

Integral Management: Livestock, Landscapes & Livelihoods in the SW English Uplands.

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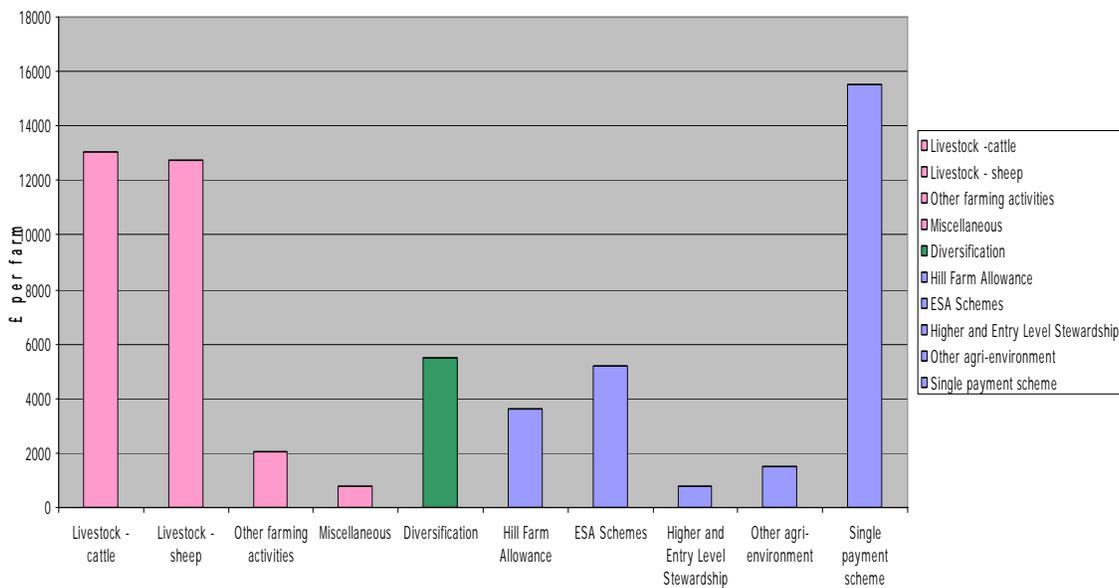
Abstract

This paper reviews the economic plight of hill farming with particular reference to the uplands of SW England. This is only mitigated by the fact that hill farmers typically do not over-borrow according to this research – perhaps constrained by the harshness and recognised unpredictability of their environment. The history and consequences of policy are outlined drawing attention to the crucial part played by proper support for the delivery of the diverse ‘public goods’ derived from such landscapes. The paper proposes integral management to achieve multiple objectives delivering ‘public goods’ through ensuring the viability of grazing livestock and of hill farming populations whose livelihoods and communities are under threat.

Introduction

The south-west uplands of England - where the main farm types are dominated by extensive cattle and sheep production - are the focus of this paper (Fig.1). These uplands comprise notably the National Parks of Dartmoor (in Devon), Exmoor (in Devon and Somerset), and the Bodmin Moor Area of Outstanding Natural Beauty (AONB) in Cornwall – a combined area of some 73,800 hectares, including 34,000 hectares of internationally important moorland (Walden, 2008). These SW uplands also contain some 10% of England’s scheduled monuments and prehistoric landscapes dating back some 6,000 years. Furthermore, it has been estimated that ecosystem services from the SW uplands include peaty soils which store an estimated 85 million tonnes of CO₂-equivalent, plus provision of drinking water for some 1.6 million residents and 8 million annual visitors to the region.

Figure 1. Principal components of output on SW hill farms, 2006/07



Source: Turner et al, 2008

All of these special, biodiverse landscapes currently face the increase of scrub vegetation owing to increasing under-grazing, the consequences of which are exacerbated by the effects of a series of increasingly mild winters, which have allowed longer growth periods. Climate change is the increasingly agreed explanation for extra growth of such species as bracken (*Pteridium aquilinum*) and gorse (*Ulex europaeus*). There is evidence that under-grazing is due to the diminishing viability of livestock farming in these uplands (Turner *et al*, 2008), in part a consequence of the de-coupling of agricultural support which is now no longer linked to livestock numbers: this is an unfortunate example of the law of unintended consequences! In 2007, a survey of SW hill farmers showed that 43% had recently reduced their breeding beef herd. Yet the annual income from the regional tourism sector is estimated at £400 million (Walden, 2008) and it is suitably managed grazed landscapes, not scrubland, that people come to see.

A The Changing Policy Challenges

It has long been recognised by Government that farming in the remoter hills and uplands of the UK requires some form of support if it is to continue in a recognisably traditional form. While sixty years ago such support was readily justified because of the nation's strategic need for food production, over the intervening period this strategic argument weakened and, in the era of European food surpluses in the 1980s, became effectively redundant. However, during the post-war period hill farming's contribution to the provision of public goods such as landscapes, water supply, high-value ecosystems and habitats, became increasingly recognised. Indeed, growing concern over the effects of agricultural intensification in localised areas of certain hills and uplands was one of the key drivers of successive reforms of the EU's Common Agricultural Policy (CAP) the most recent of which, the Mid-Term Review, has largely completed the process of de-coupling agricultural support from production. From 2005, farmers receive a Single Farm Payment based on area rather than headage payments for livestock.

Public support for hill farming systems represents a form of 'transfer payments', a redistribution of income via the Exchequer from UK and EU taxpayers to hill farmers. Under the new policy rationale they are in effect payments for the provision of public goods, broadly understood in the case of hill farming to include environment, countryside, wildlife habitats, and an array of services including recreational uses and water supply. It is arguable that to this list should be added the continuation of a distinctive farming way-of-life that, if left to the market alone, might disappear largely or even completely over time (Midmore & Turner, 2005).

However, there has been increasing concern that the special disadvantages faced by hill farmers, which arise because of the uniquely difficult farming conditions in which they operate, have not been fully reflected in the future level of support payments (Turner *et al*, 2008; SAC, 2008). Livestock numbers in the Highlands and Islands of Scotland have declined by over 30% in the past decade. If these analyses are well founded, the prospect is for a continuing decline in the vitality of the UK's hill farming systems and a consequent shortfall in the delivery of public goods. This paper comprises three main sections: the key findings of a study from South West England that points to the declining economic viability of hill farming in the region; a review of the role of integral management in the hills and uplands for the delivery of public goods; and a discussion of the emerging policy challenges for the UK's hill regions.

B The Economic Viability of Hill Farming: an example from South West England

During the course of 2008 growing concern by a range of stakeholders was expressed about the future economic viability of hill farming systems in the UK, because of what appeared to be the unintended consequences of the Mid-Term Review. This reform of the CAP largely de-coupled agricultural support from production, a commendable principle, of course, and aimed to maximise the public benefit provided by

upland farmers. However, many informed stakeholders contend that as a result of the implementation of the Single Payment Scheme within the Severely Disadvantaged Areas, hill and upland farmers in the UK are now facing a very significant challenge to long-term economic viability of their farms, an outcome which may adversely impact their delivery of public goods, as well as incurring stress and loss of livelihoods.

The challenges of hill farming have long been recognised, and in the UK special support to farming in the hills and uplands has been provided since the Hill Farming Act 1946. This support was an explicit recognition of the special handicaps confronting hill farming systems, primarily the problems caused by elevation, poor soils, steep slopes, unfavourable climate and reliance on hill and moorland grazings. When the UK acceded to the European Community British hill farming policy reshaped the CAP and since 1975 the defined Less Favoured Areas (LFAs) have been eligible for additional support. Originally this was provided mainly under the Hill Livestock Compensatory Allowances (HLCA) scheme, by which headage payments for breeding hill sheep and beef cattle were made, together with certain investment incentives. Further, for many years the principal means of support to the sheep sector, the annual ewe premium, provided a supplement for LFA livestock. It has been a policy axiom, based on successive research studies, that farming systems in the UK's hills and uplands are crucially dependent on financial support for their existence and continuation.

Hill farming is already a marginal business activity

The empirical part of this paper focuses on South West England, drawing on research conducted for the South West Uplands Federation (SWUF) representing farmers and landowners. A broad grouping of statutory organisations, farmers' groups, and environmental interests, including *The Exmoor Society*, formed the SW Uplands Taskforce largely because of emerging consensus that traditional hill farming systems face severe challenges. As part of the work of the SWUF, a small desk study of farm business economic data was undertaken to explore the factual basis of stakeholders' concerns (Fig. 2).

Fig. 2. The Economic Importance of Public Support on South West Hill Farms, 2006/07

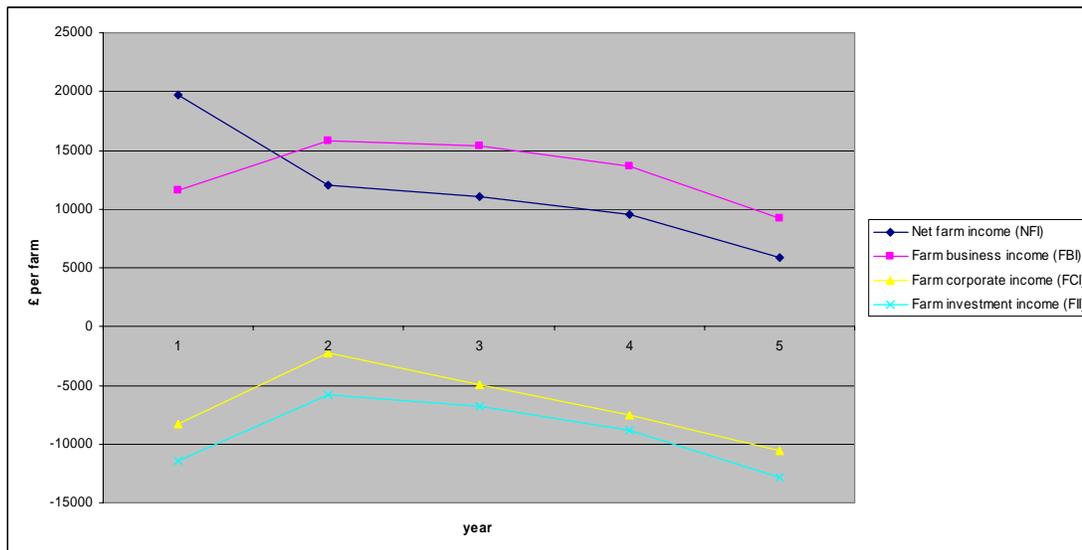
Key: SDA = Severely Disadvantaged Area

| | Average all SDA grazing livestock farms | Specialist sheep (SDA) | Specialist beef (SDA) | <i>Mixed grazing livestock (SDA)</i> |
|--|--|-------------------------------|------------------------------|--------------------------------------|
| | £ per farm | | | |
| Total public support | 26,581 | 18,283 | 23,492 | 36,516 |
| Total output | 60,783 | 40,351 | 51,833 | 86,299 |
| Farm business income | 9,207 | 8,561 | 10,124 | 9,072 |
| <i>Total public support as % of total output</i> | 44% | 45% | 45% | 42% |
| <i>Total public support as % of farm business income</i> | 289% | 214% | 232% | 403% |

Source: Farm Business Survey, Rural Business School, Duchy College

SW hill farm incomes are in decline (Fig.3). Using data primarily from the Farm Business Survey, part of the EU's Farm Accountancy Data Network (FADN), an analysis of farm incomes shows that the average hill farm in South West England recorded a modest Farm Business Income of £9,207 in 2006/07. However, when the value of the farm family's labour input is included (nearly £20,000) this left a loss in Farm Corporate Income terms of £10,583 per farm! The implications of these findings can be clearly stated: the region's hill farming systems in 2006/07 failed to produce a fair return for the labour of the farm family (the figures imply a return of less than half that payable to farm workers under the UK Agricultural Wages Board standard, and well below the National Minimum Wage) with absolutely no return for their own capital invested in the business.

Figure 3. Income trends on SW hill farms, 2002/03 to 2006/07



Source: Turner et al, 2008

Public funding has long been the key to a viable hill farming sector, and these data show that in 2006/07 public support for the region's hill farms amounted to an average of 44% of their total output. Expressed in terms of income, at £26,581 per farm this represented 289% of Farm Business Income. There is nothing particularly novel in these findings since they restate what has long been the case: the economic viability of hill farming systems has become inextricably bound up with the availability of public funding.

Greater pressure on the more remote farms

While the actual impacts will vary between farms, the significance of certain key parameters is already clear. First, the Moorland Line defines entitlements to such additional support as has been offered. Modelling the effects of this is complex but unpublished work carried out by Cumulus Consultants Ltd using national (rather than South West) data suggests the following broad conclusion as to the likely effect of the Moorland Line (under the new Single Payment Scheme) on the economics of hill farms: those farms with more than 50% of their land above the Moorland Line are likely to experience a net reduction in Single Payment Scheme (SPS) payments over the transition period to 2012.

Secondly, a preliminary analysis of the more 'extreme' hill farms in a SDA (Severely Disadvantaged Area), such as those found in the remoter areas of Dartmoor, used a farm business model to estimate their current

economic position. It found that these farms look even more vulnerable to the projected changes in public support than do SW hill farms in general:

- these farming systems are dominated by public sources of revenue and delivery of public goods;
- they face even harsher farming conditions than do hill farms in general;
- they have even less scope for making adjustments to their farming system;
- they will be hit even harder than average by projected changes in SPS payments over the next few years: where 'mixed grazing livestock (SDA)' farms are projected to lose 27% of the value of their SPS payment between 2006 and 2012, the effects on these 'extreme' farms are widely expected to be even greater, with anecdotal evidence suggesting cuts of up to 40% being possible.

Projected incomes decline even further

The study makes informed projections of the future value of Single Payment Scheme payments for Severely Disadvantaged Area (SDA) land, though these have to be treated as indicative because of the number of assumptions on which the projections are based (including exchange rates!). The model's overall projections point to very substantial cuts in Single Payment Scheme revenues at farm level over the first few years, across all three main hill farming systems. Reductions of these magnitudes are likely to have very significant impacts on the viability of SW hill farming systems. Average Farm Business Income is projected to fall by a third solely due to the effects of the Single Payment Scheme (two thirds on the larger 'mixed grazing livestock' farms).

These farms are not heavily indebted, however. Hill farms have traditionally operated with low levels of borrowings, a reflection of their vulnerability to the vagaries of the weather and the seasons, to which their exposure is rather greater than for many farming systems. This pattern of low external borrowing has been maintained despite, rather than because of, the recent depressed profitability of hill farming. Of course, there may well be individual farms which are vulnerable because of a mismatch between debt servicing commitments and on-going business profitability.

Hill farming faces a very uncertain future

The hill farming sector faces a number of important changes in public support over the next four years (to 2013) which include:

- * replacement of the Hill Farming Allowance with the Uplands Entry Level Scheme (UELS) from 2010;
- * termination of most remaining Environmentally Sensitive Area and Countryside Stewardship agreements;
- * changes to the Entry Level Scheme (ELS) and the Higher Level Stewardship (HLS) scheme following the Environmental Stewardship *Review of Progress* in May 2008 (Defra/Natural England, 2008); and
- * both the Common Agricultural Policy Health Check proposals, and the European Commission Review of the LFA (Less Favoured Areas) Scheme, have potentially adverse implications for South West hill farmers.

The research suggests that the cumulative effect of the implemented policy changes on hill farm incomes may be dramatic, and the essence of the policy changes can be simply stated:- There will be a loss of Hill Farm Allowance and Environmentally Sensitive Areas scheme payments which currently represent on average a staggering 95% of Farm Business Income on SDA grazing livestock farms in the region.

Meanwhile, the total value of payments under the replacement schemes – the Entry Level Scheme, Uplands Entry Level Stewardship and Higher Level Stewardship – is unknown but it is clear that support will be increasingly targeted at those farms which are able to deliver high priority public benefits e.g. biodiversity such as SSSIs (Sites of Special Scientific Interest), improved water quality and climate change mitigation.

While some farmers will have the natural assets and operational flexibility to capitalise on these opportunities many will not and, as a result, will suffer a reduction in public support. This has follow-on implications in terms of the location, extent and quality of the broader public benefits delivered in the uplands by hill farmers. Furthermore, there are acknowledged funding constraints that seem certain to result in a significant reduction in the volume of public support being channeled into hill farming rather than to farming elsewhere.

In this context, it is very difficult to be confident about the ability of the region's hill farming sector to continue to provide even the current level of public goods into the future. This is not to say that there will be a wholesale exodus from farming on the hills. Rather, given the current and projected economic state of the sector, hugely exacerbated by bovine TB, it seems more than possible that there will be piecemeal adjustments as individual farms adapt to the new economic conditions. These adjustments may well have adverse consequences for the maintenance of the countryside, the provision of public goods and the continuation of a thriving multi-functional hill farming sector in the region.

The effects of the changing economics of hill farming are likely to be felt most keenly on the more 'extreme' hill farms, and those farms with more than half their land above the Moorland Line. It must be remembered that the economic viability of hill farming is the pre-requisite for the long-term delivery of the public goods society rightly expects of the industry.

C The role of Integral Management in the Delivery of Public Goods by Hill Farming Systems

Integral management attempts to deal with reality holistically. It is applied to real resources of land/nature, labour, capital and entrepreneurship blended productively to secure a sustainable future. The management process must creatively balance these resources in order to reflect the complex and comprehensive character of sustainability. This is an art! It is also an applied science in that it depends on systematic measurement and analysis of real resources and their subsequent recombination in a planned way to achieve agreed short and long-term objectives (the integral components of sustainability). There have been earlier attempts to integrate rural economic and agri-environmental aspects of upland management (Garforth and Wibberley, 1999; Banks & Marsden, 2000). However, each place or zone requires more comprehensive integral management – informed by interdisciplinary research (Lowe & Phillipson, 2006) - in order simultaneously to address the challenges of reconciling multidimensional land use objectives.

The multidimensional objectives of National Parks

In the UK, the National Park Authorities (NPAs) do have such multidimensional objectives. For example, Exmoor NPA in SW England aims 'to enhance the tranquillity that makes Exmoor special' by:-

- Conserving and enhancing natural beauty, wildlife and cultural heritage;
- Promoting opportunities for public understanding and enjoyment of its special qualities.

It is widely recognised that the achievement of these objectives involves encouraging livelihoods and a vibrant rural economy to deliver appropriate land care. It has become conventional wisdom internationally that the protection of wildlife and their habitats requires the engagement of local people whose cultural heritage and livelihoods are bound up with the same areas, and their consequent tourist attractions (Maclaren, 1998; see also the International Union for the Conservation of Nature website – www.iucn.org and *A Rocha* – www.arocha.org). Mutual reconciliation between competing land users, therefore, is a prerequisite for a sustainable future.

Integral management: the Exmoor National Park example

ENPA (2007) outlines Exmoor's National Park Management Plan (2007-2012) which tackles integral management under the following nine interlinked sections, care of which it seeks to deliver:-

- The Exmoor Landscape
- Exmoor's Wildlife
- Exmoor's Historic Environment and Cultural Heritage
- Exmoor's Natural Resources, Waste and Pollution
- Farming and Land Management on Exmoor
- Understanding & Enjoyment of Exmoor's Special Qualities
- Recreation and Tourism
- Exmoor's Economy and Communities.

Moorland loss has long been contentious both from inappropriate forestry (Sinclair, 1966) and from excessive reclamation (Orwin *et al*, 1997). A comprehensive approach to the management of the fragile, valuable landscapes of Exmoor, recognising that 80% of it is farmed, has been implemented following Porchester (1977). Currently, upland management imperatives (Fig.4) relate directly to the farming and livestock sector. These are designed to achieve maintenance of existing high nature value landscapes within the context of commercial hill farming, and are an explicit recognition of the primary role of traditional farming practices in moorland management. Already, participation in agri-environment schemes is high on Exmoor with 500 ESA (Environmentally Sensitive Area) agreements covering some 43,000 hectares, plus 11,800 hectares into new Environmental Stewardship schemes (ELS and HLS) in 2008. A SW regional campaign informed by SWUF (SW Uplands Federation of landowners and farmers on Bodmin Moor, Dartmoor and Exmoor) has, with other organisations, led to the formation of the SW Uplands Task Force which has already attracted at least £2.6 million for livestock farming support on Exmoor over the next couple of years. Cutcombe market needs redeveloping since 90% of its throughput is Exmoor-raised livestock. Alongside this is needed a collaborative approach to branding and marketing Exmoor meat by local farmers such as has started on the North Yorks Moors among seven sheep farmers brokered via *Business in the Community* and encouraged by HRH The Prince of Wales, as he has done among Dartmoor farmers too.

Fig.4 Upland Management Imperatives Summarised (Wibberley, 2008)

1. Grazing livestock (cattle, sheep, ponies) are the chief upland landscape management tools.
2. Livestock numbers are critically falling while milder winters promote faster scrub growth.
3. Grazing livestock are crucial to deliver and conserve biodiversity and tourism aspirations.
4. Internationally, wildlife and habitat conservation is sustainably delivered via local people.
5. Proper grants enable viability of farm livelihoods to address the above upland realities.
6. Upland grants need to be more favourable than presently proposed as a basis for stability.
7. A specific scheme (via EU article 68) needs to be locally available to enable enough help.

D Towards a new Policy Paradigm for Hill Farming

While full details of the total support package for hill and upland farmers in the UK are not yet known (at the time of writing), there has been broad-based concern over the future of the UK's hill farming systems. Across the sector as a whole livestock numbers are declining, and this has been particularly marked in the case of breeding beef suckler herds. A primary concern here is that significant reductions in farming activity that involve farmers leaving the industry are likely to have serious implications for the local economy, and also adversely affect those farmers who remain. For example, as the number of farms declines so related industries – upstream and downstream - may find it difficult to justify continuation, at least in their current form. In remote rural areas even relatively small changes may have significant consequences over time.

Moreover, such changes will have adverse implications not only for the natural environment but also, potentially, for the full range of public goods produced by traditional hill farming systems. Extensive grazing has been shown to be a crucial element for maintenance of moorland biodiversity, and under-grazing is already resulting in the invasion of undesirable species. Perhaps the key issue from an environmental policy perspective concerns the tipping point at which 'extensive grazing' becomes simply non-existent in specific areas, resulting in the loss of those bio-diversity benefits associated with livestock, particularly cattle, grazing. Similarly, in relation to socio-economic policy, the notion of a tipping point at which the vitality of remote hill farming communities begins to crumble does not seem far-fetched, given the projected erosion of the economic viability of hill farming systems. There is a policy dilemma in that farmers value managing land to produce food as their primary livelihood rather than being recipients of payments however well-justified these may be in terms of providing public goods. While this may seem a fairly bleak assessment in the context of public policy for the hills and uplands entirely predicated on the provision of public goods rather than food production as such, it may yet be that the predicted tightening world food supply:demand balance over the coming years will force a re-assessment of the role of the UK's hill farming systems. If this occurs, it should result in a more holistic approach in which food production and the provision of public goods are explicitly seen as partner outcomes within an integral management framework.

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| THEME SECTION |
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Section 2. Farm Management, preferably, OR Section 4.Environment**PAPER FOR PEER REVIEW****WORD COUNT**

3,500 text words – excluding abstract and references, of course.

AFFIRMATION

This paper is our own work and has not been published elsewhere.

Martin Turner is Senior Research Associate in Rural Business Economics, Department of Geography, University of Exeter. An agricultural economist, widely experienced in team leadership and project management for many clients, principal research interests concern farming and rural SMEs:- farm business viability, risk management strategies, agri-rural policy appraisal for farm businesses.

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