usually smaller) farmers running farmhouse B&B’s note that people returning to the B&B often ask questions concerning the management of the landscape such as issues with sheep farming and stone walling. One interesting feature of farmers as landscape interpreters is that, the interaction between the farmers and the public has reciprocal benefits for the farmers – which indicates that it may be regarded as a true ‘public good’. As farm labour has become increasingly scarce farmers are becoming more and more isolated on the farms and the provision of positive interaction – providing it is not associated with interference with the management of the farm – can be a positive reward for farmers. For example, in addition to farmer 11 noting that ‘I quite enjoy it’, farmers have observed:

“No, it’s good to get the time of day. I’m quite pleased. When Mother and Father go and I’ll be here on my own and I’ll need it ... If you don’t see anybody, you’d go round the bend like, so if you are talking to people, *I think I need it more than they do sometimes.*” (farmer 11)

“Well there is a footpath here. I don’t have a lot of contact with them but I talk to them, and you’ve probably realised I can talk a lot. I don’t give them an option, they are *going* to talk to me.” (farmer 16)

This is unlikely to be the same for all farmers, but smaller traditional farmers with more time and a lower proportion of their job involved with business or managerial roles may play an important role in public goods provision in a mutually beneficial arrangement. It is possible that this interaction has led to farmers in areas of high tourist potential (particularly in the well-walked areas of the Lake District) having a fairly positive perspective of the general public, whereas farmers in the more isolated areas with lower tourist potential (such as the Pennines) have a slightly more negative view. On the other hand, many of the farmers in areas of high tourist potential also have part of their livelihood dependent on tourists. Farmers interviewed within the

Borrowdale area near Scafell Pike and the coast to coast footpath – were particularly positive about the presence of the general public on their land and their importance for the financial viability of the farm.

4.2.2.2 *Farmers as part of the cultural landscape*

In cases where farmers have direct contact with the public there is clearly a case to argue that they are providing a public good. However, there is also a case to argue that farmers play a public goods role in simply being part of the cultural landscape – part of the consumption of the uplands experience.

“Holiday makers have definitely taken on as a major industry ... you do find a lot that are interested in what’s going on. They see you working in the sheep pens and come over and watch what we are doing.” (farmer 18)

“Sometimes you know if you’re doing a job you can sometimes see quite a lot of them actually watching you and wondering what you’re doing and interested in what you’re what is actually going on.” (farmer 3)

“If we’re moving sheep along the roadside folk will pull over and take photos.” (son farmer 8)

The degree to which this public good is shared is clearly, however, going to be dependent on the position of the farm relative to public rights of way. For example, farmer 8 – who moved to a new farm after foot and mouth – observes that whereas the public used to sit and watch him at his old farm in a more touristy area, now they only watch from the roadside when the sheep are gathered. Farmer 7 similarly observes that on his farm not many people stop to watch him work because there are no footpaths going through the farmyard, although, “quite a lot of farms have a footpath through the centre of the farmyard.” In places like Borrowdale the appearance of farmers as part of the landscape may be a significant part of public enjoyment of the area.

4.2.2.3 *Accommodation providers*

As noted above, farms running B&Bs can have an important role as ‘landscape interpreters’/ historians/ educators for the general public because of the close contact between the farmer and the public and, generally, the close proximity to a working farmyard. Many farmers in the survey ran bed and breakfast’s. Out of the 36 farmers in total involved in the semi-structured interviews, eleven ran B&B’s. The greatest concentration was in the Lake District area where 33% of farmers were involved in B&B provision – in comparison to 16% from the Pennines, and 25% from the Orton-Howgills complex. With the exception of one farm where the B&B was run through contract labour, B&B provision was exclusively run by either farmers’ wives or the wives of their sons. Bed and breakfast provision is not, in itself a public good as it cannot be used by just anybody without cost, but, in addition to those who benefit from access to landscape interpretation and education, it also provides people with the ability to access other public goods and as such should be mentioned. Working farms fill a niche in the market not filled by other forms of accommodation such as hotels and guest houses. For example farmer 11 suggests,

“It is important, we didn’t do anything but stick a board up at the end of the road. We used to get people that wanted to stay on a farm. They didn’t want to go to C**** Farm in the middle of the village which is now a guest house, they wanted to stop on farms that *were* farms.”

The issue here is what types of farms are likely to be running the B&Bs. In general, larger farms have a higher turnover and higher demand for labour and so have both no need to run a B&B nor do they have the labour available to do so, thus it is generally smaller farms or those that are economically marginal that do farmstay B&B’s.

“The B&B keeps it going, because I think they are reducing the number on these farms that much now that if you haven’t diversified ... because previously we had 450 sheep and the wife did B&B and I worked, farming wasn’t paying anything, and luckily we moved here, and we doubled our numbers of sheep, but half of them are still fell sheep, you know a Herdwick lamb and a Swaledale lamb, they’re not worth a lot at the back end. So it’s still supporting the farm.” (farmer 17)

“We couldn’t farm without the campsite. So we have visitors in the house for B&B. That is an essential thing for Lake District farms as well.” (farmer 18)

The problem, in terms of public goods provision, is that it is exactly these smaller marginal farms that are under the greatest financial pressure and most vulnerable to being split and having the farm buildings sold off for accommodation. As farmer 11 observes in terms of the number of his friends in the area that run B&B’s

“Not as many as there used to be. Not as many farms as there used to be.”

Other farmers have observed that the profitability of their farm is entirely dependent on the B&B business as opposed to agricultural income, for example,

“A lot of farms they’re letting now, they’re saying it’s part time and you need some other form of income, you need a B&B or you need to take on other work and that. It’s a shame really, how the big the farm is [500+ acres inbye + fell rights], you’d think you’d nearly be able to work on it full time.” (farmer 12)

“We are just talking farming here, because I think the B&B makes more than the farm.” (farmer 10)

The picture here with B&B provision is that, with the increasing loss of smaller farms from the area there is a threat to the supply of farmhouse B&Bs and the role of farmhouse B&B’s in providing local knowledge to the public. The decrease in labour availability and need for pluriactivity is also likely to push farmers away from the provision of public goods as demands are increasingly made on the labour of the farmers’ wife.

4.2.2.4 *Tourism providers*

Farmers provide tourism services through both direct and indirect measures. Two of the farmers on the National Trust farms were involved in farm open days, inviting the public onto their farms for farm walks (farmer 5, farmer 17). But, besides this and the

maintenance of public footpaths there was very little direct provision of leisure facilities (This lack of tourist provision was also noted for the Lake District in the IEEP, 2003c report). Farmers did emphasise however the provision of open access for walking as a by-product of farming and that without sheep on the fells, fell walking would be difficult as the paths would quickly become overgrown as sheep grazing and trampling is a means of keeping bracken down. Overgrazing of heather is clearly likely to be detrimental to the environment, however many farmers talked of problems since entering the ESA scheme in that bracken is expanding again with the release of sheep pressure and, in some places, making access to the upland fells difficult for walkers. If the sheep were taken off or grazing reduced to a level where sheep could no longer control the environment farmers are concerned that the area would become overgrown. When asked what would happen if grazing pressure was released on the fells, typical responses were,

“I’ve always said that there should be somewhere in the lake district a site with no stock on it just to see the public what does happen. Bracken and briars and brambles” (farmer 3)

“You would have brackens and brambles and gorse bushes prickling you and you would see very little around about you” (farmer 9)

There has been no assessment of the problems that people walking in the uplands have with bracken encroachment, however, it is clear that an increase in bracken and the smothering of footpaths will not make access to the fells easier and the visibility from the hills will also be affected. In addition, there is the issue of how bracken encroachment influences the public’s visual enjoyment of the area. At times of the year bracken can look quite attractive from a distance but no studies have been done looking at the visual importance of bracken in the landscape.

4.3 Farmers and the public

4.3.1 *Farmers' perceptions of the demand for public goods*

As noted at the beginning of this chapter the recent incursion of the concept of public goods provision by farmers has meant that farmers do not really have a great understanding of what public goods are, much less how to deliver them. Farmers experiences of what the public wants are generally formed from their observations of what the public does in the uplands, combined with their own perceptions of what they would like to see in a landscape. Farmers perceptions of a good farmer is of one who has a tidy farm and looks after his stock, therefore, farmers transferred this preference to the general public. For example,

“Their picture is of grazing and a pasture with a farmer ... we look like the part. People are quite happy with that ...” (farmer 16)

“Well-groomed, tidy, maintained, landscape.” (wife of farmer 6)

Farmer 7 even suggests that the public is most likely to be interested in sheep and cattle, but he is unsure.

“Er ... [long pause] ... Obviously they like to see the sheep and the cattle and what have you on the land as they walk through it. But I’m not quite sure what the perspective of the public is really. Can’t say I’ve ever asked them that question to be honest with you.”

And farmer 16 extends this notion to observe that farmers play a cultural role as part of the symbolic meaning and identity of the Lake District.

“But also when you are working with sheep, people photograph it all the time. It’s that sort of romantic idea of one man and his dog ... so there is a whole package with the Lake District and with poetry and stuff, it’s everything really.” (farmer 16)

The perspective that the public are interested mostly in farmers may be due in part from the numerous observations of members of the public photographing sheep being

gathered or walking along the roadsides. All 8 of the farm families interviewed were asked what they thought the public was looking for and none mentioned either peace and tranquillity or wildlife – the top two choices for the urban public sample. While it may not be representative as only farmers in the family interviews were asked this question explicitly there was very little suggestion that the public were looking for farmers to keep footpath's tidy and styles and gates maintained.

4.3.2 *Having the public on the land*

In general, farmers do not seem to have a problem with having the public on their land, although some farmers expressed the view that the introduction of the right to roam CroW legislation was going to be problematic in terms of managing the farm both in terms of livestock and environmental objectives. Concerns were expressed that more open access to the countryside was likely to lead to damage to walls on farms with an accompanying economic cost (e.g. farmer 4) and, at the same time, it would conflict with the environmental objectives of the ESA scheme. For example, farmer 3

“Well, a lot of it's just disturbing the wildlife really these ground nesting birds ... if people are wandering around with dogs these ground nesting birds aren't going to get much peace ... which is going against what we as farmers are told we have to provide ... and they turn around and give the public open access!”

One interesting aspect of the study was that farmers in areas of high tourist potential such as Borrowdale seemed to have fewer problems with the public than those living in more isolated parts of the uplands. This could be for any number of reasons including increased exposure leading to greater understanding and ‘getting used to them’, tourism playing an important economic part of the farm business leading to a more positive attitude, a higher number of National Trust farms in the area so farmers view their role of looking after the public as more important or even better public behaviour in areas with higher tourist density because of social norms. The geographical variation of farmer concerns and the reasons for this is something that may be investigated in another study but it is certainly variable.

While farmers did note problems with the general public and, in particular, were concerned about increasing the level of public access through the ‘right to roam’ they also reported a number of advantages to having the public on their land. In popular tourist areas such as Borrowdale, that advantage is evident in that the tourist trade and, in particular, bed and breakfast provision, has become an important part of the farm structure as noted above. Also mentioned was the fact that the public can make the job of working on an isolated part of the farm more interesting as farmers may otherwise go a full day without talking to someone. Farmers can benefit from the interaction as much as the general public, for example

“Unless I’m really busy, I’ll take 10 minutes to have a chat with them. I think that’s beneficial both ways. I think most farmers will do that, as long as you’re not absolutely rushed off your feet. Mostly farmers will talk.” (farmer 19)

The mother of farmer 11 observes that the public can also inform them if a sheep has problems on the fells

“ Now people often come and tell us that a sheep has got their head stuck in the fence. You’ve got to go and see.”

While we cannot claim a representative sample from across the region we can tentatively conclude that the provision of public goods to the farmers and the relationship between the farmers and the public itself are very different in different parts of Cumbria. While there was widespread tolerance of the general public where they do not interfere with farm management, there also seems to be a correlation between having more members of the public on the land and being more receptive to the general public – although as noted above this needs further research.

4.4 Conclusion

The above review suggests that farmers provide a wide range of public goods ranging from their well known role of custodians of the landscape, to new concepts such as their role as informal landscape interpreters/educators or, indeed, part of the overall

cultural experience of the area itself. Not only this, but farmers – despite their reputation as being opposed to public access – are in general happy to allow public access providing it does not interfere with the running of the farm, and there are even ways in which the public contributes to farmers’ well-being – building up vertical social capital between the groups. This may be happening more in the areas where there is more communication between farmers and the public, but it does demonstrate that there can be a meaningful and mutually beneficial relationship between the two outside of agriculture. Another interesting feature of this part of the study was that farmers are in general unaware of all the public goods they are providing as well as unaware of what the public is looking for when visiting the area. This may be attributable to the recent incursion of the notion of public goods provision, but is a situation that should be resolved before deciding on the best policy to deliver public goods. There is little understanding of the farmers’ potential to supply public goods and the best way to achieve these objectives.

Farmers in general, quite logically, appear to believe that the public is interested in seeing the same sort of things they wish to see – livestock and tidy farms and that, at the same time, the public would not like to see the uplands overrun with bracken or brambles. However, as the results for the survey of the public suggest, for the urban public at least, the sort of things they value – wildlife, community culture, scenic views, and peace and tranquillity – are not aspects that the farmers see themselves. In all likelihood, this is as a result of being too close to the area. It is easy to hold an image of the countryside as part of the ‘rural idyll’ (i.e. The image of the countryside as the location of a natural way of life: of peace, innocence, and simple virtue and of villages as the location of ‘community’ – Stebbing 1984: 201, also see Halfacree, 1995) when you are not living in the countryside, but for farmers it is a working environment. They are aware that there is conflict in the area as well as *community culture*, they see the *scenic views* through their own cultural symbolism where it represents ‘good farming’ practice, *peace and tranquillity* is not as obvious working in a mechanised job (and what there is, is under threat from increases in tourist numbers), and the *wildlife* that the public values so highly is and always has been simply part of the traditional farming system and farmers have a difficulty separating the two. What farmers do value is the cultural aspects of agriculture – traditional skills, traditional landscapes, family farms and culture – and, it is argued, these are the

source of the public goods and, therefore, if the public wants the uplands as they are at the moment, policy makers need to focus on maintaining these systems.

One thing that is clear is that social capital has an important role in maintaining the public goods supply. From farmers' roles in keeping tidy farms, looking after the environment on common grazings, or supplying bed and breakfast to their role as landscape interpreters/educators, social capital is the glue that both holds the networks together and creates new networks between the farmers and the public. It is clear from the above assessment and that of the previous chapter that the loss of social capital in the farming community through weakened social links and, particularly, the loss of farmers from the area could have a major impact on the supply of public goods in upland regions. The next chapter focuses on putting the social capital and public goods discussions together to try to understand what might actually happen in the uplands should social capital continue to be lost.

Chapter 5. Upland farming in Cumbria: developing a conceptual model of change.

5.1 Introduction

Thus far this report has looked at two major issues for upland communities; namely, the importance of social capital in the uplands and public goods provision by farmers. In this chapter we wish to move this debate along by looking at a scenario of what could happen in the area if the current social and economic changes continue and, in particular, we focus on the impact this is likely to have on both the farming communities and public goods provision in the region. While the information presented here is clearly the farmers' perspective on the events – particularly land use change issues – we try to assess the accuracy of these predictions on the basis of recent scientific evidence. The objective, is to develop an understanding of the social, economic and environmental systems, how the components interact together and, importantly, where policy may best be targeted in order to alter the system if required (i.e. where the weaknesses in the system are).

5.2 Current issues in social capital/public goods provision

In the interviews with farmers we identified a number of social and economic trends that are occurring in the region. This section will review each of them in turn.

5.2.1 *House price increases and the division of houses, buildings and land*

There is no question that the price of houses in Cumbria is increasingly rapidly and that, in some areas at least, the prices are at levels that inhibit locals from owning property. As noted previously, figures suggest that in 2004 house prices increased in Cumbria by 46% over a 12 month period (<http://news.bbc.co.uk/1/hi/business/3618415.stm>). Farmers reported, however that the price of property is highly variable. For example, farmer 8 moved from a farm 25 miles distant in Cumbria to his current

location in order to expand the farm and enable his son to enter the business. While the original intention was to sell one farm and purchase the other, circumstances meant that the sale of the old property did not occur immediately such that it was only necessary to sell the house and buildings (separately) to fund the new farm – resulting in a farm double the original intended size. Similarly, farmer 14, in observing that he would like to move, observes “We would have to move at least 7 miles away before we could afford the property.” Suggesting again a highly regionalised pattern to house prices. Interestingly the increase in house prices is, in general, not matched by an increase in local population of the kind that can, as found by Findlay et al. (2000) lead to economic growth in rural areas. Statistics indicate that in the South Lakes area resident population has, in general, been declining. For example, in the South Lakeland town of Ambleside resident population decreased by – 4.6% in the 10 years between 1991 and 2000, for Grassmere this decline was – 6.2% and for Hawkeshead – 10.0% over the same period (Cumbria County Council, 2003). It is thus likely that house price rises are driven by an influx of second home owners rather than income generating migrants.

The impact of increasing house prices is to make accommodation expensive for those living in rural areas and either working directly in the agricultural industry or in support industries, thus creating financial problems for local rural people (Shucksmith, 1990). This may affect farmers in 4 main areas.

- a) For larger farms high rental costs may make it difficult for farmers to find farm workers or pay for accommodation for them (farmer 14) and, for smaller farms, finding seasonal or occasional labour may be equally difficult (farmer 5).
- b) The cost of accommodation limits the ability of farmers’ sons to move off the farm. As farmers often do not take financial control of the farm until their 40s this, in combination with a decrease in the number of small farms available for farmers to ‘make a start’ on, may act as a disincentive for farmers’ children to go into agriculture in the region.
- c) The decrease in the number of local people resident in the area that appears to accompany the high price of accommodation has the effect of both decreasing overall levels of vertical social capital (e.g. farmer 4) and farmers’ opportunities to provide for a local market outside of the main tourist season.

- d) Increasing house prices also, as with farmer 8, provides owner-occupier farmers with financial opportunities as the price of buildings and houses relative to land is high selling buildings can fund farm expansion.

While these direct results of increasing house prices can create problems for farmers, arguably more important in terms of its effects on agriculture is the indirect influence high house prices relative to the price of agricultural land can have on the development of farming communities.

Increasing farm sizes and the accompanying loss of smaller farms is neither a new phenomena nor one unique to Cumbria (e.g. Britton, 1977; Burton & Walford, in press). In general, it has been driven by the economic viability of the agricultural industry as it responded to trends in global commodity prices combined with the need to generate economies of scale as production has become increasingly efficient. In Cumbria – and particularly in areas of high tourism potential such as the Lake District – high house prices can have the effect of accentuating this trend. While this may also be occurring in other areas of the UK such as the ‘stockbroker belt’ around London where house prices are also high in rural areas (Beaverstock et al., 2004), the high scenic and tourist value of the Cumbria region combined with the widespread presence of common grazings makes this issue more of a problem in terms of public goods provision.

Note that while figures tentatively suggest that for upland areas there may be increasing numbers of farmers in the smallest categories (<20 ha) (IEEP 2004a) these farms contribute very little to the overall economy of a region in terms of their farming output, nor do they account for a substantial proportion of the land area managed. The fundamental trend in farm size change and land management control is still towards land concentration (Lobley et al., 2002).

Where prices for houses and buildings for conversion are high, often the most profitable way of selling a farm is reported to be to split it up into three or more units – buildings, farmhouse, and land (either as one unit or divided into blocks). Failing to split the parts up means that the farm has to be sold as a ‘working farm’ and, in an industry with a questionable future and where small farms are not highly profitable,

this is highly unlikely to fetch as much as if the farm is divided. The impact of the division of farms on the social capital of farming communities – particularly as measured by the number of farmers in a region – can be substantial if farmers' reports are accurate. For example, the son of farmer 8 noted that he calculated the number of small farms that had gone from the area they used to farm in the last 20 years as nineteen from within a 4 mile radius. As with house prices these figures are likely to be highly regionalised depending on the historical development of the area. For example, farmer 1 from the Pennines noted that in one valley 6 small farmers were likely to go out of business in the next 10 years, and that farms in that valley were small because they had historically been used by miners to supplement their incomes. A similar situation was noted by farmer 3 who, when asked how many farms had been lost in the valley in the last 20 years observes

“I can only really think of 2. They both got split up. *But to go out of the valley you'd probably need 2 hands to count them.* Around the village at Staveley there ..”

In other examples of changes in the valleys, farmer 6 observes that 3 out of 18 farms in his area have disappeared over the past 20 years and the wife of farmer 4 reflects that in their valley the number of farms is likely to go from 5 to 3 in the next 10-15 years. On the other hand, Farmer 2 observed that no farmers in his area were likely to go out of business in the next 10 years as all had sons wanting to take over the farm.

Farmers' opinions of the demise of small traditional farms are interesting. Given that farmers commonly seek to expand their farms in order to either provide for succession (Potter & Loble, 1992) or simply part of a 'productivist' approach (Walford, 2003), it is perhaps surprising that farmers in the Cumbria region seemed generally opposed to the demise of smaller farms. Concern centres around three main areas of loss. First, farmers were concerned for the role smaller farmers play in servicing larger farms and the impact of losing that labour source. For example, the wife of farmer 4 observes:

“Well around here you've got to keep the small farms to get the workforce. Skilled labour. So I think you need to keep them. Because this farm here used to carry 3 workers at one time. We couldn't afford to have anybody working here.”

Similarly, farmer 8 – who employs a local small farmer to clip the nails of his animals observes that “They make life easier for us but I don’t know whether we make life easier for them.” Small farmers who require additional money to maintain the farm may thus provide a valuable service industry for farmers that is diminished as smaller farms are lost from the area.

The second concern was the impact of the loss of farms would have on the sense of community in the area. For example, when asked whether it is better to make farms more commercially viable through enlargement or keep the smaller farms, farmer 3 suggests:

“Well the ideal situation would be lots of small farms wouldn’t it. You’d then get more of a community ... take a valley like this. The farms are getting bigger. You then get less of a community spirit really.”

Part of this sense of loss of community is about the loss of social capital in the region, and in this the impacts of the loss can extend into the financial and managerial realms and beyond simple community spirit. Thus the third area of concern – and one common to many farmers with common grazings – is that the splitting up of farms and loss of the smaller farmers (or any farmers as some noted that it was not just the small farms that were getting split up) makes managing the fells much more difficult.

5.2.2 *The impact of the loss of traditional farms on gathering*

The gathering of the common grazings is an essential part of upland farming. As noted previously the topography of the area makes management of the high fells particularly difficult (especially in the Lake District) and a lack of fences compounds this problem. Thus fell gathering requires a substantial amount of co-operation and therefore social capital. The way that a fell community should work in the process of gathering is epitomised by farmer 13 who gives the example of his fell:

“When he comes to gather in the fell there’s a little old fellow, 65 now, and he rings round up to 10 people. “What day of the week do you reckon?”. Rings round everybody, Tuesday weather’s good, everybody arrives at the fell gate, the lot. The lot

goes. And the communication is like “snap” that. There isn’t a captain. We’re all captains – we’re all Indians.”

In this fell the large number of farmers able to co-operate provides both the means of effectively gathering the fell and an almost social atmosphere to the gather, increasing the work satisfaction farmers get out of their job. However, the value of co-operative action is highly dependent on the number of people that are available to gather the fell relative to the area itself. Too few people to gather the fell caused, for example, by the loss of smaller farms for a fell area, can lead to problems with farm management

“Trouble is, there was a lot more little farms 40 years ago all had sheep on the fells and obviously there was more people to gather the fells. Whereas now it’s getting more like a skeleton crew as farms have been amalgamated but we’ve still got the same acreage of hill to gather”(farmer 5).

Many other farmers noted that there are problems in their fells getting enough people to do the gather. Numbers have dropped significantly. For example, farmer 2 states that when his father was farming there were 20 people working the fell but now that number has dwindled to 5. For farmer 6 the number of farmers working his fell has declined since 2000 from 4 to 2 with one farmer retiring and the other farmer deciding that it required too much effort for the financial return. This loss of smaller farms was also found by Lobley et al (2002) in their study of farms in the Orton-Fells area where they found 23% of farmers were planning to leave farming in the next 5 years, and that these were mostly older farmers on smaller farms. For some commons the labour problem is such that they have to employ contract shepherds to help with the gathering if there is not enough labour available within the local area. Contracting labour in is, however, not a preferred option both from the perspective that many of the farms are only marginally economically viable anyway, and that the contracted labour is unlikely to have a particularly good understanding of the heft. Where numbers drop to a critical threshold there is danger that the whole system can collapse – particularly when many of the farmers in the common are older farmers. For example, farmer 19 tells that the retirement of one farmer from farming on his common has led another farmer, one of the younger farmers at 40 (involved in the more strenuous work during the gather) to reconsider his position.

“It’s a hard farm. And since he’s turned 40, he’s a fit lad, he’s finding it harder. All of the sudden, there’s one of the guys is going to retire, he wants out, what’s going to happen to that gather?”

Returning to Figure 7, two possible scenarios can be outlined in more detail for the change in social capital generated by fell gathering. In the first, following a slow but steady decline in the number of farmers, we could see social capital gradually dropping off over an extended time period. With the continued loss of farmers from the common grazings this is almost a ‘best case’ scenario. In the second, because of the difficulties involved in handling fells with low numbers of farmers, there is the potential for fells to experience a dramatic change in the nature of social capital as farmers simultaneously abandon the fells to focus on other aspects of the business.

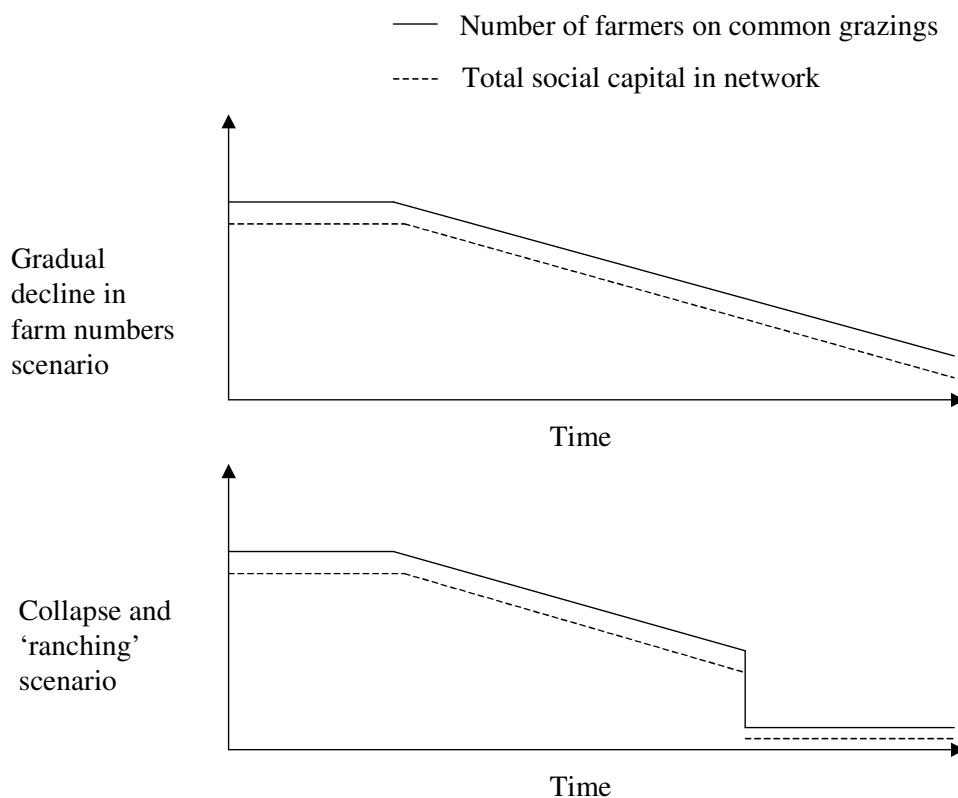


Figure 12: Scenarios of social capital change within fell grazing

While the biggest problem is undoubtedly the loss of farms and farmers from the area, the answer to the problem is not simply to repopulate the area with new farmers. In

many regions the relationship between farm families and thereby social capital has built up over more than one generation and these trust networks help to keep the traditional practices together. Farmers report problems when new people arrive in an area and do not fit in with the local community – as farmer 19 goes on to explain.

“... all it takes is for one new tenant to come in, that doesn’t fit in to that little group of co-operation, and it starts to break down. You won’t get such a good gather on the fell” (farmer 19).

This event is not that unusual in areas of the Lake District controlled by the National Trust who, until recently at least, have maintained a policy of trying to keep the smaller farms together. In particular, farmer 6 describes how his common is currently having problems with a new tenant who does not want to participate in the community spirit of the common grazers and the financial problems this can lead to.

“He doesn’t have much experience so his sheep are in poor condition and they have access to the commons ... which is a big problem. There have been several complaints. We dipped our sheep ... and this was expensive 6 week protection. But he didn’t. He’s not interested in joining the community. We would help him dip his sheep but he didn’t ask. Everyone needs to work to the same system.”

Without the new farmer participating in the community and the gather being conducted communally his sheep are left on the fell and can act as centres for the spread of ticks and disease. The farmer notes that it costs 100s to 1000’s of pounds to treat for scab. Farmers such as farmer 14 and farmer 5 suggest that the only effective way of ensuring the new farmer will fit in is if the farming community has some say over who comes onto the new farms. However, clearly, with the exception of National Trust farms where farmers have an authority to lay complaints with, this is not the case for private sales and divisions.

5.2.3 *Gathering and land management*

Problems with the gathering system clearly have knock on effects on the management of the fells. This is probably the critical area as far as the provision of public goods is

concerned as many of the public benefits that accrue from maintaining upland farming come from their ability to manage the upland landscapes. In particular two problems can occur directly as a result of management difficulties through the lack of effective grazing, namely:

- 1) Increases in bracken and scrub as a result of a reduction of grazing pressure if farmers abandon their fell rights
- 2) Lower control over the grazing system as a lack of skilled labour means that livestock are not gathered properly from the fells and general problems with the hefting system.

These changes need to be also considered in the light of other events occurring in the agricultural industry. First, most farmers involved in the survey were involved in either the ESA scheme or the Countryside Stewardship Scheme (CSS). Of the 36 farmers involved in the wider farm survey only 5 farmers were involved in neither scheme and, within the Lake District sample, all farmers were members of the ESA scheme. Agri-environmental measures therefore clearly play an important role in farming practices in the area. The main concern for conservation of the environment has been the overgrazing of the upland areas and the damage this may be causing to upland habitats and species. The impact of the agri-environmental measures has therefore been to try and get farmers to reduce their stocking rates. The second event is the gradual phasing in of the Single Farm Payment over an 8 year period. This area based payment will be based on historic subsidy receipts and effectively removes any incentive farmers may have had to overstock areas and, at the same time, introduces regulations concerning the maintaining of the land in Good Agricultural and Environmental Condition (GAEC). Beyond this little is known about the impact of the single farm payment.

During the course of the field research much emphasis was placed by farmers on the role of traditional farming as maintaining a relatively good balance between the environment and stocking densities. The argument commonly presented is that it has never been in farmers' interest financially to overstock the fells on two grounds. First, any overstocking of sheep on an area of common grazing is likely to lead to excess pressure on neighbours' farms with potential conflict the result. Thus maintaining

stocking densities is necessary in order to maintain social capital and the farmers' position as member of the local community. This is particularly important in areas like the uplands where the role of social capital in communal land management means that losing one's social capital is likely to have financial repercussions on the business – e.g. other farmers not bringing your sheep off the hill when theirs are gathered or not helping at times of gathering, increasing the individual farmers' labour requirements. A similar problem may occur with the removal of sheep as, if sheep are removed from one area, other sheep will begin to stray into the new region, making gathering more difficult for the farmers.

Second, and more importantly, where stocking densities are too high the quality of the animal is widely perceived to suffer as the sheep increasingly compete for resources in an environment where resources are relatively scarce to begin with. Further, increasing stocking densities means, on fells with tick infestations at least, the costs of controlling the parasite problem are also likely to increase as transmission. An additional issue is that decreasing stocking densities was noted, by one farmer at least, to lead to an increase in the number of deer on the farm (farmer 3). Thus the removal of sheep does not necessarily lead to environmental benefits. Hester & Baillie (1998) found that given similar densities, the overall damage to heather moorland by red deer was similar to that of sheep. Thus if the removal of sheep leads simply to their replacement by deer the overall benefits of reducing sheep numbers may be limited. In terms of studies of the impact of sheep grazing there is little doubt that overgrazing causes damage. However, long term studies of upland grazing suggest that, while there is undoubtedly some damage caused by sheep, where sheep were excluded over a 24 year period, there was a decline of plant species numbers (Rawes, 1981, also see Welch and Rawes, 1964).

The main issue with attempting to control the environment is that while it is clear that overly high grazing densities have negative impacts on both flora and fauna, we have little understanding of what the impacts of changes in management are likely to be. As Evans et al. (2003) observe, small changes in the profitability in the beef industry can have considerable impacts for the environment. Yet at the same time, even if the impacts were understood, hill pastures in the uplands are still adjusting to changes in management practices over a century ago. Hill et al. (1992), for example, note that

some hillsides in Wales are still adjusting to changes in the grazing regime (the removal of over-wintered wether sheep) that occurred around 1900. Some farmers observed that many of the problems with overstocking on the fells are relatively recent and there is some evidence to support this. In particular, Evans et al. (2003) report that the crisis in the CAP in the 1980s and early 1990s led to the rapid expansion of sheep enterprises in the uplands as farmers sought to restore their profit margins. This is supported by MAFF June census data which suggest that between 1977 and 1989 the stocking densities on moorland rough grazing in England and Wales was increasing dramatically. In 1977 48% of rough grazing had a stocking rate of less than one ewe per hectare whereas in 1989 this figure had dropped to 7%. Similarly, stocking densities of over 4 ewes per ha was unusual in 1977 with only 4% of moorland showing this level of grazing. In comparison, in 1989 the figure had leapt to 22% (Thompson et al., 1995).

On the other hand, a reduction in grazing pressure not only allows the regeneration of the heather environments but also encourages re-growth of other species particularly, in the short-term at least, bracken (*Pteridium aquilinum*). This is problematic for the region for more than one reason. Lawton (1988: 225) lists the problems with bracken growth as follows

- It causes the direct loss of grazing land
- It is poisonous to stock
- It makes shepherding very difficult
- It acts as a reservoir for sheep ticks, causing problems for farmers and managers of grouse moors
- The plant is carcinogenic, and has been implicated in higher than average indices of cancers in people living in bracken infested areas
- Finally, invasion by the plant leads to a loss of plant and animal communities that conservationists regard as more desirable than dense stands of bracken, for example heather moorland

In the late 1980s bracken was a serious problem on agricultural land. Lawton observed in 1986 that bracken coverage across the UK was spreading at 1-3% per

anum and had a measurable financial impact on agriculture. As a consequence, in areas such as Cumbria considerable effort has been placed into bracken control – particularly because of the new emphasis on agri-environmental measures through the ESA and the emphasis on habitat restoration. Control of bracken (in particular when bracken has become an extreme problem) is predominantly through the use of chemical herbicides – either Asulox (also Asulam – a selective chemical that focuses on bracken but may effect other plants such as some ferns, young heather, western gorse and some grass and tree species) or Glyphosate (a broad spectrum herbicide that kills all green vegetation it contacts) (Southern Uplands Partnership, 2001). Aside from chemical treatments, bracken may also be controlled by mechanical means (Cutting, bruising, crushing, ploughing) and through preventative measures – in particular balanced stocking regimes with fewer sheep on badly affected areas.

Bracken control measures have shown some degree of success. Pakemen et al. (2000) point out that in the National Parks at least between 1984 and 1990 there was a net reduction in the area of land dominated by bracken from 4200 to 3800 km² although during this period the predominant move was towards managed grasslands – an outcome far easier than converting bracken to environmentally desirable heather. That this is a constant battle, however, is evident in that as the level of bracken was reduced through spraying by 1000 km², there must have been 600 km² of bracken spread into new areas or regrowth on the sprayed areas.

Pakeman et al. (2000) point out that there is little evidence to help predict the likely consequences of the lowering of stocking rates as part of agri-environmental schemes and the management impacts of the Single Farm Payment on the spread of bracken. However, they suggest that “large areas of the uplands and marginal uplands may be at risk of invasion in the future as a result of land use changes” (40 - also see Pakeman & Marrs, 1996). Another important factor to consider in terms of the future changes in bracken levels in the uplands is the impact of climate change. While some factors are likely to impede bracken growth (e.g. increased drought), others may encourage bracken growth (e.g. increased CO₂ concentrations improving water use efficiency, longer growing seasons) and overall, much of the future of environmental restoration in upland areas may be determined by competition effects between bracken and other plant communities. Werkman & Callaghan (2002: 275) observe of the competition

between bracken and heather moorland that all other things remaining equal “in a warmer climate bracken will continue to displace heather moorland in the British uplands”.

One area where research concerning bracken control is unanimous is in the fact that spraying bracken alone is not sufficient to ensure adequate control. Pakeman et al (2002) note that between 1980 and 1998 845 km² of bracken was sprayed with Asulam by the air at a cost of £12,000,000 at 1999 prices – however, a survey of 102 sites showed that on 75% bracken regeneration towards dominance appeared to be proceeding (Pakeman et al., 1998). A second problem observed by Pakeman et al. (2002) is that of ‘undesirable replacement vegetation’. Of the 102 sites sprayed, only 17 could be described as heathland, with the majority of cases going to grassland of relatively low agricultural and conservation value.

In terms of traditional farming the issue we are raising here is one of the need for maintaining traditional farming methods to optimise bracken control. Of the options available to farmers in upland areas the possibility of mechanical treatments is often ruled out by the terrain (other than in the inbye land), leaving the only options the careful control of grazing regimes and spot-spraying – or a combination of both. In terms of restoring heathland vegetation grazing control is even more important. De Luc et al (2000) suggest that the timing of the grazing is a critical factor in heath restoration with low grazing in the beginning potentially leading to an ‘overshoot’ of the target community and a species poor vegetation. High grazing at a too early stage, on the other hand, is likely to lead to a different, but again undesirable plant community. Le Duc et al. (2000: 158) conclude “Grazing can be critical in determining the fate of heathland. However, careful application of treatments, including grazing and seeding, are recommended.” (also see Pakeman et al., 2000).

This need for carefully controlled grazing regimes strongly suggests that the best option for bracken control in upland systems is likely to be through the maintenance of traditional farming approaches for the following reasons.

- 1) The combination of sheep and cattle grazing practiced in traditional farming is a better system for controlling bracken than sheep grazing alone as cattle mechanically crush the bracken fronds while grazing (Lawton, 1988).
- 2) Traditional farmers manage land on a smaller scale. This enables more careful environmental management of the farm and thereby a greater ability to produce desirable plant communities after bracken has been chemically removed.
- 3) As a means of controlling bracken on common land, the hefting system again provides more control than if a ranching approach were to be employed. Vivarigos & Lawton (1991) suggest that, even so, common land is more heavily bracken infested than farmers' own land because of the inability to control neighbor's stock by fencing. Without any hefting at all, control would be even more difficult.

Here there is a potential problem for Cumbria. Despite the considerable effort placed into bracken control under agri-environmental schemes via the provision of grants for bracken control the best practice for bracken control still requires careful environmental management such as that which traditional farming practices can provide. As outlined above, labour in the upland farms is becoming increasingly difficult to find as more and more farmers move off the land and those farmers that remain seem to have increasing difficulties in finding successors for their farms. These successors would traditionally supply the excess labour that may engage in mechanical bracken control. In addition, while currently the majority of farmers are running a traditional system with cattle and sheep (only 5 out of the 44 farms interviewed for this survey were not running cattle or a suckler cow herd and, in the critical tourist area of the Lake District, all were running suckler cows or store cattle) farmers noted that the loss of the Beef Special Premium under the SFP may lead to a decline in the number of cattle as without the payments the profitability of suckler cows is likely to be seriously reduced. For example, farmer 6 calculates the economics of suckler cows at the time (October 2004) as:

“Last week and the best suckler herds were making £57 ... no ... losing £57 per cow and the average were losing £160 per cow, that's when you take subsidies away, so all that's doing it's hardly making them break even.”

One advantage of running cattle in addition to sheep (besides the diversification of the income base) is as a management tool for the vegetation, i.e. cows trample and eat the higher vegetation such as bracken and allow sheep in to graze and new growth that comes through. For example, farmer 5 states his reason for keeping cattle “The cows are just to keep the grass right for the sheep – they compliment the sheep grazing” Farmers have also observed that higher livestock numbers keep bracken levels down, for example, since the destocking due to foot and mouth farmer 4 suggests there is more bracken growing now on his fell. Not everybody is certain of this however. Farmer 10 notes:

“Everybody says there is more bracken, don’t they ... there is I think though ... yeah, but whether that’s down to less sheep or the climate I don’t really know.”

What is certain however, is that the spread of bracken will not make life easier in the uplands for either the farmers or the general public and this is likely to create further problems for the co-operative gathering of the fells. Farmers note that the ease with which the fells can be gathered and the amount of labour required varies depending on the time of the year or, more specifically, the height of the bracken:

“In the end, summer’s difficult, this time of year we can manage quite well but when the bracken’s up you need twice as many people as we do at this time of year” (farmer 14).

“It’s not so bad at this time of year when the bracken’s down but in the summer it is a bit of a slog even if it is myself, C. and D. Sheep tend to be stopping, so having somebody with some more dogs helps” (farmer 17).

“We’ve got areas of fell where there used to be no bracken at all but now it’s encroached you’re driving the sheep off the fell into the bracken it’s just a bloody nightmare ... you can’t find them” (farmer 5).

Farmers have also commented that a number of the environmental schemes operating at the moment are resulting mostly in an increase in bracken rather than other, more desirable plant communities. For example, farmer 18 observes

“The National Trust fancied fencing it off to see if there was any natural regeneration in it with it stock free. It has been stock free but I wouldn’t say there had been any more natural regeneration come up. The bracken’s become more intense” (farmer 18).

Another farmer (farmer 6) reported that the lowering of stock numbers changed the landscape so significantly in 2 years that English Nature allowed him to return to his old stocking rate

“80 hectares, one sheep to hectare. I said “you come and have a look at it” so I got the stewardship officer ... I got English nature to go and have a look at it, I said “this is what’s happened in 2 years” and I said “I’ve had about 80 sheep in here just have a look at it” , and the scrub was coming up and everything “oh yeah your old stocking rate was okay”.”

We do not wish to imply by this that the fells are being under-stocked. Amongst farmers themselves many accept that in the recent past at least parts of the uplands have been overgrazed, openly admitting that the land had been overgrazed to some extent (farmer 5, farmer 2, farmer 3, Farmer 16) and/or observing benefits to the environment following the removal of grazing pressure following foot and mouth and entry into ESA schemes – for example, an improvement in the quality of heather moorland (farmer 3), an increase in the number of hares (farmer 2), and an increase in the number of wild flowers (farmer 1). However, we wish to point out exactly how experimental this process of providing environmental public goods is in a landscape where rural communities are changing, climate is variable and the environment is itself not in a ‘stable state’ as a result of years of management for agriculture.

The problem is, at the same time as requiring more careful environmental management to obtain the desired ‘public goods’, the farming communities themselves are disappearing and management regimes becoming, by necessity as well as agri-environmental design, increasingly extensive. It is easy enough to take the sheep off the hills and put them back on again, but the same cannot be said for farmers. Once the farms are split up and sold and house prices get to a level that locals are effectively excluded from property-owning, repopulating the area with a farming

community – should that be required – will no longer be an viable option without substantial intervention. As farmer 5 suggests:

“... the worrying thing is if all of these experts that have said that these fells are overgrazed if they are wrong and in 20 years time they suddenly decide that they want a lot more sheep on these fells is there going to be the farmers there to look after them?”

5.2.4 *The effect of succession on public goods provision*

The uncertainty in how to establish a system of provision of environmental public goods suggests that policy aimed at keeping smaller farmers on the land may provide benefits in the long term and, at the very least, would maintain a flexible option if simply changing the grazing pressure is not sufficient to restore upland landscapes. In addition, maintaining smaller farms is also likely to maintain the source of direct public goods as discussed in Chapter 4, in particular considering farmers role as landscape educators and interpreters, their role as part of the cultural landscape itself, and their role as providers of farmstay accommodation for the general public. If the government is looking towards a multifunctional farming landscape then the RDR needs to be structured such that the potential ‘multifunctional’ farmers of the future do not leave the land – an event which is likely to result in a number of extremely large enterprises and a number of extremely small enterprises supported by hobby farming, i.e. the sort of ‘superproductivist’ landscapes suggested by Halfacree (1999). The danger is that, while we are trying to work out what public goods need to be provided, the public is establishing what public goods they want, and policy-makers are developing the policies that will supply these public-goods, the farmers that are required to deliver them will simply disappear off the hillsides.

The problem of attracting successors to farms is a very serious one in Cumbria. Of the 44 farmers interviewed 23 were sure of succession, 15 were sure that they would not have a successor and 5 were unsure whether succession would take place or not. This mirrors the results of Lobley et al. (2002) who found relatively high rates of succession in the Orton-Fells area where 42% of farmers had successors. These

succession rates are actually quite high compared to some other upland areas. In a study of 77 farmers in the Cambrian Mountains region of Scotland Burton et al. (in press) found only a third of farmers were sure of succession and half of farmers interviewed were sure of no succession. The figures do not, however, necessarily mean that the common grazings will lose up to 50% of their communities. Figure 12 shows that of those farms without successors only 8 were on owned properties, whereas the remainder were on rented farms which will not necessarily be split on retirement of the current farmer. Nine of the rented farms in the survey were in the Lake District area and, of these, 8 were National Trust farms.

Count		Owned or rented		Total
		Owned	Rented	
Successor?	No	8	7	15
	Yes	21	2	23
	Don't know	4	2	6
Total		33	11	44

Figure 13: Influence of land tenure on succession chances

When asked why young farmers were not interested in hill farming responses were fairly uniform across the community. First, farmers are concerned that the amount of money in agriculture is not sufficient to attract young people into the profession anymore. Second, and associated with the wages for agriculture, the hours farmer have to work and ties to the farm considering the low level of monetary compensation are no longer considered acceptable by many of the young people. Third, many farmers point out that upland farming is not an easy profession, even amongst other types of farming upland farming is difficult because of the terrain involved and relative lack of mechanisation. Fourth, farmers note that there is not the accommodation for younger people to enable them to stay in the local area even if they wanted to. One farmer 20 gives examples of young people working on farms but having to live in caravans or with relatives 15 miles from the place of work because of a lack of accommodation in the local area.

While these are standard arguments that may have been expected, what was interesting was how the responses of farmers' children involved in the family

discussions did not seem to directly mirror those of the majority of farmers. Older farmers are concerned about wages and accommodation, but for the younger farmer's sons this was not really a great concern and neither was the prospect of having to work hard on the farm. Rather, what appeared to be of far greater importance was the lack of enjoyment and satisfaction that could be derived from farming under the changing conditions of agriculture. In terms of the general motivations all 5 farmers' sons (14-25 years old) involved in the interviews suggested that they were in farming because it was what they were brought up with, and that farming provided them with the sort of outdoor lifestyle and work they enjoyed doing. For example, the sons of farmer 1 engaged in a discussion on why younger people want to farm:

Son 1 (22): "Boys with toys probably. Lads like to being outside mucking around all the time. If you get used to being out in a playground of 1000 acres you get a bit bored in an office.

Son 2 (20): I don't think it's even that. I think it's what you grow up doing. You just don't know what else to do. You'll never be as suited to other things as you are with what you've grown up with ...

Son 2: ... *Farmers like to farm. They don't like to take sheep off the hill. It's frustrating. If you can look at somewhere and say "that's good for sheep" and you've worked on it and made it good for sheep and you get paid money to take them off and you can see it all the time getting worse ... it's frustrating.*

Son 1: All that potential gone to waste ... that's what you think ...

Son 2: You're not given a chance to do what you're good at. It doesn't take skill to sit and watch it. You need the money like, but ..."

The critical point here is that as farmer 16 observes with regard to getting young farmers into agriculture "You can't compete in the wages so it is a quality of life thing" yet, as the discussions with farmers' children suggest, the satisfaction of agriculture is diminished by the fact that it is no longer progressive and measurable. As Warren (2002) notes, like anyone else, farmers need a sense of purpose and motivation. Gasson (1973) observed that being progressive is a very important value

for the farming community. Under the ‘productivist period’ (see Wilson, 2001) emphasis on production meant that it was easy to judge what a progressive ‘good farmer’ was – someone who produced more or better livestock/crops – but in today’s agricultural environment the signals are much more confused. How is it possible for a farmer to be a ‘progressive’ provider of public goods? Where are the milestones that people need to create to judge their progress and obtain their self-esteem? Within farming these can be measured through status symbols such as machinery, the size of a grain silo (Dalton, 1967), the yield of the crop, or the quality of livestock as displayed at the mart (Burton, 2004). In an environment where it must be clear to all potential farmers that in future achievement will be measured by the success of environmental schemes using a fairly vague and as yet unclear set of indicators of success it must be hard to see where the future satisfaction from farming is going to come from.

Current satisfaction from farming comes from multiple sources. The predominant source of pride seems to be the livestock. Through both the appearance of the animal and, probably more importantly, the amount fetched at auction (there is considerable pride in topping the auction) farmers not only generate self-esteem but also gain the respect of their neighbours.

“It’s pride in your stuff, if you have good stuff well folk notices it, “oh ***** has some good bullocks”” (farmer 2)

“We all like to have the respect of our fellow farmers like ... like the respect of your stock being good and that.” (farmer 14)

Another important feature of livestock quality is that, as a display of farming skill and one that is common to all upland farmers, it – or rather the symbolic capital generated through displays of quality livestock – is an important means of generating social capital in the community. For example, farmer 6 describes how the generation of mutual respect through quality produce facilitates the transfer of information between himself and another ‘good farmer’ at the auction.

“I’ve a great deal of respect for him, he’s a manager of an estate ... er big farming estate the farm is doing very very well. He’s very good at his job, and *I respect him* and, we get on quite well ... that’s maybe because *he respects me*, because I just about have the best lambs in Kirkby week in week out you know, in the auction. *So mebbe a bit of mutual respect, and, I can ask him things... in confidence.*”

Clearly with stock playing an important economic and social role farmers will consider anything that threatens the quality of their stock as a threat to the business and to their identity. This is one problem with agri-environmental schemes, some farmers see the decrease of stocking numbers as potentially threatening to the quality of their livestock through two main areas. First, there is concern that destocking as part of an agri-environmental scheme may upset the whole hefting system as if livestock density is reduced on one area of the fell and not another, sheep are likely to move around much more.

“If everybody doesn’t keep the stocking density the same, the hefted sheep that are on a heft next to one that has had sheep taken off, move into it, through it and beyond. And I’ve heard of people having to move one or two valleys to gather their own sheep back round. It hasn’t affected us too badly yet, but if they reduce sheep numbers much more, it is a problem that is getting talked about in auctions. It’s coming up when I’m scanning with people, you are coming across it. They’ll get what they can but they are travelling too far now to get.” (farmer 15)

Farmer 10 gives a specific example of where a change in sheep numbers as a result of entering a government scheme has interfered with his heft.

“And this guy has also reduced his under this Sheep and Wildlife Enhancement Scheme, so he’s reduced them by 100. So these ones have started pushing a bit more and then mine are coming round the top end.”

This clearly creates problems for farmers both in terms of the difficulties of gathering the fell and the distances that need to be travelled to recover strayed sheep from other farmers and is further exacerbated by the decline in the number of upland farmers gathering the fell areas and ageing population. Further, some farmers are concerned that if the fells are not gathered properly as a result of problems with the hefting

system sheep are more likely to be left behind and may act as carriers of parasites, thus leading to an increase in tick numbers and causing problems for the quality of the sheep and economic problems for the farmer. Second, while some farmers think that destocking is likely to lead to an increase in the quality of livestock because of lower grazing pressure (e.g. farmer 2), others argue that changes in the vegetation will lead to a decrease in livestock quality. For example, farmer 5 argues that, at least in the case of the removal of sheep during foot and mouth, the sheep that went back onto the fells were worse off because the grass grew too long and flattened out. Other farmers believe that the destocking of the fells will lead to the regrowth of bracken and associated problems with gathering as discussed earlier in this chapter. Any decline in cattle numbers accompanying the introduction of the SFP could accentuate this problem.

In other areas, as mentioned in Chapter 4, the agri-environmental schemes can have a more positive influence in reinforcing farmers' identity and therefore enhancing their enjoyment of farming. In particular, farmers receive satisfaction in farming from having a 'tidy farm' and, thus, some of the roles associated with a 'tidy farm' that are promoted by agri-environmental schemes (such as walling) can provide farmers with considerable reward. An interesting feature in this context is how the farm develops as a creative expression of the farmer and/or farm family – in particular that as farmers often begin helping on the farm as children features that they created at that stage can be of extremely high symbolic significance to them. Two farmers made mention of the importance to them of the drystone walling they had done as children. For example, farmer 16 notes:

“... you should see the wall I first put up when I was 13 in Ambleside, it's a right scrap but it's still up. So you see, you get lots of pleasure out of that, you know, you actually see what your endeavours are doing.”

Farmer 7 similarly recalls the first wall he ever put up after learning how to drystone wall from his father:

“You just learn by going along with him and helping by putting the fillings in the middle of the wall for a start ... The first one I ever put up on my own it’s still standing anyway, it hasn’t fallen down.”

The symbolic importance of the constructed landscape perhaps gives us some insight into the much debated issue of why farmers remain on the land despite long hours and poor pay. Whereas to those outside the farming community a stone wall is a stone wall, for farmers it may represent an early childhood memory or, similarly, a drained field may be the product of days of labour by the farmer and previous generations on the farm. To the farmers, the traditional farm landscapes are constructed from memories as much as from fields, walls and buildings.

5.3 Conclusion – a conceptual model of change

This chapter has focused on explaining contemporary issues in the upland farming system with an emphasis on what the future is likely to bring and identifying gaps for policy. In it we have identified six key areas that may contribute to an overall loss of public goods in the region.

- 1) The loss of smaller farms in the region is in part driven by the outside demand for property in the area and this demand, in leading to the division of farms from their buildings, is resulting in problems for younger farmers getting a start in upland farming. Note that the influence of property prices is not uniform but very localised with the greatest influence being experienced in the Lake District.
- 2) The lack of young farmers coming into farming and the decreasing number of farms has created problems in the management of livestock. In particular it has caused disruption to the hefting system and increased the difficulties experienced by farmers gathering sheep on common grazings. The impact of this is to add to the workload because of problems gathering, increase the necessity for social capital amongst the remaining farmers and, in general, make upland farming less enjoyable to farmers.
- 3) Requirements of agri-environmental schemes for lower stocking rates can also create problems with the hefting system and, combined with the influence of

lower farmer numbers (leading to a more extensive approach) and climate change, can lead to increasing problems with bracken and scrub growth.

- 4) Increasing bracken and scrub leads to other problems, making the fell increasingly difficult to manage sheep and leading to tick problems on some fells. With additional economic costs associated with treatment for parasites, an increased likelihood of sheep being left on the hill, lower levels of social capital and (external to this system) increasing regulation, the enjoyment of farming is decreased.
- 5) For young people a decrease in the enjoyment of farming, the known difficulties of finding accommodation in this region and the attraction of other industries with lower workloads and higher financial reward may lead to a lower likelihood to succeed to the farm.
- 6) As these farmers move off the land and farms come up for sale, there is a greater likelihood that the buildings, house and land will be split up, leading to a decrease in the number of people using the common grazings – and so there is a feedback into the system of a movement towards a much more extensive and potentially species poor agricultural system (e.g. ‘ranching’).

This conceptual model can be presented in the form of a flow diagram showing the links between the various components. Figure 13 illustrates the nature of the flow-on effects and feedbacks to the system and, in addition, the areas in which changes to the system may influence the provision of public goods. Notable in this diagram, but not raised in this chapter, is the impact that decreasing the number of farmers in the region has on the direct supply of public goods as discussed in Chapter 4 – in particular considering farmers’ roles as landscape educators and interpreters, providers of bed and breakfast accommodation and their role as part of the cultural landscape itself. Indirect influences come from the potential changes to the environment leading to a combination of lower enjoyment of the scenic value of the landscape and, if bracken and scrub levels increase, potential access problems in some areas. Please note that this diagram represents a conceptual framework from the perspective of the farmers.

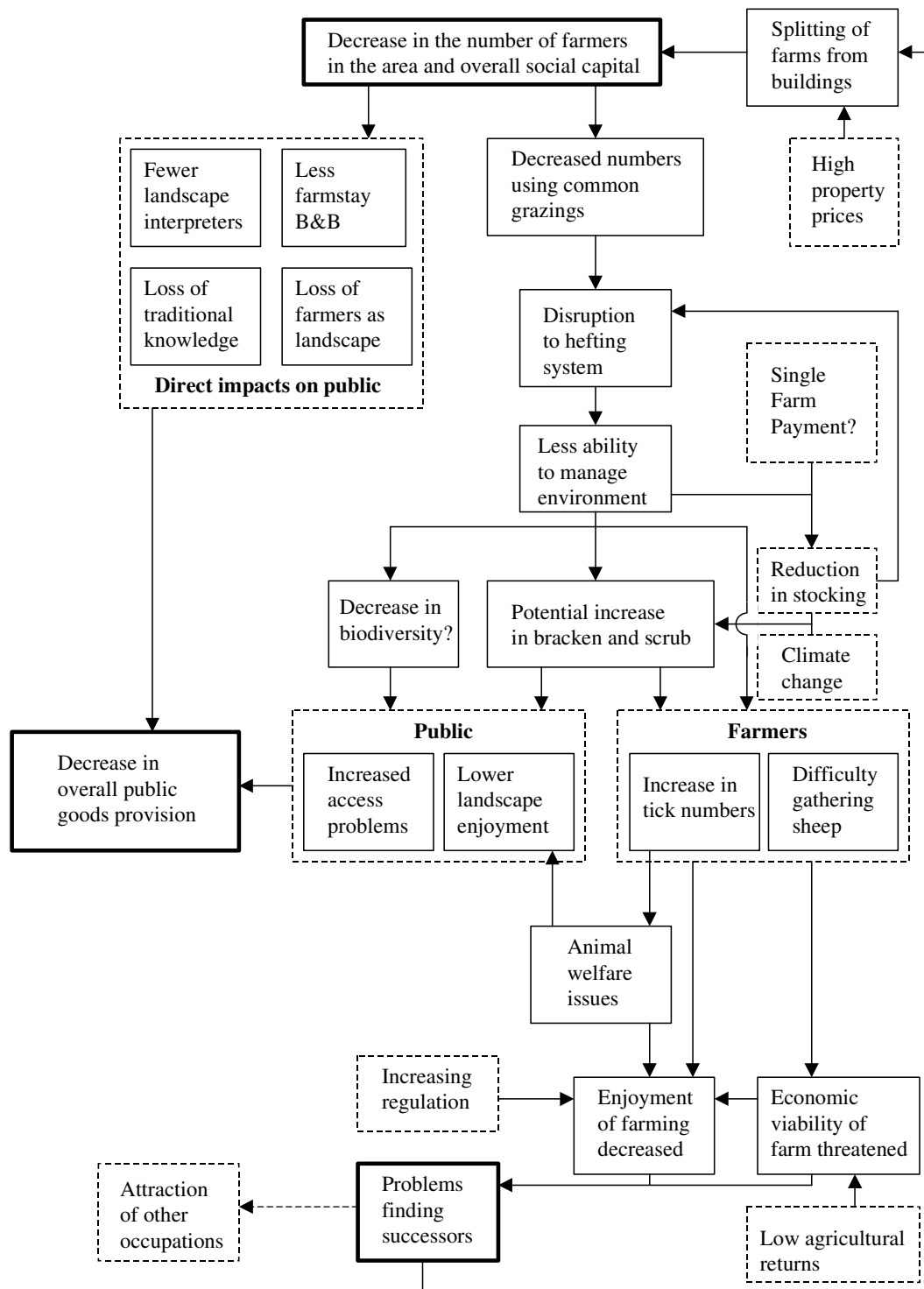


Figure 13: Flow diagram of current influences on direct and indirect public goods provision in the uplands.

There is one area in which a feedback loop may exist but is not indicated. Clearly, if the environment was too degraded and supply of public goods too low there is a possibility that it could influence the desirability of living in the area and therefore the

house prices – thus helping the system to reach something of an equilibrium. However, as not all attractions of the upland regions are directly related to agriculture it seems unlikely, in the key scenic areas at least, that any significant decline in house prices will occur. Further, even if the system has some form of stable equilibrium, if the overall decline in public goods provision is too extensive, the level at which the system reaches equilibrium may still not provide a desirable outcome.

Note that, in this discussion, the main driver for this change is not social capital per se but rather the loss of farmers from the land. However, there is a strong link between social capital and the actual numbers in that for any given region the loss of members from a network will decrease the number of connections between them and thereby the social capital of the group as a whole. This lowering of social capital can have flow on impacts for the overall ability of the group to behave in a co-operative fashion. For example, Dayton-Johnson (2003) found, using experimental variants of the prisoner's dilemma, that there was a critical level of social cohesion (facilitated by social capital) below which no co-operative behaviour was observed. As we suggest in figure 1, there is a link between social capital and co-operative behaviour in that it is through efficacious co-operative behaviour that social capital is generated in the first instance. This built up trust or "a player's reputation for being co-operative in a social network" then has the impact of lowering enforcement costs for co-operative behaviour within any social network – thus facilitating co-operative action as opposed to individual action (Annen, 2003:461). Social capital is economically of value to the farmers as, as Routledge & van Amsberg (2003) suggest, co-operation is required because of the expense or difficulty of writing enforceable contracts in which case, trust or co-operation reduces the contracting costs. In other words, if farmers were to have to conduct all of their co-operative actions on an official basis rather than relying on social capital, it would increase their overall costs.

In the next chapter we use our knowledge of the interdependencies in the system developed here to try to establish how effective policy to preserve public goods in the uplands can be developed.

Chapter 6: A policy for the Uplands?

6.1 Introduction

The report thus far has focused on identifying how public goods provision may be affected by loss in social capital within the Cumbria region and, in this context, it has specifically identified a problem in the declining number of farms and successors in the region. In this chapter we explore the policy implications of the survey of upland farmers in Cumbria. That public goods such as biodiversity or maintenance of landscape play an increasingly important role in agricultural policy design is highlighted by the changes introduced in the recent CAP reform such as the introduction of cross-compliance and GAEC as well as compulsory EU modulation increasing available funding for the ERDP (including agri-environment measures). However, concerns raised here that the loss of farmers in upland regions may lead to difficulties managing public goods both now and in the future raise issues concerning how successful the existing policy measures are likely to be in maintaining public goods provision in the Cumbrian uplands. The key question here is what the options for policy are (in particular through the ERDP and assuming that traditional upland landscapes are what the society wants) to promote social capital and co-operative activities in the uplands enhancing public goods provision.

This chapter starts with a brief overview of the ERDP and the regional chapter for the North West outlining objectives, available schemes and spending priorities. This is followed, based on the findings of this study, by a discussion of potential areas where policy can target social capital and public goods provision and a discussion of potential options for future changes in the ERDP, particularly with respect to the forthcoming new RDR and consequently a new ERDP from 2007 onwards.

The ERDP implements the second Pillar of the CAP (the RDR) in England and has been developed in accordance with EU regulation 1257/1999. Separate programmes have been developed for Scotland, Wales and Northern Ireland. The Programme has been developed at national level with regional chapters defining aspirations and objectives for each of the nine regions (DEFRA 2001). The overall aim of the ERDP is to sustain and enhance the distinctive environment, economy and social fabric of the English countryside for the benefit of all with the following national objectives (DEFRA 2001):

- To facilitate the development of dynamic, competitive and sustainable economies in the countryside, tackling poverties in rural areas.
- To maintain and stimulate communities, and secure access to services which is equitable in all the circumstances, for those who live or work in the countryside.
- To conserve and enhance rural landscapes and the diversity and abundance of wildlife.
- To increase opportunities for people to enjoy the countryside.
- To promote Government responsiveness to rural communities through better working together between central departments, local government and government agencies, and better co-operation with non-government bodies.

These objectives provide the framework for the two programme priorities and the schemes applied. Under priority A – creation of a productive and sustainable rural economy – the Rural Enterprise Scheme and the Farm Woodland Premium and Woodland Grant Schemes are applied which aim to contribute to diversification and competitiveness of the agriculture and forestry sectors as well as generate new employment opportunities in rural areas. Moreover, the development of new products and market outlets and training aspects are targeted through the Energy Crop Scheme, Vocational Training Scheme and Processing and Marketing Grant. Under priority B, defined as conservation and enhancement of the rural environment, the Hill Farm Allowance Scheme (LFA payment) and agri-environment schemes, i.e.

Environmentally Sensitive Area (ESA) Scheme, Countryside Stewardship Scheme (CSS) and the Organic Farming Scheme, operate to maintain sustainable land management. The Rural Enterprise Scheme operates also under this priority covering renovation and development of villages (DEFRA 2001).

While all these schemes operate in accordance with the national policy framework, some such as ESA Scheme, Organic Farming Scheme and Hill Farm Allowances operate on a fully national basis. Other schemes (CSS, forestry schemes and the Energy Crop Scheme) are designed with some regional discretion in targeting and project based schemes such as the Rural Enterprise Scheme, Processing and Marketing Grant and the Vocational Training Scheme operate under regional programming, consistent with national objectives and guidelines, but on the basis of regional priorities (DEFRA 2001).

At the time of conducting this study a new agri-environment scheme is being introduced in the ERDP, the Environmental Stewardship Scheme (ESS), which replaces existing agri-environment schemes. The ESS consists of three elements: the Entry Level Stewardship, a whole farm scheme open to all farmers who can choose from 50 management options; the Organic Entry Level Stewardship, a whole farm scheme similar to the Entry Level Stewardship, but open to farmers who manage parts or all of their land organically and do not receive funding under other organic schemes; the Higher Level Stewardship which will be combined with the two former entry level options delivering significant environmental benefits in high priority situations (DEFRA 2005).

However, the potential impact of the different schemes and their importance is clearly limited by the extent to which funding is available. Hence, it is necessary to look at the funding distribution between the separate component schemes of the ERDP, keeping in mind that the budget of the ERDP is significantly smaller than for market support and direct payment measures in pillar I. Interestingly, but probably not surprisingly given the new policy focus on public goods, the following table shows that the bulk of the ERDP budget is spent on agri-environmental work, followed by LFA payments and forestry measures. Together these elements dominate the budget distribution (see figure 14). In comparison, only a small amount of funding goes to

measures related to investment, diversification (other than forestry), training and marketing. For measures programmed at a national level, regions such as North-West receive a budget allocation, but for measures running under regional programming (e.g. Rural Enterprise Scheme), regions have discretion on spending priorities.

Measures	Public cost (£ million)
Investment in agricultural holdings	16.6
Training	22.0
Less Favoured Areas	253.8
Agri-environment	961.0
Improving marketing and processing of agricultural products	44.0
Forestry	237.0
Rural Enterprise Scheme	140.3
of which	
Marketing of quality products	29.1
Diversification	27.2
Encouragement for tourism	29.3

Source: Modified after DEFRA (2001)

Figure 14: Total ERDP expenditure 2000-2006

Spending priorities in the North West, within the regional aspiration of creating a thriving and diverse rural economy and enhancing the countryside and its environment, are focussed on training, marketing of agricultural products, and diversification (including tourism). The amount of money, however, allocated to these regional priorities appears to be limited with £2.71 million for the Rural Enterprise Scheme, £1.18 million for Processing and Marketing Grant and £846,00 for the Vocational Training Scheme (DEFRA 2004b).

For Cumbria in particular, the Targeting Statement (DEFRA 2003a) points out the need to promote locally sourced produce, the development of speciality and organic food with opportunities to link to tourism, co-operation amongst farmers and managing the environment. In this way, the document emphasises the importance of social capital and public goods provision in farming. The following policy analysis identifies policy objectives tackling the problem of losing social capital and explores

interactions between social capital and public goods provision and the ERDP leading to potential opportunities for more integration.

6.3 The ERDP, social capital and public goods provision through farming in Cumbria

The study has identified the reduction in farm numbers due to lack of successors and sales of farms (mainly in separate parts) as the main problem leading to loss of farmers' social capital and difficulties in public goods provisions in uplands in Cumbria. Figure 15 illustrates how the key issues ("pressure points") may be tackled through policy and how this could theoretically lead to a positive feedback loop – thus helping attain the rural development objectives for the Cumbria region. To the left of the diagram, the 'current situation' depicts our interpretation of the contemporary 'loop' in the system as depicted in figure 13 (Chapter 5) and, to the right, the hypothetical outcomes of policy intervention under the RDR.

To summarise the policy-relevant findings of the report thus far; socio-economic trends such as an ageing population (Cumbria County Council, 2004), poor farm returns and high property demand in rural locations of high scenic value have resulted in lack of farm successors and a high level of farm division. This has led to the current situation of farm amalgamation and the consequent loss of farmers involved in traditional communal management of the common grazings more difficult with potential impacts on farmers' ability to collectively manage the environment which, in turn, may result in the loss of ability to supply public goods. If this situation continues, potential changes in the environment such as an increase in bracken may decrease the attractiveness of the area to tourists affecting both the 'brand value' of the region and decreasing the size of the market for multifunctional activities.

While the farmer survey revealed many aspects of public goods and social capital in uplands regions, as far as policy provision is concerned we consider the two vital elements required to maintain traditional farming systems to be maintaining successors on the farm and the maintenance of traditional farms as whole units as without measures to curb the division of the farms and enhance the ability of hill

farmers to attract successors it is likely that traditional co-operative hill farming practices in the region will not continue. The problem here, however, is that the division of farms – a key factor in maintaining social capital in the region – is an area currently outside of contemporary agricultural policy as it is entirely dependent on market forces. Thus any attempt to attract successors back to the farm must be accompanied by measures to prevent the loss of small farms and their buildings.

Looking at the ERDP, we want to discuss now the different options available through pillar II of the CAP to promote this development, keeping in mind the recent introduction of the SFP and the potential implication of significant reductions in livestock numbers with the potential risks of undergrazing and loss in social capital in uplands (Matthews and Schwarz 2003, Gelan and Schwarz 2004) (although we generally recognise the recent CAP reform as a positive development in agricultural policy). Principally, the diagram identifies two (we think linked) main areas where support may aid public goods provision – namely, targeting environmental management directly through agri-environment schemes and targeting the socio-economic framework of traditional farms by improving the economic and social situation of farmers and their successors, e.g. through diversification, marketing and training. So far, as the spending figures above indicate (figure 14), the focus has been very much on targeting environmental management directly through agri-environment schemes.

Agri-environment schemes are an agreement between farmers or land managers whereby the public pays farmers to carry out certain environmental management measures for public goods provision through CAP. With a range of different measures to choose from and prescriptions defined with respect to different landscape types, e.g. as in the CSS, these schemes can target specific environmental aims to be delivered by farmers. In the past, agri-environment schemes tried to offset negative environmental effects from overgrazing caused by coupled livestock direct payments and the LFA payment. Farmers received payments for reducing livestock numbers (Evans et al. 2003). In the future it is important that agri-environment schemes adjust to the new decoupled CAP and *allow enough flexibility in prescriptions and measures to cope with eventual locally emerging undergrazing problems on common land in the uplands*. But, as Evans et al. (2003) further point out, agri-environment schemes

remain national schemes with only modest regional discretion in targeting and scoring applications. Hence, the ability to target local circumstances is limited in such an approach. However, there is evidence from other countries experience that geographical regionalisation does not automatically guarantee greater environmental benefits and public goods provision. For example, experience from the evaluation of the Welsh Tir Gofal Scheme commissioned by the Welsh Assembly Government (2004) and the evaluation of the Rural Environment Protection Scheme in Ireland (Emerson et al. 1999) suggests that explicit targeting is more important than geographic regionalisation.

Particularly with respect to common land, a recent study commissioned by DEFRA (Institute for European Environmental Policy, Land Use Consultants and GHK Consulting 2004a) concluded that a major problem of agri-environment schemes on common land is that farmers have difficulties in agreeing on group applications for the common land. This is supported by evidence from the farmer surveys in this study where farmers who have recently entered ESA schemes observed that the negotiations involving all commoners often took years before agreement was reached. A study commissioned by SEERAD (Davies et al., 2004) recognised the potential environmental advantages of group application compared to single farm applications for agri-environment schemes. Common land provides an ideal case for exploiting environmental advantages of group application as the land is under collective management. Prescriptions of the schemes have to be more targeted to specific circumstances of common land in order to facilitate the process of co-operation between farmers and their group applications. Schemes need to be flexible to incorporate the customs and practice which have shaped common land for hundreds of years (Short 2000).

Moreover, experience shows that it is important that agri-environment schemes are applied using a whole farm approach to achieve greater environmental benefits. Otherwise, as the example given by farmer 6 in chapter 4 shows, only the part of the farm which is in the ESA Scheme is managed following the scheme rules and the

other part is managed intensively leading to slippage (also see Wilson, 1996)⁴. On the other hand, it is important that those schemes also take into account costs farmers incur in introducing management changes required as, without this consideration, low income farmers may not be able to take part in the agri-environment schemes. A future example could be that, if policy aims at keeping or restocking cattle in uplands, production costs of keeping cattle on common land have to be taken into account. Consequently, it is crucial that voluntary schemes have levels of payment that are adequate to encourage participation.

Farmers have also reported that through the ESA Scheme costs of drystone wall construction increased and labour has moved off the farm with farm labourers moving towards supplying contract labour and services. While, on the one hand, starting a contract business can be seen as an important opportunity for diversification, on the other hand, there can be a risk of losing labour on the farm which could influence the farmer's ability to manage the farm. The increasing input costs for farmers through the influence of policy support reflects a rather general problem and is one of the main criticisms of the CAP as the anticipated positive financial effects of CAP support shift towards landowner or other input industries or businesses. Hence, it is generally important that whatever policy support is chosen, the spending and policy support is targeted at farmers.

These examples show that it is important that policy support through the ERDP is of integrative nature combining environmental, social and economic aspects. Looking at the key problem of a lack of successors for farms, it seems questionable whether agri-environment schemes alone provide enough incentive and opportunities for young farmers to take over or start a viable farm business in Cumbria uplands. In particular, it was noted in Chapter 5 that agri-environmental measures simply do not provide younger farmers with the level of job satisfaction required (also see Warren, 2002). Although we acknowledge the importance of agri-environment support for public goods provision and the clear limitation of the overall RDP budget, to us, there seems to be a case for increasing the amount of funds available through socio-economic measures such as within the Rural Enterprise Scheme and stronger integrating these

⁴ Slippage occurs when the overall effect is proportionately lower than the area involved in the scheme

two important approaches. For example, Midmore et al. (2001) concludes that in hill farming, environment-oriented activities and tourism opportunities need to be more integrated in the policy approach. However, he also points out that these opportunities only exist as long as enough environmental and cultural assets are present and, as summarised in the diagram, losing small farms would distort this system.

Tourism is an important option for diversification for upland farmers in Cumbria. The study, however, identified significant regional differences, with the largest number of farm B&B businesses in the Lake District. Where tourism activities such as B&B's are included in the farm business, they are economically important, in fact, some farmers mentioned (chapter 4) that without the B&B the farm would not be profitable. Moreover, by diversifying into tourism farmers also extend their range of public goods provision from a traditional landscape manager to a landscape educator and interpreter and provider of the cultural experience of uplands to the public. Thus, there are economic gains for farmers and benefits for the public through increased public goods provision. Although the "tourism market" is limited and diversification into tourism accommodation can not be an option for all farmers, this supports the case for policy to promote local tourism opportunities as much as possible.

Directly on-farm, policy can promote tourism in uplands through support of diversification of farm businesses into tourist service provision such as accommodation, farm shops and tea shops through capital support for adjusting farm infrastructure such as buildings and for direct marketing of quality farm products. Targeting specifically young farmers, e.g. in terms of preferential credit modalities, increases the opportunities for young to develop a viable farm business. But as Wright et al. (2005) point out in their policy review of a number of different pillar II policy schemes in different member countries, equally important is highly trained and motivated staff both in extension service for farmers and in the administration and policing of the schemes.

In order to increase the potential for tourism and direct marketing, it is crucial that these measures are accompanied by marketing schemes raising the awareness of

as a result of intensification elsewhere on the farm (Ilbery & Bowler, 1998).

quality farm products and, importantly, the quality of the countryside and landscape. Given the findings of the public goods study, it is clearly important to target urban areas and the public through marketing initiatives to enhance interactions between farmers and the public to ensure that the public is aware of the public goods farmers provide and to provide a link between farming and landscape. Public awareness of farming issues is in general very low. For example, a recent public survey indicated that only 50% of the participants knew about CAP, and of those 50%, only 19% knew about the recent CAP reform (Neville-Rolfe, 2005). On one hand, training and education schemes, again with the option of targeting young farmers, should inform farmers (and provide a platform for discussion) about what the public wants and appreciates most in countryside creating a common understanding between farmers and public about public goods. Moreover, traditional skills and social capital of the farming community could provide a basis for farmers to diversify income through contract business and to further contribute to public goods provision by restoring and maintaining traditional villages and landscapes.

The above mentioned policy areas diversification, marketing, training and education are all covered by project based schemes such the Rural Enterprise Scheme and the Marketing and Processing Grant where regional administration has spending discretion. It is important that funds are not only distributed according to regional priorities but, as the example of Cumbria shows, to specific locally defined and targeted projects. By allowing more regional discretion and local targeting in agri-environmental schemes, for example through locally defined prescriptions for common land, agri-environment elements could be specifically integrated.

In the discussion of integrating agri-environment schemes and socio-economic policy support for upland farming in Cumbria an important element to consider is the Hill Farm Allowance Scheme. The LFA payment scheme has been transformed from a headage payment to an area payment through the Agenda 2000 reform to reduce negative environmental effects caused by overgrazing (Midmore et al. 2001). The scheme aims at compensating farmers for natural disadvantages and higher production costs, maintaining farming activities in LFAs and protecting and maintaining the countryside and rural environment. Providing a comprehensive evaluation of measures under the Regulation (EC) No 950/97 in the Member States, Agri CEAS

Consulting (2003) provide evidence that the scheme contributes between 12 % and 35% of the income on farms in England. Moreover, they summarise that the LFA payment scheme is compensating additional production costs in LFAs and contributing, to some extent, to preventing a decline in the farming population and maintaining traditional farming systems in such areas. From that, it can be drawn that the LFA support is an important part of the income for upland farms in Cumbria and that without the HFA scheme the loss of farms would have been greater with a further decline in social capital.

On the other hand, however, even though upland farms have received the HFA payments in the past, the decline in farms has not been prevented and the loss of farms and lack of successors are still severe problems. While the HFA scheme provides some income support for upland farmers in Cumbria, it does not improve the economic framework for upland farmers, e.g. by promoting diversification opportunities, or target directly public good provision through specific actions required. The LFA payment scheme represents a mixture of socio-economic and environmental objectives, and, as AgraCEAS Consulting (2003) conclude, a more targeted approach, than a single area payment to each of these objectives is required. The continuation of specific support for farms in LFAs such as Cumbria seems to be justified to improve public good provision (landscape as production and consumption space, biodiversity etc.) and to maintain specific cultural and social aspects of rural communities. However, the crucial question is, is there a better more targeted approach of providing LFA support, possibly integrated in other instruments, than that presently carried out through the HFA scheme.

One way forward could be the integration of specific LFA support with agri-environment support potentially adding a social component and through specific prescriptions in agri-environment schemes targeting specific farm types and conditions and their local circumstances. In this context, DEFRA (2003b) has reviewed its upland policy and explored the possibility of combining LFA support with the Entry Level Stewardship in the ESS, but has concluded that this will be further pursued once agreement and implementation of the new RDR has taken place. Moreover, the option of dropping the HFA scheme entirely and using the available funds to expand the Higher Level Stewardship of the ESS has been explored. While

we acknowledge that in this way the funds could be used to tackle more serious environmental problems in the uplands, we would be concerned that this scenario could neglect the socio-economic aspects of providing support for LFAs, in particular if not combined with diversification schemes or other economic development programmes (see below). In order to provide environmental management of the landscape and public good provision, upland farmers in Cumbria, and farmers in LFAs in general, need a viable business environment with diversification opportunities and integrated in the rural community to facilitate structural adjustment, which, we think, could not be achieved by focussing on agri-environment support only. But effective support through project based schemes such as RES, e.g. through diversification or LEADER-type projects specifically targeted at (a group of) upland farmers and communities in LFAs, requires an increase in funding for these schemes. Even in a scenario where former LFA payment funds would be (partly) integrated in project based schemes additional funding would be necessary to cover a bigger number of upland farms.

With respect to the integration of different elements of policy support, interesting developments have taken in place in other countries. Scotland, for example, is in the process of introducing Land Management Contracts (LMC). A three tier whole farm support approach which combines, on the one hand, pillar I and pillar II support, but, on the other hand, also agri-environment and socio-economic farm support in one policy approach (SEERAD 2004). The concept behind LMCs is of a whole farm system of support where farm businesses undertake to deliver a range of economic, social or environmental benefits in return for support payments. LMCs are seen as a method of providing payments to farmers for public goods which are otherwise difficult to capture.

The integrative nature and the whole farm concept, if applied to common land and allowing for group applications, could be an opportunity for the uplands in Cumbria. It needs further exploration as to what extent a similar approach could be employed where a number of farmers, the National Trust (where appropriate) and the policy administration sign a contract which integrates financial support through the single farm payment and through environmental and socio-economic measures of the ERDP for public goods provision. Given the characteristics and community-wide

implications of common land, community involvement in the contract definition could enhance public goods provision. At the moment, intensive discussions are ongoing about potential additional benefits of regionalising LMCs in Scotland. However, we are sceptical, as mentioned earlier, that geographical regionalisation would automatically increase benefits, and again, based on the reviews summarised by Scott Wright et al. (2005) and the results of this study, targeting of specific problems and local issues is crucial for the success. However, there is the danger that LMCs cause significant administrative burden and it remains to be seen to what extent this approach increases such burden both for farmers and policy administration in Scotland, in particular, if geographical approaches are chosen.

High administrative burden and costs is also one of the main criticisms of Contrat D'Agriculture Durable (CAD) in France. CADs were introduced in 2003 as a successor to the Contrats Territoriaux D'Exploitation (CTE) acknowledging the multifunctionality of agriculture and integrating environmental and socio-economic aspects of land management into a direct policy approach between farmers and policy administration (France Nature and Environment 2004). Taking into account the problem of CTEs in the past that farmers only took up socio-economic measures (Mollard 2003), CADs consist of an obligatory agri-environment part and a voluntary socio-economic part. In the socio-economic part, farmers can choose to apply measures such as improving quality production or farm diversification in the voluntary part. CADs operate at geographic sub-regional level within a complex framework of interactions between national, regional, sub-regional administrations and farmers and land managers, potentially causing high administration cost. However, to provide an in-depth analysis and comparison of LMCs and CADs would go beyond the scope of this study.

Local targeting of specific problems and issues is one of the key elements of successful rural policies. Farmers often feel that they only have little input into policy development. If schemes were to be devised locally, this could mean that farmers more become involved in the process of developing the schemes, feeling a kind of ownership on this process, which could result in more targeted schemes and more participation. Further, through creating policies for their own farms, personal involvement may enhance farmers' enjoyment of agriculture and thereby encourage

succession. Given the community-wide implication of public goods provision in the Cumbrian uplands (e.g. traditional and scenic landscape on common land) and to promote integrated multi-sectoral rural development, community involvement and ownership is another key issue (Midmore et al.1994, Dwyer 2005). By developing local rural development projects and co-operative actions between traditional farmers and other local rural interest groups both horizontal and vertical social capital will be used and further developed for the benefit of all groups. Small farmers in the uplands have an important role in public goods provision, but their future economic viability depends strongly on interactions with the rural community. For example, farm diversification into tourism and direct marketing needs to be supported by sustainable rural communities and village (infrastructure) and through networking with other rural interest groups. Worryingly, as noted in the report, there has been a decline in the number of this kind of economically beneficial permanent local resident in some of the most scenic areas of the Lakes District, probably as a result of second home buying.

One approach to community involvement is the LEADER approach, which has been widely, and at least in some cases, successfully used, in particular in other member states such as Ireland and Germany (e.g. Midmore et al. 1994 and Storey 1999). LEADER is a European Union funded program to promote the development of rural areas and is targeted at local requirements with an emphasis on public and private voluntary sector partnerships mobilising local people as a resource for rural development. But this approach is not without its problems as LEADER can produce tensions across complex partnerships that transcended national, regional and local levels. Further, the broad aims of the initiative led to a focus on economic and social development at the expense of environmental outputs. Again, this points out the need for, but also the difficulties in achieving, a balanced economic, social and environmental approach. This is one area where vertical social capital within the Cumbria region could be important for reducing tensions across partnerships.

To become more efficient, agricultural policy support has to be more integrated with other local economic development initiatives and other policy areas. Rural planning policy, e.g. planning policy statements and planning policy regional guidance notes (ODPM 2004), has a direct impact on the farming sector and land use. In the Cumbria

case, this study has identified the booming house market and high property prices in areas such as the Lake District as one of the main forces accelerating the split of farms and their buildings leading to a loss of traditional farm structures. It has to be evaluated to what extent agricultural policy support for traditional farmers in Cumbria aimed at delivering public goods can be (and probably needs to be) accompanied by *changes in local planning policies to avoid conflicts in the implications of the different policy areas*. But crucially, the extent to which changes in the planning policies favouring small farmers might have negative effects for the wider rural economy also has to be taken into account.

6.4 Conclusion

Some of the issues such as whole farm support have been addressed within the new ESS, but it is clear that rural policy support through the ERDP needs further integration. To summarise the main findings and issues emerging from the above policy discussion; integration of policy, flexibility in targeting and localising policy, community involvement and farmers' ownership and increasing funding for pillar II of the CAP are the key issues. Integrating agri-environment, socio-economic measures such as diversification and specific LFA support is important to address the complex system of social capital and public goods provision through upland farming. Moreover, agricultural policy has to be more integrated with other rural policies such as structural policies and planning policies in order to recognise interactions between agriculture and the wider rural context. Crucially, policy support has to be flexible and localised to target specific local problems and issues in LFAs and to adjust if necessary. In this context, we think, it is important to involve farmers and the rural communities in the policy process and project development, e.g. choosing an approach similar to LEADER, to ensure adequate and successful public goods provision through common land management. And crucially, acknowledging the opportunities that pillar II provides, transferring more funds to pillar II of the CAP.

In line with Short (2000), we think, that in this way, all of the environmental, economic and social aspects of common land including agriculture, nature conservation, landscape and tourism can be integrated into an inclusive governance

and sustainable management structure, which takes account of traditional practice and common land. This could be an excellent example of integrated European Rural Policy as declared at the Salzburg conference (EU-Commission 2003).

The process of defining a new Rural Development Regulation for 2007, and consequently a new ERDP, seems to be an opportunity to address and consider these issues. Moreover, the outcome of the revision of the LFAs and corresponding support measures will have a significant impact on future grazing patterns in the uplands. But future opportunities depend strongly on available funding for the ERDP. Potential limitations of the overall agricultural budget of the EU to 1% of GDP, in particular in the context of the forthcoming accession of Bulgaria and Romania, will put more pressure on CAP spending. It is important that this pressure does not result in cuts of spending for rural development through pillar II. In fact, an increase in pillar II funding is required to allow effective policy support for necessary structural changes in rural areas.

7. Summary and conclusion

This report has looked at the influence of social capital on public goods provision in the uplands area of Cumbria and how the revisions to the Rural Development Regulations may be directed towards providing the sort of public goods people are likely to require in the future. The development of a new Rural Development Regulation for implementation in the 2007-13 comes at a critical time for farmers. The recent introduction of the Single Farm Payment in the UK will undoubtedly – certainly if Cumbrian farmers' views are typical – result in uncertainty for many livestock farmers as far as what the future is likely to bring and how best to react to the new payment approach. There is certainly a feeling that agriculture is about to enter a period of substantial restructuring (e.g. Drummond et al., 2000), however, the extent to which this is likely to occur and whether it is likely to reach 'crisis' proportions has been questioned by others (Lobley & Potter, 2004).

Given its recency of introduction (2005) the likely impact of the Single Farm Payment on farmers has yet to be established, however, evidence suggests it is likely to result in further extensification and, in acting as a safety net, further delay the retirement of older farmers (Burton et al., in press; Lobley & Potter, 2004). Changes to the payment system and particularly the removal of the Beef Special Premium may see, at the same time as a decline in overall stock numbers, a decline in the number of the more environmentally friendly cattle from the upland areas. Further, structural changes in the farms themselves may have implications for agri-environmental schemes. Lobley & Potter (2004) observe, as we have done in this report, that, given the possible changes in farm structures as a result of the Single Farm Payment and changes to the RDR, there is a question as to whether the provision of public goods through agri-environmental schemes will be as effective as current approaches. Specifically, they ask in respect to moves to whole farm contracting (a possibility for Cumbria with extensive sheep farming):

“Will these operators and the new estates now effectively under their management control be amenable to influence through schemes when their interests are likely to

be much more narrowly agricultural than the resident farmers whose management input they replace?” (Lobley & Potter, 2004: 509)

In addition to these elements of uncertainty, there are other uncertainties relating to the supply and demand situation for public goods associated with changes in agricultural policy. In particular, while policy makers are in the process of setting up systems for the supply of public goods, little is known of the demand situation – either now or in the future. Social changes such as the increasing demand for access and leisure provision (Glyptis, 1989) and the extent to which the market is no longer external to the area but, as McLaughlin (1992:15) puts it, “has now come to the farmer” are resulting in a shift in public expectations of the role of farmers away from roles associated with agricultural use of the countryside towards consumptive roles associated with providing goods and services for the wider public (Marsden *et al.*, 1990). However, as these changes have only recently replaced a period where the rights of the landowner and development rather than those of the public or conservation in general were paramount (Potter & Adams, 1989; Potter, 1995) and major changes such as the recent introduction of the right to roam legislation are still occurring, there must be some doubt as to whether the public actually knows what it wants in terms of public goods provision. Further, as Hodge (2001) points out, the demand for public goods is diffuse and unevenly spread across the population, thus one other question we should be asking ourselves concerns the relationship between public goods provision and social justice issues.

While the public may be unsure of what to expect, it is clear that the government has a vision of the public goods that farmers should provide. As Lowe *et al.* (2002) observe, Article 33 of the RDR is not so much agricultural survival as the provision of broader environmental public goods. At the same time they observe that the government intends a long term role for farming as one of “developing and responding to particular market opportunities resulting from shifting social demands on the countryside (quality food, regional food chains, farm tourism and countryside management).” (15-16). Thus the emphasis turns to the farmers to become providers of public goods and create the ‘multifunctional’ countryside that is widely considered desirable.

However, this is not what farmers are experienced in and we may be overlooking the difficulties involved in public goods provision. Grant's (2003) observation that the supply of public goods in agriculture (particularly environmental public goods) often is unpredictable, difficult to manage and difficult to monitor is borne out from the results of this study. In particular, farmers raised the issue that the approach used by the agri-environmental schemes of destocking does not always provide the environmental benefits intended, but can lead to the development of extensive bracken growth rather than heather communities. This observation receives some support from scientific studies of competition between bracken and heather under conditions of climate change whereby with warmer climates the bracken is said to have a competitive advantage (Werkman & Callaghan, 2002). The issue here is our experience in reconstructing plant communities for 'public goods' is extremely limited and the current approach of removing grazing is not certain to provide the public goods desired – particularly if one considers the possible impacts of global warming.

The report has also looked at issues of social change in the uplands area. In particular, we have raised the concern that the price of housing associated with the high scenic value of many areas of Cumbria (particularly in the Lakes District) creates problems both in terms of reducing the number of farmers working on the common grazings and, at the same time, limits the ability of successors or potential successors to work in the area and increases the overall cost of labour – making farming increasingly difficult for current farmers and decreasing the likelihood of succession (which may again lead to further farm division). The problem here is that social capital is clearly highly important for cooperative fell management systems. Thus, as the number of farmers working the fells gets fewer and fewer farming gets increasingly difficult, detracting from the enjoyment of traditional hill farming (and again decreasing the likelihood of succession) and, at the same time, affecting farmers' ability to maintain traditional management systems.

The problem is, as farmers increasingly leave the area public goods provision is likely to become more difficult. This is not only in reference to environmental public goods such as landscape and biodiversity. The report reviewed a number of different ways that farmers can contribute to the provision of public goods outside of the

environment including their role as educators and interpreters of the landscape and their role as part of the cultural landscape. The important thing to note here is that the benefits of maintaining farming communities are not limited to the transferral of knowledge such as the construction of stone walls or buildings. Interviews suggested that drystone walling is not a complicated task and, although it does require built up skill the farmers have, it could, if required, be learnt by people from outside of the community. Similarly, the often touted role of farmers running local communities, councils, etc. appears to be diminishing (in some areas more than others) as in-migrants are increasingly taking over these roles in the region. Maintaining local farming communities in the uplands cannot therefore be justified simply in terms of the passing on of generic traditional knowledge or farmers' community roles. Instead the advantage of maintaining the local farming communities can be seen in mainly in three broad areas

1. **Connection with the land** – caring for the countryside they created and being able to interpret it for the general public. The landscape of their farms means more to farmers as it represents not simply the physical features, but is constructed from memories often built up over generations. This intimate connection between the construction of the landscape and the farming family enables traditional farmers to act as interpreters and educators of landscape for the general public. As family farms disappear this is increasingly lost and, as a public good, it can never be replaced.
2. **Maintaining social capital** – to make the environmental management possible it requires farm families to be able to work well together and these trust networks are built up over years, if not generations. The creation of a system whereby farm families change relatively quickly does not allow this level of social capital to build up and, therefore, could potentially have consequences in terms of environmental management of the hill areas and any new 'multifunctional enterprises involving local cooperation.
3. **Local experience** – because farmers work in a constantly changing environment (for example the weather, new diseases, etc.) farmers' built up experience over lifetimes and generations is vital to running an efficient business and, in terms of

public goods provision, enables farmers to manage both the environment and livestock better. This may provide added value in terms of both animal welfare and landscape/biodiversity management.

One important aspect to emerge from this study has been the importance of maintaining traditional farmers within the farming community in Cumbria for both their environmental and social role in the area. Of particular concern is the trend of increasing farm sizes and the relationship between traditional farms, large farms and small farms. While this study was largely qualitative, there is little doubt from literature both on upland areas (IEEP, 2004a) and other studies across the UK (Burton & Walford, in press; Lobley et al., 2002) that farm sizes are steadily increasing. For farms within DA and LDA land, the IEEP report suggests that between 1992 and 2002 the land contained in holdings greater than 100 ha in size increased from 865,000 ha to 978,000 – an increase of 11.5%. At the same time the area of land in holdings of between 20-100 hectares decreased from 471500 to 268000 – a decrease of 22%. Farms in the smallest category (0-20 ha) remained relatively insignificant in terms of the area covered. There is an indication that the area may be increasing dramatically in area in percentage terms, however, changes to the means of gathering the statistics during the period mean that any conclusion here is tentative and the overall area covered remains lower than 1% of the total area.

A summary of the main reasons for retaining traditional farmers in the middle range are:

1. The higher number of farmers in an area where traditional farms dominate rather than a limited number of smaller farms is likely to help the economic development of the whole region. Examples from the study include the role of traditional farms in B&B networks and the establishment of local marketing schemes (e.g. Kentmere lamb) within local communities. Where large farms are formed as traditional farms are divided and the land redistributed this social capital is lost with potential economic loss to the communities.

2. Similarly, traditional farmers generate considerable social capital within the local rural community and this is likely to have impacts for the general economic well-being of farmers in the region. In particular, the common grazings in the area require cooperative activities from all farmers in the region. Any loss of farmers from within the common can decrease the level of social capital and make management more difficult for those remaining. There is also potential for a dramatic decline in the system where a threshold is reached beyond which traditional cooperative grazing systems are no longer viable.
3. Traditional farmers often provide employment for the small farmers enabling them to, for example, support themselves on smaller farms by providing contracting services such as clipping or silage making. While larger farms can also fulfil this role, their market position means they are often in a position to employ more labourers on the farm. While this in itself provides employment within the region, as noted in the report, the smaller farmers are important for maintaining social capital and effective communal land management – thus there are strong mutual benefits in maintaining smaller farmers. This relationship is one that can occur at all scales, with traditional farmers diversifying to supply goods and services to the largest farmers – particularly through potential successors forming contracting businesses and providing skilled, motivated labour.
4. As the landscape can support either a large number of traditional farmers or small number of large farmers, the loss of traditional farmers decreases the number of ‘landscape interpreters/educators’ for the public (as described in the report) as well as decreasing the frequency of interaction between the public and farmers as a visual part of a working landscape. This would be particularly evident where larger farms move to more extensive ‘ranching’ systems. Again, employees may provide labour in the pastures, but may lack both specific knowledge about the farm or the free time that traditional farmers are able to give to talking to the public.

5. As is evident from concern over the possible loss of the flock on Beatrix Potter's former farm, maintaining traditional farmers is also important for maintaining genetic diversity among livestock within the Cumbria region. As farms get increasingly larger and flocks likewise, the current high levels of genetic diversity among the flocks that have resulted from decades of breeding is likely to decline. This genetic diversity is critical for maintaining livestock features such as a strong hefting instinct and tick resistance – factors that can be extremely useful to farmers of all sizes in the Cumbria region. Farmers feel the loss of individual flocks as a loss for the region.
6. Traditional farms have an advantage over larger farms in terms of the degree to which it is possible to environmentally manage the landscape. While our understanding of heathland restoration ecology is still in its infancy it appears from existing literature that simply spraying bracken may not be sufficient to restore upland heaths but may require complex management regimes. This problem may be accentuated under a climate warming scenario. The question is whether larger farmers operating 'ranching' systems on a commercial basis are able to provide the sort of intensive management practices that may be required for the production of environmental public goods.

In order to justify special provisions for upland areas we also need to consider why upland farming represents a unique case. The main reasons for preserving traditional farming systems in the uplands are as follows:

1. **High cultural heritage value** – In many other parts of the UK 'traditional' farming systems have already been largely lost to the substitution of capital for labour – leading to a more industrialised version of agriculture. In upland areas, however, the environment has largely prevented this occurrence and subsequently, if we wish to preserve an example of a traditional farming system, upland farming represents one of the few opportunities to do so. The question here that has yet to be answered is how valuable farmers are as part of the cultural landscape? In the UK there are many regulations to prevent the loss of buildings as heirlooms of the nation for the public (evidenced in the emphasis on stone walls in the ESA

scheme), but there is little consideration given to preserving living culture itself. This seems somewhat ironic in that the many of the traditions that are widely valued are cultural and not structural and, in the case of the uplands, we stand to lose one of the last examples of traditional farming cultures.

2. **High tourist potential of the region** – The second factor that makes upland farming communities important lies in the environmental and tourism value of areas such as the Lake District. As noted above, our understanding of both the supply and demand side of public goods provision is extremely limited and, as a consequence of the high tourist potential of upland regions, if the loss of farmers from the region does have a serious impact on public goods provision the economic costs for such areas could be high. What is required in this instance is more extensive work investigating the demand side from public goods in terms of landscape appearance – particularly the effect of an increase in bracken on the provision of both aesthetic and recreational public goods.
3. **High and rising house prices.** Associated with the tourist potential of the region is the high demand for property, particularly by non-residents. This has the impact of placing pressure on farm units to be divided on sale (into house, buildings and land) to maximise economic return, as well as making obtaining labour and maintaining successors more difficult for farmers in the regions. This issue is localised within the region but some areas, particularly in the Lakes District, appear to be under extreme pressure. As it appears to be non-residents that are purchasing property, this development does not aid economic and social integration between the farming community and local residents.
4. **The presence of common grazing systems** – Unlike many other areas of the UK the uplands contain a relatively high proportion of common grazing land and much of this land is of particularly high environmental importance. The CAP was not designed for common grazings and there is some argument that, in order to deal with the specific requirements under common grazing regimes, there should be scope for the creation of policy specific to common grazings. In particular, the importance of maintaining cooperative action means that dealing with farmers on an individual basis can lead to problems – such as sheep reduction in one area

leading to problems with the hefting system over the entire common. The ESA system already recognises this in terms of arriving at collective agreements, but this is largely through managerial considerations (the agreement must be signed by all) rather than through any recognition of the particular needs of common grazings.

5. **The environmental importance of traditional grazing systems.** As noted in Chapter 5 the literature supports traditional farming systems involving mixed cattle and sheep grazing as providing strong positive environmental benefits – in particular in upland areas. In Cumbria the most probable alternative to the mixed system would appear to be sheep ‘ranching’ to create economies of scale and minimise management issues. The impact of this form of farming on the ability of farmers to manage the area for public goods provision is unknown.

These unique aspects of the uplands areas in combination with the added value of maintaining smaller traditional units for sustaining public goods provision suggest that there is a case for supporting traditional farmers in upland areas such as Cumbria, particularly when it is considered that our knowledge of the supply and demand situation for public goods is in its infancy. Through this study we can now outline the basic areas where social capital is influencing the provision of public goods and provide more detail to the original diagram (figure 1). Figure 16 shows that cooperative behaviour is essential in three main areas (a) the direct marketing of local food, (b) environmental management – particularly of common grazings, and (c) through promoting the success of farmstay B&B networks.

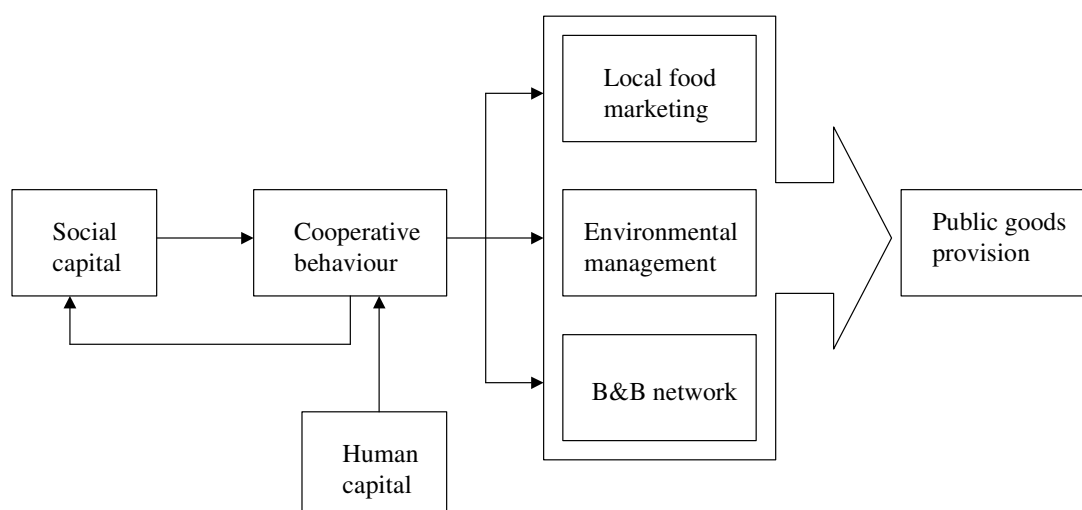


Figure 17: The relationship between social and human capital and public goods provision – the case of upland farming in Cumbria.

While we recognise that the recent CAP reform is a positive development in agricultural policy, we contend that, ensuring the existing supply of public goods and the flexibility to respond to changes in public goods demand in the future may require careful application of policy measures. In particular, we identify that agricultural policy clearly needs to focus on the maintaining of successors in these regions but, in addition to this, measures to stop farms being split from their buildings (and thereby ceasing to function as ‘farm’ units) would also provide practical benefits. This issue is again particularly important to some areas of Cumbria (particularly the Lake District). In this context it should be noted that the Lake District in particular is an area that already has some of the highest levels of support under second pillar measures of the CAP in the UK and yet still almost a third of farmers cannot find successors for the farm. The policy chapter (Chapter 6) provides a number of suggestions as to how policy might address these problems and deliver significant public goods benefits to the Cumbria region.

First, it is recognised that agri-environmental schemes require flexibility in prescriptions and measures to cope with the twin issues of climate change and the uncertain nature of the public goods supply/demand relationship. This involves, among other things, possible contingencies to restore traditional grazing systems as an alternative measure to releasing grazing pressure. Second, prescriptions of agri-environmental schemes should be more targeted to specific circumstances of common

land to facilitate co-operation between farmers and their group applications. Again, schemes need to be flexible to incorporate the customs and practices that have shaped common lands for hundreds of years. Third, there seems to be a case for increasing the amount of funding available through socio-economic measures such as the Rural Enterprise Scheme and stronger integration between this and the agri-environmental measures. In particular, measures aimed at specifically targeting younger farmers (e.g. in terms of preferential credit modalities) may provide increased opportunities for younger farmers to develop a viable farm business.

Fourth, specific LFA support should continue but should be integrated with other policy instruments to improve diversification opportunities and to better target public good provision. One way forward could be the integration of specific LFA support with agri-environment support potentially adding a social component and through specific prescriptions targeting specific farm types and conditions and their local circumstances. However, in order to provide environmental management of the landscape and public good provision, upland farmers in Cumbria, and farmers in LFAs in general, need a viable business environment with diversification opportunities and integrated in the rural community to facilitate structural adjustment, which, we think, could not be achieved by focussing on agri-environment support only. But effective support through project based schemes such as RES, e.g. through diversification or LEADER-type projects specifically targeted at (a group of) upland farmers and communities in LFAs, requires an increase in funding for these schemes. Even in a scenario where former LFA payment funds would be (partly) integrated in project based schemes additional funding would be necessary to cover a larger number of upland farms.

Fifth, measures should simultaneously look at raising the awareness of quality farm products and public goods provision. The survey of the general public demonstrated that the urban public are in general unaware of the connection between agriculture and the provision of public goods and measures to improve this situation may aid in providing a market for quality farm produce and local marketing schemes.

Sixth, the possibility of Land Management Contracts to integrate the social, economic and environmental measures of the ERDP and secure the provision of public goods. In

this case, however, the possible administrative costs of such a scheme should be considered. Seventh, the involvement of farmers in policy construction following the LEADER model may enable areas such as Cumbria where there are a multitude of stakeholder groups to develop a sense of ownership over the policy. High levels of social capital, as has been noted in this report, are required for communities to work together to achieve high levels of community benefits. An additional advantage may be to provide potential successors on farms with the feeling that they are involved in designing a future for the farm – something that does not appear to be the case at the moment. Finally, as a major force driving change in some areas is the rapidly increasing house prices, consideration could be given to changing local planning policies where they conflict with the overall objectives of the RDR. In particular, as any change in the common grazing numbers has implications for all commoners, a means for farmers to make submissions on the impact of changes on their ability to co-operatively manage the land may help to maintain traditional management approaches.

References

- AgraCEAS Consulting (2003): *Ex post evaluation of measures under Regulation (EC) No 950/97 on improving the efficiency of agricultural structures*. Report commissioned by the EU-Commission.
- Anderson, A.; Miller, C. (2003): "Class matters": human and social capital in the entrepreneurial process. *Journal of Socio-Economics* 32, 17–36.
- Annen, K. (2003) Social capital, inclusive networks, and economic performance. *Journal of Economic Behavior & Organization* 50, 449–463.
- Árnason, A.; Lee, J.; Shucksmith, M. (2004): *Restructuring in Marginal Areas: The Role of Social Capital in Rural Development*. Final Report to the European Commission. Arkleton Centre, Aberdeen.
- BBC (2001): Farmers face 'time of change'. <http://news.bbc.co.uk/1/hi/uk/1300507.stm>
- Beaverstock, J.; Hubbard, P.; Short, J. (2004): Getting away with it? Exposing the geographies of the super-rich. *Geoforum* 35, 401–407.
- Bell, P. (2000): Contesting rural recreation: the battle over access to Windermere. *Land Use Policy* 17, 295–303
- Bennett, K., Carroll, T., Lowe, P., Phillipson, J. (2002): *Coping with Crisis in Cumbria: Consequences of Foot and Mouth Disease*. Centre for Rural Economy Research Report, University of Newcastle Upon Tyne.
- Signal, E.; McCracken, D. (1996): Low-intensity farming systems in the conservation of the countryside. *Journal of Applied Ecology* 33 (3): 413-424.
- Britton, D. (1977): Some explorations in the analysis of long-term changes in the structure of agriculture. *Journal of Agricultural Economics* 28, 197-209.
- Brunstad, R.; Gaasland, I; Vardal, E. (1995): Agriculture as a provider of public goods: a case study for Norway *Agricultural Economics* 13, 39-49
- Bubolz, M. (2001): Family as source, user, and builder of social capital. *Journal of Socio-Economics* 30, 129–131.
- Burgess, J.; Clark, J.; Harrison, C. (2000): Knowledges in action: an actor network analysis of a wetland agri-environment scheme. *Ecological Economics* 35, 119-132.
- Burton, R. (2004): Seeing through the 'good farmer's' eyes: towards developing an understanding of the social symbolic value of 'productivist' behaviour. *Sociologia Ruralis* 14 (2), 195-216.

Burton, R., Walford, N. (in press): The effect of multiple succession on farm size in the South East counties of England. *Journal of Rural Studies*.

Burton, R.; Schwarz, G.; Fischer, H. (in press): Changes in farm labour structures on family farms and implications for the Rural Development Plan for Scotland. *Economie Rural*.

Cloke, P.; Milbourne, P.; Thomas, C. (1997): Living lives in different ways? Deprivation, marginalisation and changing lifestyles in rural England. *Transactions of the Institute of British Geographers* 22 (2), 210-231.

Convery, I.T.; Bailey, C.; Mort, M.; Baxter, J. (2005) Death in the wrong place? Emotional geographies of the UK 2001 foot and mouth disease epidemic. *Journal of Rural Studies* 21 (1): 99-109.

Council of the European Union (2000). *WTO negotiations on agriculture: outline of the EC comprehensive negotiating proposal*. Note 13656/00.

Countryside Commission (1990): *Advice Manual for the Preparation of a Community Forest Plan*. Countryside Commission, Cheltenham.

CRE (2001) *The Impact of the Foot And Mouth Crisis on Rural Firms: A Survey of Microbusinesses in the North East of England*. University of Newcastle Upon Tyne. Centre for Rural Economy Research Report.

Cumberland News (2005): Wildlife Scheme Success for Lakes Sheep Farmers <http://www.cumberland-news.co.uk/news/viewarticle.aspx?id=180000>

Cumbria County Council (1997) 'State of the Environment audit of Cumbria.' Cumbria CC: Carlisle.

Cumbria County Council (2003): Ward Population Change 1991-2000. BRF 01/03 <http://www.cumbria.gov.uk/elibrary/view.asp?ID=1795>.

Cumbria County Council (2004): Recent Changes in Cumbria's Population. Cumbria County Council Policy Unit, Carlisle.

Cumbria Foot and Mouth Disease Inquiry (2002). *Inquiry Report*. Cumbria County Council.

Dalton, G. (1967): The application of discounted cash flow techniques to agricultural investment problems. *Journal of Agricultural Economics* 18, 363-74.

Davies, B., Blackstock, K. and Brown, K. (2004): Macaulay Institute, Aberdeen.

Dayton-Johnson, J. (2003). Knitted warmth: the simple analytics of social cohesion. *Journal of Socio-Economics* 32 (2003), 623-645.

DEFRA (2001): The English Rural Development Programme. <http://www.defra.gov.uk/erdp/pdfs/programme.execsummary.pdf>

- DEFRA (2003a): Rural Economy and Countryside Stewardship – Joint Targeting statement Cumbria 2003/2004. <http://www.defra.gov.uk/erdp/regions/nw/docs/CumbriaTS0304.pdf>
- DEFRA (2003b): Conclusion of the review of the Hill Farm Allowance 2003. <http://www.defra.gov.uk/corporate/consult/hfa/conclusion.pdf>
- DEFRA (2004a) ‘Agricultural Census 2003’ www.defra.stats/census. accessed: 12/2/05
- DEFRA (2004b): The ERDP in the North West. <http://defra.gov.uk/erdp/region/nw/default.htm>
- DEFRA (2005): *Environment Stewardship*. <http://www.defra.gov.uk/erdp/schemes/es/default.htm>
- Drummond, I., Campbell, H., Lawrence, G., Symes, D., (2000): Contingent or structural crisis in British agriculture? *Sociologia Ruralis* 40, 111–127.
- Dwyer, J. (2005): *The new Rural Development Regulation 2007-2013*. Paper presented at the Outlook 2005 conference organized by Agra-Europe. London, 1-2 March 2005.
- Eckton, G. (2003): Road-user charging and the Lake District National Park. *Journal of Transport Geography* 11, 307–317.
- Egoz, S., Bowring, J.; Perkins, H. (2001) Tastes in tension: form, function, and meaning in New Zealand’s farmed landscapes. *Landscape and Urban Planning* 57, 177-196.
- Emerson, H., and Gillmor, D. (1999): The Rural Environment Protection Scheme of the Republic of Ireland, *Land Use Policy* 16, 235-245.
- English Nature (1995) ‘Natural Areas Initiative.’ CD Rom English Nature: Peterborough
- English Nature (1998) ‘*State of the Uplands*.’ English Nature: Peterborough.
- English Nature (2004): Sheep and Wildlife Enhancement Scheme. Information note 1.
- ESPON (2004): *Espon Project 2.1.3: Territorial impact of CAP and Rural Development Policy*. Arkleton Institute for Rural Development Research. Espon, Luxemburg.
- EU-Commission (2003): *Planting Seeds for Rural Futures*. <http://europa.eu.int/comm/agriculture/events/salzburg/declaration.pdf>

Evans, N.; Gaskell, P.; Winter, M. (2003): Re-assessing agrarian policy and practice in local environmental management: the case of beef cattle. *Land Use Policy* 20, 231-242.

Falconer, K.; Ward, N. (2000): Using modulation to green the cap: the UK case. *Land Use Policy* 17, 269–277.

Federation of Cumbria Commoners (2005) ‘Winter Newsletter.’ FCC: Penrith.

Findlay, A.; Short, D.; Stockdale, A. (2000): The labour-market impact of migration to rural areas. *Applied Geography* 20, 333–348.

France Nature and Environment 2004: Contrat D’Agriculture Durable – Recommendations pour une politique agro-environmentale reussie
<http://www.scotland.gov.uk/News/Releases/2004/12/21122530>

Franks, J.; Lowe, P.; Phillips, J.; Scott, C. (2003): The impact of foot and mouth disease on farm businesses in Cumbria. *Land Use Policy* 20, 159–168.

Gasson, R. (1973): Goals and values of farmers. *Journal of Agricultural Economics* 24, 521-537.

Gelan, A.; Schwarz, G. (2004): Impacts of the CAP Reform on LFAs in Scotland: A Simulation Experiment Using Scottish Data. *Paper presented at the Regional Study Association congress in Angers, 15 and 16 April 2004.*

Glyptis, S. (1989): Recreation in rural areas: A case study of Rydale and Swandale. *Leisure Studies* 8, 49-64.

Grant, W. (2003): The prospects for CAP reform. *Political Quarterly* 74 (1), 19-26.

Halfacree, K. (1995): Talking about rurality: social representations of the rural as expressed by residents of six English parishes. *Journal of Rural Studies* 11 (1): 1-20.

Hewson, R.; Wilson, C. (1979): Home range and movements of Scottish Blackface sheep in Lochaber North-West Scotland. *Journal of Applied Ecology* 16 (3): 743-751.

Hill, M.; Evans, D.; Bell, S. (1992): Long-term effects of excluding sheep from hill pastures in North Wales. *Journal of Ecology* 80 (1): 1-13.

Hodge, I. (2001): Beyond agri-environmental policy: towards an alternative model of rural environmental governance. *Land Use Policy* 18, 99–111.

IEEP (2004a): An assessment of the impacts of hill farming in England on the economic, environmental and social sustainability of the uplands and more widely. *Main Report*. <http://statistics.defra.gov.uk/esg/reports/hillfarming/volume1.pdf>

IEEP (2004b): An assessment of the impacts of hill farming in England on the economic, environmental and social sustainability of the uplands and more widely.

Literature Review and Consultations. <http://statistics.defra.gov.uk/esg/reports/hillfarming/volume2.pdf>

IEEP (2004c): An assessment of the impacts of hill farming in England on the economic, environmental and social sustainability of the uplands and more widely. *Reports of Case Studies.* <http://statistics.defra.gov.uk/esg/reports/hillfarming/volume3.pdf>

IEEP (2004d): An assessment of the impacts of hill farming in England on the economic, environmental and social sustainability of the uplands and more widely. *Executive Summary.* <http://statistics.defra.gov.uk/esg/reports/hillfarming/execsumm.pdf>.

Ilbery, B.; Bowler, I. (1998): From agricultural productivism to post-productivism. In B. Ilbery (ed.) *The Geography of Rural Change*. Harlow, Addison Wesley Longman Limited: pp 57-84.

Johnston, R.; Gregory, D.; Pratt, G.; Watts, M. (Eds) (2000): *The Dictionary of Human Geography*. Blackwell, Oxford.

Kollock, P. (1998): Social Dilemmas: the anatomy of cooperation. *Annual Review of Sociology* 4, 183-214

Kristensen, S.; Thenail, C.; Kristensen, L. (2001): Farmers' involvement in landscape activities: An analysis of the relationship between farm location, farm characteristics and landscape changes in two study areas in Jutland, Denmark. *Journal of Environmental Management* 61, 301-318.

Lake District National Park Authority, 1994. *Facts and Figures*. Lake District National Park, Kendal.

Lawrence, A.; Wood-Gush, D. (1998): Home-range behaviour and social organisation of Scottish Blackface sheep. *Journal of Applied Ecology* 25 (1): 25-40.

Lawton, J. (1998): Biological control of bracken in Britain: Constraints and opportunities. *Philosophical Transactions of the Royal Society of London. Series B. Biological Sciences* 318 (1189), 335-354.

LDNPA (2004) 'Lake District National Park Management Plan 2004' LDNPA: Kendal CD-Rom.

Le Duc, M.; Pakeman, R.; Marrs, R. (2000): Vegetation development on upland and marginal land treated with herbicide, for bracken (*Pteridium aquilinum*) control, in Great Britain. *Journal of Environmental Management* 58, 147-160.

Lobley, M.; Errington, A.; McGeorge, A.; Millard, N.; Potter, C. (2002) *Implications of Changes in the Structure of Agricultural Businesses: Final Report*. DEFRA.

- Lobley, M.; Potter, C. (2004): Agricultural change and restructuring: recent evidence from a survey of agricultural households in England. *Journal of Rural Studies* 20, 499–510.
- Lowe, P.; Murdoch, J.; Marsden, T.; Munton, R.; Flynn, A. (1993): Regulating the new rural spaces: The uneven development of land. *Journal of Rural Studies* 9 (3), 205-222
- Lowe, P.; Buller, H.; Ward, N. (2002) Setting the next agenda? British and French approaches to the second pillar of the Common Agricultural Policy. *Journal of Rural Studies* 18, 1-17.
- MAFF (1994): *Agricultural Land Classification Statistics*. MAFF: London
- Mansfield L. (under review): Sustaining Upland Agriculture: the Fell Farming Traineeship in Cumbria. Submitted to: *Journal of Rural Studies*.
- Marsden, T. (1999): Rural futures: the consumption countryside and its regulation. *Sociologica Ruralis* 39 (4), 501-520.
- Marsden, T.; Lowe, P.; Whatmore, S. (1990): Introduction. In T. Marsden, P. Lowe, and S. Whatmore, *Rural Restructuring: Global Processes and their Responses*, London, David Fulton Publishers.
- Marsden, T., Banks, J., Bristow, G. (2002): The social management of rural nature: understanding agrarian based rural development. *Environment and Planning A* 34, 809–825.
- Mather, A. (1988): *Land Use*. John Wiley & Sons, New York.
- Matthews K.; Schwarz G. (2003): *CAP Reform: What will it mean for the Uplands of Scotland*. Workshop report, workshop hosted by the Macaulay Institute at Hartwood Farm, 03.12.2003.
- McEachern, C. (1992): Farmers and conservation: conflict and accommodation in farming politics. *Journal of Rural Studies* 8 (2), 159-171.
- McLaughlin, B. (1992): Agriculture and rural strategy: Diversification in the farming industry. *The Planner*, 27th Nov. 12-15.
- Meerta, H.; Van Huylenbroeck, G.; Vernimmenc, T.; Bourgeoisa, M; van Hecke, E. (2005): Farm household survival strategies and diversification on marginal farms. *Journal of Rural Studies* 21, 81–97.
- Meinzen-Dick, R.; DiGregorio, M.; McCarthy, N. (in press) Methods for studying collective action in rural development. *Agricultural Systems*.
- Midmore P.; Ray, C.; Tregear, A. (1994): The South Pembrokeshire LEADER project : an evaluation Aberystwyth : Department of Agricultural Sciences, The University of Wales, Aberystwyth.

Midmore, P.; Sherwood, A-M.; Roughley, G. (2001): Policy Reform and the Sustainability of Farming in the Uplands of the United Kingdom: Conflicts between Environment and Social Support. *Journal of Environmental Policy and Planning* 3, 43-63.

Mollard, A. (2003): Multifunctionnalite de l'agriculture et territoires: des concepts aux politique publiques. *Cahiers d'economie et sociologie rurale* 66, 28-54.

Nassauer, J. (1997) Cultural sustainability: aligning aesthetics and ecology. in Joan Nassauer (Ed.) *Placing Nature: Culture and Landscape Ecology*. Island Press., Washington D.C. pp. 67-83.

Neville-Rolfe, L. (2005): *A Retailers View on Farm Policy Reform*. Paper presented at the Outlook 2005 conference organized by Agra-Europe. London, 1-2 March 2005.

Office of Deputy Prime minister (ODPM) (2004): Planning Policy Statements. http://www.odpm.gov.uk/stellent/groups/sdpm_control/documents/contentservertemplate/cdpm_index.hcst?n=2258&l=1

Oreszczyn, S.; Land, A. (2000): The meaning of hedgerows in the English landscape: Different stakeholder perspectives and the implications for future hedge management. *Journal of Environmental Management* 60, 101-118.

Pakeman, R.; Marrs, R. (1996): Modelling the effects of climate change on the growth of bracken (*pteridium aquilinum*) in Britain. *Journal of Applied Ecology* 33 (3), 561-575.

Pakeman, R.; Le Duc, M.; Marrs, R. (1998): An assessment of aerially applied asulam as a method of long-term bracken control. *Journal of Environmental Management* 53, 255-262.

Pakeman, R.; Le Duc, M.; Marrs, R. (2000): Bracken distribution in Great Britain : Strategies for its control and the sustainable management of marginal land. *Annals of Botany* 85 (Supplement B), 37-46.

Pope, C.; Ziebland, S.; Mays, N. (2000): Qualitative research in health care: Analysing qualitative data. *BMJ* 320, 114-116.

Potter, C. (1995): Tomorrow's Countryside. *EcoS* 16 (3/4), 7-9.

Potter, C.; Adams, B. (1989): Thatcher's Countryside: Planning for Survival. *Ecos* 10 (4), 1-3.

Potter, C.; Barr, C.; Lobley, M. (1996): Environmental Change in Britain's Countryside: An Analysis of Recent Patterns and Socio-Economic Processes Based on the Countryside Survey 1990. *Journal of Environmental Management* 48, 169-186.

Pretty, J.; Ward, H. (2001): Social Capital and the Environment. *World Development* 29 (2), 209-227.

Putnam, R. (1993): *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University Press, Princeton.

Rawes, M. (1981): Further results of excluding sheep from high-level grasslands in the North Pennines. *Journal of Ecology* 69 (2), 651-669.

Retter, C.; Stahr, K.; Boland, H. (2002): Zur Rolle von Landwirten in dörflichen Kommunikation- netzwerken [The role of farmers in village communication networks] *Berichte über Landwirtschaft* 80 (3), 446 – 467.

Roseland, M. (2000): Sustainable community development: integrating environmental, economic and social objectives. *Progress in Planning* 54, 73-132.

Rough Fell Sheep Breeders Association (2005) 'Rough Fell Heritage: a celebration of the life, work and landscape of the Rough Fell sheep farming community.' Eden Media Production: Penrith DVD

Routledge, B.; von Amsberg, J. (2003): Social capital and growth. *Journal of Monetary Economics* 50, 167–193.

Sandbach, F. (1978): The early campaign for a national Park in the Lake District. *Transactions of the Institute of British Geographers* 3 (4): 498-514.

SEERAD (2004): The Land Management Contract Menu Scheme. <http://www.scotland.gov.uk/library5/agri/lmcms.pdf>

SEERAD (2005): Single Farm Payment Scheme. Information leaflet 9: Understanding your statement of provisional payment entitlements. <http://www.scotland.gov.uk/library5/agri/sfps9.pdf>

Setten, G. (2004): The habitus, the rule and the moral landscape. *Cultural Geographies* 11 (4): 389-415

Short, C. (2000): Common land and ELMS: a need for policy innovation in England and Wales. *Land Use Policy* 17, 121-133.

Short, C.; Winter, M. (1999): The problem of common land: towards stakeholder governance. *Journal of Environmental Management* 42 (5): 613-630.

Shucksmith, M. (1990): Still no homes for locals? In: T.Champion, & C. Watkins, *People in the Countryside*. London, Chapman. pp. 84-95.

Sobelsa, J.; Curtisa, A.; Lockie, S. (2001): The role of Landcare group networks in rural Australia: exploring the contribution of social capital. *Journal of Rural Studies* 17, 265–276.

STARUK (2004): Cumbria 2002. <http://www.staruk.org.uk/default.asp?ID=664&parentid=469>

STEAM (2004) 2000-2003: Cumbria County Tourism Data. <http://www.cumbriatourism.info/pressimage/pdf/research/Cumbria-2000-2003.pdf>

Stebbing, S. (1984): Women's roles and rural society. In: Bradley, T.; Lowe, P. (Eds): *Locality and Rurality: Economy and Society in Rural Regions*. Geo Books, Norwich. pp 199-208.

Storey, D. (1999): Issues of integration, participation and empowerment in rural development: The case of LEADER in the Republic of Ireland. *Journal of Rural Studies* 15(3), 307-315.

Thompson, D.; MacDonald, A.; Marsden, J.; Galbraith, C. (1995): Upland heather moorland in Great Britain: A review of international importance, vegetation change and some objectives for nature conservation. *Biological Conservation* 71, 163-178.

Throsby, D. (2003): Cultural capital. In: Ruth Towse (ed.) *A Handbook of Cultural Economics*, Edward Elgar, Cheltenham, pp 166-169.

Varvarigos, P.; Lawton, J. (1991): Farmers' perception of the scale of the bracken problem on farms in Less Favoured Areas in England and Wales. *Journal of Applied Ecology* 28 (3), 988-1003.

Walford, N. (2003): Productivism is allegedly dead, long live productivism. Evidence of continued productivist attitudes and decision-making in South-East England. *Journal of Rural Studies* 19, 491-502.

Warren, C. (2002): *Managing Scotland's Environment*. Edinburgh University Press, Edinburgh.

Welch, D.; Rawes, M. (1964): The early effects of excluding sheep from high level grasslands in the North Pennines. *Journal of Applied Ecology* 1 (2), 281-300.

Welsh Assembly Government (2004) *Socio-economic evaluation of Tir Gofal* : Welsh Assembly Government : Cardiff.

Werkman, B.; Callaghan, T. (2002): Responses of bracken and heather to increased temperature and nitrogen addition, alone and in competition. *Basic Applied Ecology* 3, 267-276.

Westmorland Gazette (2004): Beatrix Potter's farm to be divided. www.thisisthelakedistrict.co.uk/display.var.56285.0.0.php.

Whitby, M.; Hodge, I.; Lowe, P.; Saunders, C. (1996): Conservation options for CAP reform. *ECOS* 17 (3/4), 46-55.

Wilson, G. (1996): Farmer environmental attitudes and ESA participation. *Geoforum* 27 (2), 115-131.

Wilson, G. (1997): Factors influencing farmer participation in the Environmentally Sensitive Areas scheme. *Journal of Environmental Management* 50, 67-93.

Wilson, G. (2001): From productivism to post-productivism ... and back again? Exploring the (un)changed natural and mental landscapes of European agriculture. *Transactions of the Institute of British Geographers* 26 (1), 77-102.

Woods, M. (1998): Advocating Rurality? The Repositioning of Rural Local Government. *Journal of Rural Studies* 14 (1): 13-26.

Wright, I., Scott, A., Nolan, A., Cummings, R., Schwarz, G. and Birnie, R. (2005, in preparation): *Regionalisation of Land Management Contracts*. Report commissioned by Scottish National Heritage.