

# AGRICULTURE AND NATURE CONSERVATION IN CONFLICT — THE LESS FAVOURED AREAS OF FRANCE AND THE UK

by Malcolm Smith



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Dr Malcolm Smith is the Nature Conservancy Council's Assistant Regional Officer for East Gwynedd, North Wales. The views expressed in this report are personal ones and do not necessarily reflect those of the NCC or the Arkleton Trust.

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Malcolm Smith

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"We have weighed the UK farm support system for the Less Favoured Areas in the balance and found it wanting. It is a parody of the EEC Directive under which it is supposed to operate, and through which it obtains a quarter of its finance. It has proved a very costly way of increasing production, and it has done so at the expense both of the rural communities and of the countryside. It is in conflict with wider social and environmental objectives, which should include the revival of the rural economy, the stemming of rural depopulation, the conservation of the countryside, and the provision of countryside recreation." Malcolm MacEwen and Geoffrey Sinclair, 1983.

"MAFF, by their narrow interpretation of the few innovative features it (the draft Regulation of the European Commission on improving the efficiency of agricultural structures) contains, reinforce this backward-looking tendency."

House of Lords Select Committee on the European Communities, 1984.

### FOREWORD

Malcolm Smith was awarded an Ernest Cook Fellowship by the Arkleton Trust in 1984 to enable him to undertake a comparative study of the effects of agricultural policies on rural development and nature conservation in certain 'less favoured' areas of France and the UK. This report is one of the tangible outcomes of that study.

Malcolm is an Assistant Regional Officer with the Nature Conservancy Council in Wales, and must therefore confront the interface between agriculture and nature conservation in his daily life and work. His study illustrates how important agrarian structures and history are for the development of conflicts between agriculture and conservation, and he makes some interesting proposals for the future development of structural policies at a time when new ideas are both welcome and, in the current period of transition to new circumstances and revised priorities, likely to be considered. Whether one agrees or not with Malcolm's conclusions, the thoughtful way in which they are advanced makes the study an important source of fact and opinion for those concerned with the current debates in this field.

The Arkleton Trust is once more in debt to the Ernest Cook Trust for their support for the Fellowship Programme which made this study possible.

John Bryden Programme Director July 1985.

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# I INTRODUCTION

The extensive upland landscapes of the UK, and the varied and rich wildlife they support, are the product of centuries of predominantly pastoral agricultural activity. In the past, the use of these uplands for sheep and beef cattle rearing has not conflicted significantly with the need to retain habitats such as moorlands, hill grasslands, high altitude montane vegetation, enclosed pastures and hay meadows, wetlands and native woodlands, which form the basis of the nature conservation interest of the 9.68 million hectares of upland in the UK. But agriculture has not stood still. In the last couple of decades the scale and pace of agricultural developments, and the enormous impact they are having on the nature conservation value of the uplands, has become increasingly obvious. Widespread concern over the losses of moorland by cultivation and conversion to grassland, the drainage of wetlands, and the deterioration of artefacts including hedgerows, stone walls and buildings led the Countryside Commission to launch a major consultative exercise early in 1983 on the future of the uplands in order to assess the implications of these and other changes. The losses and degradation of wildlife habitat have implications in a wider context than the UK alone; heather moorlands, many upland broadleaved and Caledonian pinewoods, and some of the individual species dependent on these habitats, are of significance in a European context.

Nearly a half of the land area of the UK is designated under the EEC Less Favoured Areas Directive (75/268), almost all of it upland. The way in which this important directive is implemented, and the financial incentives provided under it to support and intensify agriculture in the UK's uplands, are the main factors causing the nature conservation/agriculture conflict. In France, the Directive is implemented rather differently but still with agricultural support as its mainstay. This study is aimed at examining the differences between the French and UK systems of implementing the Directive and their implications for nature conservation in the uplands of both countries. To facilitate comparison, the study is centred on two predominantly upland regions — Wales in the UK and the Auvergne in France. Within these, a detailed examination of comparative statistics was made for the Powys county of Wales and the Cantal Department of the Auvergne.

The objective of the study was to determine which aspects of the UK government's implementation of the Less Favoured Areas Directive are responsible for the agriculture/nature conservation conflict and to recommend changes aimed at retaining a predominantly agricultural land use in the uplands without further loss and degradation of its unique nature conservation interest.

## **II ACKNOWLEDGEMENTS**

I would like to thank the Arkleton Trust for making this study possible by awarding me a Fellowship and the Nature Conservancy Council for agreeing to three months study leave. My special thanks are due to Dr John Bryden of the Trust for his advice and to Dr Andrew Deadman, NCC's Assistant Regional Officer, Clwyd for taking over most of my NCC responsibilities in my absence. Mr Brian Ducker, NCC's Regional Officer and Dr Gareth Howells, Deputy Regional Officer, North Wales have given me their full support and encouragement in spite of the increased workload my absence has caused. Dr John Aitchison, Department of Geography, University College, Aberystwyth; Mr Mike Taylor and Mr Keith Turner of the Countryside Commission; and Mr John Garnett. Mr Howard Pell and Mr leremy Pyne of MAFF have been particularly helpful in supplying information and in discussing aspects of the study. Mr Andy Wilson, RSPB; Lord Melchett; Mr Ken Parker of the Peak District National Park: Mr Bruce Manson, a former Arkleton Trust Fellow; Mr J. C. Peters of DoE; Mr Malcolm MacEwen; Mr Andrew Cowen of the Dartington Institute; Mr Alan Jones, National Park Officer and Mr Vernon Davies, Agriculture Officer, Snowdonia National Park: Ms Heather Macleod of IUCN, Kew; Mr Patrick Cox of An Foras Taluntais, Dublin; Dr David Baldock of the Institute for European Environmental Policy and Mr John Blackwood, then Head of NCC's International Branch, all supplied information or advice. A special thanks is due to Mr Alan Woods, Department of Geography, University of Birmingham for providing information on land use in the Auvergne and for advising on contacts there. Ms Fiona Reynolds of the Council for National Parks has kept me up to date with the progress of the EEC's Agricultural Structures Review. Mrs Sian Rudling of the Welsh Office Agriculture Dept's Agricultural Development Advisory Service, Aberystwyth made available agricultural statistics for Wales and Powys.

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### III THE LESS FAVOURED AREAS DIRECTIVE

# Formulation of the Directive and its Context in European Agriculture

Before British accession to the European Community in 1973, the original six Member States had become concerned by the way in which the Community's Common Agricultural Policy (CAP) was accelerating depopulation in mountain areas. Work on drafting a Directive specific to the mountain areas of the Community had already begun but one of the British government's objectives during entry negotiations was to provide for a continuation of the special assistance hill and upland farms had hitherto enjoyed in the UK. In the Treaty of Accession specific reference was made to ". . . the special conditions obtaining to hill farming areas as compared with other areas of the UK . . . " The UK government succeeded in broadening the scope of the draft Less Favoured Areas Directive by defining "other areas" to include the UK hills and uplands, extending the application of the proposed Directive from mountain areas alone. Any shortcomings or faults the final Directive has cannot be levelled solely at our Community partners; the UK government played an important role in both fashioning and broadening the scope of the Directive.

Conflicting interests of Member States during the drafting delayed the Directive's formal adoption until January 1974. West Germany, Benelux and Denmark saw relatively little or no benefit to their own agriculture industry and were concerned to restrict the cost of the Directive. France was mainly concerned that adequate provision was made for dairy farmers in her mountain areas. Italy and the Irish Republic joined with the UK in extending the Directive's scope to other 'less favoured areas' in addition to mountains.

Council Directive 75/268 — "On mountain and hill farming and farming in certain less-favoured areas" — was published in April 1975 after the Council had agreed the areas to be designated in Member States. While the LFA Directive is certainly the most significant in terms of direct support for farmers in less-favoured areas, it should not be viewed in isolation. It is a vital element in the CAP "structures policy" — the element of the CAP directed at influencing the structure and organisation of the farming sector. Other Directives, 72/159 on the modernisation of farms; 72/160 concerning measures to encourage farmer retirement and reallocation of agricultural land for structural improvement; and 72/161 concerning the provision of socio-economic guidance, are all relevant (though not specifically aimed at mountain and upland areas) to the structural sector of the CAP. The Guarantee Expenditure (pricing policy) of the CAP nevertheless absorbs 95% of EEC agricultural expenditure; the structures policy just 5%. Price support policies have effects on less-favoured areas and these effects may sometimes be more important than structural policy effects through the LFA Directive. An Arkleton Trust report<sup>1</sup> concluded that the interplay between these elements of the CAP was complex and that, although studies had been made, "no clear answer to the overall impact of CAP policies on the position of LFA farmers in general could be given."

### The Main Features of the LFA Directive

The LFA Directive<sup>4</sup> differs from other CAP provisions in that its broad objective is to support an area of agriculture which may not be best suited for production. Its preamble states that it is aimed at sustaining agriculture in difficult regions of the Community where "natural production conditions are least favourable." Article 1 sets out its purpose, viz. "to ensure the continuation of farming thereby maintaining a minimum population level or conserving the countryside in certain less-favoured areas . . . ," Article 2 outlines the procedure for EEC approval of the areas proposed as LFA by Member States. Farming is therefore identified as fundamental in achieving the two objectives of maintaining rural populations and conserving the countryside. A continuation of farming is presented in the Directive as the means of achieving these dual objectives. Farming in the mountains and uplands and other less-favoured areas is therefore the means to achieve the objectives and not an objective in itself.

Article 3 gives broad definitions of the less-favoured areas that can be assisted.

### Article 3(3) — Mountain Areas

Local goverment districts (or parts thereof) in mountain regions where agriculture is disadvantaged by short growing seasons due to altitudes above 600-800 metres or slopes over 20% average gradient per km.<sup>2</sup> In combination, areas can qualify at lower altitude with less severe slopes.

### Article 3(4) — Less Favoured Areas in danger of depopulation

Farming areas having permanent natural handicaps, viz. poor land with limited or no potential for increased production except at excessive cost. Low crop yields or livestock carrying capacities are necessary. The rural population must be low or dwindling and be extensively dependent on agricultural activity. In more detail the EEC criteria are:—

Crop yields below 80% of the national average. Stocking rates of under one livestock unit (1 livestock unit defined in the Directive as 1 bull, cow or other bovine over two years; 0.69 bovines from 6 months to 2 years; or 0.15 sheep or goats) per forage hectare. High percentage of farm land or all land in permanent pasture made up of rough grazing. Sale value of land considerably below the national average. Appreciably lower financial returns to farmers than the national average. Population density of 50% or less of the national average. Proportion of the active farming population not less than 15%.

# Article 3(5) — Other Less Favoured Areas affected by specific handicaps

These can include small areas where farming is handicapped but needs to continue in order to conserve the countryside and to preserve its tourist potential or to protect its coastline. Such areas cannot exceed 2.5% of each Member State. Specific handicaps refer to natural conditions unfavourable for agricultural production, e.g. poor soil, poor drainage or excessive salinity. Regulations such as conservation constraints can also constitute a specific handicap as can urban fringe problems but the presence of "poor land" is a basic qualification. (It should be noted that Article 3(5) of the Directive does not actually state whether the land designated has to be inherently poor in addition to being affected by specific handicaps; neither does it define "specific handicaps". The extended definitions given above are MAFF views, apparently amplified as a result of Commission advice.<sup>11</sup> That agriculture has to be shown to be necessary for the viability of Article 3(5) areas is stated in the House of Commons' Agriculture Committee's 1982 Report<sup>3</sup> which also states that such areas must have a low or declining population, the exact opposite of the view given by MAFF).<sup>11</sup>

Member States inform the European Commission of their intention to implement the special system of aids provided for in Article 4 of the Directive and provide information about the areas proposed for designation. The Commission has to be satisfied that the various criteria are met before adding the areas to the EEC list of LFAs.

# The Conservation/Environmental Elements in the LFA Directive

The Directive<sup>4</sup> contains several references to "the conservation of the countryside" although nowhere is any definition given of precisely what was meant by this term. The references are as follows:

- Preamble: "Whereas, it is necessary that steps be taken to ensure the continued *conservation of the countryside* in mountain areas in certain other less-favoured areas; whereas the Member States have already taken or plan to take positive measures for this purpose and these efforts should be encouraged; whereas farming performs a fundamental function in this respect."
- Preamble: "Whereas the rationalisation of farms and the need to conserve the countryside necessitate the granting of aids for joint investment schemes in respect of fodder production, for land improvement and jointly-owned capital equipment for pasture and hill grazing."
- Article 1: "In order to ensure the continuation of farming, thereby maintaining a minimum population level or *conserving the countryside* in certain less-favoured areas the list of which is . . ."
- Article 3(1): "The less-favoured farming areas shall include mountain areas, in which farming is necessary to protect the countryside, particularly for reasons of protection against erosion or in order to meet leisure needs; they shall also include other areas where the maintenance of a minimum population

or the conservation of the countryside are not assured."

- Article 3(4): "Less-favoured areas in danger of depopulation and where the *conservation of the countryside* is necessary, shall be made up of farming areas . . ."
- Article 3(5): "Less-favoured areas within the meaning of this Article may include: small areas affected by specific handicaps and in which farming must be continued in order to *conserve the countryside* and to preserve the tourist potential of the area or in order to protect the coastline."

Because the Directive is based on Articles 42 and 43 of the Treaty of Rome, MAFF has always been of the opinion that environmental measures cannot be aided financially, since these two Articles relate solely to agricultural policy. This interpretation of the legal position has been disputed strongly by a number of individuals and organisations, particularly in evidence to the House of Lords Select Committee on the European. Communities.<sup>5</sup> MAFF's view has been that any support for conservation measures must be purely as an adjunct to agricultural works, a view supported by DoE. The legal opinion obtained<sup>5</sup> by CPRE and the Council for National Parks from Professor Francis Jacobs, one of the leading authorities on EEC law, makes it clear that both MAFF and DoE have been taking an unduly restrictive view in adopting their stance. Professor Jacobs even states that "it would be proper, for example, if it were regarded as desirable . . . to require that agricultural and environmental considerations be taken together in the assessment of eligibility for support". The House of Lords Select Committee concluded that MAFF and DoE's narrow view is unnecessary and that there was no legal impediment to a more liberal applicatiion of the Directive.

Other Member States also see the LFA Directive being primarily concerned with agriculture, conservation being a subsidiary consideration, except in the Netherlands where the Directive has been implemented to maintain cherished landscapes by supporting traditional agriculture.<sup>6</sup>

The references in the Directive (quoted above) to conservation of the countryside suggest strongly that the thinking behind its drafting equated the continuation of farming in the uplands as synonymous with conserving the countryside. If the object of the Directive was to support the continuation of traditional agriculture (i.e. non-intensification of production) in the LFAs, the objective of conserving the countryside could be achieved. Maintenance of traditional husbandry and land management on upland farms could conserve man-made landscape features such as stone walls, hedgerows, and traditional buildings and also retain important nature conservation "features" such as hay meadows, wetlands, heath and moorland. If the supports provided for in the Directive are used to stimulate intensification of agricultural production (as is the case in the UK), losses of features of both landscape and nature conservation value are inevitable.

Although no detailed provisions, independent of agriculture, are provided by the Directive to implement the references to countryside conservation (because the Directive is based on Articles 42 and 43 of the Treaty of Rome) the EEC Commission has always stated that there is considerable scope for flexibility in implementing the Directive's many provisions. Indeed, contrary to MAFF's stubbornly held views that the LFA Directive cannot be used to support conservation except as an ancillary to agricultural development, the then Minister of Agriculture, Mr Peter Walker, answered a question in the House on 10 December 1981 on how successful the LFA Directive had been in encouraging production in the UK. Mr Walker stated: "The principal objective of the Directive is not to encourage production but to compensate farmers in order to ensure the continuation of farming."

If this was so, the basis was clearly available to reconcile countryside conservation with support for agriculture in the LFAs. The continuation of farming is not so much the objective of the Directive but the means to attain its objectives.

There is an inherent assumption in the Directive that maintenance of farming in the LFAs is necessary to prevent areas from falling into decline and becoming "wildernesses". From the nature conservation viewpoint there could be substantial gains if significant areas of the uplands reverted to a more natural condition without agricultural management, providing that forestry intervention on a large scale (as agricultural land values fell) was prevented. A more diverse and better developed flora would result; erosion would be reduced and many groups of animals, insects for example, would increase.

In the Directive, countryside conservation seems to be equated with retaining a farmed landscape, an objective which can be achieved even with a substantial amount of agricultural intensification. Conservation of semi-natural vegetation communities, and the plants and animals they support, becomes increasingly meaningless as the amount of agricultural intensification increases. Some Member States, notably France and West Germany, have implemented the LFA Directive so that traditional agriculture has been supported financially without causing substantial degradation of the natural environment. The Directive is perfectly capable of being applied in such a sensitive way. The precise purposes of the Directive and the ways in which 'countryside conservation' and agricultural support could be integrated could have been spelt out more clearly in its text but the document contains a considerable amount of flexibility in the implementation of its many provisions, a flexibility frequently not used to advantage.

### Current Review of the EEC's Agricultural Structures Policies

The EEC's Council of Ministers is considering a proposal from the European Commission on improving the efficiency of agricultural structures.<sup>7</sup> It is intended to replace Directives 72/159, 72/160, 72/161 (see Chapter 3) and Articles 4-17 of the LFA Directive, 75/268. Proposed changes in financial and other aids directed at LFAs are discussed in Chapter 6. The implications of these proposed changes for nature conservation in both the UK and France will be discussed in Chapter 9. The present chapter will outline the reasoning behind the review.

The structural policy of the CAP arose in the climate of the late 1960s with high employment levels and steady economic growth. Agriculture was lagging behind the general prosperity levels. Agricultural surpluses have become commonplace in the intervening years and this is preventing increased production from upping incomes. Shedding of agricultural labour to other employment sectors is no longer acceptable, or even possible. Existing structural policy has encouraged farm modernisation and this has tended to exacerbate the surplus problem. In consequence, the Commission feels that this is an appropriate time to re-examine its agricultural structures policies. The Third Action Programme for the Environment reflects the EEC's increasing concern with environmental policy. It is relevant to the agricultural sector and there are several references to environmental considerations in the draft proposal. Some of the provisions now under discussion will provide aid to a much larger proportion of farmers but the types of activity receiving aid will be re-orientated. In the past, raising productivity often went hand in hand with increased production; now the emphasis will be on encouraging practices which will reduce costs, save energy, improve living and working conditions, protect and improve the environment and raise the quality and value of products leaving the farm.

Whether the proposed structural reform will reconcile agriculture and conservation in the LFAs remains to be seen. The House of Lords Select Committee on the European Communities<sup>5</sup> has thoroughly reviewed the proposals and a draft amendment was submitted by the UK government to the Council of Ministers in September 1984. Detailed consideration of the proposals is reserved for Chapters 6 and 9 of this Report.

## IV THE STUDY AREAS SELECTED IN FRANCE AND THE UK

### **Reasons for Selection**

Wales (21,000 km<sup>2</sup>) and the Auvergne (26,000 km<sup>2</sup>) are two European regions of roughly equal size, both with a high proportion of their land area in agricultural use. Administratively, the Auvergne constitutes one of France's 22 planning Regions; it is divided into 4 Departments (Allier, Cantal, Haute-Loire and Puy-de-Dome) which are organised into Cantons and ultimately consist of a total of 1,308 Communes. Under the present French government policy of decentralisation, increasing responsibilities are being devolved from the Federal government to Departments. Wales is not a separate administrative Region from the remainder of the UK, though a degree of administrative autonomy is provided by The Welsh Office, a Ministry of the Central Government. Wales consists of 8 administrative Counties further divided into a larger number of Districts (which between these two tiers are mainly responsible for local government) and a much larger number of Communities (or Parishes).

Topographically, both Wales and the Auvergne have large areas of upland and mountain, most of which is established as LFA under the 1975 Directive. In the Auvergne the main mountain areas are in the west, southwest, southeast and east of the Region (Figure 1), rising to a maximum altitude of 1,886m at Puy de Sancy. Most of the Auvergne is topographically part of the vast Massif Central of south-central France; in consequence only a third of its land area is under 400m in altitude. Wales has its main upland areas in the northwest (Snowdonia), central Wales (Cambrian Mountains) and in south central Wales (Brecon Beacons), rising to a maximum altitude of 1,085m at Snowdon (Figure 2). Being surrounded by sea on three sides, Wales has a far higher proportion of lower lying land than the Auvergne and its high upland or mountain areas are far less extensive.

Climate is broadly similar in the two Regions, though more variable in Wales because of the coastal influence. In general, the mountain areas of the Auvergne experience a much colder winter climate with a long period of permanent snow. Summers are comparitively warm with a moderate rainfall in upland areas of both Regions. In the Auvergne, annual precipitation ranges from 500-2,200 mm; in Wales, from about 380-3,900 mm. Both predominantly rural regions, the population density in the Auvergne is only 51/km<sup>2</sup> compared with Wales having 133/km<sup>2</sup>, the much higher figures for Wales being partly accounted for by industrial conurbations in south Wales. In comparison, the only significantly industrialised area in the Auvergne is the city of Clermont-Ferrand, the Regional capital. The difference in population density is also explained by the large rural areas of the Auvergne being more thinly populated than those of Wales.

For a detailed examination of agricultural statistics in the Auvergne and in Wales, two areas were selected — the Cantal department in the Auvergne and the county of Powys in Wales. Cantal is entirely within the LFA and at least 80% of Powys is included within the Welsh LFA (before its extension in February 1984). The agricultural land area (386,071 ha. Cantal; 448,922 ha. Powys), and permanent grassland areas (313,683 ha. Cantal; 382,574 ha. Powys) are both similar.

# Agriculture and Nature Conservation in Wales and the Auvergne

#### Agriculture

Agriculture in Wales is dominated by extensive livestock rearing, predominantly of sheep and cattle. Figure 3 shows the Agricultural Land Classification. Grade 4 and 5 land is used largely for this purpose although occasional fields of oats, barley or forage crops occur in grade 4. The extensive low lying areas of grade 3 land consist predominantly of productive grassland where dairying predominates. Arable crops can only be grown on any significant scale on the comparatively small areas of grade 1 and 2 land.

Wales had 1.68 million hectares of agricultural land<sup>8</sup> and 29,822 farm units in 1982. Of the agricultural area, 531,400 hectares is classified as rough grazing (mainly supporting sheep), 845,000 hectares is classed as permanent grassland (with cattle and sheep), and 263,400 hectares is arable. Fodder crops occupy 31,700 hectares. The total Wales cattle population is 1.43 million and there are 8.42 million sheep and lambs. In 1982, 6,737 farms were predominantly livestock rearing and fattening units. 37% of Welsh farms are in the 2-20 hectare size category; 24% in the

20-40 hectare category and 32% are above 40 hectares. In the Less Favoured Area (which includes all the Welsh uplands), the average size of sheep farm is about 262 hectares and the average mixed cattle and sheep farm about 138 hectares.

Agriculture in the Auvergne is also dominated by livestock rearing, although with much more emphasis on dairy cattle for milk and cheese production. Figure 4 gives an agricultural zonation. The lowland plain and Allier valley to the north and south of Clermont-Ferrand are highly productive cereal (especially maize), and vegetable growing areas, in places with livestock. Beef cattle rearing and sheep predominate over large upland areas in the north, northwest and northeast. The higher uplands and mountain areas in the south, west and east of the. Auvergne are used predominantly for dairy cattle of various breeds, though sheep are also commonplace.

In 1983 the Auvergne had 1.59 million hectares of agricultural land occupying 63% of the Region's land area and 56,837 farm units.<sup>9</sup> 29% of these are under 10 hectares in size, 44% between 10 and 35 hectares, 24% between 35 and 100 hectares and 3% over 100 hectares. The total cereal area is 280,000 hectares and permanent grassland covers 68% of the utilised agricultural land in the Auvergne. Animal production in the Auvergne is estimated to be worth 4,700 million FF per annum. By area the land is approximately equally owner/occupied as tenanted with a trend towards less owner/occupancy.

#### Nature Conservation

Wales has a wide variety of semi natural vegetation and habitats of considerable nature conservation interest. In the uplands, extensive areas of moorlands, upland grasslands and blanket bog support important communities of floristic, entomological and ornithological value. The higher mountains of Snowdonia are famed for their montane vegetation and relict arctic-alpine plants and insects. Broadleaved woodlands — predominantly oak in the uplands but mixed deciduous in the lowlands, lowland wetlands, lakes and marshes, plant-rich pastures and hay meadows are all important components of the natural environment. Coastal sand dune systems, mudflats, cliffs and estuaries are other important features. The Nature Conservancy Council manages 11,624 hectares of land in 35 National Nature Reserves in Wales. By the end of March, 1984, 541 Sites of Special Scientific Interest (SSSI), representing a cross-section of important wildlife habitats and covering 148,754 hectares had been notified by the NCC. 261 of these SSSI were re-notified under Section 28 of the 1981 Wildlife and Countryside Act.<sup>10</sup> By the same date, 24 Management Agreements (under Section 15 of the 1968 Countryside Act) covering 244 hectares of land and costing £6,929 per annum were in force. Many more are being negotiated. Several Welsh County and District Councils manage Local Nature Reserves; the voluntary sector (County Naturalists' Trusts, RSPB and Woodland Trust) also manage several Reserves. The National Trust owns a considerable land area, much of it of importance for nature conservation. Wales has 3 National Parks, in which nature conservation is an important element - Snowdonia (2,170 km<sup>2</sup>), Pembrokeshire Coast (583 km<sup>2</sup>) and Brecon Beacons (1.357 km<sup>2</sup>). Thirteen lengths of Heritage Coast are designated by The Countryside Commission plus 4 Areas of Outstanding Natural Beauty (Gower, Lleyn, Anglesey and Wye Valley) totalling 676 km<sup>2</sup> in Wales.

In the Auvergne, the agriculturally fertile lowland plains have only remnant features of nature conservation interest, e.g. scattered rocky grasslands. The lower-elevation uplands in the north of the Auvergne have extensive areas of bocage - pastures and hedgerows with large areas of woodland/forest. The uplands in the south, west and east of the Auvergne have very extensive upland grasslands including species-rich montane grasslands and floristically rich pastures and hay meadows. Broadleaved woodlands, mainly in river valleys, are extensive; small valley wetlands but more extensive moorlands and blanket bog are important upland habitats. 656,000 hectares, 26% of the land area, is forested in the Auvergne, half of it deciduous, the remainder planted conifer. Nature conservation has only been promoted by government in France since 1976; to date only 2 official Nature Reserves have been designated in the Auvergne. Hunting Reserves probably occur but no data is available. According to data supplied by the Ministere de l'Environment, 144 locations are listed as 'Site Inscrit' in the Auvergne (4 of these are larger than 25 km<sup>2</sup> in area) but the level of protection is minimal and the designation is largely in recognition of landscape features. 32 locations are listed as 'Site Classe', designation of the largest being presently under discussion. These have fuller protection

against agricultural and other developments, but the majority are locations that are unlikely to see any significant land use changes in any case. Figure 5 shows these sites. Figure 6 shows the extent of the two Regional Parks in the Auvergne - Parc des Volcans d'Auvergne and Livradois-Forez (the latter being proposed for extension), both of which cover extensive uplands and forests. The main purpose of these Parks is to provide tourist facilities, to preserve traditional landscapes and architecture, to stimulate local enterprise and improve local economic prosperity. Conservation is incidental but the emphasis on encouraging traditional agriculture and other land management practices generally works in favour of maintaining the status quo, conserving wildlife habitats as a consequence. The main voluntary conservation body in the Auvergne is Auvergne et Nature which acts mainly as a pressure group drawing attention to environmental problems.

# Interaction between Agriculture and Nature Conservation in the Uplands

Traditional agricultural practices in the uplands of Wales have generally ensured in the past that agriculture and nature conservation have been compatible. In more recent decades a well publicised conflict has arisen in Wales and throughout much of the UK uplands as a significant amount of agricultural development has caused losses of upland habitats. Extensive areas of upland grasslands and moorland have been cultivated and converted to grass leys. Drainage schemes have affected valley mires and blanket bogs. Uncontrolled vegetation burning has frequently caused significant damage to moorland and blanket bogs on peat. Sheep grazing levels are such that most of the broadleaved woodland in the Welsh uplands cannot regenerate itself and is threatened with virtual extinction. Many of these problems will be shown to have resulted directly from the way in which the LFA Directive is interpreted and implemented in the UK.

In the Auvergne uplands, agriculture follows more traditional practices without significant intensification of production. Livestock grazing levels are moderate; fertilisers are used but uncommonly; drainage of wetlands appears to be very unusual and there are climatic and pedological restrictions on ploughing and reseeding of grasslands. Because of complex land ownership patterns and other restrictions on land use, some areas of land are agriculturally under-utilised. In consequence, agriculture and nature conservation are not in conflict in the Auvergne uplands. Apart from consideration of the LFA Directive's implementation in France, other factors such as the French interest in hunting and the retention of habitats for this purpose, are also relevant. Conservationists are mainly concerned with problems stemming from physical developments (especially tourism/recreational facilities) in the uplands, rather than agricultural change. Remembrement (the re-allocation of land into larger fields and rationalised ownerships) has had a substantial impact on nature conservation in the lowlands but a lesser impact in upland areas.

# V CRITERIA FOR THE SELECTION OF LFAs IN THE UK AND FRANCE

### The UK's Less Favoured Areas

9.86 million hectares of land in the UK (48% of its total land area and 51% of its agricultural land) are designated under Article 3(4) of the Directive (see Chapter 3), i.e. "less favoured areas in danger of depopulation," but with the tiny exception of the Isles of Scilly which are designated under Article 3(5), i.e. "other less favoured areas affected by specific handicaps." 8.65 million hectares were designated in 1974 with adjustments in 1976, and were based on the old 'hill areas' under the 1946 Hill Farming Act and already receiving special support measures from the British government. This original LFA is now categorised by MAFF as 'severely disadvantaged.' A further 1.21 million hectares were added to the LFA and approved by the EEC's Council of Ministers in February 1984. This LFA extension is categorised as 'disadvantaged' in comparison.

In Wales, 1.04 million hectares is classed as 'severely disadvantaged' and 0.41 million hectares as 'disadvantaged' (Figure 7). 20,311 farm holdings are included in the total LFA (68% of Welsh farms). The extended LFA covers 74% of the agricultural land in Wales. No data is yet available on grassland areas in the extended LFA but of the 1.04 million hectares of the original Wales LFA, 413,337 hectares is permanent grassland and 292,210 hectares is categorised as rough grazing (excluding common land). Its total farm labour force is 20,286 people; it supports 505,024 total cattle and calves plus 6.67 million sheep and lambs.<sup>12</sup>

The Wales LFAs (all designated under Article 3(4)) according to MAFF<sup>11</sup>, are all suitable for extensive livestock production but not for crops, apart from those necessary to feed livestock maintained on the land. Agricultural production is either severely restricted or restricted in its range by soil, relief, aspect and climate, either singly or in combination. This generalised definition appears to have been sufficient to justify the Article 3(4) designation. The original LFA (now known as 'severely disadvantaged') followed the old 'hill cow line', rather arbitrarily drawn up in 1943. When so-called 'marginal land' around the periphery of the LFA was surveyed between 1980 and 1982, none of the existing LFA land was taken out of the LFA in spite of the

arbitrary nature of the boundary. Almost certainly this was a political decision aimed at maintaining good relations with the farming industry and unions rather than the result of a careful agricultural assessment. The extensions to the LFA made in 1984 were the result of a systematic survey which used the MAFFdrawn boundaries of grade 4 and 5 agricultural land (the poorest quality) as the starting point. What MAFF refers to as "local knowledge" and "desk studies" were then used to modify these boundaries; on the ground inspections by ADAS staff were limited. The NFU (and Farmers Union of Wales in Wales) made a major input into the survey, mainly in the form of agricultural and economic information collected from their members. Previously disjunct areas of LFA were brought inside the enlarged LFA. MAFF did not conduct a farm by farm assessment to define boundaries as DAFS (Department of Agriculture and Fisheries for Scotland) has done in Scotland because the manpower requirement would have been enormous and the work would have taken, according to MAFF, 8-10 years to complete for England and Wales.<sup>15</sup> Nevertheless, one cannot escape obtaining the impression that the farming community, who stand to benefit from the financial supports and incentives available under the Directive, played a major role in defining the boundaries of the LFAs. Pressure on MAFF to extend the LFA boundary in the first place came from the farming lobby.

Council Directive 84/169/EEC<sup>16</sup> concerning the modified list of LFAs in the UK quotes the criteria under which the LFA extensions qualify under Article 3(4). It states, "... grassland accounting for more than 70% of the total utilised agricultural area, a stocking rate of less than 1 livestock unit (1 cow over two years old or 6.6 sheep) per forage hectare and farm rents not exceeding 65% of the national average ... and a labour income per man — work unit exceeding 80% of the national average". Other criteria concerning population densities and the agricultural workforce were also applied.

In every case these criteria are significantly more relaxed than those used to designate the original LFA in the UK<sup>17</sup> so that the so-called marginal areas could be brought into the extension. For instance, the stocking rate for the original LFA had to be below 0.78 livestock units/forage hectare (0.78 cow or 5.2 sheep/ hectare).

The extended LFA in Wales brings 69% of its land area within

the designation. This has important implications for nature conservation interests because of the financial supports and incentives available (see Chapter 6).

The farmers in the extended LFA are mainly dairy farmers or dairy with sheep, and it may well be that compensatory payments because of LFA designation will be less important than the substantial payments they can attract under the EEC's existing Sheepmeat Regime. Nevertheless, capital grants and the payment of compensatory allowances for hill livestock are likely to encourage agricultural intensification on land areas which in general are suitable for agricultural improvement. These incentives could extend the land area in Wales where conflict between agriculture and nature conservation occurs.

## France's Less Favoured Areas

10.6 million hectares of land in France (21.3% of the utilisable agricultural land and 19% of French territory) is designated as LFA. The bulk of it is designated under Articles 3(3) and 3(4) as shown in Figure 8 (see Chapter 3), i.e. "mountain areas in which farming is necessary to protect the countryside" and "Less-favoured areas in danger of depopulation", respectively. Several smaller areas, including some offshore islands, are designated LFA under Article 3(5) i.e. "other less-favoured areas affected by specific handicaps". The areas designated under Article 3(3) are the higher uplands and mountain areas of the Massif Central, Pyrenees and Alps. Under Articles 3(3) and 3(4), four different zones of LFA have been distinguished by the French depending on the severity of handicap and these determine the levels of financial supports and incentives.<sup>18</sup> Within the Article 3(3) areas, three zones are distinguished, viz.

Zone Defavorisee de haute montagne — high mountains (Alps and Pyrenees only) where agriculture is severely limited to low stocking levels of livestock. A very small land area is included in this zone.

Zone Defavorisee de montagne — mountain areas (particularly Massif Central, Pyrenees and Alps) where there are considerable limits on agriculture because of the nature of the terrain, climate and soils and because of restrictions on mechanisation. A considerable land area is included in this zone. Zone de Piedmont — an intermediate zone between the zone de montagne and the Article 3(4) areas — see below. Zone de Piedmont has a mountainous character often with steep slopes and sufficient to limit agriculture but not as much as in the zone de montagne. A comparatively small area is included in this zone.

Article 3(4) areas — zone Defavorisee hors montagne — a zone comprised mainly of land that cannot be cultivated and which does not lend itself to intensive production. Parts of the land area have more specific handicaps and are characterised by having a declining rural population. A considerable land area is designated.

The Zone Defavorisee de montagne was defined in Orders of the Ministere de l'Agriculture dated 20.2.74; 28.4.76; and 29.1.82. The Zone de Piedmont was defined in an Order dated 2.8.79; the Zone Defavorisee hors montagne in Orders dated 28.4.77; 29.1.82; and 20.9.83.

In the Auvergne three zones are designated (Figure 9). There is no Zone Defavorisee de haute montagne. About 60% of the land area is designated as Zone Defavorisee de montagne, comprising all of the upland and mountain areas above about 400m (1300 ft) in elevation and dominated by land at 700m-1300m (2300-4250 ft) elevation. Around 5% of the Auvergne is designated as Zone de Piedmont and this consists mainly of the foothills and uplands transitional between the lowerlying land areas and the mountain proper. It has an elevation of from about 300m to 700m. About 20% of the land is designated as Zone Defavorisee hors montagne and this is at a lower elevation of 200-400m, concentrated mainly in the north of Auvergne. This area is predominantly pastoral, often with bocage - fields and hedges. The remaining 15% of the Auvergne is not designated under the LFA Directive and this is the predominantly arable lowland in the fertile plains in the centre of the Auvergne (see Figure 9).

The different LFA zones in the Auvergne have been drawn up on a Commune by Commune basis, each Commune being allocated completely to one zone or another with the exception of 11 Communes which are partly within one or other of the zones. The zonation more fully reflects the differing degrees of agricultural handicap in different land areas than the UK equivalent (which only very recently distinguished even two zones). No doubt considerable generalisations have also been made by the French but the division into more zones (each with different financial incentives) gives one a greater sense of confidence that care has gone into linking agricultural supports to real variations in handicap.

The division into 3 LFA zones in the Auvergne has considerable implications for nature conservation. Financial supports and incentives for agricultural development are graded so that farmers in the least favoured zone (montagne) receive the highest levels. In consequence, the land naturally most amenable for agricultural intensification (by cultivation, drainage of wetlands, fertilisers, etc.) where losses of habitats important for wildlife could be greatest, receives the least state (and EEC) agricultural support. In much of the montagne zone there are natural limitations on agricultural development and intensification (see later) so that significant losses of semi-natural vegetation/wildlife habitat are less likely in any case. These areas receive the greatest financial support for maintaining agriculture.

### Summary

In the UK, virtually all of the LFA is designated under just one of the three Articles available under the Directive — Article 3(4). Its original boundaries were drawn up without the benefit of any systematic survey; no LFA land was de-designated when the UK LFA was substantially extended early in 1984 to include the so-called marginal land. This enlarged LFA, the areas included in which were determined in close consultation with farmers' representatives, now takes in much land amenable for agricultural development and may increase the proportion of the UK uplands experiencing the nature conservation/agriculture conflict. The LFA is now zoned into two areas ("severely disadvantaged" and "disadvantaged") though there is doubt over whether the latter is really applicable to many of the areas of land included.

In France, the LFA is designated under all three available Articles with a comparatively small area under 3(5). The boundaries were drawn up for the Directive on a Commune by Commune basis with the vast majority of Communes being entirely allocated to one or other LFA zone. The French have distinguished 3 zones of handicap within their Article 3(3) areas and financial incentives are linked accordingly; the 3(4) areas and 3(5) areas consist of one further zone each. The French system gives the observer more confidence than the UK system does that a more thorough assessment has been made by the French of comparative natural handicaps which is then used as the basis for a comprehensive system of support.

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### VI THE IMPLEMENTATION OF THE LFA DIRECTIVE IN THE UK AND FRANCE

### Implementation of the Directive in the UK

The system of aids and financial supports applied in the UK's Less Favoured Areas are discussed in some detail in existing documents produced by the Arkleton Trust,<sup>1</sup> by MAFF<sup>11</sup> and by MacEwen and Sinclair for the Council for National Parks.<sup>19</sup> Consequently, this chapter is not intended to provide a detailed and comprehensive documentation of the aids available in the UK. Rather, the components of the aid package (including national aids paid by member states within the LFA) with implications for nature conservation will be selected for study.

In the UK, the implementation of the Directive is nationally uniform so no different provisions apply to the LFA in Wales or elsewhere. The aid package may be divided into four sections, viz compensatory allowances, investment aids, other EEC measures and national aids.

### Compensatory Allowances

The current rates of HLCAs (hill livestock compensatory allowances) payable in the "severely disadvantaged" zone are \$44.50 for each beef cow; £6.25 for each "hill" ewe of a listed hardy breed and £4.25 for each upland ewe. There are no payments on dairy cows, immature cattle or immature sheep (though such payments could be made under the terms of the Directive). In the "disadvantaged" zone, the payments are at half the "severely disadvantaged" zone rate, i.e. £22.25 for each beef cow and £2.12 for each ewe, in this case irrespective of breed. The maximum payment permitted under Article 3(4) of the Directive is currently 97 European currency units (ECU) per livestock unit, i.e. £60, and the existing levels in the "severely disadvantaged" UK zone work out at 72, 68 and 46 ECUs for hill cow, hill ewe and upland ewe per livestock unit, respectively. Anyone qualifying for HLCAs must occupy at least 3 hectares of eligible land. There is no upper limit on the number of cattle attracting HLCAs but sheep are limited to 6 per hectare.

In Wales the 20,311 holdings in the extended LFA have a total of 163,500 beef cattle and 3.55 million sheep (1983 figures). In the original LFA (i.e. the "severely disadvantaged" zone) 10,773

holdings (95% of the total) received HLCAs on 138,379 beef cattle, 2.33 million hill sheep and 714,647 upland sheep totalling  $\pounds$ 23,63 million in 1983 (26% of the UK total).<sup>11</sup> The EEC re-imburses 25% of the cost of HLCAs. In Powys,  $\pounds$ 10.08 million was paid in 1982 on 66,900 cattle, 855,100 sheep at the higher rate and 420,100 sheep at the lower rate.<sup>12</sup>

There are unquantified provisions in MAFF's regulations for reducing the number of HLCAs paid where land (including common land) is "overgrazed" but there does not appear to be one instance of MAFF (nor of WOAD in Wales) enforcing this provision. In the farm area eligible for HLCAs, stock grazing woodland on the farm are included in the numbers paid. Both of these points will be discussed in Chapter 8.

#### Investment Aids

The main EEC based investment aid is through the Agriculture and Horticulture Development Scheme (AHDS) whereby enhanced rates of grant are paid for land in the LFA's "severely disadvantaged" zone. Rules of eligibility are more relaxed in the LFA and based on the achievement of certain target incomes equivalent to non-agricultural workers after agricultural improvement via a development plan. Low interest loans are not provided. In the "severely disadvantaged" LFA zone the rates of grant were changed in December 1984 to 50% for drainage (formerly 70%) and have been abolished for land cultivation (formerly 50%) though not for the reseeding of existing pasture (where the new rate is 30%). In addition, farmers with an agreed development plan in the LFA receive a "guidance premium" which is not higher than that given outside the LFA in the UK (though it could be one third higher under the Directive). The rates payable per hectare (last reviewed in January 1980) are £30.56, £20.67 and £10.52 over the first three years of the plan, respectively. But rates of grant for the "disadvantaged" zone of the LFA are identical to the "severely disadvantaged" zone for drainage and pasture reseeding in spite of its lesser agricultural disadvantage. The substantial investment grants available in the LFA until recently have resulted in considerable spending. In 1983, £8.2 million was paid to farmers in the LFA in Wales under the AHDS, plus £1.17 million in guidance premia.<sup>11</sup> In the single Welsh County of Powys, about two thirds of which is "severely disadvantaged" LFA, the grant payment to farmers in 1982/83 under the AHDS totalled £0.98 million plus £3.60 million under the forerunner of the AHDS, the FHDS (many plans established under it still running).<sup>12</sup> The all Wales figures above exclude substantial payments under the FHDS.

The UK operates a system of aids to joint investment schemes for forage groups (under Article 11 of the LFA Directive) through 'Food from Britain' and includes grant aid of 25% for certain machinery and 15% for tractors but this is not widely used in the UK.

#### Other EEC Measures

The UK has not made particular use of Directive 72/160 on farmer retirement and land reallocation and 72/161 on socioeconomic guidance in the LFAs (or elsewhere).

Two relatively new grant schemes (introduced in 1980) funded by the EEC are being used in LFAs, though not specifically designed for the benefit of hill farming. The Suckler Cow Premium scheme pays producers who maintain suckler cows for rearing beef calves. Dairy farmers are ineligible. The rate of premium is  $\pounds$ 24.74 per eligible cow within the LFA; half as much outside it. The estimated expenditure in all Wales on this one item for 1984/85 is  $\pounds$ 3.5 million<sup>11</sup> based on 141,471 eligible cows ( $\pounds$ 27.5 million projected for the UK). The rate of premium in the "disadvantaged" LFA zone has not yet been fixed.

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The EEC's Sheepmeat Regime guarantees producers' income to the level of the Basic Price (set each year by the EEC) through payment of an annual premium. This is paid when the average market price falls below the basic price. Calculation of the sums is complicated but producers effectively receive a headage payment on ewes. The most recent sheep premium payment<sup>3</sup> under this regime is £2.80 per breeding ewe plus £0.68 LFA supplement for the "severely disadvantaged" zone. These premia should be added to the sheep HLCAs (Chapter 6) which range from £4.25 to £6.25 making the total per ewe either £7.73 or £9.73. In the UK a variable premium is also paid on all fat lambs slaughtered. Traditionally, hill sheep farmers have sold store lambs to lowland farmers for fattening and it is the latter who should benefit from the variable premia. Its existence has, however, been a powerful incentive encouraging hill farmers in the "severely disadvantaged" LFA zone to fatten lambs themselves and benefit accordingly. Late in 1982 the variable premium rose to  $\pounds 18$  on a 20kg lamb and the UK flock of breeding ewes increased by 3.3% in the year to June 1982<sup>19</sup> alone.

#### National Aids

For farmers falling outside the criteria for AHDS qualification, the UK operates the Agriculture and Horticulture Grants Scheme (AHGS) which replaced the Farm Capital Grants Scheme (FCGS). Farms below a labour input of 200 standard man days are excluded from grants for certain buildings and other structures so many part-time farmers do not qualify under either the AHDS or AHGS. Until December 1984, when MAFF and WOAD announced changes in grant levels under the AHGS, the LFA's "severely disadvantaged" zone attracted grant levels of 50% for land cultivation and 60% for drainage. The new level for AHGS drainage grants is 30%; land cultivation grants have been withdrawn except for reseeding of existing pasture which is reduced to 30%. The new levels apply equally to the "severely disadvantaged" and "disadvantaged" zones. Hedge planting and stone walling grants remain at 60%.

In 1983, \$9.8 million was paid to farmers in the Wales LFA's "severely disadvantaged" zone under the AHGS<sup>11</sup> representing roughly \$23 million of capital investment. In Powys, grant payments in 1982/3 totalled \$5.23 million under the AHGS and \$287,000 under the FCGS; the total number of claims paid was 2,938 representing a total investment (from state and farmer) of \$13.78 million.

### Implementation of the Directive in France.

As in the previous section only those aids available in the French LFAs which have implications for nature conservation will be detailed. In France, implementation of aids under the LFA Directive, or other aids relevant to the LFAs, are not all paid uniformly. Increasing decentralisation (to Regions or Departments) of responsibilities is a feature of the present French government's policies; in consequence, financial aids in the LFA may well become less uniform than at present.
#### Compensatory Allowances

The French system of allowances equivalent to HLCAs in the UK is more complex. The levels of Idemnite Speciale (compensatory allowances) varies according to the LFA zone. The 1983/4 rates<sup>18</sup> for the Auvergne Region were:-

Zone Defavorisee de haute montagne

600FF/livestock unit

Zone Defavorisee de montagne

350FF/livestock unit Zone de Piedmont 150FF/livestock unit Zone Defavorisee hors montagne

0-120FF/livestock unit (sheep only) There is an upper limit of 1 livestock unit per forage hectare, i.e. 1 cow or 6.7 sheep/hectare — a similar stocking density to that permitted in the UK. In the 'haute montagne' and 'montagne' zones there is an upper limit of 40 livestock units (i.e. 40 cows or 267 sheep) per farm unit (extended in the case of cooperatives to 40 livestock units plus 10 units per member of the association). In the Zone de Piedmont, there is an upper limit of 30 livestock units (i.e. 30 cows or 200 sheep). No such limits are applied in the UK. The above levels of Idemnite are those quoted in the Auvergne; precise figures can vary between Regions. The Idemnite paid in the 'haute montagne' is the Directive's maximum. France also stipulates its own additional criteria for the payments.<sup>1</sup> Recipients must be permanent residents and must derive the bulk of their income from agricultural activities.

Unlike the UK, in France dairy cows are eligible in predominantly dairy areas (e.g. the Auvergne uplands) with a limit of 10 per farm unit (higher limits in 'haute montagne'). Again unlike the UK, calves, store stock and bulls are also eligible.

In 1981, the French LFAs in total attracted 690mFF in Idemnites (about £60 million) paid to about 122,000 farmers on about 2 million livestock units. The proportion of allowances paid at the highest rate (in 'haute montagne') in 1981 was only 5%; 78% in the 'montagne' zone and 16% in the 'piedmont' zone.<sup>1</sup>

#### Investment Aids

In France, incentives for development plans on farms are enhanced, and the conditions of eligibility somewhat relaxed, in the LFAs. The difficulty in meeting the relaxed comparable income eligibility criteria and the complexity of preparing the plans has severely limited the number of plans agreed. France operates a complex system of subsidised credits rather than grants and the minimum interest rate to be borne by plan beneficiaries is usually 2% pa. The total aid granted for investment (except some property improvements and land improvements) must not exceed the aid resulting from financing the investments with a 15 year loan at a 7% interest rate subsidy.<sup>1</sup> Again, regional variation occurs; in the Auvergne, loans for development plans in the LFA are at 4.75% pa compared with 6.0% pa outside the LFA.

By the end of 1983 only 36,847 development plans had been agreed in the whole of France (4,875 in 1983), 17% of them in the 'haute montagne', 'montagne' and 'piedmont' zones; 23% in the 'hors montagne' (Article 3(4)) zone and 60% completely outside the LFA.<sup>18</sup> Grants are available for a wide range of capital investments and the rates do not appear to vary with the type of investment but with the nature of the production system (average rates of 22.4% for milk cows, 28.3% for beef cows and 31.2% for sheep units in the Auvergne) and the LFA zone (34.0% in the 'montagne' and 'piedmont'; 28.5% in the 'hors montagne' and 21.1% outside the LFA). How these rates interact (e.g. dairy farm in 'montagne' compared with outside the LFA) is not clear. Cattle farming systems generally take 2 out of 3 development plans; plans for sheep rearing enterprises appear to be decreasing. By the end of 1981, just 2, 122 plans had been agreed in the whole of the Auvergne.

Guidance premia are payable (as in the UK) for agreed development plans and are increased by 30% in the LFA providing the beneficiary has more than 0.5 livestock units per forage hectare (there is no such enhancement in the UK).

France (as does the UK) operates a system of aids for farmers unable to meet the comparable income criteria for development plus. For land improvements (only) the levels of aid are higher in the LFA than outside and similar to those quoted above for development plans. Subsidised loans and grants are also available for joint investment schemes to increase fodder production (e.g. to farming cooperatives, grazing associations) and low levels of grant are available for machinery purchases. France has also provided an array of measures to assist the establishment of farming groups to increase productivity, to stem depopulation and support small farms. Support to the numerous types of group varies according to the number of members, their objectives and location (there are supplements in the LFA).<sup>1</sup> Grazing groups receive aid based on the number of livestock managed in common and paid over the first 3 years after being set up; amounts range from 144FF to 370FF per livestock unit (c.  $\pounds 12.50$ - $\pounds 32.17$ ), the higher rates payable to the groups with least livestock units.

#### Other EEC Measures

The French have made use of Directive 72/160 which encourages farmer retirement and the transfer of land to enlarge units. France has pursued such policies for many years and this rationalisation and reallocation of land — remembrement — is still seen as a major long-term aim. Much has already been completed but its scale and impact has been far greater in the lowlands than in the LFAs. In the 'haute montagne' and 'montagne' zones the retirement annuity is 15,000FF ( $\pounds$ 1,304) per annum and maximum payments are not confined to those releasing farmland for public use, afforestation or to development plan farmers as they are in the UK.<sup>1</sup> The Highlands and Islands Integrated Development Programme in the UK has its equivalent in the Lozere department but no IDP exists in the Auvergne and the implications for nature conservation of these programmes would have to be the subject of a specific study when their impact is clearer.

#### National Aids

France has a complex and comprehensive programme of national aids, many of which apply to its LFAs. Policies for mountain areas were well established prior to the initiation of EEC measures. The entry of young farmers (otherwise prohibited by speculative land markets) into agriculture is seen as important in France. An installation grant maxima of 162,000FF ( $\pounds$ 14,087) in the 'haute montagne', 'montagne' and 'piedmont' zones; 100,800FF ( $\pounds$ 8,765) in the 'hors montagne' zone; and 78,000FF ( $\pounds$ 6,783) in non-LFA areas — can be used for farm buildings, the farmstead, land improvements, stock acquisition and other needs.<sup>20</sup> Young farmers can also obtain cheap, long-term loans for certain land purchases. FIDAR, the Interministerial Fund for Rural Development, coordinates and funds rural development, especially in mountain areas (most of which is LFA).<sup>1</sup> It supports communal groups of various sorts but does not fund individuals. In future its activities will probably be based increasingly at Departmental or Regional (rather than Federal) level. FIDAR's existing Massif Central programme (97 million FF in 1980) promotes local industries, especially traditional product outlets, the installation of young farmers, electricity and roads, amongst other needs. It is not much directly concerned with land improvements<sup>21</sup> although as part of a complex system of supports, staff of the Volcans d'Auvergne Regional Park understood that support payments (of 1,000FF/year for each cow to an unknown maximum) were made to farmers in the Massif Central through FIDAR and SOMIVAL (a regional development company).

### Summary:- Main differences between existing UK and French system of aids within LFAs

The main differences in those areas of LFA supports which have, or may have, implications for nature conservation are:-

- Compensatory payments for livestock are graded depending on the severity of handicap into 4 payment levels in France. In the UK there are two levels of payment (further modified for sheep only according to breed) more arbitrarily linked to handicap levels.
- 2. An upper limit of compensation payments is fixed at a stocking level in France of ILU/hectare (1.0 cow or 6.7 sheep/ha); in the UK there is no upper limit for cattle but a limit for sheep of 6 per hectare.
- 3. There is an upper limit on numbers of livestock per farm unit which receive compensatory payments in France (usually 30 or 40 livestock units). No limit exists in the UK.
- 4. Dairy cows (up to 10 per farm), calves and bulls are eligible for compensatory payments in France but not in the UK.
- 5. For development plans and other investments France operates a system of subsidised loans plus grants. The UK operates a grant system only.
- 6. Rates of grant for development plans and other investments were, until December 1984 greater in the UK than in France

(a maximum of 34% seemingly in French LFAs compared with 70% in the UK). Cultivation grants for non-pasture land in the UK under development plans have been with-drawn and drainage reduced from 70% to 50% since December 1984.

- 7. Considerably lesser numbers of development plans have been agreed in France than in the UK (because of the small size of French farms, difficulty in meeting even relaxed eligibility criteria, and complexity of plan preparation in France.
- 8. Guidance premia associated with development plans are enhanced by 30% in the French LFA. No enhancement is available in the UK.
- 9. France has an array of measures, some EEC funded, some not, to assist the establishment and running of a variety of cooperative agricultural ventures. The UK operates a much more restricted system of measures.
- 10. France provides considerably more support for farmer retirement, land re-allocation and the installation of young farmers than does the UK.

#### Changes in LFA Supports proposed by the EEC's Review of the Efficiency of Agricultural Structures

Of the many changes proposed in this review (which is still under discussion by the Council of Ministers), several are designed to alter policies and aids in the LFAs.<sup>7</sup> Those likely to have some relevance, either directly or indirectly, for nature conservation are examined below.

- 1. Directive 72/160 which has been used, particularly by France, to encourage the reallocation and rationalisation of agricultural land (though less in the LFAs than elsewhere) is to be abandoned, seemingly because it has had limited impact.
- 2. Eligibility criteria for farm development plans are being relaxed (the comparable non-agricultural income comparison is proposed for abolition) so such plans will be available to a wider range of farmers. This may prove particularly relevant to both French and UK small upland farms.

- 3. The emphasis in development plans and other investment aids will be removed from increasing productivity and labour efficiency and reorientated towards practices which will protect and improve the environment (amongst several others).
- 4. There is provision for Member States to pay compensatory allowances at a higher rate under Article 15 where improvement or maintenance "of the natural landscape" is important (e.g. farmers keeping a lower stocking density for nature conservation reasons). These higher payments, however, are not eligible for EEC funding so the provision, as presently drafted, is likely to be ignored.
- 5. Slightly increased maxima for compensatory allowances are specified.
- 6. Aid to assist joint investment schemes by farmers for fodder production can be extended to include drainage.
- The possibility exists for grant aiding agriculture for environmental purposes under a modified definition of the Article 3(5) areas in Directive 75/268 (to become Article 32.2(b) in the new proposals). This Article is still being considered and the subject will be referred to in detail in Chapter 9.
- 8. An enabling framework is provided for possible future Integrated Development Programmes for LFAs. Measures could include land consolidation, drainage and others.
- 9. National capital aids are not eligible for EEC reimbursement if they exceed the levels permitted under Article 4.2. except for certain grants (including those for land improvement or for the protection/improvement of the environment). In these cases the aid can reach the levels for development plans.
- 10. A discretionary aid under Article 20 to encourage on-farm afforestation of agricultural land and "improvement" of existing woodland. In LFAs, grants would be available for farmers not qualifying for farm investment aids.
- 11. A provision for possible funding by the EEC of pilot schemes to demonstrate to farmers the enlarged objectives of investment aid via a development plan.

In its submission dated September 1984 to the Council of Ministers,<sup>22</sup> the UK Government proposed the addition of a new Article, 19A to 19F which would provide support for the con-

tinuation of farming in a manner that has regard to the countryside in certain environmentally sensitive farming areas. The British government is also pressing for Article 20 (provision of farm aids for forestry and woodlands) to be dropped. These points will be discussed in Chapter 8.

#### VII THE IMPACT OF AGRICULTURE ON NATURE CONSERVATION IN THE UPLANDS OF THE UK AND FRANCE

### The United Kingdom Uplands

The upland landscapes of the UK, and the varied and rich wildlife they support, are undoubtedly the product of centuries of agricultural activity. It is axiomatic that traditional agricultural management of the uplands has maintained and conserved these landscapes and their wildlife. This is not, though, to say that upland landscapes and the floristic and faunistic richness of the uplands are best developed under this form of land management. It could be argued convincingly, for instance, that the nature conservation interest (perhaps also the landscape appeal) would be increased considerably if large expanses of the uplands were not exploited for agriculture (nor forestry). But what has become evident in the last couple of decades in particular is the scale and pace of agricultural developments which have, and continue to, reduce both the nature conservation and landscape values of many of our upland areas.<sup>36</sup> Widespread concern over the losses of moorland (due to ploughing and conversion to grassland; and to forestry) the drainage of upland wetlands, grazing of broadleaved woodlands, and the deterioration of man-made features including stone buildings and walls led The Countryside Commission to launch its 'Uplands Debate' early in 1983 to assess the implications of these and other changes in the uplands.<sup>24</sup>

No systematic survey of vegetation, habitat, or species losses due to agricultural development has been undertaken for the whole of the UK uplands, nor is one planned. Rather, individual surveys of different upland areas, or of particular habitats, have provided an important insight into the scale and the implications of the problem.

#### Loss of Moorland and Roughland

Upland moorland and rough grasslands, most of which is in the LFA, can be improved agriculturally be fencing followed by surface cultivation (often preceeded by complete herbicide treatment to kill the vegetation), seeding and fertilisation to produce a much more agriculturally productive grass sward. Drainage may also be necessary and a pioneer crop may be required in the first year. A less sudden change can result from burning of vegetation (especially moors) coupled with more intensive grazing in order to preferentially encourage grasses rather than ericaceous plants (heather and heaths). Wet moorland may support 1 sheep for every 3/4 hectares; moorland converted to a rye grass sward can support 10 sheep per hectare.<sup>25</sup> Conversion of a Nardus upland grassland to a rye grass ley would not produce as drastic an increase because it could anyway support a livestock grazing level significantly above that of wet moorland. Contrary to some opinion, however, it is not possible for grazing alone to convert extensive areas of pure heather moorlands to other nonericaceous vegetation, grassland in particular. Unless sheep can repeatedly remove over 40% of the current season's growth of heather, the plants will continue to thrive.<sup>25</sup> Heather is of limited nutritional value and sheep could not possibly survive by removing such a quantity. As a consequence, burning to rejuvenate heather is a common agricultural practice on moors. Only if sheep graze a combination of rough grassland and heather moor will the grassland slowly extend at the expense of moorland.

The Exmoor National Park had 23,900 hectares of moorland in 1947 which, by 1976, had been reduced to 19,021 hectares (a 20% loss),<sup>26</sup> mainly by conversion to pasture. The 1977 Porchester report<sup>27</sup> published figures provided by MAFF to indicate the potential loss of agricultural production if 16,000 hectares of Exmoor stayed as rough sheep grazing and were not converted to grassland. The annual losses would be 708 tonnes of mutton and lamb (total UK production in 1975, 258,000 tonnes); 610 tonnes of beef and veal (UK,1,166,000 tonnes); and 109,090 Kilos of wool (UK, 51 million kilos). Porchester regarded these potential agricultural losses as insignificant in UK terms.

The Brecon Beacons National Park in Wales lost 8,195 hectares of moorland (to agriculture and forestry) between 1885 and 1975, and the northern half of the Snowdonia National Park lost 5,201 hectares over a similar period, though the majority of it was to forestry.<sup>29,31</sup>

The Upland Landscapes Study based its survey on 12 parishes, all in the LFAs in England and Wales. The Institute of Terrestrial Ecology used the same parishes for a parallel study of vegetation change. The studies produced interesting results,<sup>30</sup> though there is some doubt about the statistical validity of applying its conclusions to the whole of the uplands in the UK. Table 1 shows the losses of different semi-natural vegetation types summed for the 12 parishes.

Vegetation Type	А			
	in 1967	in 1978	change 67/78	% change
Heath Shrubs (heathers, bilberry)	15,067	14,438	-629	-4%
Coarse grassland (Nardus, Molinia)	12,310	11,317	- 993	-8%
Smooth grassland (fescues, bents)	10,173	7,935	-2,288	-22%
Sedge and Rush Moors (cotton grass, rushes)	8,175	7,754	-421	-5%
Bracken Gorse	3,660 342	3,948 710	+288 +368	+8% +108%

## Table 1. Aggregate Changes in plant communities in all ULS parishes<sup>30</sup>

Not all of the losses of moor and rough grassland can be attributed to agricultural change. The loss of smooth grasslands (the most amenable to agricultural improvement) is almost entirely attributable to agriculture. The area of farmland in the 12 parishes (crops, grass leys and improved permanent pasture) increased from 14,026 to 15,291 hectares between 1967 and 1978 (an increase of 1,265 hectares). Conversion to grassland also explains much of the loss of healthy shrubs, coarse grasses, cotton grass and rushes. Gorse and bracken spread (the former significantly richer for wildlife than the latter) may be due to a reduction in the intensity of land management in some parishes. In the North York Moors National Park, bracken is estimated to be encroaching into the moorland at a rate of about 120 hectares a year.<sup>28</sup>

Dr Martin Parry and colleagues at Birmingham University have surveyed land use changes<sup>29</sup> in five UK National Parks and in the mid-Wales uplands. The total area involved, 700,000 hectares, is almost all LFA. In their surveys, 'roughland' includes heather and other forms of moorland, rough grasslands, bracken, rushes and gorse. Table 2 gives data for roughland loss and shows that over 70,000 hectares of moorland and roughland were lost in these 6 upland-areas between 1950 and 1980. No distinction is made between losses due to agriculture and afforestation.

Table 2. Net changes in area of roughland in each of 6	
upland areas, 1950-1980 (median dates). Data rounded t	0
nearest 100 hectares <sup>29</sup>	

	Area of				
		roughla	nd (ha)	Net cl	nange
Study Area	Period	'195 <mark>0</mark> '	<b>'1980'</b>	hectares	%
Mid Wales Uplands	1948-83	100,900	72,400	-28,400	-28%
North York Moors NP	1950-79	68,000	50,900	-17,100	-25%
Northumberland NP	1952-76	83,600	71,500	-12,000	-14%
Brecon Beacons NP	1948-75	74,100	65,800	-8,300	-11%
Snowdonia NP (north)	1948-75	65,600	63,000	-2,500	-4%
Dartmoor NP	1958-79	51,000	49,300	-1,800	-3%
TOTAL	<b>'1950–1980'</b>	443,200	373,000	-70,100	-16%

The appearance of the countryside - uplands included - has always been changing and the Farming Unions, in particular, make great play of this suggesting that the losses of rough grassland and moorland in recent years are merely a part of continual agricultural change. Their argument takes no regard of the scale and pace of change. It has also been suggested that much of the roughland converted to grass leys will revert again to roughland and that this interchange is an established, if episodic, occurrence. It does not appear, however, to be supported by the findings of Parry and his colleagues. They ignored temporary conversions from roughland to grass leys (and vice versa) and found that in the 30 years to 1980 in their 6 study areas, 15,000 hectares of rough pasture had reverted to roughland but 23,900 hectares of roughland had been converted to grass leys. Temporary conversions of roughland, not then maintained as grass leys permanently, are in addition to these figures. Reversion, complete only when all of the moorland plants return, may take a hundred years. On the North York Moors, about a third of recent (1974-79 moorland conversion to grassland was of moor first converted between 1853-1895 and which reverted to moorland in the 1930s. Table 3 gives the breakdown of the 23,900 hectares in the 6 upland areas.

#### Table 3. Enduring Conversion of Roughland to improved grassland in each of 6 upland areas, '1950-1980'. After Parry<sup>29</sup>

Enduring Conversion of Roughland to Pasture (hectares)

Mid Wales Uplands	9,700
North York Moors NP	5,500
Northumberland NP	2,400
Brecon Beacons NP	3,800
Snowdonia NP (north)	1,000
Dartmoor NP	1,400
TOTAL	23,900

Study Area

The RSPB has recently completed a commissioned study of losses of rough grazing in the LFAs based on an analysis of MAFF and DAFS returns at parish level for the years 1946, 1951, 1961, 1971, 1976 and 1981.<sup>47</sup> The data does not include common land and it has had to be standardised to overcome changes in category definitions over the years. The results are given as Table 4.

Table 4.	Rates of	change	in freeho	ld rough	grazing
between	1946 and	1981 in	LFAs in	the UK <sup>47</sup>	

	1946	-1981	1976-1981	
		change		change
	% change	(hectares)	% change	(hectares)
LFA Region	per annum	per annum	per annum	per annum
Northumberland	-1.10	-1,786	-1.46	-1,581
North Pennines	+0.03	+22	-0.40	-314
Lake District	-0.54	-346	-1.41	-787
North York Moors	-1.08	-180	-0.35	-37
Mid Pennines	-0.29	-408	-0.80	-956
Peak/S Pennines	-0.38	-209	+0.42	+ 197
Exmoor	-0.98	-183	-2.26	-314
Dartmoor	-0.52	-85	-2.57	- 397
Bodmin Moor	-1.03	-91	-2.46	-159
Snowdonia	-0.71	-1,050	-2.23	-2.810
Cambrian Mountains	-1.41	-1,810	-2.66	-1.999
South Wales	-1.70	-1,480	-5.21	-2.480
Welsh Borders N	-0.99	-810	-2.34	-1.417
Welsh Borders S	-1.60	-693	-3.04	-680
Total England +				- + 0
Wales Uplands	-0.88	-9,107	-1.75	-13,734

In regions with the worst topography and climate (e.g. Snowdonia) the greatest losses have been due to afforestation; in SW England and southern Wales, agricultural conversion has been the main cause, whereas in intermediate areas such as the Cambrian Mountains of mid Wales, moorland has been lost to both. In the UK LFAs as a whole, 797,195 hectares of freehold rough grazing were lost between 1946 and 1981; in the 1976-1981 period, 359,034 hectares were lost. The rate of loss 1976-1981 in the UK as a whole is over five times that between 1946-51. In the 1946-81 period, total livestock units increased by 39% throughout the UK,<sup>47</sup> though with considerable regional variation. Sheep numbers doubled during this period in Wales; Scottish sheep numbers rose by only 12%.

On Dartmoor, 365 hectares of moor and heath were converted to grassland between October 1980 and February 1983. The county of Powys (almost all LFA) had 240,600 hectares of rough grazing in 1955 which by 1982 had fallen to 179,052 hectares, much of it improved agriculturally.<sup>12,14</sup> The number of capital investment schemes for which agricultural grant was paid is increasing, from 5,564 in total in 1979/80 to 6,718 in 1982/83. Over the same period the cost of these schemes has risen from  $\pounds$ 10.63 million to  $\pounds$ 24.81 million, partly the result of the larger number of schemes, the increasing cost of materials and labour and perhaps also the increasing scale and thoroughness of many of the schemes carried out.

According to the RSPB,<sup>47</sup> peripheral upland blocks have tended to lose their bird species first; in SW England some areas have lost, or almost lost, one-time vigorous Merlin, Red Grouse, Black Grouse, Ring Ouzel and Golden Plover populations. The evidence shows clearly that the single most significant cause of decline in upland bird species in the UK as a whole is the removal of moorland habitat. There are 10 species in the UK whose breeding populations are dependent on moorland and upland rough grassland; populations of Golden Eagle, Hen Harrier, Merlin, Red Grouse and Golden Plover are regarded as internationally important.

Sown grasslands support few insects, mammals or birds. According to some figures compiled by the Nature Conservancy Council,<sup>33</sup> untreated permanent grasslands (including chalk grasslands) can support 20 species of butterfly; sown grass leys support none! Such temporary grasslands consist very largely of just two or three plant species. Heather moorland supports a range of higher plants plus lichens and mosses, an array of insects, small mammals and breeding birds.

Not all of the losses of moorland and rough grassland to agricultural development are the result of surface cultivation and grass seeding. Some have occurred as a result of lime and fertiliser applications coupled with more intensive grazing of livestock. Grazing alone has brought about considerable changes. It is well accepted that heavy sheep grazing of Agrostis/ Festuca grass swards in the uplands favours more resilient species, especially Nardus stricta and Juncus squarrosus at the expense of these finer grasses. Since Agrostis/Festuca swards only occur on the more fertile soils and are agriculturally more productive, heavy stocking not only alters the vegetation composition but reduces the grazing value. Anderson and Yalden<sup>34</sup> correlated a reduction of heather and bilberry moorland area (from 154km<sup>2</sup> in 1913 to 99km<sup>2</sup> in 1981) in the Peak District with sheep numbers which trebled between 1930 and 1976, a finding consistent with sheep grazing experiments. In Wales the sheep population has increased from 5.53 million in 1961 to 8.42 million in 1982.<sup>8</sup>

Heavy grazing levels on mountain slopes and summits (especially in Snowdonia, the Lake District and the Peak District) combined with moderate or heavy use by hill walkers is causing serious vegetation and soil erosion problems on access paths and summit platueax. A heavily grazed sward has little resilience to repeated abrasion by walkers' boots,<sup>43</sup> leading to vegetation, followed by soil, loss over a wider and wider area. A current example on the summits of the Carneddau mountains in Snowdonia has been brought to the attention of WOAD by NCC, the National Trust and the Park Authority who consider that heavy grazing levels on this registered common are a major cause of worsening erosion.

Declines in stocking levels can also have disastrous consequences if combined with tourist use. Dr Roy Brown estimates<sup>28</sup> that 12,000 hectares of moorland in the North York Moors National Park is not grazed intensively enough because farmers are reducing sheep flocks. The resulting rank heather is a severe fire hazard in areas attracting tourists. Severe fires have already caused substantial losses. In the Berwyn Mountains in North Wales (all LFA), a fire in the 1976 drought burnt 700 hectares of heather moor and its underlying peat. By 1982 less than a quarter of the area had revegetated; the remainder is bare peat, clays or exposed shale and rock from which the peat cover has been burnt off. Peat fires kill all vegetation and seeds; mosses and lichens are particularly fire-sensitive, the less mobile insects and other animals are killed outright. Moor burning as an agricultural or shooting practice reduces plant and animal species diversity considerably; heather monocultures predominate. When coupled with increased stocking levels, moorland losses are inevitable and heather can be replaced by bilberry, cotton grasses, purple moor grass or other vegetation (depending upon many factors), reducing moorland wildlife.

Wet moorlands — more correctly known as blanket bogs often vegetated with a heather/cotton grass/cross-leaved heath or purple moor grass/deer sedge plant community, are not usually amenable to agricultural development on a significant scale. But moor gripping (open drainage channels at regular spacing) can severely damage wet flushes, small pools and *Sphagnum* moss beds within such blanket bogs. The practice has no proven agricultural benefit,<sup>35</sup> although frequently justified by farmers, their Unions and the Agriculture Departments alike in spite of the evidence to the contrary. No figures are available from the Agriculture Departments on the land areas gripped each year — the data is incorporated in the total field drainage figures and cannot be separated — but several schemes in the Pennines and the Welsh uplands have caused significant damage on blanket bogs in the past.

Floristically rich (and thereby often entomologically rich) pastures and hay meadows, traditionally managed for many years, perhaps always since woodland clearance, can have their interest destroyed simply by one ploughing or by occasional applications of inorganic fertiliser. Agricultural statistics take no account of such changes because an old hay meadow may be recorded as permanent grassland both before and after a sudden change in management practice (e.g. a one-off large inorganic fertiliser dose) or even after one cultivation provided its agricultural use does not change. A pasture entered as 'permanent grassland' in the agricultural statistics could therefore have lost all of its nature conservation interest. Numerous, hitherto traditionally managed hay meadows and pastures in the UK uplands have totally lost their nature conservation interest in this way.

#### The Threat to Broadleaved Woodlands

In the uplands of the UK, broadleaved woods are fragmented (due largely to past clearance for agriculture) and confined largely to steep valley slopes, to boulder strewn and rocky ground, and to gorges. Except in parts of Scotland where Caledonian pine forests with birch are predominant, the broadleaved woods of the uplands are mainly oak (Ouercus petraea) dominated. Their long-term survival is seriously in jeopardy, not from felling for timber or futher agricultural clearance, but from livestock grazing.<sup>37,39</sup> Tree saplings (over 1 metre in height) are absent from 80%, by area, of the 5,400 hectares of broadleaved woodland in the Snowdonia National Park, virtually all of which is LFA. They are absent from 90%, by area, of the more open Snowdonia woods which are even more amenable to sheep grazing. Most of the woodland is located on hill farms and unrestricted access by sheep is encouraged to provide winter shelter and year-round grazing. 85% of the woodland area is dominated by mature trees, indicating that grazing has been heavy enough for a long time to prevent sapling recruitment.<sup>38</sup> The pattern repeats itself throughout the Welsh uplands and appears to be the norm in the UK uplands generally. In Powys (where the problem is as severe as in Snowdonia), the total sheep population has increased from 1.01 million in 1947 to 3.13 million in 1982; in Wales it increased from 5.53 million in 1961 to 8.42 million in 1982, exacerbating the problem.

Concern over the future of broadleaved woodlands in Wales, stimulated by the threat from grazing to the oakwoods of the uplands, has led NCC to set up a Welsh Wildwood campaign with representation from a wide range of statutory and voluntary bodies plus local Authorities. The plight of woodlands in Wales has been analysed and a publicity drive during 1985 is aimed at stimulating interest in protecting and enhancing woodlands throughout the Principality.

Biologically, the upland oakwoods are rich and varied; they frequently support important populations of mosses and liverworts, lichen assemblages and breeding birds such as Redstarts, Pied Flycatchers and Wood Warblers confined to the north and west of Britain. In Snowdonia, 10% of the broadleaved area is managed in 11 National Nature Reserves by NCC; a further 13% (almost all grazed) is notified as SSSI.<sup>38</sup> A survey by NCC has revealed clearly that all of the woodland could regenerate itself naturally if sheep grazing was prevented or substantially reduced; the cost of fencing for this purpose can be as much as \$3,500-\$8,000 for a 20 hectare wood depending on its shape and the terrain encountered, making the costs often prohibitive.<sup>38</sup>

#### Loss of Hedgerows, Stone Walls and other Traditional Boundaries

The Upland Landscapes Study compared aerial survey data for 10 LFA parishes in the UK taken in 1945-1962 (median, 1949) with field mapping carried out in 1978-79 to see how field boundaries had changed.<sup>30</sup> Table 5 show the results.

## Table 5. Aggregate changes in areas enclosed by different types of field boundary in 10 upland parishes, '1949' and '1978'. (selected boundary types only).<sup>30</sup>

Field Enclosure Type	Enclosed '1949'	Area (ha) '1978'	Net change, hectares	ʻ1949-1978' %
Walls enclosing farmland Walls enclosing more	4,320	3,059	-1,261	-29
extensive grazing	1,182	1,098	- 84	- 7
All wall types	8,011	6,945	-1,066	-13
All hedge types	4,210	3,924	- 286	- 7
All fence types	3,613	5,249	+1,636	+45

Traditional boundary types have frequently been replaced by post and wire fences. Some of the changes are the result of afforestation and reservoir construction so that not every change is attributable to agricultural development. Data compiled by NCC<sup>33</sup> shows that hedges, hedgerow trees and their seminatural grass verges can support 20 species of mammal, 37 species of birds and 17 species of butterfly; comparable figures for fences are 5, 6, and 0 when associated with sown grassland and 6, 9, and 8 when associated with semi-natural grass verges.

#### The French Uplands

The uplands and mountains of France, from the Massif Central with its extensive grasslands, large woods, forests and upland wetlands to the high mountains and foothills of the Pyrenees and Alps with their substantial areas of sub-montane and montane vegetation types and permanent snow fields, support a notably varied and impressive fauna and flora. Agriculture is the main rural industry, though commercial forestry has traditionally also been important. Although the French uplands are nationally important for such commodities as beef, milk and cheese, the forms and intensity of land management have changed relatively little with time. In general, agriculture and nature conservation in the French uplands are not in conflict, certainly not on any significant scale. This is markedly not the result of any official policies, nor generally because of a widespread concern for, and understanding of, the environment by the agricultural population. Rather it is the unplanned result of the maintenance of a generally traditional form of agriculture which is not overexploitive of its fundamental resources.

No surveys to assess changes in vegetation communities/ habitats as the result of agricultural changes in the French uplands have been carried out. It has not proved possible to locate any smaller scale surveys specific to any areas, although it is always possible that some could exist somewhere! What data exists on broad vegetation types for the uplands has been extracted mainly from French Agriculture Ministry sources. In the Auvergne, the major agriculture/conservation conflict is clearly in the plains, especially the extensive limagne north of Clermont, where intensive cereal and crop production has taken over from a former bocage (hedge and pasture) landscape. This view was confirmed in discussions with 'Auvergne et Nature', an active voluntary conservation body in the Region and by M. G. Laroche of the Institut Technique des Cereales et des Fourrages (ITCF).

#### Changes in Grassland/Moorland Areas

Of France's total agricultural land of around 35 million hectares (excluding forested land), about 14 million hectares is under permanent grassland (40%) and this proportion has remained about steady since World War II. In the Auvergne Region, the Departments of Haute-Loire (in the SE) and Cantal (in the SW) are the two almost entirely upland in character and within the LFA. In Haute-Loire, the 1979/80 quoted area for permanent grassland was 128,281 hectares, the area of rough grassland/ moorland was 38,544 hectares (giving a total permanent grassland area of 166,825 hectares).<sup>40</sup> The total area of temporary grass leys was 24,680 hectares. Total permanent grassland represented 65% of the utilised agricultural land and this proportion has changed little over the years.

Similar figures were compiled in more detail for the Cantal Department (Table 6).

#### Table 6. Grassland Areas in relation to Total Agricultural Land in the Cantal Department of Auvergne, 1955-1980<sup>41</sup>

	Area in hectares			
Agricultural/Vegetation type	1979/80	1970/71	1955	
Permanent Grassland (1)	275,349	247,047	249,310	
Rough Grassland/Moor (2)	38,334	49,510		
Total Permanent Grassland (1+2)	313,683	296,558	_	
Temporary Grassland (3)	36,563	32,563	_	
Artificial Grassland (4)*	2,816	3,125	_	
Total Temporary Grassland (3+4)	39,379	35,688	_	
Utilised Agricultural Land (5)	376,904	362,808	396,088	
Total Permanent Grassland				
(1+2) as proportion of 5	83%	82%		
Total Temporary Grassland				
(3+4) as proportion of 5	11%	10%	_	
* Consisting mainly of legumes				

Few figures are available from the 1955 Census and data does not exist in this detail for intervening years. The proportion of total agricultural land in Cantal represented by permanent and by temporary grasslands has remained remarkably steady between 1970/71 and 1979/80 in spite of the LFA Directive which was applied in 1975. The temporary grassland area has increased (by 12%) in this period, presumably the result of cultivation of previous premanent grassland on lower slopes and valley bottoms. The rough grassland/moor area declined by 23% between 1970/71 and 1979/80 and the area of permanent grassland increased (and the total utilised agricultural area). This may be because more land was brought into agricultural use as a result of remembrement (see p. 46) and re-use of the communal high pastures — the estives — in the mountain areas. These latter had fallen out of traditional summer grazing use during the present century and official encouragement (mainly through SAFER -Societe d'Amenagement Foncie et d'Etablissement Rural) has been given to establishing farmers' associations for their re-use by cattle. While these high mountain areas are not suitable for any form of significant agricultural improvement, reintroduction of grazing will have altered the vegetation communities somewhat, preventing the slow reversion of seminatural communities to more natural, rank vegetation with scrub encroachment on lower slopes. The reduction in the nature conservation interest will probably have been slight and reintroduction of light grazing may well have prevented a decline in floristic diversity in some upland, species-rich grasslands traditionally subject to such grazing. The decline in rough grassland/moor may reflect its "better" agricultural management bringing it into the category of permanent grassland instead. Surface cultivation is rare, except in some lower lying valleys<sup>18</sup> so the changes have subtle origins.

A detailed study of 9 communes in the Monts Domes area of the Puy-de-Dome department (all LFA)<sup>42</sup> showed that the utilised agricultural land increased from 9,369 hectares in 1970 to 10,169 hectares in 1980 (an 8% rise), probably for the same reasons given above in this mountainous part of the Auvergne. The area of permanent grassland during the same period rose from 8,070 hectares to 9,391 hectares (a 16% rise).

Some of the change in grassland area is also the result of a downward trend in the area of land under cereals in Cantal (Table 7) which has declined to over half its 1955 area.<sup>41</sup> Land previously used for cereals is now either used as grassland (perhaps mainly temporary) or for fodder crops. A similar fall has been noted in the Monts Domes.<sup>42</sup>

## Table 7. Area of land under cereal crops in the Cantal Department of Auvergne, 1955-1980<sup>41</sup>

	1979/80	1970/71	1955
Total Area of Cereals (hectares)	17,455	24,414	38,623
All ploughed land*	62,515	65,368	85,990
Cereals area as proportion of			
utilised agricultural land	4.6%	6.7%	9.8%
* includes cereals, fodder crops and t	temporary gras	sland.	

#### Changes in other habitats

Very little direct information exists for quantifying the impact, if any, of agricultural change on habitats other than moorland and grasslands in upland areas. Traditionally, woodland and forest is subject to an impressive level of management in France. This is also true in the uplands. The majority of it is in private ownership but livestock are almost always excluded and regeneration of woodland is not prevented as it is in most of the upland woods in the UK. In the Auvergne, where 656,000 hectares (26% of the land) is wooded, 146,000 hectares in Cantal and 161,000 hectares in Haute-Loire, local farmers and Communes have a traditional involvement in woodland management, if only to provide firewood. In France it is apparently illegal to graze livestock in woodland. Upland agriculture and the long-term retention of native woodlands are not mutually exclusive.

Throughout the Cantal and Puy-de-Dome uplands (all LFA), numerous small wetlands exist, often in shallow valleys. Wetlands transitional to wet pastures were also noted but in spite of considerable travel in these areas, I noted only two active drainage schemes, both consisting of a few open ditches mainly to facilitate surface water runoff. Many small wetlands amenable to agricultural drainage were noticed though no data exists on the number or location of former wetlands now effectively drained. Ministere de l'Agriculture figures<sup>41</sup> for Cantal show that 4,265 hectares of land (1.1% of the agricultural land) on 1,161 farms have been 'drained'; in the 1970/71 Census the figures were 3,124 hectares on 949 farms. No figures are provided by the 1955 Census. Clearly there has not been any signifcant surge in the interest of draining wetlands and wet pastures in spite of opportunities to do so.

Remembrement — the government sponsored reorganisation of land to produce larger fields and rationalised farms — has had a major impact on agricultural productivity and intensification in many parts of the French lowlands over the last few decades. It has also drastically altered landscapes and reduced the nature conservation interest associated with the former small fields and hedges or banks. In the last couple of decades the process has been extended to parts of the uplands.<sup>2</sup> In the process, field boundaries are removed, pastures and meadows amalgamated into larger units, streams canalised and improved access roads constructed. In the uplands, remembrement is three times more costly than in the lowlands. In the Auvergne, Figure 10 shows the Communes in which remembrement was complete or in progress in 1983. Several groups of Communes are in the LFA Zone de Montagne; in the Rochefort-Montagne Commune of Puy-de-Dome much encouragement has been given to remembrement by M. Giscard d'Estaing who resides in the area and is in favour of "progressive" agriculture. Much of the land drainage quoted above for Cantal may be associated with remembrement. Parts of the 'remembred' communes are clearly characterised by larger pastures separated with post and wire fencing; in places evidence was found of the remains of former hedge and bank field boundaries.

SAFER Auvergne functions by purchasing land on the open market and re-selling it within 5 years to enlarge existing farm units or to create new, more rationalised units. In 1983 it acquired 3,965 hectares in 549 parcels throughout the Auvergne (half of them under 1 hectare each); 2,439 hectares in 315 parcels was within the LFA Zone de Montagne. Also in 1983, SAFER sold off 5,223 hectares, 2,447 hectares of which went to enlarge existing farms, (69% by area in the Zone de Montagne) and 1,276 hectares to create 77 new farm units, 49 of them in the Zone de Montagne.

Figures are not produced for the lengths of old field boundaries removed or watercourses canalised but in 1983, SAFER Auvergne spent 163,481FF on building new farms and buildings; 470,165FF on irrigation, drainage and straightening water courses; 1,859,119FF on roads, clearance for cultivation (scrub etc?) and boundary construction, much of it attracting state subsidies.<sup>44</sup> An indirect measure of its effect on nature conservation interest associated with old field boundaries can be obtained by comparing data on farm sizes in 1970/71 and in 1979/80 in Cantal<sup>41</sup> (Table 8). This shows that the number of farms has fallen by 14%; the number in the smaller size bracket generally (under 30 hectares) has fallen and the number in the larger size brackets risen. Some of these changes will have occurred by re-grouping existing fields without many boundary changes but probably a fair proportion will have been associated with boundarv losses.

# Table 8. Breakdown of farm units in the Cantal department of the Auvergne by size category, 1970/71 and 1979/80<sup>41</sup>

Area (hectares) of utilisable	Area in	this	Number o	f farm
agricultural land in categories	category (h	ectares)	units	i
agricultural land in estegories	1970/71	1979/80	1970/71	1979/80
Under 1	55	83	164	337
1-2	344	220	244	159
2-5	2,468	1,600	707	460
5-10	11,294	6,539	1,509	876
10-15	20.519	13,180	1,655	1,057
15-20	29.267	18,190	1,688	1,039
20-25	30,453	22,884	1,367	1,028
25-30	29,008	25,690	1,059	937
30-40	54,748	53,391	1,590	1,542
40-50	42,145	50,016	949	1,127
50-70	46.133	65.041	794	1,117
	38,502	50,972	, 468	620
100-200		55,000	1	420
200-300	57.871	8,216	} 391	35
300+	}	5,920	J	10
TOTAL	362,808	376,942	12,557	10,764

Because the impact of agricultural change on upland vegetation/habitats has been generally small, the effect on individual species is also probably minor. No precise data exists; it is known, however, that there have been no significant declines in French breeding birds associated with farmland generally since the 1936 Inventory of French Birds.<sup>45</sup> That the impact of agriculture in the Auvergne uplands on vegetation and species is minor was confirmed in discussions with Auvergne et Nature, M. G. Laroche of ITCF, Clermont Ferrand and by staff at INRA (Institut National de la Recherche Agronomique) at Theix.

Pastures in the Auvergne uplands of Puy-de-Dome and Cantal appear to be heavily used by birds of prey, indicating that they support good populations of small mammals and birds which in itself indicates that the majority are agriculturally unimproved. During my visit in October 1984, Buzzards, Kestrels and Red Kites were commonly noted hunting over pastures; Hen Harriers and Great Grey Shrikes were also noted doing this.

#### Summary

In the UK uplands, agriculture and nature conservation are in conflict. Substantial losses have occurred of semi-natural vegetation and wildlife habitats, notably moorland and rough grassland, much of it attributable to agricultural intensification (especially cultivation and reseeding). The scale and pace of these losses appears to be unprecedented; it has increased markedly in the last decade. A very serious threat is also posed to the survival of the broadleaved woods of the uplands - the modified remnants of the original wildwood — because of increasing livestock grazing. Damage to (and some losses of) wetlands and a reduction in traditional features such as stone walls and hedges in the LFAs is also of concern. The long-term implications of these habitat losses for individual species, if the present trends continue, are likely to be disastrous. Heather moorlands, many of the upland broadleaved woodlands, and some of the individual species dependent on these habitats, are of significance not merely in a UK context but in a Western European context also.

In the French uplands, agriculture and nature conservation are not significantly in conflict though this is not a result of policies aimed specifically at conservation objectives. There has been no substantial loss of moorland/rough grassland; wetland drainage appears to have been on a limited scale and grazing of woodlands is not common practice. Traditional pasture and meadow management prevails and by default fulfils conservation aims. Remembrement in the uplands has resulted in limited losses of semi-natural features. There does not appear to be any threat to individual species from agriculture.

#### VIII ELEMENTS OF THE LFA DIRECTIVE AND ITS IMPLEMENTATION RESPONSIBLE FOR THE AGRICULTURE/NATURE CONSERVATION CONFLICT IN THE UK

In the French LFAs, agriculture and nature conservation are not in conflict to any marked degree but in the UK uplands the conflict is severe and widespread. This gross difference is unlikely to be the result solely of the way in which the Directive is implemented in the two countries — other influences are also at work — but the implementation of the Directive in the two countries is certainly different in several respects. These, and the ways in which the Directive has been interpreted, are analysed below, wherever possible segregating the various elements and assessing their impact. Other perceived differences are discussed later in this chapter.

#### **Compensatory Allowances**

Chapter 6 stated the different ways in which these allowances were paid and analysed the differences between the French and UK arrangements. Because the payments are made on a headage basis it would be unnatural for farmers not to attempt to increase the numbers of animals they can support on their farms. This can be achieved in two basic ways; firstly, by maximising stocking density on all land available to support livestock; and secondly, by agricultural improvement of vegetation to provide more productive grasslands. In the second case, the HLCA payments increase as stocking levels increase as more of the farmland is brought into more productive use. Limitations obviously exist, e.g. the amount and cost of necessary winter feed (or wintering on other land) and consideration of carcase quality when livestock are slaughtered. For these reasons, it is somewhat artificial to examine the impact of HLCAs alone. But because they are so important in affecting livestock numbers, data was obtained for the Cantal department of the Auvergne and the county of Powys in Wales in order to examine trends. Table 9 compares livestock levels calculated from data obtained from the UK and French Agriculture Ministries.<sup>12, 13, 14, 41</sup>

Autore 7. Comparative Grazi	ing Densities ic	or the Canta	l department	,
Auvergne and Powys count	y, Wales, 1955-	1982		
Region and	1055	1070/71	1070/00	1000
CANITAL	1955	1970/71	1979/80	1982
1 Utilized conjectured				
1. Othised agricultural	207.000	2/2 000	274 004	
and (nectares)	396,088	362,808	376,904	
2. Total permanent	200 2105			
grassland (hectares)	309,310	296,558	313,683	
3. Total sheep plus lambs	80,523	63,256	76,098	
4. Total cattle	244,531	352,011	391,017	_
POWYS				
5. Total agricultural			•	
land (hectares)	466,951	457,557	452,000	448,922
6. Total permanent		-	,	•
grassland (hectares)*	382,640	384,302	385.000	382.574
7. Total sheep plus lambs	1.616.400	2.244.242	2.865.908	3.126.386
8. Total cattle	198,087	271,891	272,010	268,000
9 No sheep/hectors of				
ntilised agricultural land				
CANTAL	0.70	0.17	0.00	
DOWNS	0.20	0.17	0.20	<u> </u>
10 No. astile/heatens of	3.40	4.91	0.34	6.96
without a similar a low d				
CANTAL	0.43	0.07	• • • •	
DOWNE	0.62	0.97	1.04	
POWYS	0.42	0.59	0.60	0.60
II. No. sneep/nectare of				
permanent grassland,	o ord	0.24		
	0.264	0.21	0.24	
POWYS	4.22	5.84	7.44ª	8.17
12. No. cattle/hectare of				
permanent grassland,	4			
CANTAL	0,79ª	1.19	1.25	—
POWYS	0.52	0.71	0.71ª	0.70
13. Total no. livestock				
units/hectare of utilised				
agricultural land <sup>e</sup> ,				
CANTAL	0.65	1.00	1.07	_
POWYS	0.94	1.33	1.55	1.64
14. Total no. livestock				
units/hectare of permanent				
grassland <sup>e</sup> ,				
CANTAL	0.83	1.22	1.28	_
POWYS	1.15	1.58	1.82	1.93

#### Table 0 ----- Cante n nestates

a. includes all rough grazing and permanent grassland but excludes temporary grassland.

b. figure comprised of 249,310 hectares permanent grassland and estimate of 60,000 hectares rough grazing.
c. includes an estimate for area of common rough grazing.
d. figures partly dependent on accuracy of b and c above.
e. 1 livestock unit equivalent to 1 cow or 0.15 sheep.

Livestock stocking levels (converted to LUs) are invariably higher in Powys than in Cantal. To some extent this may reflect the shorter growing season for grasslands in the Cantal LFA (longer, colder, winters) though no estimate of this effect is available. Visual observation in the Auvergne uplands gave the distinct impression that autumn grazing levels are not as high as in the Welsh uplands judging by the height of vegetation in pastures and on more extensive grassland areas. This has been confirmed in conversations with Mr Keith Turner of the Countryside Commission who reached the same conclusion. This subjective observation equates with the data under 13 and 14 in Table 9. Stocking densities are clearly increasing both in Cantal and Powys. A figure of 0.86 livestock units/hectare of permanent grassland in Powys in 193914 shows that it had increased between that date and 1955. In Cantal the livestock density per hectare of permanent grassland appears to be increasing only very slowly now and certainly more slowly than between 1955 and 1970. The opposite is true for Powys where stocking densities are increasing more and more rapidly. Powys has considerably more sheep (and less cattle) than Cantal. Absolute numbers of sheep in Cantal, and of cattle in Powys, show no clear trend of increase or decrease whereas the predominant grazing animals (sheep in Powys, cattle in Cantal) are both clearly increasing. The rate of increase of sheep numbers in Powys in recent years is accelerating slowly but the rate of increase in cattle numbers in Cantal is decelerating. The Powys position reflects the trend in Wales as a whole. Data calculated from available statistics<sup>12</sup> shows that the number of livestock units/hectare of permanent grassland (including rough grazing) has risen from 1.45 LUs/hectare in 1961 to 1.67 in 1971 and 1.96 in 1982, a slowly accelerating trend.

The heavy stocking levels in the Powys LFA (over 40% higher than in Cantal based on 1979/80 data) have almost certainly contributed to the losses of heather moorland and the reduction in the diversity of species associated with pasture grasslands. Sheep are much more selective graziers than cattle. They probably also reflect the trend of replacing former traditional hay meadows with grazed pastures (see Chapter 7). The increasing stocking density evident in Powys over the last 3 decades also explains the broadleaved woodland regeneration problem and clarifies why such woods are now often grazed to billiard table-like turf when in the more distant past grazing levels must have been low enough to allow regeneration. HLCAs are paid on woodland included in the farm hectarage and encourages its stocking. The most recent Powys figure of an average 1.93 LUs/hectare of permanent grassland is the equivalent of 12.9 sheep/hectare, a high overall stocking figure considering that nearly half of the total permanent grassland area in Powys is categorised as rough grazing. Sheep — the main culprit of woodland grazing in the LFAs — have increased in Powys from 1.51 million in 1939 to 3.13 million in 1982, more than a doubling in numbers.

Compensatory payments have without doubt been a major stimulus to increasing stocking levels on existing land (including woodlands) and to agriculturally improve land to provide a greater stocking potential. Livestock in Cantal attract 350FF/LU (about £30/LU) because all of Cantal is classed as LFA Zone de Montagne. But on lower, inherently more productive, land elsewhere in the Auvergne, the payment decreases (see Chapter 6) and thereby more adequately reflects the level of handicap. In Powys, the HLCA payment would be either £28/LU or £42/LU for sheep (\$44.50/LU for cows) in the "severely disadvantaged" zone which occupies most of the county. Therefore the actual payments are similar in Cantal and Powys, though the effect of the Sheepmeat Regime in the UK gave the Powys hill farmer an extra £2.08 per ewe (on 1.34 million sheep) in 1982,<sup>12</sup> though it could be argued that if an upland farmer in the UK can make use of the Sheepmeat Regime and claims its payments plus HLCAs, his farm should not be in the LFA at all. Permitted upper limits to stocking are also similar in both countries — 6 sheep/hectare in the UK and 6.7 sheep/hectare in France, though no limit exists in the UK for cattle compared with 1.35 cows/hectare in France. In the UK, however, there is every encouragement to agriculturally improve land and then stock it to the maximum, and for farmers to acquire more land and increase the size of their units because no upper limit exists for HLCA payments per farm unit (subject to not reaching the maximum stocking density overall). In France such a ceiling is set at 40 LUs in the Zone de Montagne (267 sheep) and 30 LUs (200 sheep) in the Zone de Piedmont. The difference between Cantal and Powys is shown by the farm size distribution based on sheep numbers (Table 10).

Table 10. Farm sizes categories based on numbers of sheep per farm holding in the Cantal department of Auvergne and the county of Powys, Wales for 1979. (based on<sup>12, 13, 14, 41</sup>)

	Proportio	on of farms wit	h this number	r of sheep
	0-50	50–99	100-199	200+
Cantal <sup>a</sup>	68%	15%	10%	7%
Powys <sup>b</sup>	16%	13%	20%	51%

a. based on a total of 1,237 predominantly sheep farms in Cantal.

b. based on a total of 4,701 predominantly sheep farms in Powys.

To some extent the far greater proportion of farms with large numbers of sheep in Powys, and the much higher proportion of small sheep farms in Cantal, reflects the historically much smaller size of French farms (including those in the LFAs), as illustrated in Table 11.

## Table 11. Overall farm structure in France and the UK based on farm size, 1980<sup>46</sup>

Size Category (hectares)	UK		France		
	No. Farms (%)	Area (%)	No. Farms (%)	Area (%)	
1-5	14.5	0.6	19.4	1.8	
5-10	12.6	1.4	14.9	4.1	
10-20	15.5	3.4	21.2	11.9	
20-50	26.2	13.1	31.0	37.8	
50+	31.3	81.4	13.5	44.4	

For Cantal and Powys the data presented in Table 12, and compiled from UK and French Agriculture Ministry information, closely mirrors the marked trend towards a greater number of larger farms in the UK than in France. Cantal farms appear to be generally larger than the French average.

Table 12. Farm size distribution in 1970/71 and 1979/	/80
for the Cantal department of Auvergne and the cou	nty
of Powys, Wales (based on <sup>12, 13, 14, 41</sup> )	•

	Number	r of farms,	Cantal %	Number	r of farms,	Powys %
Size Category (hectares)	1970/71	1979/80	increase/ decrease	1970/71	1979/80	increase/ decrease
under 2	408	496	+22%	158	97	- 39%
2-5	707	460	-35%	812	413	- 49%
5-20	4,852	2,972	-39%	1,578	1,380	- 13%
20-40	4,016	3,507	-13%	1,646	1,264*	- 23%*
40-200	2,602	3,284	+26%	2,222	2,308*	+ 4%*
200+	N/A	45	_	34	96	+182%
TOTAL	12,585	10,764	-15%	6,450	5,558	- 14%

\* Approximation due to different size category classifications in original data.

It is also evident from Table 12 that all the smaller size categories of farms in Powys decreased in number (from 1970-1980) while the largest farms expanded, presumably by the larger farmers buying up land previously held as small, individual farms. In Cantal, farms (presumably very part-time) under 2 hectares in size increased markedly in the same period; the only other increase was of farms in the 40-200 hectare bracket. In France there is no HLCA incentive to acquire enlarged farm units once the maximum qualifying number of livestock (30/40 cows; or 200/267 sheep) is exceeded. In the UK uplands, the absence of a maximum limit has doubtless encouraged farmers to expand their holdings and attract more HLCA payments which are guaranteed. On agriculturally unimproved moorlands it is not easy to exceed the maximum stocking density (6 sheep/hectare) for HLCAs because it is often not possible to support more than 2 per hectare. In the LFA in England and Wales the largest farms receive the highest proportion of HLCAs (see Table 13); in 1981/82, the 759 largest farmers (3.7% of the total) received 22.4% of the total  $\pounds$ 44.7 million in HLCAs, an average of £13,192 each! At the other extreme, the 11,213 smallest farms received an average of £590 each.

The decline in the total number of farms in the Cantal LFA, though similar proportionally to the decline in Powys, is almost certainly more due to French national policies for improving farm structures (including remembrement) than to aspects of the LFA Directive such as HLCAs. In Powys, as in the rest of the UK's LFA, there is much less direct official encouragement to improve agricultural structures; rather it is the result of the way the LFA Directive is implemented, in particular the HLCA payment system.

Table 13. Dis	tribution	of HLCAs i	n the l	LFAs of
England and	Wales. Af	ter MacEwe	en and	Sinclair <sup>19</sup>

Livestock Units/			HLCA total at	
farm eligible	No. farms	% of the	1981/2 rates	HLCA per
for HLČAs	in LFA	LFA farms	[£ million)	farm (£)
0-50	11,213	53.7	6.6	590
51-100	4,243	20.7	8.7	2,043
101-150	2,460	12.0	8.5	3,452
151-200	758	3.7	3.7	4,895
201-250	615	3.0	3.7	6,033
251-300	472	2.3	3.5	7,387
300+	759	3.7	10.0	13,192
TOTAL	20,520	100.0	44.7	37,592

Retaining large numbers of small farms rather than a lesser number of large farms is usually considered beneficial in conservation terms; both the Countryside Commission and the Nature Conservancy Council have used this argument. The ULS Study showed that smaller farms were more labour intensive per unit of land area<sup>19</sup> and the NCC's concern is mainly that larger units (especially if bought up by large investors) are run as ranches with little if any regard to conservation interests or features. Productivity is maximised, there is less dependence on capital grants, and machinery and equipment is readily available for such tasks as wetland drainage, ploughing of old hay meadows or grubbing of woodland. On the other hand it is the larger farms who can more easily 'afford' conservation, especially on small scale, both in terms of setting aside small land areas for less intensive agricultural management and in economic terms. A small farm, where farming is the main or sole income source, can easily have as its overriding priority the maximisation of land use. Balancing these extremes and devising a general rule is therefore difficult, both in the LFAs and elsewhere. Small may be beautiful - but probably only if the small farm is run as a part-time unit or as a leisure interest.

If a cut-off maximum on the number of livestock per farm attracting HLCAs was applied in the UK (as it is in France), a major incentive to over-grazing (leading to some moorland and roughland loss; degradation of species rich grasslands; broadleaved woodland destruction and mountain erosion) would be removed. There would also be less of an incentive for farmers to expand and acquire smaller farms. Since the levels of payment in the French Zone de Montagne (as in Cantal) are similar to those paid in the bulk of the UK's LFA, and similar limits on stocking densities for HLCAs exist in the two countries, the absence of a maximum cut-off per farm in the UK is the major difference in the way the HLCA system is implemented in the two countries. MAFF's obsession with linking all incentives under the LFA Directive to the spiral of increasing agricultural activity, almost at any expense, accounts for the absence of any UK limit. In this respect, MAFF has created an awkward precedent which has enriched the larger farmers in the LFAs at the expense of smaller farmers. The LFA Directive was also seen by the British government as a way of recouping EEC expenditure.

In a purely agricultural context (and MAFF has only very recently recognised others) it is sensible to provide an incentive for increased agricultural production but this as we have seen is clearly not an objective of the LFA Directive. The objective in the LFAs designated under Article 3(4) — as is virtually all of the UK's LFA --- is to stem rural depopulation and conserve the countryside by retaining an agricultural industry. This does not have to mean increasing agricultural output. In order to reduce the conflict between agriculture and nature conservation in the LFAs in the UK, an upper limit on livestock per farm attracting HLCA's could be fixed at about 50 livestock units (50 cattle or 333 sheep). 55% of all LFA farms in England and Wales have less than 50 LUs (see Table 13). In Powys, almost half the farms have less than 200 sheep; 59% of its farms have less than 20 cattle.<sup>12</sup> The limit would affect less than half of existing LFA farms in Powys. The present distinction between hill and upland sheep breeds, which is a rather ad hoc system of differentiation, should be dropped and sheep HLCA payments linked to a more thorough and meaningful LFA zoning (see p. 65) subject always to a maximum of 50 LUs per farm unit.

The Agricultural Departments in the UK include fenced out farm woodland (in order to regenerate it, e.g. for 10-15 years) in the farm hectarage when assessing HLCA payments. This provision is not widely known to farmers, largely because the Departments have never taken sufficient trouble to spell it out. If temporarily fenced woodland was excluded from the calculation, the overall livestock stocking density on the farm would increase, bringing it closer to the overall stocking threshold above which HLCAs are not paid. Together with capital grants for such temporary woodland fencing (which could also benefit from some publicity) there is no significant financial disincentive for a farmer in fencing and regenerating on-farm broadleaved woodland. These arrangements seem potentially useful.

#### Investment Aids

Many aids of a capital nature, both in the UK and in France have few, if any, implications for nature conservation. Falling into this category are such items as farm buildings (including farmsteads), replacement items such as fences, and machinery/equipment purchases. Capital projects such as roads fall into an intermediate category; while they may usually have few, if any, direct implications, roads are frequently used in the UK's LFAs to gain access to more remote uplands with a view to future moorland/ rough grassland conversions. But the main items of most concern have been grants for surface cultivation (ploughing and rotovation), drainage and fertilisers, whether paid under Development Plans or as one-off capital aids (see Chapter 6).

In the UK, and up to December 1984 when grant levels were reduced, investment grants have been a considerable incentive towards first-time conversion of moorlands and rough grasslands in the LFAs. Their effects cannot be isolated from the HLCA system; in essence it has been the availability of substantial levels of grant plus the guarantee of HLCAs on the increased numbers of animals which can be kept on the agriculturally improved grassland, which together have constituted a substantial incentive for such capital improvements. With land improvements in the LFA until recently attracting 50% grants and drainage attracting either 60% or 70% of costs in the UK (plus guidance premia for farmers with Development Plans), a higher proportion of land improvement costs overall has been borne by the state than by the farmer. The incentives have been such that several farmers in the LFA in Snowdonia for instance made no secret of their view that they would not have contemplated the schemes in the absence of grants. MAFF publishes no cost/ benefit appraisals of grant-aided capital schemes and makes only a very superficial assessment of their value in either agricultural or financial terms. Prior approval is not required (except in SSSIs and National Parks in the UK, but then not from the Agriculture Department) and in assessing schemes financially, MAFF has disregarded the fact that it has in the past contributed 50-70% of the scheme's cost and that a high proportion of the profit to be earned is public money in the form of HLCAs. It is not the sort of financial assessment which would find quarter in many other areas of economics. In Wales the total investment grant payments have increased from £12.2 million in 1979/80 to £21.5 million in 1982/83. The proportion of this paid in the Wales LFA is unknown because such statistics are not available from the Welsh Office Agriculture Department.<sup>12</sup> But in Powys (almost all LFA) the total cost of investment aids under the capital grant schemes increased two and a half fold between 1979/80 and 1982/83 (see Chapter 7).

Outside National Parks and SSSIs prior approval is not required before a farmer goes ahead and implements a capital scheme for which grant is claimed after completion. The applicant is required to certify that he has taken nature conservation into account when implementing his scheme, even though the average farmer cannot be expected to be capable of assessing such impacts. Even if he could, it would not be in his (agricultural) interest to do so anyway. Such certification could only have been dreamed up as window dressing to exonerate the Agriculture Departments in circumstances where damage could have occurred.

The UK has never operated on the basis of giving subsidised loans (as in France) instead of capital grants for investment schemes, though there is no reason why such a system should not be instigated. If, as it may be, such a system would cost more to operate than grant payments do, it would be of little advantage except in the important psychological sense that it would be a greater personal investment by the farmer over a longer time period. It has proved impossible to determine whether the French LFA farmer is better off financially having loans compared with his UK counterpart receiving a capital grant; the indications are that the UK system has been a greater incentive, especially towards land improvements. Some capital grants are given in the French LFA but the maximum percentage rate is much lower (apparently 34%) than it was prior to December 1984 in the UK (50-70%) for land improvements. Inability to meet the criteria of comparable income and to a lesser extent the lower incentives in France account largely for the small number of development plans approved — only 87 in Cantal during 1981 and a total of 534 between 1975 and 1981. Only 2,122 had been approved in the whole of the Auvergne by the end of 1981,<sup>41</sup> covering 7.1% of its land area. In Wales the amount of development plan grants paid for drainage increased 3.5 times, and for grassland improvement 3.2 times, between 1979/80 and 1982/83 compared with a rise of 74% for farm buildings (the latter then attracting a much lower rate of grant).

Land cultivation in the Auvergne uplands is extremely limited because of the long cold period in winter when sward reestablishment would be difficult, a dry summer climate, and because of thin soils which are anyway generally quite fertile. Grants and loans are available for fertilisers but the purchasing costs (and equipment to spread it) are still substantial for the farmer and little is used. This was borne out by the very subjective observation that no used fertiliser bags were noted anywhere in the Auvergne uplands whereas such discarded litter is commonplace in the Welsh uplands (unless French farmers are innately tidier!). Manure is often used on pastures near to the farmstead. Experimental work by French agricultural research bodies (e.g. INRA and ITCF) has proved the agricultural efficacy of fertiliser applications on upland pasture in the Auvergne and it may be that their use would be more commonplace if state subsidies were higher. Under such circumstances considerable losses of floristically-rich pastures and meadows could then occur.

As with HLCA payments, the larger farms in the UK have received the highest proportion of capital grants paid. MAFF classifies part-time farms arbitrarily as those requiring less than 250 standard man days (smd) work per annum, even though many of them in reality are full time, providing the sole income of the farmer. A MAFF study in Staffordshire<sup>19</sup> showed that over the 1978-81 period, 246 larger farmers (500 smds or above) spent an average of £4,419 on capital works (grant-aided) while 202 smaller farmers (150-250 smds) spent an average of only £328. MAFF's narrow attitude has been criticised; not the least by the House of Commons Agriculture Committee<sup>3</sup> who recommended that policies should be adjusted so that part-time and small farms could make more of a living. While in social terms this objective may be desirable, opening up the investment aids to reach an even wider range of farms could seriously exacerbate the agriculture/nature conservation conflict in the LFAs as more pastures and hay meadows are converted to grass leys, roughland improved agriculturally and wetlands drained although the reduction in drainage grants and the abolition of grants for land cultivation in December 1984 makes such an extension to smaller farms rather academic. The reduction in grant levels will considerably reduce the pressure for land improvements.

Many critics of the encouragement provided until recently by the UK's investment grants system in LFAs argue that farmers have been converting increasing areas of moorland and roughland to grass leys (attracting substantial grants and more HLCAs) while neglecting pastures previously improved and not maintaining standards of husbandry and land management. Examples of farmers in the Welsh LFA converting moorland while once good lower pastures are filling with rushes or being overgrown with bracken, are quite commonplace. In the North York Moors bracken is spreading into moorland at an estimated rate of 49 hectares per year.<sup>28</sup>

The French, in their LFAs are supporting young incomers to farming with substantial "settling in" grants and much of their other capital expenditure goes towards farm buildings for wintering livestock and the provision of improved road accesses for winter use. Because capital grants are fixed at a low proportion of costs, and with the emphasis on cheap loans, the responsibility to ensure that the planned project is viable is more squarely the farmer's (as it will now be in the UK). It has also helped to ensure that intensification of agriculture in the French LFAs has not occurred, preventing any agriculture/nature conservation conflict. The French national policy of encouraging younger people into farming may slowly lead to changing attitudes as older, more traditional ways fade. Younger farmers may prove more innovatory than their predecessors and introduce more intensive farm development to the extent it can be achieved within the French system. In Cantal the process of rejuvenation is slow; 11% of the farmers were aged under 35 in 1970/71; by
1979/80 the figure was only 15%. Those over 65 years declined in the same period from 13% of all farmers to 10%.<sup>41</sup>

The size of capital grants in the UK's LFA (enhanced above the rates payable outside it) has always been considered, along with HLCAs, a major incentive for agricultural improvements which has exacerbated the nature conservation/agriculture conflict in the uplands. With the abolition of land cultivation grants (except for pasture) under both AHDS and AHGS schemes, and the reduction of drainage grants to 50% (AHDS) or 30% (AHGS) since 11 December 1984, a major incentive for agricultural intensification is removed. It is unlikely that hill gripping schemes on upland wet moorlands and blanket bog would be contemplated by many farmers at a 30% or 50% grant level because the agricultural gains are so minimal. The grant levels may still be high enough to encourage wet pasture improvements or the drainage of wetlands if land cultivation is not an integral part of the scheme. Consequently, it is suggested that land cultivation grants in the LFA remain withdrawn and that drainage grants are reduced to 30% under both AHDS and AHGS schemes in the LFA except in the proposed Marginal Zone (the least handicapped Article 3(4) LFA land) where it is recommended that they revert to the level obtaining outside the LFA (221/2%), reflecting the increased financial benefit likely to accrue from drainage schemes on such lower elevation, least handicapped land.

The grant level reduction announced by MAFF on 11 December 1984 constitutes a major change brought about as a result of wanting to reduce public expenditure and due to concern for the conservation of upland landscapes and wildlife.

#### **Zoning of LFAs**

A major difference between the French and UK Less Favoured Areas is the division of the French LFA into four zones of handicap compared with just two in the UK (one zone only until recently). The differences are discussed in Chapter 5. The French system, though still rather broad-brush in its approach because each individual Commune is usually allocated entirely to a zone, is more closely related to natural handicap than the UK system. In the UK, until the so-called marginal areas were brought into an extended LFA early in 1984, only one zone of handicap

covered the whole of the LFA, ranging from relatively fertile grass pastures almost at sea level to the summits of Britain's highest mountains. The extension of the LFA has left this gross anomaly unaffected since it brings in land at the lower elevations outside the original LFA boundary. It is a patent nonsense not to have a more meaningful zonation to properly reflect the severity of permanent natural handicaps on agriculture and to more precisely tie in the various aids and incentives to the degree of handicap as required by the Directive. The ULS<sup>19</sup> measured the financial support given by MAFF to individual farms in its 12 study areas against the degree of natural handicap established by their own Hills and Uplands land classification. It concluded that the support given varied inversly with the degree of natural handicap! This is largely because farmers on better land can stock it more heavily and attract more HLCAs, generating more capital to finance grant-aided agricultural improvements.

In the EEC, only Belgium and Luxembourg, apart from the UK, fail to zone their LFAs to equate compensation with the degree of handicap. Since these two countries account for only 1.2% of the HLCA expenditure in the EEC,<sup>1</sup> the UK's position is anomalous. The MAFF view given to me is that a detailed assessment in England and Wales would be extremely time consuming and costly, probably taking eight years to complete. But if MAFF's original assessment for the UK's LFA had been based on an objective survey rather than merely regurgitating the "hill line" drawn up under the 1946 Hill Farming Act, it would have had a more reliable basis to which the results of its Hills and Uplands land classification could have been added to determine some meaningful handicap zones. The Department of Agriculture in Scotland has for many years conducted individual farm assessments with appeal committees on which farmers are represented. The system appears to work well, as does a more complex assessment system in Austria. If MAFF introduced a similar assessment in England and Wales, there would be social and environmental benefits and a shift in HLCA payments to the most handicapped farms. It could also result in a saving of total expenditure on HLCAs. The House of Commons Agriculture Committee<sup>3</sup> recognised the problem but failed to propose any detailed scheme except to call for increased rates of HLCAs in the Scottish Highlands and Islands (which it referred to as 'disfavoured areas') without extending its sights to the remainder of the UK's uplands. DAFS has recently announced that HLCAs in the Highlands and Islands Development Board Area within the LFA are being increased to the EEC maximum —  $\pounds 60$  per cow and  $\pounds 9$  per sheep. This increase is seen as a quid pro quo for the LFA extension in England and Wales.

Relating support proportionately to the severity of handicap, it may be suggested, is a nonsense in agricultural terms but the object of the LFA Directive is to stem rural depopulation and conserve the countryside by supporting farming. Clearly, a limitation is necessary but the financial incentives on the best land included in the extended LFA should be considerably lower than those available on the least amenable land where agricultural development is considerably constrained by climate, topography and soils.

It is suggested that the UK's existing LFA is assessed in order to define at least 3 zones of natural handicap within it, viz:-

- A. A mountain zone (areas such as the Scottish Highlands, the core of the Lake District and northern Snowdonia) where HLCAs should be increased to the Directive's maximum rates (subject to the livestock numbers per farm limit recommended earlier in this chapter. These areas would qualify under Article 3(3) of the existing Directive and could use as a starting point grades H3 and H4 in the Hills and Uplands Classification.
- B. An intermediate zone (the bulk of the "severely disadvantaged" LFA presently designated subject to a more objective survey of its boundary) of land with permanent natural handicaps to which the qualifying criteria of Article 3(4) of the Directive are rigorously applied. HLCAs should be fixed at a slightly lower level than at present, e.g. 80% below present values in the "severely disadvantaged" LFA. Grades H1 and H2 in the Hills and Uplands Classification could be used as the starting point for inclusion.
- C. A marginal zone (part of the "severely disadvantaged" zone not fully meeting the detailed qualifying criteria under Article 3(4) plus the existing "disadvantaged" zone) at the least disadvantaged end of the spectrum. HLCAs should be fixed at a maximum of one third of present "severely disadvantaged" zone levels. These areas would also qualify under Article 3(4) providing they met the criteria. Grades

U3 and U4 land in the Hills and Uplands Classification could be used as the starting point for inclusion.

Relating levels of capital grants to handicap zones would also provide a better climate for conservation in the uplands. The land most amenable (both for topographic and climatic reasons) for agricultural development is the most susceptible to habitat loss; the highest elevation, often steepest and most rocky, or wettest land areas are least susceptible to such developments. Since first-time land cultivation grants have ceased, a graduated system of drainage grants in the LFA, with the maximum payments available in the most handicapped two zones should be devised. Coupled with revised HLCA payments, the system would be as given in Table 14.

# Table 14. Recommended revised levels of HLCAs and capital grants (both AHDS and AHGS) for the LFA in England and Wales.

Recommended LFA Zone	Existing LFA	HLCA Levels <sup>a</sup>	Capital grant . levels for drainage <sup>b</sup>
A. Mountain Zone (Article 3(3))	Highest elevation land in "severely disadvantaged" zone subject to revision around H3 and H4 land.	Set at the maximum under the Directive i.e. £60 per cow; £9 per sheep.	33%
B. Intermediate Zone (Article 3(4))	Most of "severely disadvantaged" zone, subject to revision around H1 and H2 land.	80% of existing UK levels i.e. £36 per cow; £5 per sheep.	30%
C. Marginal Zone (Article 3(4))	Part of "severely disadvantaged" zone plus the "disadvantaged" zone, subject to revision around U3 and U4 land.	33% of existing UK levels, i.e. £15 per cow; £2 per sheep.	221⁄2%¢

- a. no distinction would be made between hill and upland sheep breeds: all HLCA payments would be subject to a maximum of 50 LUs per farm.
- b. payable only in those parts of the LFA not subject to conservation constraints (see pp 62-66).
- c. equates with the non-LFA grant level under the AHGS.

### **Other Factors**

Not all of the factors responsible for the differences between the nature conservation/agriculture interface in the UK and French uplands stem from the LFA Directive. The more obvious ones that do not are:-

#### 1. Traditional management

There is quite a considerable emphasis on traditional animal husbandry and land management in the French uplands, more so than is often evident in the UK, especially in Wales where there is now a long-founded tradition of agricultural improvement of rough grazings. The French farmer in the uplands is also more concerned with product quality (e.g. of milk to produce cheeses) than his Welsh counterpart in particular who is generally much more concerned with quantity than quality, an attitude probably encouraged by the UK's HLCA system.

#### 2. Land ownership

Fragmentation of land ownership in France has resulted in much smaller sized farms compared with the UK (see Tables 11 and 12). It has also resulted in isolated, small areas of land not being fully utilised for agriculture or any other land use. Such areas, often of rank grassland, scrub or wetland, occur quite frequently in the Auvergne uplands and must add a significant level of habitat diversity, particularly structural diversity, which may be important entomologically and for breeding birds and small mammals. The fact that a much higher proportion of farmland in France is tenanted compared with the UK is another factor. In Cantal, 51% of farms were owner/occupied and 49% tenanted in 1979/80 (the difference is accounted for by common grazing),<sup>41</sup> figures fairly typical of the Auvergne generally. In Powys, 76% of farms are owner/occupied and only 24% tenanted (1982 figures).<sup>12</sup> Tenanted land may be subject to restrictions depending on the interests of the owner which may not be solely agricultural (see 3 below).

### 3. Hunting/Shooting

These are extremely important leisure pursuits in France, including the French uplands and some areas of land are set aside as 'hunting reserves'. Its importance has probably contributed to the maintenance of the fabric of a traditional countryside. In the UK uplands there appears to be much less hunting or shooting and it is less organised, except of grouse and red deer in the Scottish hills and also in parts of Northern England and Wales.

# EEC Review of the Efficiency of Agricultural Structures

The main proposed changes were detailed in Chapter 6. Only Articles 2 and 3 of the draft Regulation are compulsory for member states to implement i.e. the aids based on the production of a farm plan.

The proposed regulation<sup>7</sup> has been widely — and fairly criticised for being generous in its gestures of environmental concern and for conservation, but lacking in the provision of specific means to carry them out. This aspect was heavily criticised in evidence to the House of Lords Select Committee on the European Communities;<sup>5</sup> the Committee considered the draft to be too closely production orientated and criticised MAFF for stifling any innovate features it contains by their generally backward-looking tendency. The Committee also recommended that the preamble and Articles 1, 2 and 3 of the regulation should be altered so that care of the environment should have comparable status with food production and that the Regulation should refer to the EEC's Third Action Programme on the Environment.

One of the major proposed changes in the Review is to relax the eligibility criteria (particularly the present income requirement) for farm development plans, i.e. the AHDS in the UK. This will effectively allow smaller farms to adopt such plans. While this may be socially desirable in the LFA, until the reduction and partial elimination of capital grants in December 1984, there were fears that pastures and meadows (hitherto traditionally managed), small wetlands and areas of rough grazing on small farms in the UK uplands would be subject for the first time to agricultural intensification. This would have exacerbated the agriculture/nature conservation conflict. The elimination of land cultivation grants in the LFA and the reduction in drainage grants largely eliminates this potential problem. Such a change could also bring into the development plan eligibility net a large number of small farms in the French LFAs which hitherto could not qualify because their income levels were too low. How important this single factor is in maintaining traditional agricultural management in the French uplands is impossible to estimate but, if the proposal remains as it is, more small French farms in the LFA may intensify for the first time. Since the need for prior approval for capital grants (other than the AHDS) from the Agriculture Departments in the UK was abolished in 1980 (except for National Parks and SSSIs --- see Chapter 9), implementation of individual schemes can go ahead and grant claimed on completion. It is recommended that the UK government should press for all development plans to be agreed with conservation authorities before they can be adopted. In the UK, the NCC could play a major role in supplementing ADAS advice whether or not statutory sites (e.g. SSSIs) were involved. On this latter point, Lord Belstead (Minister of State, MAFF) in evidence to the House of Lords Select Committee.<sup>5</sup> stated that ADAS is broadening its ability to give environmental/conservation advice in conjunction with NČC. This is a continuing development which should be encouraged. The issue of prior approval for grant-aid is a vexed one but it does not wait upon the outcome of the EEC Structures Review in order to be resolved. It is discussed more fully in Chapter 9.

The proposed broadening of the granting of investment aids for the purpose of protecting and improving the environment (part of Article 3) is to be welcomed although it does not appear to square with the basic investment aid objectives of such plans because it appears to mean that environmental investment per se will qualify for support, even if not part of an agricultural improvement. The House of Lords Select Committee<sup>5</sup> understood the provision to relate to development plans but if it is implemented in the UK (and this depends somewhat on MAFF taking an unusually enlightened view) it could pave the way for farm development plans incorporating conservation and agricultural measures. It is to be hoped that MAFF will adopt a realistic and progressive attitude to the measure. An integrated farm development plan in an LFA could incorporate agricultural development of vegetation types of little consequence in nature conservation terms while stipulating traditional forms of management of nature conservation features.

Article 20 of the proposed Regulation makes provision for a

general, discretionary aid to encourage farm afforestation and the improvement of existing farm woodland. In the LFAs, grants would be additionally available to part-time farmers. This Article could aid considerably the plight of upland broadleaved woods discussed in Chapter 9 but much evidence given to the House of Lords Select Committee<sup>5</sup> on this item gave the proposal a very mixed reception. If the Article stimulates the planting of alien conifers on habitats (e.g. moorland) of nature conservation interest or results in the replacement of native woodland with conifers it would be extremely detrimental. Conservation safeguards exist in the UK, particularly for SSSIs and, to a lesser extent (under a voluntary arrangement) in the National Parks of England and Wales, but such afforestation proposals outside designated areas would not be subject to any significant level of control, particularly because prior approval does not exist for grant aid.

The EEC Commission has placed the responsibility on Member State Governments to ensure that the aids under Article 20 are dispensed with conservation objectives considered, though there is no differential aid in favour of indigenous species. If the Article was used in the UK (woodland is well managed in the French uplands in any case) to rehabilitate upland broadleaved woodland in the LFAs (and outside the LFAs) e.g. by fencing, selective felling and encouragement of regeneration, it could be extremely beneficial. MAFF, without support from other Member States, have opposed the Article in its entirety however, arguing, rather spuriously, that "forestry" is not part of the CAP. It is difficult to understand how MAFF can substantiate this argument; clearly the House of Lords Select Committee<sup>5</sup> felt that the MAFF view had long been overtaken by events in the EEC! MAFF (and DAFS) have also commented<sup>5</sup> that the scope for Article 20 was limited in the UK; this seems to pay little regard to the plight of on-farm woods and overlooks the point that the aid is not intended for large scale afforestation but for more modest schemes. It is recommended that the British government uses Article 20 to rehabilitate on-farm broadleaved woods in the LFA in conjunction with advice from the conservation authorities, but that it does not implement any provisions for afforestation because of the role of the Forestry Commission and private forestry companies in the UK.

The Article 22 proposal for EEC funding of pilot schemes to

demonstrate to farmers how they can achieve the objectives of development plans is to be welcomed but only if it includes environmental considerations as suggested by several witnesses to the House of Lords Select Committee.<sup>5</sup> This could be used to advantage in the LFA to show how nature (and landscape) conservation considerations can be incorporated on an upland farm.

Changes in the existing features of HLCA payments are proposed in Articles 13-15. There is provision for Member States to pay at a level above the stated maximum in order "to improve or maintain the natural landscape" but such increased payments will not be eligible for EEC refund so are very unlikely to be implemented. This is a notably bad piece of drafting by the Commission, giving the impression that conservation considerations are being treated as cosmetics. The provision would allow payments to be made to farmers for maintaining low stocking densities for conservation requirements. However, Article 15 specified slightly increased levels of HLCAs because the conversion rate of European Currency Units to Sterling has been altered a little and it is recommended that any enhanced payments should be linked solely to conservation undertakings and be re-imbursed by the EEC. The draft Regulation reemphasises that Member States fix their HLCAs on bands according to the severity of permanent natural handicaps on agriculture. Much dissatisfaction was expressed to the House of Lords Select Committee<sup>5</sup> about the open-ended nature of the HLCA system in the UK but it is very clearly available to MAFF to fix limits on payments and to more properly define levels of payment linked to the severity of natural handicap. A modified HLCA system which would reduce the upland agriculture/ conservation conflict has been detailed earlier in this chapter.

Article 17 — the provision of aid to assist joint investment schemes by farmers for fodder production and for "the improvement and equipping of pastures", perhaps also drainage — could have implications in the LFAs in the UK but the existing, very similar provisions have not been widely taken up. The Article as drafted makes no reference to environmental acceptability and this should be inserted. It is a provision more appropriate to the French uplands where cooperatives and joint investments are commonplace but where its use will probably have no significant impact on nature conservation interests. Providing an environmental/conservation clause is inserted, the probable limited use of this non-mandatory provision in the LFA in the UK will not pose any significant problem providing the conservation impact is assessed and acted on.

The final issue is the revision of Article 3(5) of the existing LFA Directive which is proposed for replacement by Article 32.2(b) in the draft Regulation. As presently drafted, this reads (with the new wording in italics):-

"Less favoured areas . . . may include small areas affected by specific handicaps and in which farming must be continued, *if* necessary subject to certain conditions, in order to ensure the conservation of the environment, to maintain the countryside and to preserve the tourist potential of the area or in order to protect the coastline. The total extent of such areas may not, in any Member State, exceed 4% of the area (of the State) concerned."

This proposed draft broadens considerably the scope of what are the Article 3(5) areas of the LFA — in the UK only the Isles of Scilly have been so designated. It also extends the permitted area from 21/2% to 4% of each Member State. Several 3(5) areas have been designated in France, some of them quite large (see Figure 8). Much contention surrounded this one measure in evidence submitted to the House of Lords Select Committee<sup>5</sup> and a good part of the discussion centred on the meaning of "specific handicap" and "to ensure the conservation of the environment." On the former even views from the European Commission were conflicting but the Committee eventually concluded that in future the definition of "specific handicap" could be a physical one constraining agriculture but also a protective designation such as SSSI notification. In the Netherlands where Article 3(5) has been used on a large scale, the key element in the definition is that the handicap is external (i.e. not arising from the farmer's operating practices) and permanent in the locality.<sup>6</sup> HLCAs there are fixed on the basis of continuing traditional management in order to perpetuate the existing landscapes. MAFF regard the Dutch use of Article 3(5) as being of dubious legality under Directive 75/268 and have suggested that this is also the actual attitude of the EEC Commission.<sup>15</sup> Nevertheless, the Commission's disquiet has not prevented it from agreeing the designation. On the issue of "conservation of the environment," some witnesses to the House of Lords Select Committee<sup>5</sup> suggested

that aid should be given where farming must be continued to conserve the environment, to maintain the countryside and to protect the coastline, and that food production is a secondary consideration. MAFF still insist that agricultural production is a precondition of grant aid. The House of Lords Select Committee recommended that the Article should be reinforced to ensure a more liberal interpretation so that financial support could be given to areas of particular conservation interest within the LFA. The provision is unlikely to relate as much to the uplands as to lowland areas such as Halvergate Marshes, the Somerset Levels and The Broads.

Because of MAFF's view that environmental considerations are not pre-eminent in dispensing aid on any new 3(5) areas as presently drafted, and because they are concerned that it will mean payments to support a predominantly dairving agriculture in the lowlands (setting a precedent because the UK does not pay HLCAs on dairy cattle), MAFF submitted to the Council of Ministers in September 1984 a major proposed amendment.<sup>22</sup> This proposed an enlarged Article 19 which concerns "specific measures to assist agricultural holdings in environmentally sensitive farming areas" and is an attempt to provide a clear basis for supporting whatever type of farming is necessary to conserve designated areas "to protect the countryside, including traditional landscapes, and wildlife." A limit of 4% of each Member State's land area is suggested and the provision for the Commission to formulate qualifying criteria. A similar system of HLCA payments is suggested to those available anywhere in the UK's LFA (minimum qualifying area per farm of 3 hectares; maximum payments of 97 ECU/LU) but with the added provision that HLCAs can be paid on the first 10 dairy cows per farm. This initiative is an excellent one, and if agreed by the Council of Ministers will provide the basis for supporting traditional agriculture without intensification in places such as the Somerset Levels. Linking HLCA payments to agreed stocking levels implies that the payments will be on a hectarage rather than headage basis. It will still not preclude farmers from designing development plans but these will have to take full account of conservation requirements and implications under other Articles of the proposed Regulation. Whether the UK's proposal will be accepted is in some doubt, not least because it has failed to engender the support of other Member States.

#### Summary

There are substantial differences in the way aids are dispensed in the UK and French LFAs and several aspects of this explain in good part why a major nature conservation/agriculture conflict has resulted in the UK uplands but not in France. Livestock stocking densities are substantially higher (40% in 1979/80) in Powys than in Cantal (though sheep predominate in the former and cattle in the latter). In Cantal the stocking density is rising, but more slowly presently than it did between 1955 and 1970; in Powys it is increasing more and more rapidly. The situation in Powys reflects that in Wales as a whole and has contributed especially to the threat to upland broadleaved woodlands but also to the losses of heather moor, rough grassland and to the degradation of species-rich pastures. Rates of HLCAs are similar in Cantal and Powys though the use of the Sheepmeat Regime by some farmers in the LFA in the UK effectively increase payments per head of sheep. Upper limits to stocking per hectare for HLCAs are similar in both countries. The major difference is that a limit on HLCAs per farm exists in the French LFA (either 30 or 40 LUs per farm depending on LFA zone) but not in the UK, encouraging farm expansion, capital developments and overstocking in the UK uplands.

Levels of capital grants for development plans and one-off capital schemes have, until December 1984, been fixed at high levels for the UK's LFA; land improvements at 50-70% of costs depending on the scheme used and the type of improvement. Such schemes almost always represent a very poor true economic return and many would not have been contemplated at all if the substantial grants and HLCAs were unavailable. The combination of these incentives has resulted in the past in much agricultural intensification causing losses of moorland, rough grassland, wetlands and species-rich pastures and meadows in the UK uplands. In Wales the take-up of capital grants has increased considerably in recent years; the bulk of the money has gone to a comparatively small number of larger farms. In the French LFAs, subsidised loans are the more common incentive for capital developments; capital grants are fixed at a lower level than in the UK and are related to the degree of handicap. There has been less of an incentive for capital developments in France and more emphasis on other, more socially desirable policies.

In France the LFA is divided into 4 zones (plus the Article 3(5) areas); in the UK there are now 2 zones but until recently no zonation was made in spite of considerable variation in the level of natural handicap. In France, HLCAs and capital grants are related to the level of handicap; only a crude distinction is made in the UK. In order to substantially reduce the agriculture/nature conservation conflict in the UK uplands, significant changes are proposed — differentiating 3 zones of handicap in the UK's LFA (apart from Article 3(5) areas) and linking new levels of HLCAs and capital grants for drainage to these (see Table 14). The grants for land cultivation in the LFA were abolished in December 1984 in the UK except for pasture grassland.

The current review of the efficiency of agricultural structures by the European Commission will make several likely changes to agricultural policies in the LFAs. Relaxation of the eligibility criteria for development plans, proposals for farm afforestation and improved management of existing farm woodland, slight modifications to the HLCA system, pilot demonstration schemes, and joint investment schemes for various purposes, are all components of the proposed Regulation discussed earlier in this chapter, and assessed in relation to their likely impact for nature conservation. A significant broadening of the Article 3(5) LFA areas' definition to maintain traditional agricultural practices in environmentally sensitive areas (of relevance particularly to the Somerset Levels, Halvergate Marshes and The Broads in the UK) has been proposed by the UK but is still subject to discussion.

#### IX CONSERVATION CONSTRAINTS ON AGRICULTURE IN THE LFA

#### The Situation in England and Wales

The upland agriculture/conservation conflict in the UK does not centre entirely on the application of the LFA Directive. Large sections of the UK uplands have conservation designations and special procedures operate for judging the impact of agricultural schemes in these areas. The role of National Parks (in the IUCN classification, Protected Landscape Areas) and of SSSIs was outlined in Chapter 4.

When prior approval from Agriculture Departments for agricultural developments attracting grant aid in the UK (whether or not an EEC-backed scheme) was abolished in 1980, a modified system of prior approval in National Parks and SSSIs was set up instead. In this, NPAs had to be given 1 month's notice of a proposal by the applicant and the applicant had to show that the NPA's agreement was obtained (either to the scheme as originally planned or an agreed modified version) when applying for agricultural grant to MAFF or WOAD. If the applicant is not applying for a grant there is no obligation to consult. NPAs have no compulsory powers and the Minister is the final arbiter of whether or not grant is witheld if a scheme proceeds without the NPA's agreement. NPAs assess the implications of any scheme in landscape terms and, generally, with nature conservation interests also in mind (frequently seeking guidance from NCC) but their views are often tempered by considerations of "economic and social well being" in the agricultural community. In the Snowdonia National Park this latter consideration frequently appears to be of more importance than any other to the NP Committee when more controversial schemes are examined, in spite of a NPA having no statutory responsibilities for such policies. Between October 1980 and March 1984, 2, 124 schemes had been submitted to the Snowdonia NPA; an average of 87% were agreed without modification and 13% agreed with modifications. In 1982 one formal objection went to the Minister (Secretary of State for Wales) but was not upheld. NPAs can only negotiate voluntary management agreements with compensation to prevent environmentally damaging schemes from proceeding; in 1984, Snowdonia has objected to 3 schemes; 2 are under negotiation for agreement and 1 is likely to go to the

Minister.<sup>48</sup> The NP Committee in Snowdonia (as in all UK National Parks) consists of <sup>2</sup>/<sub>3</sub> locally elected representatives (local councillors) and 1/3 Secretary of State nominees. Snowdonia's 27 Committee members contain 9 who are either farmers (active or retired) or farmer's wives, the largest single interest group. Instead of redressing the balance, 3 of the nominated members (included in the previous 9) are farmers. Many, probably most, submitted schemes have little or no conservation implications but the attitude of the Committee to agricultural development schemes may be a factor explaining why extremely few schemes have been objected to by the NPA. On Exmoor, management agreements have generally worked to stem losses of moor to agricultural development but the annual, indexlinked compensation payments have been widely criticised as providing money to prevent a change which is not in the national interest to begin with. Management grants have worked well on a trial basis in the Peak District,<sup>51</sup> replacing agricultural capital grants and retaining over 70 flower-rich pastures and meadows. NPAs (since the 1981 Wildlife and Countryside Act) have been charged under Section 43 with preparing maps of moor and heath (without guidance on what should be included) which in their opinion are important to conserve. They can obtain Orders from the Secretary of State (DoE or Welsh Office) to prevent any agricultural, or forestry, land use change for up to a year. But again, a final solution is dependent upon the Agriculture Department withholding grants and the NPA negotiating a voluntary agreement. There is also an apparent marked reluctance on the part of Ministers to agree Moorland Orders.

SSSIs notified by NCC were also the subject of retained prior approval arrangements as for National Parks but, with the advent of the 1981 Wildlife and Countryside Act, all SSSIs notified under its Section 28 are subject to 3 month consultation over any activities specified on a list of Damaging Operations notified with each SSSI. Schemes may be agreed if no damage to the site's scientific interest is assured or may be modified by mutual agreement. If damage is inevitable, NCC can negotiate a voluntary agreement to retain traditional land management with calculated compensation payments to the applicant (if necessary via arbitration) but if such arrangements are impossible, NCC has recourse to Section 29 Orders (sanctioned only by the Minister) which can lead eventually to compulsory land purchase. In Wales, about 150 Management Agreements on SSSIs are under negotiation in December 1984; many of these are in the LFA and concern upland grasslands, moorland and wetlands. The first Section 29 Order in Wales was granted in southern Snowdonia in September 1984 in response to a damaging proposal for agricultural developments in the LFA.

Elsewhere in the UK's LFA, i.e. outside National Parks and SSSIs, there is no mechanism for any type of prior approval for agricultural developments attracting grant aid.

#### The French Situation

Official nature conservation policies in France are only very recent in origin so the framework of protected sites simply does not exist on the scale and extent it does in the UK. In the uplands, National and Regional Parks have been designated; there are also more specific sites given a certain degree of protection. The basis for these protected areas was given in Chapter 4.

National Parks in France are generally not populated and they have regulations controlling all potentially damaging activities, including agricultural change. Since almost all are high mountain areas, agricultural development is anyway unlikely but traditional agriculture for conservation objectives is supported. Six National Parks covering 12,500km<sup>2</sup> (2.3% of the national territory) presently exist; all are in the Article 3(3) LFA and there is no significant conservation/agriculture conflict.

France's Regional Parks are more akin to the UK's National Parks (both are classed by IUCN as Protected Landscape Areas). Twenty are designated (2.8 million hectares or 5.2% of the national territory) and 6 are being considered. In the Auvergne, the Parc Regional Volcans d'Auvergne Regional Park was visited and its management discussed. Nature conservation is not a primary policy aim in these Parks but it tends to follow as a secondary consideration from the primary aims which are to conserve the social and cultural heritage of the Region, improve employment and make more use of the Region for recreation and education. Administration is typically complex with the involvement of local Communes, public authorities, chambers of trade and commerce, and the Regional Planning Authority. Conservation programmes per se are difficult to achieve since the Park Authorities do not have the regulatory powers of the French National Parks. But many have established Reserves and work with the agricultural community to encourage traditional practices (very often pump-priming product market outlets) of agricultural management which conserve the landscape, flora and fauna alike. In the French Regional Parks in total, agricultural holdings average 23 hectares and about 50% are part time.49 Under 30% of the Volcans d'Auvergne Regional Park's active residents were employed in primary occupations in 1975 but its population overall is increasing slowly. All of the Volcans RP is in the LFA Zone de Montagne and Zone de Piedmont. In attempting to maintain traditional agriculture the Volcans RP dispenses money to cooperatives and not to individual farmers. Scope for agricultural improvement is limited naturally but the RP provides 40% of the cost of fences so that grazing land can be compartmentalised and grazed more effectively, 40% of the cost of providing livestock watering facilities and 40% of the cost of adding fertilisers or grass seed (applied on to existing pastures and trodden in by livestock). Roads are also aided for access purposes. Fertiliser use is apparently very limited because of cost in spite of such grants and the RP seemed to have to peddle a narrow course between not stimulating significant agricultural change but allowing enough development to support a viable local economy. It did not provide compensatory payments. Many of the extensive grasslands in the RP are owned by Communes and grazed collectively. Sheep are usually taken to higher land in summer; cattle are overwintered indoors. The RP is involved in remembrement only in an advisory capacity; they have to balance the need for such farmland rationalisation with ecological and landscape considerations.

Both within and outside Regional Parks, there are smaller areas which have protective designations. Many of these are in the LFA but they are all criticised by Auvergne et Nature as being either ineffective or protecting small sites not under any threat anyway. Site Inscrit and Site Classe were referred to in Chapter 4. In Site Inscrit, roads and fences cannot be constructed without permission from a special Committee but fertilisers can be applied and land ploughed. The designation is a form of landscape protection only and has little value in nature conservation terms. Many of the features protected are geological or geomorphological. In Site Classe there is apparently full protection (more akin to SSSIs in the UK) and agricultural change has to be sanctioned by special Committees. Staff at the RP Headquarters considered that contravensions sometimes occurred so the level of sanction applied may be minimal. Many of the Site Classe areas are small and not subject to change, e.g. small lakes, wetlands or high pasture.

# Additional Conservation Constraints in the Uplands of England and Wales

The system of both landscape and nature conservation designations is considerably more effective and comprehensive in the UK than in the French uplands and LFAs with the exception of French National Parks. The UK conservation designations have not in the past been sufficient to curb considerable losses of upland grasslands and moorlands because of agricultural (and forestry) development. Increased protection for SSSIs (including immediate protection on proposed SSSIs) and for "moorland" in National Parks should give vulnerable habitats increased protection. The following modifications, coupled with LFA policy and incentive modifications proposed in Section 8 would ensure more comprehensive conservation in the UK's LFA:—

- 1. Prior approval from Agriculture Departments outside National Parks and SSSIs for certain agreed operations should be re-introduced (both within and outside the LFA). This would cover drainage, and use of fertilisers within the LFA (roads, buildings, fences, etc. need not be subject to prior approval). Grants for land cultivation within the LFA were withdrawn on 11 December 1984. NCC should act as the advisor to the Agriculture Departments.
- 2. National Park Authorities should be given last resort compulsory purchase powers (on a similar basis to Section 29 Orders) to be used where voluntary agreements fail. The consultation period on agricultural proposals should be increased from 1 to 3 months.
- 3. Section 42 Moorland Conservation Orders should be granted by Ministers on the areas of moor and heath mapped by NPAs under Section 43 and which are, in their opinion, important to conserve, so that NPAs are informed of all proposals likely to alter their character, including non-grant aidable schemes such as clearances of existing drainage channels, burning and changes in livestock numbers.

- 4. More active consideration should be given to creating "wilderness areas" in mountainous regions of the UK, e.g. in the Scottish Highlands, Lake District and Snowdonia. These should consist entirely of high upland in which no agricultural or forestry activities would take place. The resulting ungrazed vegetation would be less susceptible to erosion; floristic diversity would increase considerably. Public access would be facilitated by managed paths. In Snowdonia, Snowdon itself could lend itself to such management as could the Glyder and Tryfan mountain block. In the UK the only practical, and politically acceptable, way of creating such "wilderness areas" would be by freehold purchase (e.g. by NCC or NT) involving buying out any existing tenancies or rights and by fencing out the whole unit.
- Consideration should be given to modifying the composition of National Park Committees to increase nominated member representation (to better reflect the national interest) and to eliminate any significant single interest group domination.

#### X RECOMMENDATIONS FOR ELIMINATING THE NATURE CONSERVATION/ AGRICULTURE CONFLICT IN THE UK UPLANDS

Several organisations and individuals have proposed their own solutions for alleviating the social and environmental problems facing the UK uplands. The major study conducted by The Countryside Commission<sup>24,30,50</sup> examined agriculture, tourism and craft industries in the upland economy, local services, recreation and conservation of traditional landscapes. Malcolm MacEwen and Geoffrey Sinclair in their parallel report<sup>19</sup> prepared for the Council for National Parks also examined a wide range of issues but concentrated on agriculture and the implications of its financial support in the uplands. The House of Commons Agriculture Committee<sup>3</sup> have also examined agriculture and the system of EEC and national supports used to bolster it in the UK's LFA, to some degree comparing the situation with that in France and West Germany. Recently, the RSPB<sup>47</sup> has put forward its recommended changes in the systems of agricultural support in order to reconcile upland agriculture with bird conservation in particular. The changes proposed by these authors in so much as they relate to the agriculture/nature conservation conflict in the UK uplands are summarised below.

## Recommendations made by others

The Countryside Commission recommends<sup>50</sup> a closer integration of policies for social, economic, environmental and recreational aims in the uplands, incorporating a policy objective "to protect and enhance the wildlife and landscape . . . of the uplands". In a section dealing with support for the upland economy, CC recommends that "MAFF assist both small and part time farmers . . . by reducing the minimum employment criterion to 150 smds for capital grants and press the EEC to reduce the threshold of eligibility for AHDS grants". A broadening of AHDS eligibility is now proposed in the EEC's agricultural structures review but much concern has been expressed that small farms could then be intensified, exacerbating the current conflict.<sup>5</sup> CC recommends increases in finance to National Parks and NCC in order to fund management agreements and that legislation is introduced to extend the Section 43 moorland maps to the whole of the LFA. They recommended that grants for land improvement and drainage should be withdrawn from Section 43 areas and that all capital grant schemes in the LFA should be modified to encourage a wide range of conservation measures. The HLCA system should be reviewed with MAFF and WOAD re-assessing stocking levels in Section 43 areas in consultation with NPAS (and Local Authorities outside) to "achieve environmental and agricultural objectives". They also recommend that "where stocking levels are set to meet conservation interests, HLCA payments be raised to the EEC maxima". On broadleaved woods in the uplands, the CC suggest that "MAFF grant rules be revised to allow broadleaved woods to be included in HLCA calculations during periods when they are enclosed to allow regeneration". This use of HLCAs is, in fact, available but not widely publicised by the Agriculture Department with much discretion being left to individual officers, a situation which MAFF has stated will be rectified.<sup>15</sup> CC also pressed for a broadening of the existing LFA Directive to support other activities as well as agriculture.

The CC purposely did not make detailed proposals for change, preferring to leave these for discussions with the appropriate government Ministries. Instead, it pointed out the main areas for reform and the re-orientation of policies required. Their recommendation that capital grants are withdrawn from extended Section 43 areas depends heavily on the conviction of NP and LA Committees (with often very strong agricultural representation) to include all the relevant moor and heath in the first place. It also singles out moor and heath for specially favourable treatment; habitats such as wetlands and species-rich grasslands may remain within the scope of the grants. A review of the HLCA system is relevant but overall limits on qualifying numbers are not proposed and the setting of stock numbers to meet conservation interests would be extremely difficult to achieve on large upland areas grazed by a number of farmers with hefted flocks.

The RSPB<sup>47</sup> generally endorses the CC recommendations but considers that its own proposals provide better protection for all wildlife features and not just moorlands. They recommend the introduction of Management Grants for appropriate land management (similar to NCC's Section 15 Management Agreements) which can combine payments to offset loss of income for not performing damaging operations and other payments to reflect the need for certain forms of positive management. The RSPB wants to see the AHGS becoming less important for farm support and that all environmentally damaging grants in the LFA should cease. Grant levels should be changed to give encouragement for environmentally desirable measures, e.g. stone wall repairs rather than fencing. The AHDS scheme should become a larger element in farm support, meeting nature conservation requirements and with NCC scrutiny for every plan. The RSPB also recommend that grants for on-farm forestry (as proposed by the draft Structures Regulation) should be included, but with emphasis on indigenous species. On HLCAs they recommend paying the maximum EEC rates to the areas of greatest handicap; lowering the stocking limit per hectare or linking HLCAs to the area of rough grazing on a farm so that farms with the most rough grazing receive the greater payments. Limits on enhanced annual premiums (Sheep Annual Premium and Suckler Cow Premium) are recommended with the payments "restricted to farmers who are unable to fatten lambs regularly or where the cows are grazing unimproved land over the summer months", a complex arrangement to administer.

The House of Commons Agriculture Committee<sup>3</sup> put forward 43 recommendations for change but their conclusions suggest strongly that the Committee did not appreciate the severity of the conservation/agriculture conflict in the uplands and the impact of habitat loss. They also give the firm impression of responding to virtually any request for additional funding for further agricultural supports put to them, without assessing the impact of what could be involved. They recommended full lime and phosphate subsidies being re-introduced, retaining the application of the Sheepmeat Regime and Suckler Cow Premium in the LFA, encouraging more take-up of grant schemes, raising all AHGS grants to 70% and extending their scope, payment of existing HLCA levels in the "disadvantaged" LFA extension and others, all of which would seriously exacerbate the conflict. The Committee concentrated on the Scottish LFA and failed to take proper note of more severe problems elsewhere. Few of their recommendations help reduce the uplands conflict and their document makes little contribution to the uplands debate. Of their few helpful recommendations, the Committee suggested tapering of HLCAs on larger livestock numbers (but were not

specific) and paying increased HLCAs in what it called the "disfavoured areas" (Highlands and Islands) but only there. Linking HLCAs to the degree of natural handicap and the number of LUs (rising to a higher level for smaller units) was also recommended. As a positive measure for conservation in the LFAs all they could recommend were "deficiency payments for farmers who lay aside areas for conservation . . . so long as the productivity of hill and upland farming is not unreasonably threatened". The whole document is hopelessly out of touch with the severity and scale of the UK's upland agriculture/ conservation conflict.

MacEwen and Sinclair<sup>19</sup> produced a more detailed critique of the upland conflict and made detailed recommendations for change, concentrating on agriculture. They propose a more comprehensive assessment of LFA handicaps on a farm by farm basis with HLCAs linked to it in order to create a more favourable climate for conservation. Four handicap classes are suggested based on MAFF's Hills and Uplands classification. The distinction between hardy and other sheep breeds would be abolished. HLCAs would be paid on all livestock up to 250 LUs per farm and the rate would be adjusted on a handicap factor from 50% of the HLCA base rate on better inbye land, to 80% on poorer inbye and up to 150% on poorer rough grazings. An overall handicap adjustment is then derived based on the proportion of the four handicap types on each farm, and this is modified if some land is agriculturally improved "up" a handicap zone. The HLCAs would be paid in five bands based on LU numbers. from 120% of the base rate HLCA on 0-50 LUs to 40% for 201-250 LUs. Above 250 LUs, no HLCAs would be paid. The combined effect is to benefit the smaller and the more handicapped farms and MacEwen and Sinclair predict an overall HLCA saving of £3.2 million which could go to upland farms in a range of measures, including the payment of HLCAs on the first 10 dairy cows per farm. On capital grants they recommend that none should be given if the scheme is incompatible with conservation policy and that the withholding of grants should not oblige conservation authorities to offer a management agreement as at present. They propose widening the AHDS farm development plans into a comprehensive management plan incorporating conservation requirements and tieing productionorientated grants to them. Conservation advice would be the

NCC's and the NPA's responsibilities; ADAS' role would be widened and advice made available to smaller farms than at present.

#### Summary of the present study

The conflict between agriculture and nature conservation in the uplands of the UK has expressed itself as considerable losses of moorland and of rough grasslands which have been converted to grass leys; as broadleaved woodland threatened with long-term extinction because of livestock grazing; as species-rich, traditionally managed pastures and meadows converted to temporary grasslands; as the drainage of wetlands, and as a decline in traditional man-made features including hedgerows and stone walls. The rate of loss of moorland and rough grassland is accelerating. Agriculture in the uplands is given very substantial financial supports, mainly stemming from EEC Directive 75/ 268 — The Less Favoured Areas Directive. In an attempt to analyse which components in particular of the Directive seem to be responsible for the considerable degradation in upland habitats (and ultimately the flora and fauna they support) in the UK the implementation of the Directive in the French and UK uplands was studied and compared.

Such a comparative investigation was facilitated by selecting two study areas, both with a large proportion of their land designated as LFA — Wales and the Auvergne. For a detailed comparison of agricultural, land use and habitat statistics, the county of Powys in Wales and the department of Cantal in the Auvergne were studied. Findings were considered representative of the situation generally in the UK and French upland LFAs.

Chapter 3 outlines the origins and relevance of the LFA Directive and discusses its references to conservation and what it was designed to achieve. It also outlines the implications of, and the reasons for, the current EEC review of its agricultural structures policies in general (of which the LFA Directive is a part).

Chapter 4 provides the reasons for selecting Wales and the Auvergne as the major study areas and outlines the forms of agriculture in the two regions plus their nature conservation interests. Chapter 5 discusses the criteria used for selecting the French and UK LFAs, how their boundaries have been derived and their zoning into areas of natural handicap. The February 1984 extension to the LFA in the UK is critically appraised. Chapter 6 details the various financial aids provided in the LFAs in France and the UK — compensatory allowances, investment aids, and other EEC and national measures — and assesses the differences between the two countries. Changes in LFA financial supports as a result of the current review by the EEC of agricultural structures are also assessed.

Chapter 7 details losses of habitats of nature conservation interest - particularly upland rough grasslands and moorlands and the threat to broadleaved woodland - in the UK uplands. providing data on the scale and increasing pace of such losses. The implications of continued losses on the flora and fauna of some of the habitats concerned is discussed. Only a comparatively limited amount of data, plus actual experience obtained from visiting parts of the Auvergne LFA, is available for the French uplands but sufficient is available to show that no significant losses of semi-natural vegetation or habitats has occurred. No agriculture/nature conservation conflict exists in the uplands of France. Chapter 8 analyses the different ways in which the individual components of the LFA Directive (and their interactions) have been applied in France and the UK and identifies which of them have caused and exacerbated the nature conservation/agriculture conflict in the UK uplands. In France the Directive has not been implemented in order to further nature conservation - that it has done so results by default rather than by design. But the Directive is implemented more sensitively in France and its aids are much more aligned with the degree of natural handicap than in the UK. The systems of compensatory allowances and investment aids, and particular components of them, are major elements in determining whether or not agricultural changes damaging to the natural environment of the uplands have occurred but a range of other, sometimes unquantifiable factors (e.g. land ownership patterns, hunting/shooting. traditions of husbandry and land management) are also more or less relevant. Failure to link HLCA payments to a handicap zonation of the UK's LFA, failure to limit the HLCAs paid per farm and (until December, 1984) payment of very high levels of capital grants, are three important factors in initiating and escalating the nature conservation/agriculture conflict in the UK uplands. Changes relevant to the LFAs proposed in the EEC

Review of agricultural structures are assessed in order to predict their implications for the UK situation. Recommendations for reducing or eliminating the upland agriculture/nature conservation conflict in the UK are derived in the present chapter.

Chapter 9 discusses the existing set of constraints on agriculture in the uplands of France and the UK — National and Regional Parks, and protected sites in France; National Parks, Section 43 Moorland Maps, and SSSIs in the UK and assesses their effectiveness in preventing habitat destruction. Recommendations are made for increased constraints to conserve upland habitats threatened by agricultural change.

#### Changes suggested by the present study

To eliminate the nature conservation/agriculture conflict in the uplands of the UK the following suggestions for change derived in Chapters 8 and 9, are put forward:—

- The LFA in the UK should be more meaningfully zoned to properly reflect the degree of natural handicap as required under Directive 75/268. It is recommended that the upland LFA should be divided into a "mountain zone" under Article 3(3) of the existing Directive (using grades H3 and H4 in the Hills and Uplands land classification as the starting point); an "intermediate zone" under Article 3(4) using grades H1 and H2 land as the starting point; and a "marginal zone" also under Article 3(4) using grades U3 and U4 as the starting point. The existing LFA boundaries are based largely on a line drawn up in the 1940s and hardly modified since. Proper zoning of the LFA is essential in order to relate levels of financial aid to degree of handicap experienced and MAFF (and WOAD's) refusal to differentiate a proper zonation is a fundamental shortcoming on their parts.
- 2. Levels of HLCA payments should be related to handicap zones and three levels are proposed, viz:

Mountain zone — set at ĒEC maximum, i.e. £60 per cow; £9 per sheep.

Intermediate zone — set at 80% of existing level, i.e. £36 per cow; £5 per sheep.

Marginal zone — set at 33% of existing level, i.e. £15 per cow; £2 per sheep.

The distinction between sheep of hardy and other breeds

should be abolished because it is only very loosely related to degree of handicap.

- 3. The stocking density limit on sheep (6 per hectare) above which no further HLCAs are paid should be retained; there appears to be no reason to alter the existing lack of any stocking density maximum for cattle. It is recommended that HLCAs should not be paid on more than 50 livestock units per farm (50 cattle or 333 sheep) in order to remove a major incentive for overstocking. A farm in the "mountain zone" could not then receive more than £3,000 per annum irrespective of increasing size; an "intermediate zone" farm no more than £1,800 and a "marginal zone" farm no more than £750. Any accountancy fiddles (e.g. notionally splitting units into several "farms" to claim on more than 50LUs) would need vigilance by the Agriculture Departments. The current practice of retaining on-farm woodland temporarily fenced out for regeneration purposes (up to 15 years) in the assessment of farm hectarage for HLCA payment calculations should remain.
- 4. The Agriculture Departments should more actively enforce the provisions of the HLCA regulations in cases where overgrazing is leading to vegetation erosion by withholding payments above an agreed, appropriate stocking density, taking conservation advice.
- 5. Land cultivation grants under both AHDS and AHGS schemes in the LFA should remain withdrawn as announced on 11 December 1984. If re-introduced at any future date, it is recommended that they should be fixed at not above 30% of costs and subject to prior approval from NPAs within National Parks. (Consultation with NCC in SSSIs is a statutory requirement under the Section 28 notification procedure). All proposals should be "environmentally acceptable".
- 6. Capital grants for drainage under both AHDS and AHGS schemes in the LFA should be reduced to 30% of costs in the proposed "mountain zone" and "intermediate zone" and to 22½% of costs (the level outside the LFA) in the "marginal zone" in order to reduce incentives to drain upland wetlands and species-rich wet pastures/meadows. Prior approval from ADAS (with advice from NCC if a conservation assessment is considered necessary) outside National Parks

and SSSIs in the remainder of the LFAs should be reintroduced for all drainage schemes and all proposals should be "environmentally acceptable".

- 7. Capital grants specifically for temporary fencing of farm broadleaved woodland (or of native Caledonian pine in Scotland) should be raised to 70% in the LFA in order to encourage the long-term retention of valued winter livestock shelter (and landscape/nature conservation interest). See recommendation 15.
- 8. National Park Authorities should be given last resort compulsory purchase powers under new legislation on a similar basis to Section 29 (of the Wildlife and Countryside Act, 1981) applying to NCC. They would be used where voluntary management agreements fail and an environmentally damaging agricultural intensification scheme would proceed in its absence.
- 9. The obligatory consultation period for prior approval from National Park Authorities for agricultural proposals attracting grant aid in National Parks should be increased from 1
  - month to a maximum of 3 months in order to give NPAs a more reasonable time for an assessment of the proposal's implications and to take specialist advice.
- 10. Section 42 (of the Wildlife and Countryside Act, 1981) Moorland Conservation Orders should be granted by Ministers on the areas of moor and heath mapped by NPAs under Section 43 of that Act and which are, in the opinion of the NPA, important to conserve. In this way, NPAs will be informed of all proposals likely to alter significantly the character of moorland, including non-grant-aidable changes.
- 11. More active consideration should be given to creating "wilderness areas" in the mountainous regions of the UK, e.g. in the Scottish Highlands, Lake District and Snowdonia. These should consist entirely of high upland in which no agricultural or forestry activities would take place. The resulting ungrazed vegetation would be less susceptible to erosion; floristic diversity would increase considerably. Public access would be facilitated by managed paths. In Snowdonia, Snowdon itself could lend itself to such management as could the Glyder and Tryfan mountain block. In the UK the only practical, and politically acceptable, way of

creating such "wilderness areas" would be by freehold purchase (e.g. by NCC or NT) involving buying out any existing tenancies or rights and by fencing out the whole unit.

12. Consideration should be given by government to modifying the composition of National Park Committees in order to increase nominated member representation (to better reflect the national interest) and to eliminate any single interest group domination.

Recommendations as a result of the EEC proposal for a Council Regulation on improving the efficiency of agricultural structures:—

- 13. The British Government should press for all agricultural development plans, which are likely to be broadened in their scope and available to a larger proportion of (particularly smaller) farms, to be agreed with conservation authorities before they can be adopted. Failing this, the Agriculture Departments in the UK should instigate such procedures themselves, calling on NCC to assess all plans and to make their adoption dependent on the fulfilment of nature conservation as well as agricultural objectives as suggested under Article 3 of the proposed Regulation.
- 14. The British Government should withdraw its objection to the provisions of Article 20 of the proposed Regulation provision for a discretionary aid to encourage farm afforestation and the improvement of existing farm woodland - and implement only the second provision in the UK. Afforestation should remain the primary responsibility of the Forestry Commission and existing mechanisms are in use to balance conservation and forestry interests. The Agriculture Departments should encourage the protection and rehabilitation (thinning, regeneration or replanting, removal of aliens) of existing on-farm broadleaved woods with grants which would cover up to 70% of scheme costs including fencing. All proposals should be subject to a conservation assessment by ADAS (with NCC advice as necessary) and subject to existing prior approval arrangements in National Parks (and statutory consultation of SSSIs). Proposals to rehabilitate existing broadleaved woods (which are a source of livestock shelter) on farms should only be grant aided if the scheme aims to "retain the essential broadleaved character of the

woodland with appropriate native tree species". The Agricultural Departments should adopt a more flexible and progressive attitude to this Article because they are well aware of the plight of upland broadleaved woods in the LFA (and of their livestock shelter value).

- 15. Article 22 should be used by the Agriculture Departments to set up farm pilot schemes showing how a wide range of objectives of the broadened farm development plan can be achieved, including nature and landscape objectives.
- 16. Any enhancement of HLCA payments (Articles 13-15) "to improve or maintain the natural landscape" should be reimbursed by EEC funds and should be linked to conservative needs, e.g. agreed stocking levels below those that could be supported for purely agricultural objectives. The Agriculture Departments should be able to offer such payments only with NCC advice and agreement that conservation objectives would be realised. Such a facility would normally apply to a physically discrete or contained site (e.g. a single pasture, groups of pastures, a wetland separated from other land) in order that livestock from another ownership or section of land could not substitute for the agreed reduction.
- 17. Article 17 the provision of aid to assist a wider range of joint investment schemes should include reference to environmental acceptability so that any proposals (apart from prior approval in NPs and obligatory consultation in SSSIs) require vetting by ADAS with conservation implications as an acceptance criterion.
- 18. The British Government's re-drafting of Article 32.2(b) in the draft Regulation (replacing Article 3(5) of the LFA Directive) is to be welcomed. If agreed by the Council of Ministers it will form the basis for support to the maintenance of traditional agriculture without intensification. It can link HLCA payments (including for the first time in the UK, for dairy cows) to agreed stocking levels on a hectarage (not headage) basis. It is recommended that the Article, if accepted, is applied to The Somerset Levels, Halvergate Marshes, The Broads and similar areas (to not exceed more than 4% of the land area of each Member State).




















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