

Review of Area-based Less Favoured Area Payments Across EU Member States

Report for the Land Use Policy Group of the
GB statutory conservation, countryside and
environment agencies

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CJC Consulting

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Abbreviations

AER	Areas with Environmental Restrictions(articles 13-21 of the RDR)
AWU	Agricultural work unit
CA	Less-Favoured Area Compensatory Allowance
CAP	Common Agricultural Policy
CTE	Contrat Territorial d'Exploitation
EAGGF	European Agricultural Guidance and Guarantee Fund
EC	European Commission
EEC	European Economic Community
ESA	Environmentally Sensitive Area
ESU	European Size Unit
EU	European Union
FA	Favoured Areas
FADN	Farm Accountancy Data Network
GAEPS	General Protection Scheme
GFP	Good Farming Practice
GAP	Good Agricultural Practice (the same as GFP)
KULAP	Bavarian Environmental Programme
Länder	Austrian and German Regional Authorities
LFA	Less-Favoured Area
LFA/AER	Less-Favoured Areas and Areas with Environmental Restrictions
LU	Livestock Unit
LVU	Livestock Density
LVZ	Landwirtschaftliche Vergleichszahl (agricultural equivalent)
MEKA	German Environmental Programme
N	Nitrogen
NGO	Non-Governmental Organisation
ÖPUL	Austrian Agri-environment Programme
PS	Public Support
RDP	Rural Development Programme
RDR	Rural Development Regulation (EC) No 1257/1999
SAT	Sociedad Agraria de Transformación
SGM	Standard Gross Margin
SPD	Single Programming Document
SPS	Special Protection Scheme
UAA	Utilised Agricultural Area

Preface

The Land Use Policy Group (LUPG)¹ of the GB statutory conservation, countryside and environment agencies aims to advise on policy matters of common concern related to agriculture, woodlands and other rural land uses (see www.lupg.org.uk). It undertakes research into aspects of European land management and rural development policy. The LUPG has recently completed a major study into the planning and implementation of the Rural Development Programme (RDR) across Europe (Dwyer *et al.*, 2002).

The LUPG has funded this study on policy development for less-favoured areas (LFAs) in order to understand more about how the Agenda 2000 revised objectives of the RDR's LFA measure are being implemented in EU member states. The LUPG intends to use the information gained in this study both to inform the mid-term review of the CAP and the mid-term evaluations of the development programmes under the RDR that are being carried out by Member States in 2003.

This report was produced by CJC Consulting on behalf of the Land Use Policy Group. The views expressed within the report are those of the contractor and do not necessarily reflect the views of the agencies within LUPG.

¹ LUPG consists of English Nature, the Countryside Agency, Scottish Natural Heritage, the Environment Agency, the Countryside Council for Wales and the Joint Nature Conservation Committee.

Summary

Context

The EU Rural Development Regulation 1257/99 (RDR) set new objectives for the payment of compensatory allowances to farmers in Less-Favoured Areas (LFA) and Areas with Environmental Restrictions (AER):

- ❑ to ensure continued land use and thereby contribute to the maintenance of a viable rural community;
- ❑ to maintain the countryside;
- ❑ to maintain and promote sustainable farming systems which, in particular, take account of environmental protection requirements.

Under the regulation, compensatory allowances are no longer to be made per head of livestock (headage) but instead on an area basis; payments should be differentiated to reflect the severity of the natural handicap, particular environmental problems and the production structure; and payments can only be made where farmers are complying with Good Farming Practice requirements (GFP) defined by each Member State in their Rural Development Plan.

Remit

The objective of this research project was to provide an overview of how:

1. EU Member States have implemented the requirement to change Less-Favoured Area payments from a headage to an area basis and;
2. social and environmental objectives have been included under the revised schemes.

Project structure

Six EU Member States were selected as case studies to cover a range of different LFA policy objectives, variation in the expenditure allocations for the LFA measures within RDR programmes and a range of geographical contexts varying from Nordic to Alpine and Mediterranean. These states/regions were:

- ❑ Austria
- ❑ Germany (Bavaria)
- ❑ France
- ❑ Greece
- ❑ Spain (Catalonia)
- ❑ Finland

In all the case studies at least 45% of the UAA was designated as less-favoured and in Austria and Finland this exceeded 70%. Correspondents in each country provided an analysis of the structure of the new LFA measure and its impacts in relation to policy objectives.

Policy objectives

In general, the aim of LFA policy in these six countries was to maintain farming in the LFAs, not only for the benefit of the farm and rural populations but also in relation to the landscape and other services derived from farming. Some countries are more narrowly focussed on income support to farmers and the maintenance of agriculture as a land use

(e.g. France, Finland). Compensation for income differences between LFA and non-LFA farms is specifically mentioned as a policy aim in France, Germany and Greece.

Other countries have less agriculturally-orientated objectives, or at least see the support of agricultural incomes as an intermediate step in the delivery of other rural and environmental objectives. Population maintenance is an objective in Greece, and closely related to this 'maintenance of rural livelihoods' in Spain. Population maintenance is not a central issue for LFA policy in Austria, Bavaria or France.

Limited use is being made of LFA allowances to explicitly procure specific public goods from farmers (maintaining or enhancing landscape, biodiversity and habitats etc.). The Commission's view appears to be that agri-environment measures already have this role and that the LFA allowances should serve a different purpose.

Expenditure share in the RDR

The table below gives the proportionate breakdown of LFA spending within the RDR budget. In terms of relative expenditure, LFA policy is most significant in Finland and Austria. Both countries have a clear policy aim to maintain farming and a farmed landscape in the LFAs. In Finland, policy aims to support farming because of its social and environmental contribution. In Austria the farmed landscape contributes strongly to tourism. Spain sits at the other extreme with the smallest relative expenditure on LFAs, a reflection of its greater emphasis on other rural development measures within the RDR.

Planned allocation of RDR spending 2002-2006 (%)

	LFA/AER	Early retirement	Agri-environment	Afforestation	Other measures
Austria	28.6	0.0	54.3	0.2	16.9
Germany	11.1	0.1	26.2	1.1	61.5
France	17.2	2.3	13.9	0.7	65.9
Greece	16.4	19.7	6.9	2.8	54.2
Spain	4.8	2.8	9.5	7.0	75.9
Finland	51.0	5.7	28.9	1.0	13.4
UK	31.1	0.0	35.9	7.5	25.5
EU-15	15.6	3.1	24.6	3.7	52.9

Source: Dwyer *et al.* (2002)

Compensatory allowances

Most countries use a high degree of differentiation in the payment scheme in order to target support. In Austria, for example, the rate of allowances is set by the degree of natural handicap as determined by a scoring system; farm size (higher rates for the first 6 ha of land); whether livestock are present; and land use (forage and other land). Rates of payment per ha vary from 7 to over 600 euros per ha with the highest payments directed at very small livestock farms in the most disadvantaged areas.

Germany also uses a detailed scoring system for determining the degree of natural handicap. France relies mainly on a geographical classification to identify disadvantage. Greece and Spain differentiate in part according to the characteristics of the farmer and the business in order to target support to viable farms and farmers dependent on farming for their income. Part-time farmers are not eligible for LFA support in several countries.

For example, in France and Spain payments are made only to farmers that obtain at least 50% of their income from farming, and in Spain farmers must spend at least 50% of their time on farming.

Of all the countries studied, Finland had the least differentiated system because its main aim is to provide general (horizontal) support to Finnish farming which operates in the context of a universally harsh environment for agricultural production.

Change to area-based payments

The RDR uses land area as the basis of payment. Land used for cattle, sheep, goats and dairying is generally eligible, and dairying is given a small amount of additional state support in Austria to assist in maintaining local supplies. In most countries, payments on cropped land are restricted or reduced (e.g. France, Austria, Germany). In Mediterranean countries, where cropping is widespread in the LFAs, some or all of the cropped area is typically eligible for payments. Finland bases the LFA payments on the arable land area only.

In most countries, allowance rates have been increased under 1257/99 to ensure that there are few losers from the change to an area-based system. The increases also compensate for any additional costs associated with good farming practice. Austria has the greatest range of payments. These vary from under €10 to over €600 per ha. Elsewhere, rates vary less, ranging from: €25-220 in Bavaria, €49-223 in France; €40-100 in Greece; €45-120 in Spain; and €150-210 in Finland. Several countries limit the overall size of payments (e.g. €12,000 in Bavaria) or the number of hectares that can be claimed for (e.g. 50ha in France; 100 ha in Austria and Spain; 50 ha of pasture and 15 ha of other LFA land in Greece). Austria and Spain also modulate (reduce) payment rates to favour small farms (e.g. on claims between 60 and 100 ha in Austria and between 5 and 100ha in Spain).

Good farming practice (GFP)

Member States have established different GFP codes depending on the environmental issues present and the farm practices that they wish to control. In some countries (e.g. Germany) there is a robust set of national environmental legislation and the LFA GFP conditions add supplementary measures. The French GFP code appears to be the lightest and consists mainly of regionally-defined limits on stocking rates. More commonly, the codes comprise rules relating to fertiliser use (mainly nitrogen application levels and restricted periods), disposal of farm manure, soil protection, and restrictions on chemical use.

It was not possible to assess the codes in relation to their effectiveness in limiting environmental damage. However, the codes should help to control the practices that are most damaging and lead to reduced levels of water, air and soil pollution.

Links to other rural development measures

In Austria, Finland and Bavaria, agri-environment measures are widely taken up on farms in the LFAs and together the measures are self-reinforcing in support of sustainable farming and its associated public benefits. The role of LFA measures is less clear where the priorities are to develop local economies and sustain population and incomes. Here the LFA payments support farm incomes but may fail to contribute to longer-term structural change and rural development.

Country impacts

Austria

The compensatory allowance instrument plays a major role in maintaining agriculture and population density, the protection of cultural landscapes and the delivery of environmental objectives. The payment system is highly differentiated (see above) in order to give preferential assistance to farms that have persistent natural handicaps (e.g. mountain farms), small farms and those with livestock. Payment rates are structured to favour smaller holdings (up to 6 ha), with payment rates declining for areas between 60 ha and the maximum eligible area of 100 ha. Average payments are just under €3,000 per holding, and LFA payments account for 19% of farm income on mountain farms rising to 40% on those with the greatest natural handicaps.

It is expected that the changes in the RDR will foster environmentally friendly production methods and reduce environmental damage in the LFAs. Basing payments on area rather than stock numbers will assist in keeping extensively farmed areas and those with production difficulties in agricultural use. It is too early to assess the impacts in detail.

Germany (Bavaria)

The German LFA Scheme is mainly income oriented. The LFA compensation payment system is extremely important in Bavaria as a means of compensating for low LFA farm incomes. In the new system, payment levels have been raised and the new calculation method based on community rather than farm level criteria has enabled an additional 6,000 farmers to benefit from LFA payments. Payments range from €25 per ha for arable LFA land to €200 per ha for alpine pasture. Average payments per farm are around €2,200 with a maximum payment of €12,000. Subsidies for alpine pastures have been increased from €146 to €200 per ha in view of the associated public benefits to tourism and the environment. Apart from the GFP conditions on land use, there is no specific limitation on stocking rate as a criterion for LFA payments.

The environmental NGOs of Germany lobbied unsuccessfully for changes to the LFA programme to increase its environmental contribution. They argued for greater targeting of the LFA measure (i) to mountain areas and areas with valued habitats, and (ii) to reduce risks of agricultural decline by providing more support for extensive and organic systems.

France

The LFA compensatory allowances are an important source of income for LFA farms, in particular in mountain areas where the compensatory allowance represents 20% of farm income. The new scheme has tried to retain the existing balance in expenditure between mountain areas (80% of the expenditure) and other less-favoured areas. The transition to area payments has been helped by an increase in the budget of 20% over two years. Payments per hectare range from €49 in "simple LFAs" that are not dry to €223 in dry high mountain areas, and are limited to a maximum of 50ha.

Good farming practice is mainly based on meeting maximum and minimum stocking rates. Allowances are defined for different types of LFA and in relation to stocking rate.

The consequences are economically positive for LFA farms. Impacts on land management are not expected to be great but some convergence in stocking rates is expected in the long-term. Increased overall payments should help to maintain farming particularly in mountain areas. At this early point in the implementation of the new system it is very difficult to predict the impacts on the environment.

Greece

Since compensatory allowances were established in Greece following accession to the EEC, they have played an important role in maintaining farming in LFA areas, especially for extensive livestock systems (i.e. sheep, goats and grazing cattle) and have reduced the rate of population loss. The continuation of farming leads to a number of positive environmental impacts (e.g. reduction of erosion and protection against fires, rural landscape preservation). However, limited regulation of land use in Greece often leads to environmental degradation either by over-exploitation (e.g. overgrazing in the accessible areas) or under-exploitation (e.g. abandonment of terraces, undergrazing, loss of biodiversity).

Payments per ha are generally higher for young farmers that have received a 'green certificate' (training) and for those in mountain areas. Rates are relatively low, ranging from €40 to €100 per ha. The maximum area compensated is 50 ha of pasture land or 15 ha of other LFA land.

It is too early to draw firm conclusions on the impacts of the new LFA arrangements. Environmental impacts are likely to vary according to the farming system prevailing in the specific LFA. Where production is of minor importance to income, the introduction of per ha payments and the imposition of a code of good agricultural practice could lead to a positive environmental impact by reducing grazing pressure. Elsewhere the stocking rate conditions for GFP may lead to a degree of non-compliance.

Spain (Catalonia)

The reform to the compensatory allowances has meant a 50% increase in the budget allocated to LFAs, although this is from a very low base. The LFA areas (mountain areas, high depopulation risk areas, and areas influencing National Parks) have not been modified.

The payments continue to be relatively small in relation to other European countries and consequently have a small impact on the farm families' decision-making. Payment rates are highest for mountain areas and areas with specific limitations and are limited to 100 ha. They range from €45 to €120 per ha for the first 5 ha, with progressively lower rates up to 100ha. Average payments are only around €414 per farm.

The number of beneficiaries of the compensatory allowances has diminished since they were first applied in Spain. The main winners from the changes introduced in the RDR have been farmers who own large areas of land. The losers are livestock farmers with little or no land. Whilst no significant changes in land use are expected, there should be positive environmental impacts due to the imposition of GFP.

Finland

The coverage of the LFAs in Finland with specific handicap has been extended to the whole agricultural land area. Finland has the highest proportion of RDR funds allocated to LFAs (51%) and uses the measure to provide widespread support to its farmers. It is a key measure with the objective of securing the continuation of environmentally sustainable agriculture and reducing depopulation. The environmental objectives of the LFA scheme are complemented by the agri-environment scheme which operates on 74% of the LFA land area.

Payments are differentiated by location, increasing northwards as conditions become more severe. Payment rates vary from €150 per ha in the south to €210 per ha in the east and north where natural handicaps are greatest. On arable farms the LFA payment

accounts for between 64% and 82% of family income and 22-34% on other LFA farm types.

Impacts on land use and environment of the RDR changes are expected to be minimal. The GFP measures will assist in reducing negative external effects, with the agri-environment scheme being the prime mechanism for environmental enhancement.

Conclusion

Overall, the impacts on agriculture of the RDR changes to LFA support will be relatively minor at least in the short term. Average payment rates have been increased to smooth the transition such that few farmers will lose from the change. The main impacts will occur where the compensatory allowances are an important source of farm income or where specific changes in the conditions attached to the payments have been introduced. There has generally been a tighter targeting of allowances to make the payments more cost-effective. In general, the changes will tend to support the maintenance of farming structures and agricultural land use. Where stocking rate and GFP conditions have been modified these should provide environmental benefits from more sustainable use of pasture and reduced water, soil and air pollution.

1 Introduction

1.1 Introduction

Less-favoured Areas (LFAs) were established across the European Union under the LFA Directive (75/268/EEC²). The support measures were later incorporated into regulation 797/85, which was itself replaced by regulation 2328/91 and that in turn by 950/97. Member States were required to identify certain areas used for hill farming or less-favoured areas defined by natural physical handicap, and in particular, altitude, slope, infertility or “low productivity of the environment”. Direct income payments could be made to farmers within these LFAs for “the continuation of farming, thereby maintaining a minimum population level or conserving the countryside”.

Under the Agenda 2000 agreement, articles 13-21 of the EU Rural Development Regulation 1257/99 (RDR) refer to Less-Favoured Areas and Areas with Environmental Restrictions (AER).

The objectives for naturally less-favoured areas were amended so that support would contribute to the following objectives:

- to ensure continued land use and thereby contribute to the maintenance of a viable rural community;
- to maintain the countryside;
- to maintain and promote sustainable farming systems which, in particular, take account of environmental protection requirements.

The RDR contained fundamental changes to the LFA Directive:

- Member States could now choose to make LFA payments or to use these funds for other elements of the RDR;
- LFA payments were no longer to be made per head of livestock (headage) but instead on an area basis;
- payments should be sufficient to compensate for existing handicaps whilst avoiding over-compensation;
- payments should be differentiated to reflect the severity of the natural handicap, particular environmental problems and the production structure;
- payments could only be made to farmers meeting specified criteria relating to the social and environmental objectives for the LFA;
- payments can only be made where farmers comply with Good Farming Practice (GFP) requirements.

1.2 Rural Development Regulation

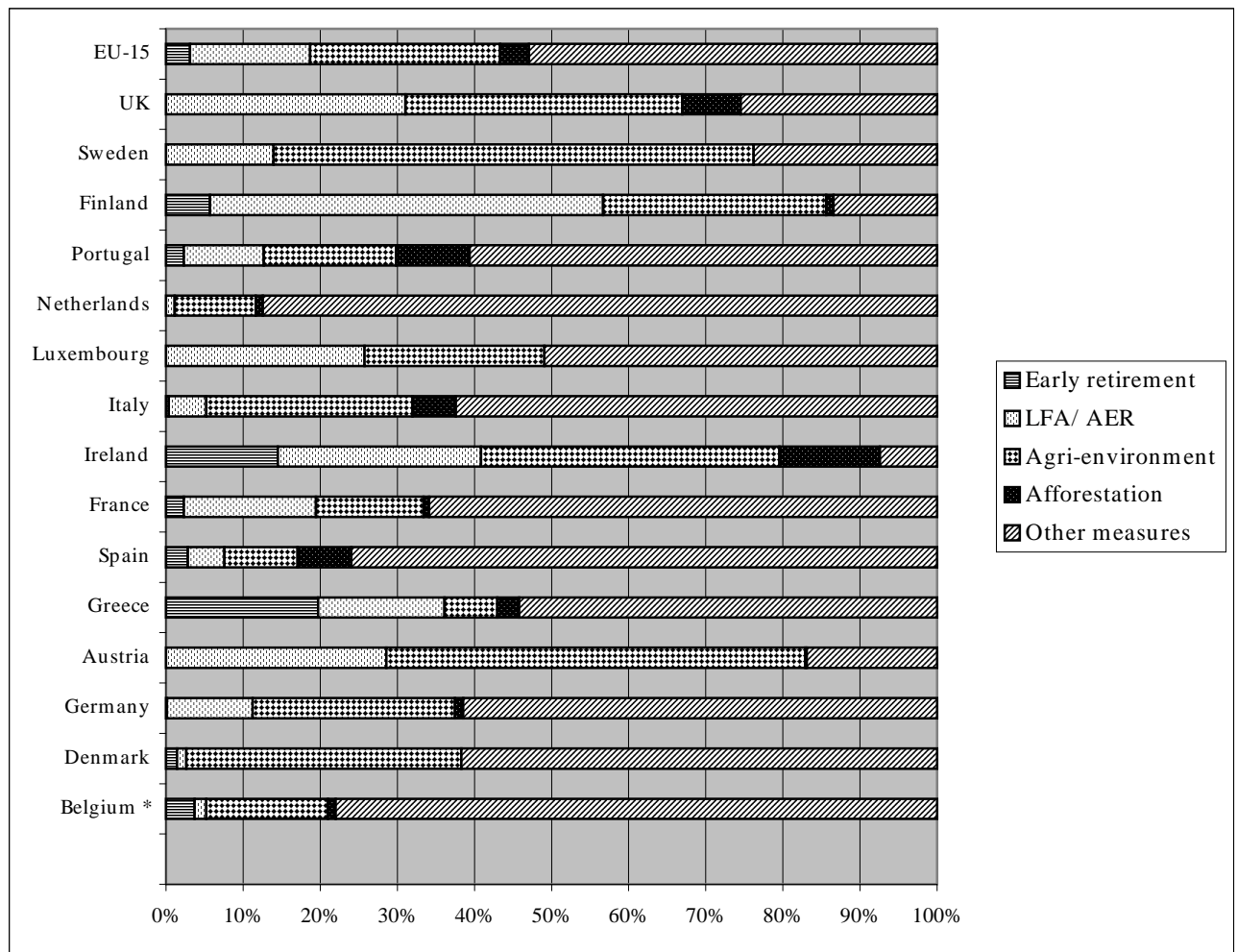
The RDR was designed to provide a more coherent basis for supporting development in rural areas. It brings together a set of ‘accompanying measures’ which provide support mainly through land-based payments for the agri-environment, less-favoured area compensation, aid for afforestation and early retirement, and ‘non-accompanying measures’ which support rural development projects through annual and capital payments.

² Directive 75/268/EEC on mountain and hill farming and farming in certain less-favoured areas

Member States have varied widely in their allocation of Pillar 2 measures to LFA/AER measures (Figure 1.1). The highest proportion of funding has been in Finland (51.1%), UK (31.1%) and Austria (28.6%). France and Greece have intermediate levels at around 17% and some member states have allocated less than 5% (Belgium, Denmark, Spain, Italy and the Netherlands).

To an extent, this is explained quite simply by the proportion of the agricultural land that is designated as LFA in different countries (Table 1.1). This is very high in the Nordic states and Austria but much lower in the Netherlands. But other factors are involved. For example, as part of the negotiation for the 1995 accession, Finland, Sweden and Austria were allocated a larger share of the resources for the new accompanying measures. As a result these countries developed high expenditures on LFA and agri-environment measures and this has continued under the RDR.

Figure 1.1 Planned allocation of RDR expenditure in Member States 2000-2006



Source Dwyer *et al.* (2002)

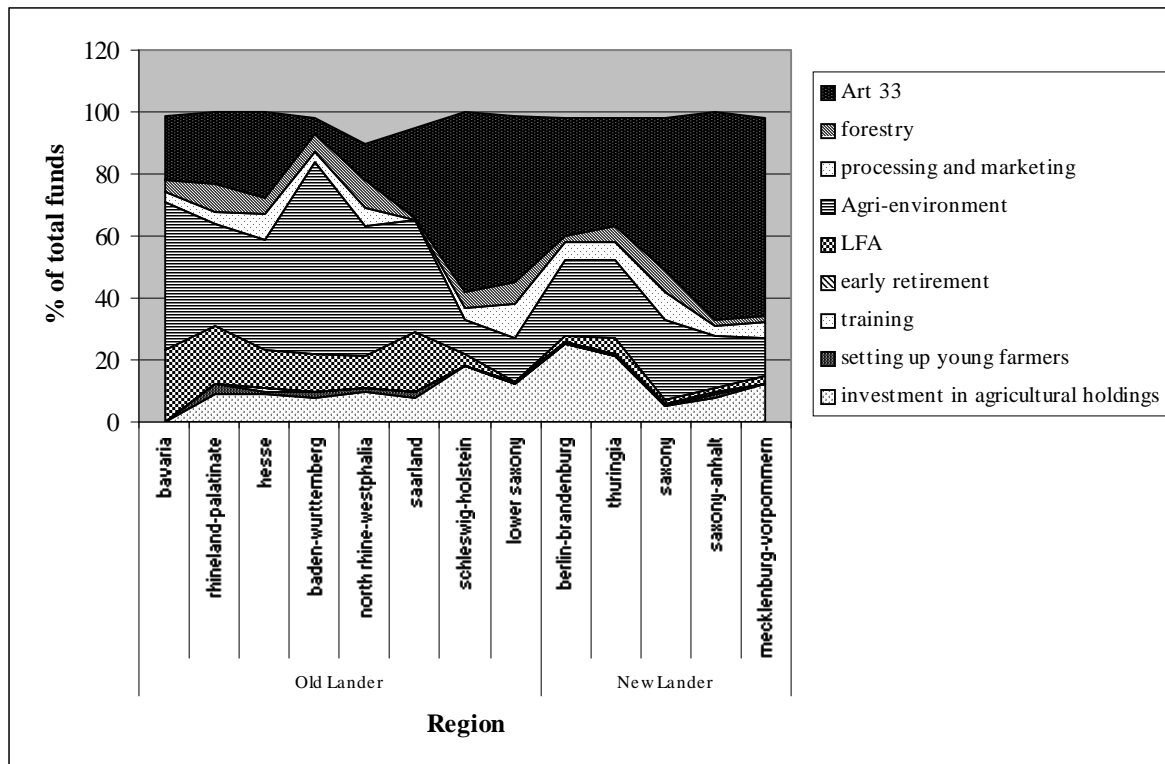
Some countries have preferred to continue their historic allocation of expenditure on other structural adjustment measures such as early retirement, the setting up of young farmers and investment in processing and marketing. France, Spain and Germany have

allocated a high percentage of the RDR expenditure to rural development projects. Spain is an example of a country with a substantial LFA but where payments to LFA farmers have been set at a relatively low level, the preference being for measures to assist rural development and modernisation.

Table 1.1 Proportion of the Utilised Agricultural Area designated as less-favoured in selected countries

Country/ region	LFA area as % of UAA
Austria	71
Germany	50
Germany (Bavaria)	45
France	44
Greece	69
Spain	80
Spain (Catalonia)	56
Finland	100
England	20
Wales	77
Scotland	84

Figure 1.2 Regional prioritisation of rural development measures in Germany



Source Dwyer *et al.* (2002)

Differences in the importance of LFA spending in the RDR can also be observed within countries that have distinctive regional rural development programmes. In Germany, for example, the old Länder (which include the most mountainous regions of Bavaria and Baden-Württemberg) have a much higher proportion of spending on LFA measures than the new Länder (Figure 1.2).

1.3 Objectives of the study

Not only does expenditure on the LFA measure vary substantially between Member States and regions, but there are differences in policy objectives, delivery mechanisms and associated conditions. Member States also managed the transition from the previous LFA instruments to 1257/99 in a variety of ways.

The objective of this research project was to provide an overview of how:

1. EU Member States have implemented the requirement to change less-favoured area payments from a headage to an area basis; and
2. social and environmental objectives have been included under the revised schemes.

1.4 Project structure

Six EU Member States were selected to cover a range of different LFA policy objectives variation in the expenditure allocations for the LFA measures within the RDR programmes and a range of contexts varying from Nordic to Alpine and Mediterranean. These states/regions were:

- Austria
- Germany (Bavaria)
- France
- Greece
- Spain (Catalonia)
- Finland

Because of the differentiation in rural development programmes in Spain and Germany between autonomous communities and Länder respectively, we selected one region in each country as a case study: Catalonia and Bavaria. Correspondents from each of the selected areas were asked to report on the implementation of the LFA measures under the RDR according to the following structure:

- Rural Development Programme (RDP) and LFA component.
- Economic, environmental and social objectives for LFA policy in the country/region – what were perceived as the dominant objectives.
- Characteristics of the LFA in the study area.
- Description of policy mechanisms (i.e. scheme or schemes) now used in the LFAs.
- Implementation of good farming practice cross-compliance.
- Evaluation of impacts of current LFA instruments.

The different case study areas are described in Chapters 2-7. Chapter 8 compares and contrasts the objectives and implementation of policy in the six case studies areas. It draws conclusions about the way the measure is used in different contexts and

assesses the socio-economic and environmental impacts of changes in the LFA mechanism.

2 Austria

2.1 Rural Development Plan (RDP) objectives

Austria has a single RDP covering the federal territory of the Republic of Austria excluding the measures co-financed by the EAGGF, Guidance Section in the Objective 1 area (the province of Burgenland). Measures relating to less-favoured areas, agri-environmental measures and forestry measures under Article 31 of 1257/1999 are financed under this programme for the entire territory of Austria. The total public cost of the programme is €6,896m, including an EU contribution of €3,208m from the EAGGF, Guarantee Section.

The RDP has three objectives:

- compensation for special services by farmers;
- preservation of assets with regard to the maintenance of holdings; and
- improving competitiveness.

Compensation for services is intended where special services have to be provided which the revenue from agricultural and forestry production cannot cover. This concerns the LFAs, agri-environment, and services linked to the protective and ecological function of woodland. The budget for the measures relating to LFAs and areas with environmental restrictions is approximately 29% of total RDP costs.

2.1.1 LFA objectives

The dominant objective for LFA policy is to maintain an agricultural and forestry sector based on environmental principles and small family farms. The aim is sustainable resource management e.g. preservation of soil, water and air, maintenance of the agricultural and recreational landscape, and protection from natural hazards.

The national implementation regulation sets the following objectives for LFAs (BMLFUW, 2001a):

- Maintenance of agricultural land use and associated rural community, through the development of the rural environment;
- Contribution to the settlement and land use management systems under difficult production conditions; and
- Remuneration of the public goods produced by farms in less-favoured areas.

2.2 Characteristics of the LFA

2.2.1 Structure

The LFA area covers almost 80 % of the total Austrian land area, and 71 % of the UAA. Most is classified as mountain area with a small part classified as other less-favoured area. The mountain area comprises 70% of Austrian territory (58% of the UAA) and is home to 36% of the Austrian population (Dax, 1998). This share of the national population living in mountain areas is one of the highest world-wide and underpins Austria's concern for enhancing the full potential of all economic sectors in these regions.

The general dynamic of business and employment in the alpine area is similar to that in the "non-alpine area": the number of people employed in agriculture and forestry is falling, industry and manufacturing still account for a large proportion of total

employment, and the shift of jobs towards the tertiary economy is quite marked. Tourism is a core element of the service sector in the mountain area. Population growth and economic development in the last 20 years have led both to an increase in the importance of the alpine area and to a sharpening of disparities within it (Schindegger *et al.*, 1997).

The structure of agricultural holdings is characterised by a high percentage of part-time farms whose operators are regular commuters. There is a growing demand for eco-friendly agriculture and different types of rural tourism. Natural hazards, particularly in the mountain regions, and remoteness require high infrastructure costs if the vitality and economic base of rural regions under these conditions is to be maintained. Some of the eastern border regions and the Alpine side-valleys are significantly remote and have limited opportunities for diversification.

2.2.2 Agriculture and environment

Mountain farming in Austria is now characterised almost exclusively by grassland production, within which beef farming is most important. Agriculture plays an important role in maintaining multifunctional landscapes in mountainous areas since 52% of all agricultural and forestry holdings are situated there. Mountain holdings account for 64% of the dairy cows, 64% of all cattle, and 79% of the sheep in the national populations (Statistik Austria, 2001). Mountain farms are also of great importance for forest protection and the management of alpine pasture areas, which are extremely sensitive eco-systems.

The naturally unfavourable situation of mountain farming enterprises is primarily due to steep gradients, a short growing season, extreme weather conditions and an absence of alternative production possibilities. Poor transport conditions and an inadequate and expensive infrastructure are widespread. Austrian farm holdings are characterised by a small-scale structure, which is operated primarily by family labour: the average size of mountain farms is only 14 ha UAA (of which 11 ha is grassland), and 11 ha forest. Mountain farm holdings with cows have an average stocking rate of 8.5 units and only 5.2% of farms keep more than 20 cows. On only 44% of mountain farms is agriculture the main economic activity.

Despite the reduction in agricultural production since 1945 and the dual trends for rural areas to become either urbanised or marginalised, Austria's LFAs still possess a high environment quality as characterised by relatively low pollution and a largely intact farmed landscape. This results in generally good conditions for environmentally-friendly agriculture and forestry and these preserve the cultural landscape. Such multifunctional agriculture and forestry still extends over most of the rural areas. It is important for tourism which plays a central role in the Austrian economy.

2.3 Description of policy mechanisms now used in the LFAs

2.3.1 Farm classification

Since the early 1970s a *differentiated classification system* (of 4 groups) has been the basis for defining support levels for mountain farmers. The main criteria for the classification were the climatic conditions and the "internal transport situation", i.e. the proportion of agricultural area of the holding that had a gradient of at least 25% (or at least 50% for farms with highest difficulties (category 4)). This differentiation of mountain farms operated until 2001.

The change to a more differentiated payment structure was planned during the 1990's and a *revised classification system* (Tamme *et al.*, 2002), has been applied since 2001.

This addresses the positive externalities of mountain farming more clearly. A detailed system of attributing points up to a maximum of 570 points is used. The elements used in the calculation are grouped into three categories: “farm situation (internal)”, “farm situation (external)” and “soil and climate”. In addition, the system allows for annual changes through linkages that account for the actual land use of mountain farms. This is the basis for the differentiation of the compensatory allowance³ system and is also used for other specific measures, particularly those of the agri-environment schemes, which enhance the preservation of cultural landscapes in mountain areas.

2.3.2 Structure of LFA compensatory allowances since 2001

Prior to the implementation of the RDP, LFA payments were made on a headage basis with an upper ceiling of 1.4 livestock units per ha utilised agricultural area. Aid intensity is now calculated on the basis of land area, land type (forage or other land), type of holding (with/without livestock) and the extent of the handicaps to which the farm is subject (see 2.3.1). The compensatory allowance consists of *area aid 1* (up to 6 ha) and *area aid 2* (progressive reduction up to 100 ha).

The new compensatory allowances take the following factors into account:

- Persistent natural handicaps.
- Predominantly small and medium-sized farms as a result of the topography.
- Preferential assistance for farms with fodder-based livestock systems.
- Minimum land area of 2 ha UAA; commitment period minimum of 5 years; adoption of code of good agricultural practice (GAP).
- Application of Article 15(3) of 1257/1999 (flexibility of maximum payment): With an eligible land area of 1,590,000 ha UAA, there is a potential total annual finance cost of €318m in Austria. The actual budget is limited to €277m, and in principle this restricts the average compensatory allowance to a maximum of €200 per ha. (but see below).

Payment rates

Table 2.1 gives examples of the amount of support payable on different types of farm (using mountain farm register points and differentiating according to farms with and without livestock).

Table 2.1 Compensatory allowances per ha UAA

	Farms with livestock		Farms without livestock	
	Area aid 1 (euro)	Area aid 2 (euro)	Area aid 1 (euro)	Area aid 2 (euro)
Basic category	30.30	94.47	7.56	72.67
100 points	175.65	132.26	43.89	101.74
200 points	321.00	170.05	80.23	130.81
300 points	466.34	207.84	116.57	159.88
400 points	611.69	245.63	152.90	188.95

1) Area Aid 1 is granted only for the first 6 ha UAA of the eligible holding

2) Area Aid 2 is granted for all ha UAA on the holding up to a maximum 100 ha, but modulated from 60 ha.

Source: BMLFUW (2000b)

³ Throughout this text, compensatory allowances (CAs) refer to the allowances paid in LFA/AER designated areas under Article 14 of 1257/99.

It is a basic requirement of eligibility that all the agricultural area is used. The calculation of the classification system is based on 16 indicators for each farm reflecting the internal farm situation, external farm situation, and soil and climate. Of these, the internal situation, indicating the proportion of the agricultural area with production difficulties, receives the highest weight. Points for each of the indicators are aggregated. The points are not dependent on farm size but on production difficulty. Although detailed information is provided to farmers on the system and their individual classification, the calculation is complex and cumbersome.

A farm with around average difficulty (characterised by half of its area at a gradient of more than 25%, a typical average peripheral location and climate and soil conditions) scores about 120 points (Tamme *et al.* 2002, p.31).

Some holdings receive over €200 per ha in area aid (see Table 2.1). These higher amounts have to be seen in the context of article 15 (1) of 1257/1999 as aiming to compensate existing handicaps without overcompensation. The maximum compensatory premium per ha UAA (€725), can only occur for very small farms (e.g. 2-4 ha) in extreme locations.

In addition to area aid 1 and area aid 2, the Länder can introduce an additional classification for dairy farms in line with article 15(2) of Regulation (EC) 1257/1999 as a top-up state aid to be financed mainly by the "Länder" (*area aid 3*). The Länder provide this top up aid primarily to cover increased costs of peripherally located dairy farms which reflects the increased difficulties of milk collection in parts of the mountain areas due to the termination of remote milk collection points.

The maximum amount of this top-up aid is limited to €2,000 per holding per year with an annual budget ceiling of €14.53m per year.

Overall, 116,954 LFA farms receive support through the compensatory allowances scheme of €280.2m, which is on average €2,395 per holding. There was a marked increase (39.5%) in LFA payments from €200.5m in 2000 to €280.2 m in 2001. The total LFA budget was increased to make sure that there were no farms where there was a fall in the receipts from compensatory allowance payments. This was designed to make the new scheme acceptable to farmers. However, Austria had previously requested the Commission in its national Memorandum on Mountain Agriculture and Forestry (1996) to allow changes in the EU regulation that would allow a substantial increase in support for mountain farms with the most severe handicaps. This became possible after the Agenda 2000 reform.

2.3.3 LFA support and farm income

Support payments dominate the income from agriculture and forestry for all farm types throughout Austria (Table 2.2). The national average contribution is 66% and is higher for mountain farms at 73%. The compensatory allowance is especially important for mountain farms. The proportion of agricultural income as LFA payments is 19% for all mountain farms, and the proportion of public support is 26%. Again, support payments become more important as the production difficulty increases: with category 4 farms the LFA support is 40% of agricultural income.

Besides the compensatory allowance, which is specifically targeted at LFAs, support from the agri-environment programme is extremely important in mountain areas. Together compensatory allowances and the agri-environment programme (ÖPUL) account for 44% of agricultural income.

Table 2.2 Agricultural income and public support in 2001 (means for different farm types in €1,000)

Indicator	Category							
	Austria	Mountain area	1	2	3	4	All mountain farms (cat 1-4)	Non-mountain farms
Agricultural income	22.9	22.5	22.1	22.5	21.3	17.6	21.6	24.1
of which:								
public support(PS)	15.1	15.7	15.5	14.7	16.9	16.0	15.8	14.4
of which:								
Compensatory allowance (CA)	2.3	4.0	2.9	3.8	5.0	7.0	4.1	0.6
PS as % of income	66	70	70	65	79	91	73	60
CA as % of income	10	18	13	17	24	40	19	3
CA as % of PS	15	26	19	26	30	44	26	4

Notes: Compensatory allowance (CA) is defined as LFA payment from EU reg. 1257(99), including the National Support scheme following the EU-accession treaty. Public support is regarded as income; it includes all support measures from public sources (EU, federal state, Länder, municipalities) linked to agriculture and forestry. The contribution of forestry to income is not included.

2.3.4 Areas affected by specific handicaps

Austria gave notification of a national list of Natura 2000 areas in April 1999 (about 16 % of the land area). Only about 15 % of this area (200,000 ha) is UAA, revealing that a predominant portion of Natura 2000 land is not in agricultural use.

The creation of the requirements and general conditions (basic identification of locations, restrictions on use, assessment of costs and loss of income) for the implementation of measures under Article 16 of 1257/1999 is currently under way; these areas will probably be included in the programme from 2003.

2.4 Implementation of good farming practice cross-compliance

In the Austrian RDP the general definition of good agricultural practice (GAP) contains the following conditions:

- Fertilisers and manure:** Fertiliser quality, fertiliser dosage, max. fertiliser levels (max. 175 kg N/ha/year on arable land and max. 210 kg N/ha/year on grassland, of which max. 170 kg organic N). Restriction on farm manure (max. 3.5 LU/ha, 2.7 LU/ha), manure dosage distribution, fertilising methods, hillside fertilisation, restrictions governing watercourse edge zones, fertilisation bans.
- Plant protection:** Plant protection product registration and use, licences to purchase, proof of expertise, obligation to keep records, storage rules.
- Soil protection:** Use of sewage sludge, application of liquid manure, prevention of soil erosion.
- Livestock production:** Feed quality, active substance bans, nutritional quality.

Compliance with the set of indicators for GAP will be monitored on at least 5% of beneficiaries.

2.5 Evaluation of impacts of current LFA instruments

2.5.1 Ex-ante evaluation

The ex-ante evaluation of the LFA scheme was undertaken by the Federal Institute for Less-Favoured and Mountainous Areas (Hovorka, 2000). It concluded that the key changes were in the definition of area aid 1 and the new, more precise calculation of individual farm production difficulties using the revised classification system for mountain farms. The change to an area-based system of support will favour less intensive farm management systems which are found in the areas with greater production difficulties. Any loss of farm output is alleviated by the increase in the level of support. In general, this increase was achieved through the additional part-instrument of area aid 1 (payments up to 6 ha UAA) which has the function of providing a basic level of support, thus enhancing the payment level on smaller farms. There is also a preferential treatment of livestock rearing farms (see 2.3.2).

The World Wide Fund (WWF) Austria commissioned an ex-ante evaluation of the Austrian RDP focusing on nature conservation aspects. This study presents a positive assessment of LFA measures but proposed more demanding environmental conditions. Nevertheless it shares the consensus about the positive effects of the scheme on the environment, given the geographical focus on mountain (and less-favoured areas) and the tendency to orientate support towards less-intensive production systems (WWF 2000).

2.5.2 Impacts on farm incomes and land management

Support levels have been improved for LFA farmers under the RDP, and particularly for mountain farmers. The Agenda 2000 reform reinforces the focus on income support and remuneration for the services provided by small-scale farming. A number of indicators suggest a more positive development path for supported (mountain and LFA) farms than for non-LFA farms.

The distribution of the support instrument is very differentiated according to the size of the farm, the production difficulties and also the province where the farm is situated. In addition the management of alpine pastures, which is of core importance in many mountain regions of Austria, greatly influences the support received. There are specific conditions applied to farms with pastures which allow much less intensive livestock production on mountain farms.

Until 2000, the compensatory allowance had an upper limit of 1.4 LU per ha forage area and thus tended to restrict stocking rates. No increase in average stocking rates from a rather low level (about 1.0 LU per ha) occurred in the period 1995-2000. The shift in the support relation in 2001 to area-based payments should in the medium-term reduce the average stocking rates by removing any CA-driven incentive to increase stock numbers.

The LFA compensatory allowances make an important contribution to the economy and rural environment particularly in mountain areas. In general, livestock farms with high production difficulties have received the greatest increase in support. As the minimum stocking level for full support is set at a rather modest threshold, there are hardly any incentives in the LFA system to increase output.

2.5.3 Impacts on land use and the environment

The new instrument is more in line with ecologically sound production methods and less intensive farm management systems. There is also high complementarity with the objectives of the agri-environment measures and other rural development support

measures which means that it contributes to the achievement of primary objectives of the programme. The current evaluation studies reinforce these conclusions.

The framework of the new support system and initial experience of implementation suggest that overall implications for habitats and landscape are positive. Although the increased level of payments conceals immediate effects on individual farms the reduction in the livestock density threshold will have an impact in the medium and long-term. It can be expected that agricultural land use will become, on average, more extensive. The increase in payments will particularly provide an incentive for less labour intensive and environmentally sound production methods and will assist in reducing land abandonment.

2.5.4 Impacts of other elements of the RDR

Currently, payments under the “second pillar” of the CAP far exceed those under market measures (Table 2.3). Even if some of the effect is due to the small-scale structure of Austrian agriculture and its weak market integration, the political priority to apply the set of measures available and also adapt them to the needs of mountain farming has been decisive in this respect.

Table 2.3 Public support measures per farm unit in percent (2001)

	Austria	Mountain Area	Category of mountain farms					Non-mountain farms
			1	2	3	4	1–4	
CAP-payments	35	24	31	23	18	12	23	47
Agri-environmental programme (ÖPUL)	38	37	37	40	37	34	37	38
Compensatory allowances	15	26	19	26	30	44	26	4
Other subsidies	12	13	13	11	16	10	14	11
Total subsidies	100	100	100	100	100	100	100	100

Source: LBG, own calculations.

The agri-environment programme, ÖPUL, for which an integral, horizontal approach was chosen (€599m per year for the period 2000-2006), has the greatest implications for mountain farms, because their management systems correspond most closely to environmentally sound farming. Mountain farmers receive about 45% of these funds whereas they account for only 36% of the farms of Austria. One of the most demanding environmental elements of this scheme related to organic farming. In 2000, 83% of supported organic farms were mountain farms (Kirner *et al.*, 2002) and the proportion of organic farming is higher on farms facing a higher level of production difficulty.

In Table 2.3 the various public support measures are disaggregated to show their distribution across the expenditure categories. Market support (CAP payments) is 47% for non-mountain farms and is thus of great relevance for this group (in particular crop production in favourable areas), whereas mountain farmers receive the highest proportion of support through the agri-environment programme and compensatory allowances, which include landscape preservation as one of their main objectives. These two account for 63% of public support for mountain farms (78% for category 4 mountain farms), as compared with 42% for non-mountain farms.

2.6 Summary

The compensatory allowance system together with the transitional National Support instrument play major roles in maintaining agriculture and population density, the protection of cultural landscapes and the delivery of environmental objectives in less-favoured and mountain areas.

The recent changes brought about through the Agenda 2000 regulations had the intention of fostering environmentally friendly production methods and preventing environmental damage in these areas. Although this orientation is evident, it is too early to assess the effects of the changes including the shift from headage to area-based support measures.

Long experience with LFA payments in Austria has demonstrated their positive impact on the continuation of land use in LFAs (and particularly in mountain areas). They have also prevented marginalisation in most of the mountain regions. Basing payments on area rather than stock numbers will assist in keeping extensively farmed areas and those with production difficulties in agricultural use. This will have an impact on landscape development and the multifunctional aspects of mountain land management.

3 Germany (Bavaria)

3.1 Rural Development Programme objectives

The RDPs in Germany have been developed at the level of individual Bundesländer. The overall national priorities for the plans are

- Development of agriculture and forestry;
- Rural development; and
- Environmental and compensatory measures.

The maintenance of agricultural land use is one of the core objectives in the German agricultural policy. This aim is now often linked to a policy of integrated rural development.

The LFA programme plays an important role within the Bundesländer programmes in the southern part of Germany - Bavaria and Baden-Württemberg. In those regions as compared to the eastern and northern part of Germany, there is a less satisfactory farm structure associated with unfavourable soil and climatic conditions.

Although the objectives of the LFA measures differ between the German Bundesländer, the core aims are identical as follows:

- Maintenance of farming in the LFA;
- Maintenance of the cultural landscape for tourism and recreation;
- Prevention of an income gap between non-LFA and LFA farms; and
- Composition and protection of a farm structure which is adapted to the conditions associated with its location.

Since many environmental measures relate to grassland extensification they make a considerable contribution to the RDP in LFAs. It is therefore difficult to separate the effects on the environment of the compensation payments and the environmental programme. The analysis of LFA measures must therefore be interpreted with care.

Compared to some other European countries, depopulation concerns do not play any policy role in Bavaria.

3.2 Characteristics of the LFA

About 50 % of German farmland was defined as LFA in 2001. 149,000 farms on 9.4m ha received compensation payments. The average subsidy per farm was about €2,179. In Bavaria 45 % of the UAA is classified as LFA.

The LFA of Bavaria is located in the mountain area of the Alps and the low mountain range of northern Bavaria. Table 3.1 shows the extent of compensation payments for the main districts of Bavaria.

In all but a few districts, the percentage of people employed in agriculture and forestry is significantly higher in the LFA than elsewhere. With the exception of the alpine area in South Bavaria, the percentage of farms within the LFA which have a successor is up to 10 % lower than in the non-LFA. A more marked decline in agricultural employment in the LFA is therefore to be expected.

Table 3.1 Regional relevance of Compensation payments in the LFA

Districts of Bavaria	No. of farms with LFA payment	Ha with LFA payment	% of total UAA ha	Average payment (€/farm)
Oberbayern	13,382	254,682	31	1,592
Niederbayern	11,421	146,027	26	1,271
Oberpfalz	15,403	282,322	68	1,364
Oberfranken	11,437	237,359	73	1,401
Mittelfranken	11,379	198,712	56	1,079
Unterfranken	5,944	124,164	34	1,254
Schwaben	9,755	203,702	37	1,722

Source: Bavarian Ministry of Agriculture, 2002

Within the LFA there is considerable variation in the proportion of land that is rented. This can be explained in part in northern Bavaria by the distribution of inheritance between all the children which has resulted in a poorly structured agriculture. In addition, there is a high percentage of part-time farmers in Bavaria (about 65%) and this inhibits structural change. Although the decline in the number of farms is nearly the same in the LFA and non-LFA, it is difficult to assign this effect to the compensation payments. Trends in the non-agricultural sector (e.g. the employment situation) and the income effect of the environmental programmes under 1257/1999 play a more important role than the LFA measures.

3.2.1 Farm accounting information

The effect of compensation payments on farm incomes can be derived from the Bavarian farm accounting data system (Table 3.2). In comparison to the non-LFA, the LFA farms have a lower livestock density and also a lower percentage of arable land. Although CAP payments are, on average, €1,381 higher in the LFA, the profit is €5,668 lower.

Table 3.2 Farm account data for Bavaria 2001 (averages for full time farms)

Category	Unit	Mountain area	Central area	LFA	Non LFA
UAA	ha	31.72	41.77	42.67	41.81
Leased area of the UAA	ha	39.7	55.6	54.1	44.5
Labour force	No. of workers	1.56	1.61	1.63	1.62
of which unpaid labour (family)		1.54	1.56	1.54	1.46
Arable land	% of UAA	0.8	58.3	62.7	81.1
Livestock density	LU/ha	1.52	1.47	1.51	1.63
Revenue from sales	€/ha	2,333	2,224	2,509	3,120
Production cost	€/ha	791	996	1,239	1,701
Profit	€/farm	29,228	28,413	30,539	36,207
CAP payments (all types)	€/farm	11,871	17,307	18,210	16,829

Source: Bavarian agricultural report, 2002

3.2.2 Environmental issues in the LFA element of the RDP

There has been a conflict between the European Commission and the Bavarian Ministry of agriculture regarding the LFA measures in the RDP. In the course of the LFA

programme reform, the ministry wished to justify the payment with environmental arguments but this was unacceptable to the Commission who regarded the purpose of this programme as exclusively to compensate for income differences caused by locational handicap.

Within the German LFA system there are no conditions that relate to livestock density. The German administration has refused to redesign the programme so that it contributes more clearly to the RDR. This is relevant when considering the environmental contribution of the LFA measures.

The German environmental NGOs have lobbied for an adaptation of the LFA programme to increase its environmental contribution. Interviews with NGOs indicated that their main concerns are that:

- There should be a more goal-oriented definition of less-favoured areas in Germany. This means that the programme area should be redefined and concentrated more in the mountain areas or areas with valuable habitat.
- Grants should be paid, especially in those regions, to reduce the risk of a decline in agricultural land use.
- There should be a focus on grassland.
- There should be more demanding environmental requirements than good farming practice. The NGOs call for extensification or organic farming.

(Source: Interviews with German NGOs; NABU and Bund Naturschutz)

3.3 Compensatory allowances

There is a set procedure for determining the LFA payment level which is based on the so-called Landwirtschaftliche Vergleichszahl (LVZ) (Figure 3.1). In Germany the fiscal administration is responsible for the soil rating and the calculation of the LVZ, which exists for every agricultural plot. The LVZ reflects the soil quality, climate and is the base for income tax assessment on small farms.

In the old LFA system, the average LVZ was calculated at farm level but this had high administrative costs. The new system is based on the average LVZ of the local community. Farmers having a local LVZ above 35 only get the minimum compensation payment. However, this regulation does not apply to mountain areas and for farms having at least 30% of land which cannot be farmed without difficulty (e.g. arable land with at least an 18% gradient). Compensation payments in LFAs are graded. For grassland, the graduation is €5 per ha per LVZ- point (€2.50 for arable areas).

3.3.1 Conditions for LFA payments:

The programme is open for all farm types in the LFA. However, the following crops receive no payments: maize, sugar beet, wheat, wine, vegetables and set aside. It is a condition that recipients continue in farming for 5 years and at least 3 ha of the UAA have to be within the LFA. Furthermore, the farmers have to fulfil the requirements for good farming practice.

Payments are based entirely on the areas of arable and grassland, and the LVZ classification. No account is taken of the actual land use (e.g. arable, sheep, dairy).

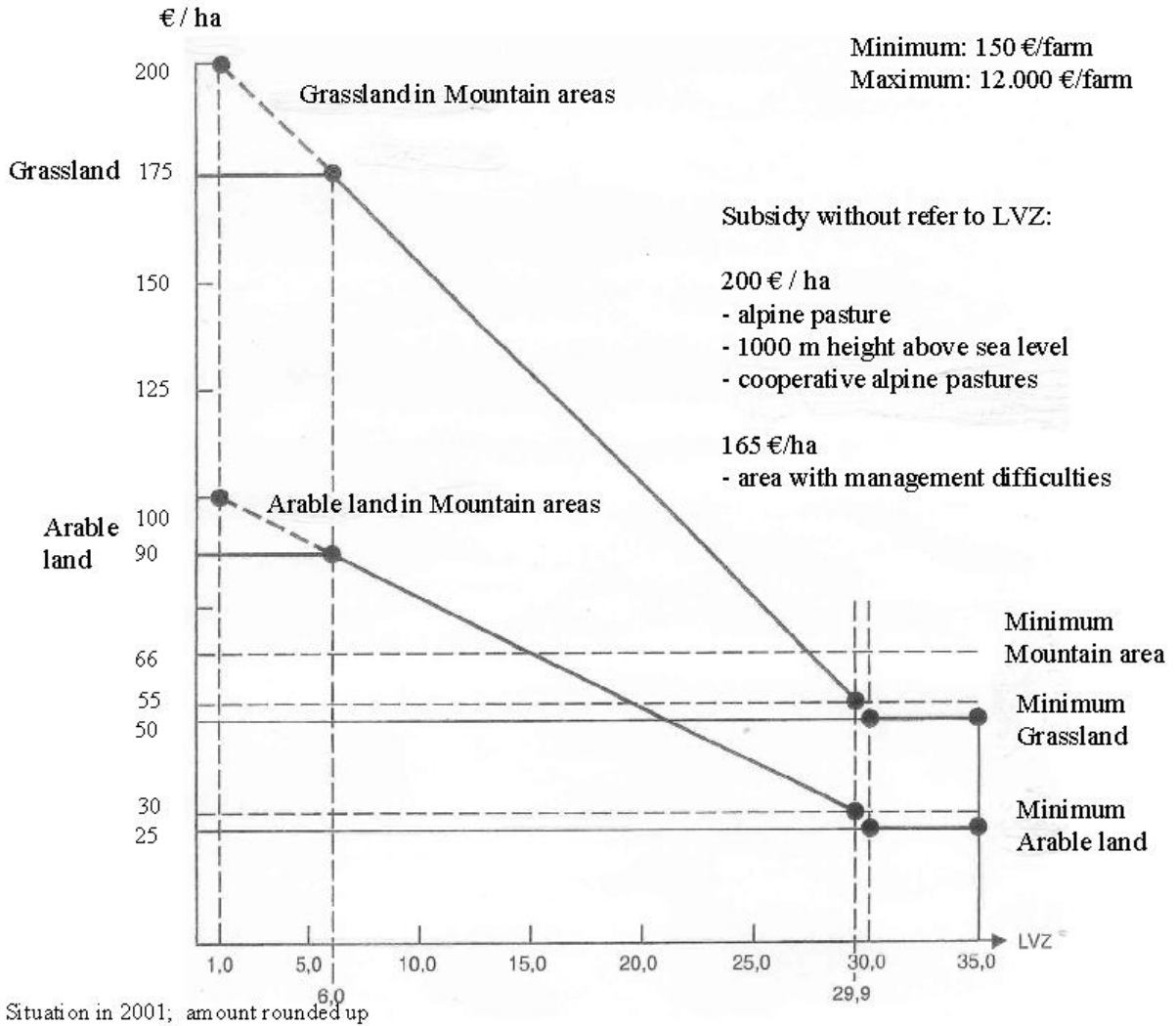


Figure 3.1 Graduation of compensation payments according to LVZ (x axis) and other factors

An example of the calculation of the LFA payment for a farm with 20ha grassland, 5ha alpine pasture, 5 ha maize silage; 5 ha oats, with an average LVZ of the village boundary 20 is as follows:

20 ha grassland (LVZ 20) at 103 €/ha = €2,060

5 ha alpine pasture at 200 €/ha = €1,000

5 ha maize silage (no compensation payment) =0

5 ha oats (LVZ 20) at 54 €/ha= €270

The total LFA payment is €3,330.

LFA payments are limited to about €12,000 and no payments are made for amounts less than €150.

3.3.2 Development of compensatory allowances

Table 3.3 gives a summary of the development of the compensation payment scheme in Bavaria. Since area-based payments have played an important role in Bavaria for 20 years it is difficult to describe transitional effects. In the old system, co-operative pastures were paid at €102 per ha whereas in the new scheme it has been increased to €204 per ha. Cows were paid between €123 and €146 per cow. These subsidies were limited to 1 LU per forage ha. Altogether, farmers received subsidies for 60 units per farm (ha or LU; maximum 6,000 €/farm).

Table 3.3 Development of the Bavarian compensation payment system

<p>Before 1988: Compensation payment for forage area as a function of soil quality and grazing livestock Land classification with LVZ system Compensation payment is limited to a LVZ of 35 LVZ calculated at farm level</p>
<p>1988 –2001: Compensation payment for forage area as a function of soil quality and roughage livestock Compensation payment for other crops with the exception of wheat, wine, sugar beet, vegetables, fruit Compensation payment limited to a LVZ of 35 LVZ calculated at farm level LVZ of rented land calculated at community level</p>
<p>Since 2002: Exclusively area-based payment as a function of LVZ Abolition of 35 LVZ limit; farms with LVZ > 35 get the minimum subsidy within the LFA LVZ calculated at community level</p>

The average stocking rate per hectare in the alpine regions of Bavaria is between 0.82 and 1.68 LU/ha. As there were restrictions on the number of livestock eligible for payments in the old system, the new system gives higher payments grants, especially in the alpine regions. Now, grassland is supported at between €50 and €175 per ha (in alpine regions €200 per ha).

The present system defines the LVZ at the community rather than farm level. This has greatly reduced the administrative burden of the calculations. A side effect of the new calculation process is that the number of entitled farms has increased by 6,000.

3.4 Good farming practice

There has been considerable discussion about the appropriate definition of GFP in Germany especially in the 1990's in the context of the protection and enlargement of water catchments.

The farmers' association argues that the effects of climate are such that it is not possible to have detailed regulations defining GFP. On the other hand, in Germany, environmental regulations have been set in environmental law with requirements that are part of specific laws (e.g. for fertilizer use, plant protection and soil protection). However, enterprises participating at the *Bavarian Cultural Landscape Programme* or receiving LFA compensation payments have to fulfil specific GFP regulations as a condition for receiving payments.

These conditions are:

Fertiliser use:

- No direct input of fertilizers to surface water, and maintain an adequate distance from surface water.
- Application of nitrogenous fertilizers only on absorptive soil (not saturated with water or covered by snow).

Slurry, liquid manure, poultry droppings or nitrogenous liquid fertilizer of secondary material:

- Immediate incorporation on uncropped field.
- No utilization within the retention period.

Additional for all fertilizers of animal origin:

- Utilization of potassium or phosphorus only up to a certain soil level.
- Maximum average use of total nitrogen per year: 170 kg/ha on cropland, 210 kg/ha on grassland.

Calculation of fertilizer requirement

- Actual results of standard soil analysis, not older than 6 years and not older than 9 years on extensive grassland.
- Consideration of advisory recommendations or soil examination for calculation of nitrogen fertilization.
- Calculation of nutrient content of organic manure.

Plant protection

Essential requirements for plant pesticides:

- Application of pesticides in agriculture, horticulture or forestry only by people with certificates of expert knowledge.
- Crop protection equipment has to be checked every two years by an official workshop.
- Regular applications of plant protection measures have to be reported to the department of plant protection of the regional office of soil cultivation and plant production.
- Pesticides may only be used on agricultural, horticultural and forestry areas. Application on path, waterside edges etc. is illegal as well as application into water bodies.
- Only permitted plant protectants can be used. Manufacturers' instructions must be followed.

3.4.1 Control of compliance with good farming practice

The control of the compliance with good farming practice takes place on-site and also by special controls exercised by the responsible authority. Both approaches to control are used to verify the preconditions of aid for the programs of *Cultural Landscape* and the LFA compensation payments.

In the on-site control, officials have to check the following:

- Execution of the standard soil examination.
- Preparation of the nutrient content comparison.
- Calculation of nitrogen fertilization need.

- ❑ Immediate incorporation of slurry, liquid manure, nitrogenous liquid fertilizer of secondary stuff or poultry droppings on uncropped field.
- ❑ Application of plant protectants only by people with certificates of expert knowledge and only with licensed equipment.

Detected infringements of the agricultural professional law basically result in reduction of the amount paid of the *Cultural Landscape Programme* and the LFA payment. The reductions vary from 5 to 20% in the year of detection but increase to 40% in certain cases. Grave infringements result in the repayment of LFA aid and the loss of payments in subsequent years. We have no data on the extent of infringements but the main problem is thought to lie with limited storage capacity for liquid manure and spreading on frozen soil or snow-covered soil.

3.5 Summary

The LFA compensation payment system is extremely important in Bavaria as a means of compensating for low LFA farm incomes. The German LFA Scheme is mainly income oriented. However, to what extent the LFA programme is able to stabilise farm incomes in the LFA is difficult to predict.

In the new system, payment levels have been raised and the new calculation of the conditions of location (LVZ) at community level has enabled an additional 6,000 farmers to benefit from LFA payments. With regard to the environmental effects of the programme two aspects have to be pointed out: To maintain the positive external effects of alpine pastures, the subsidies have been raised from 146 €/ha to 200 €/ha. On the other hand, apart beside the GFP conditions, there is no limitation on livestock numbers within the programme. Although the NGOs demand a more environmentally-oriented programme, the government consider that this is dealt with in specific environmental programmes such as the Bavarian cultural landscape programme.

4 France

4.1 Rural Development Programme

France has a single national RDP. A unique juridical text defines the framework and the implementation of the LFA payments in the areas concerned. Nevertheless, some adaptations are possible at the department level (in particular in regard to the definition of good agricultural practice). Expenditure on LFAs is budgeted to account for 17.2% of the RDP total public expenditure budget over the period 2000-2006, which is near the EU average of 15.6%. This expenditure converts to an average of €95 per ha UAA (Dwyer *et al.*, 2002).

4.1.1 Less-favoured areas

There are two types of less-favoured areas: mountain areas and other less-favoured areas, although there are some variations in each type:

- 1) Mountain areas are defined as communities with a minimum altitude of 600-700 m and/or an average slope of 20%. Within such mountain regions, higher areas are defined according to altitude (at least 1,200 m) and livestock density (less than 20 LU per km²).
- 2) Other less-favoured areas are composed of (a) piedmont areas, defined as areas still within mountainous regions but with less severe climatological and topographical restrictions, and (b) regions defined since 1975 as *simple* less-favoured areas according to a number of different criteria (low productivity of the soil, declining population, etc.).

4.1.2 LFA objectives

The objectives of the LFA policy in France are as follows:

- to compensate for the differences of income between farms in LFAs and farms in other regions (to compensate for higher costs in LFA areas). More generally, the objective is to maintain farming in each French region. This objective is subject to the condition of GAP, which is defined at the local level in such a way as to avoid “under grazing” and “over grazing” on farms.
- To favour smaller farms. To achieve this, the compensatory allowance is limited to 50 ha of agricultural area and the first 25 ha receive a higher rate of payment. The minimum size of the farm for eligibility is 3 ha of agricultural area and 3 livestock units.

The LFA payments are not designed as an incentive for the production of environmental goods but (i) to compensate for natural handicaps and (ii) to avoid environmentally-damaging practices through adherence to GAP. The production of public goods and protection of the environment is mainly addressed through the new second pillar “*Contrat territorial d’exploitation*” which have now been modified by the new government into “*Contrat d’agriculture durable*”. The objective is to favour multifunctional farming through two obligatory elements – an environmental dimension (including agri-environmental measures) and an investment dimension. This policy is available on the whole French territory including the LFAs.

4.2 Characteristics of the LFA

4.2.1 Types of LFA

Less-favoured areas represent 53% of the total French land area and 44% of the French UAA. The socio-economic trends differ substantially between the different mountain massifs. For example, the northern Alps can suffer from overpopulation, because of development of industries, services and tourism. In this region, the number of farmers in the active population is around 4% (typical of France as a whole). Conversely, some regions of the Massif Central and Pyrénées suffer from depopulation. In these regions, farmers typically make up 20 to 30% of the active population.

Mountain areas comprise one part of the total less-favoured areas, and represent 14% of the total UAA. Details are shown in Table 4.1.

Table 4.1 Proportion of area in the less-favoured areas in France

Type of LFA	Area (km ²)	% of French land area	Agricultural area (km ²)	% of total French UAA
High mountain	23,310	4.2	2,588	0.9
Mountain	102,398	18.7	37,081	12.9
Total mountain	125,708	22.9	39,669	13.9
Simple less-favoured area	137,892	25.2	73,443	25.7
Piedmont	25,154	4.6	11,589	4.0
Total other less-favoured areas	163,046	29.8	85,032	29.7
Total LFA	288,754	52.8	124,701	43.6

Source : MAAPAR

The distribution of farming enterprises varies within the different types of LFA. In 1997, about 275,000 farms were situated in LFAs. These represent 37% of all French farms. Within LFAs, 107,000 farms are in mountain areas (15% of all French farms), 43,000 are in piedmont areas (5% of the total French farms) and 125,000 are in the other less-favoured areas (17% of the total French farms).

The main types of farming system in LFAs are shown in Table 4.2.

In the FADN, 85% of farms in mountain (+piedmont) areas are livestock farms, and the proportion is almost 100% in mountain areas (Table 4.3). In these regions, there are similar numbers of dairy and beef cattle. The situation is totally different in the simple less-favoured areas, where the proportion of arable crops farms is about 23%.

Table 4.2 French farms by type of farming system and type of area in 2000 (“professional” farms⁵)

Farming system	Mountain area		Simple less-favoured area		Piedmont area		Total France	
	Number	%	Number	%	Number	%	Number	%
Dairy cattle	27,200	35%	16,900	20%	72,800	33%	116,900	30%
Beef cattle	29,100	37%	33,200	39%	32,100	15%	94,400	25%
Sheep – Goats	9,900	14%	5,600	7%	2,400	1%	17,800	5%
Total livestock	66,200	85%	55,700	66%	107,300	48%	229,100	60%
Arable crop	1,200	2%	16,500	19%	50,300	23%	68,000	18%
Other (permanent crops)	9,700	12%	12,400	15%	62,300	28%	84,400	22%
Total	77,900	100%	84,700	100%	222,300	100%	384,900	100%

Source : FADN France 2000, INRA Nantes

NB : Mountain = high mountain + mountain + piedmont

Table 4.3 Average structural characteristics of professional farms by type and by area in 2000 (euros)

By farm	Mountain area				Simple less-favoured area				Piedmont area	Total France
	Dairy cattle	Beef cattle	Sheep Goats	Total	Dairy cattle	Beef cattle	Sheep Goats	Total	Total	Total
Total number	27,200	29,100	9,900	77,900	16,900	33,200	5,600	84,700	222,300	384,900
Total Labour Input	1.69	1.37	1.72	1.62	1.87	1.50	1.42	1.73	1.95	1.84
- of which paid labour	0.05	0.05	0.12	0.15	0.18	0.12	0.09	0.30	0.52	0.40
Total UAA (ha)	61	67	71	60	99	88	69	82	63	67
- of which fodder area	54	60	61	43	60	60	37	20	20	29
Maize/fodder area (%)	5%	2%	1%	1%	19%	3%	1%	8%	24%	14%
- of which crops	7	6	9	7	38	27	32	36	40	31
Total grazing LU	59	66	59	52	82	79	57	51	5	42
Milk quota	150,800	Ns	Ns	Ns	216,900	Ns	Ns	Ns	Ns	Ns

Source : FADN 2000, INRA de Nantes

For each farm type in mountain areas, the agricultural area is mainly pasture and fodder. This represents 75% of the total agricultural area. Grass is the main crop since the

⁵ In The FADN, a farm is considered as “professional” if its economic size is greater than 8 European Size Units (ESU) of Standard Gross Margin (SGM) and if the number of AWU exceeds 0,75. In France, the proportion of « professional » farms is on, average, 60%, and 40 - 50% in mountain areas.

proportion of maize is very low in all farm types. In the other less-favoured areas, the proportion of crops is important even on livestock farms.

4.2.2 Incomes

In general, business size is smaller in mountain agriculture compared to other areas. For example, the average milk quota in mountain region is 150,800 kg per farm compared to 216,900 kg in simple LFA regions (and 205,000 kg in piedmont areas) (Table 4.4).

Table 4.4 Average economic characteristics of professional farms by type and by area in 2000 (euros)

In euros per farm	Mountain area				Simple less-favoured area				Pied-mont area	France total
	Dairy cattle	Beef cattle	Sheep Goats	Total	Dairy cattle	Beef cattle	Sheep Goats	Total	Total	Total
Total output	75,300	42,300	61,500	65,500	122,700	63,900	54,700	89,300	132,000	109,100
Gross farm income	39,100	29,300	36,200	36,200	57,100	40,200	30,100	46,600	54,800	49,200
Net farm income	22,400	16,700	18,600	20,900	30,700	22,800	15,300	25,700	30,900	27,700
Direct payments	12,200	21,500	19,600	15,700	22,300	28,300	22,300	25,500	18,800	19,600
- of which LFA	4,900	4,300	7,000	4,300	350	1,400	2,300	810	0	1,000
LFA/direct payments (%)	40%	20%	36%	27%	2%	5%	10%	3%	0%	5%
Direct payments /net farm income (%)	55%	73%	106%	75%	73%	124%	146%	99%	61%	71%
LFA /Net farm income (%)	22%	26%	38%	21%	1%	6%	15%	3%	0%	4%

Source : FADN 2000, INRA de Nantes

In mountain areas, the compensatory allowance makes a very important contribution to farm income. In 2000, it represented between 20% and 38% of farm income and between 27% to 40% of the total direct payments. In simple LFAs, the compensatory allowance was less important: it contributed from 0% to 15% of farm income depending on farm type, and less than 10% of the total direct subsidies.

Despite specific subsidies, farm income in mountain areas is still only 40-85% of that in piedmont areas. Incomes in simple LFAs vary from 0%-100% of those in piedmont areas.

4.2.3 Environmental issues

In the case of the Alps, there are no serious environmental problems linked to intensification. The problems are of a more localised nature. The environmental issues that exist are general problems with undergrazing. Some mountain areas suffer from very low stocking rates, in particular in the intermediate areas between valleys and alpine pastures. Conversely, some intensification of valleys and alpine pastures has been occurring.

4.3 Description of policy mechanisms

The following are the eligibility conditions for farms/farmers to obtain LFA payments:

- less than 65 years old.
- at least 50% of income from the agricultural activity.
- at least 3ha of agricultural area.
- at least 3 LU except in certain areas (dry mountains) where the eligibility also relates to permanent crops.
- The LFA allowance can be obtained for all types of cattle farming only in the mountain areas. There are some restrictions for dairy cattle in the piedmont areas and dairy cattle are excluded in the other less-favoured areas.
- The LFA allowance can be obtained for permanent crops only in the dry less-favoured areas.

Table 4.5 shows a summary of the structure of the compensatory allowances. The compensatory allowance is paid as a function of the number of ha of fodder area per farm. The maximum number of ha compensated is 50 and the amount per ha is increased by 10% for the first 25 ha. The amount per ha varies from €49 per ha in simple less-favoured areas to €223 per ha in high mountains areas.

Table 4.5 Maximum compensatory allowance per ha of fodder area in 2002 (euros per ha)

Area type	High Mountain		Mountain		Piedmont		Simple less-favoured areas	
	Dry	Other	Dry	Other	Dry	Other	Dry	Other
Amount (euros by ha)	223	221	183	136	89	55	80	49

Source : MAAPAR

Under the previous LFA system, payments were made per head of stock: the maximum number of LU paid was 50, with a 10% increase for the first 25 LU. The maximum number of LU paid could not exceed the fodder area of the farm, so as not to favour more intensive farming systems.

The LFA allowances are the main expenditure element in the accompanying measures and represent 17% of the total public expenditure in the RDP budget. Mountain areas receive 80% of the LFA expenditure compared to 20% in the other LFA areas. As regards transitional mechanisms to soften the impact on farmer's incomes, the main instrument has been the increased level of overall expenditure. Indeed, the expenditure allocated to the LFA measure has increased by 20% under the new system.

4.4 Implementation of good farming practice

Good agricultural practice is defined almost entirely in terms of stocking rate. If the stocking rate is over a maximum level or under a minimum level, the LFA allowance is not granted (see Table 4.6). Some variation exists in the rules for GFP. For example, an

optimal stocking rate (around 1 LU/ha)⁷ is defined in each department and in each area. Between the optimal levels of stocking rates and the eligibility limit the amount per ha is decreased by a certain percentage. For example, for a stocking rate between 0.8 LU/ha and 1.2 LU/ha in mountain areas, the rate per ha is maximal, i.e. €136 per ha. Between, 0.4 and 0.8 LU per ha, the rate per ha is decreased by 30%, i.e. €95.2 per ha. Each department has to define the optimal levels of stocking rate and the rate at which payments decline to zero.

Table 4.6 Minimum and maximum level of stocking rate by type of less-favoured area defined for the compensatory allowance (LU per ha)

Area	High Mountain		Mountain		Piedmont		Simple less-favoured areas	
	Dry	Other	Dry	Other	Dry	Other	Dry	Other
Minimum level	0.1	0.15	0.15	0.25	0.35	0.35	0.35	0.35
Maximum level	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0

Source : MAAPAR

The other criteria for GFP consist of regulations relating to animal welfare and the spreading of cattle effluent.

4.5 Evaluation of impacts of current LFA instruments

4.5.1 Impacts on incomes

The impacts on farms have generally been positive for incomes because:

- 85% of the farms have had an increase of at least 5% in their compensatory allowance;
- Only 5% of the farms have had a decrease of the LFA allowance that exceeds 5%; and
- Only 1% of previous recipients have been excluded under the new scheme.

The losers are, in general, farms with an extreme stocking rate (very high or very low). The gainers are the farms with a stocking rate a little less than 1 LU/ha.

4.5.2 Land management

As regards the impacts of the new scheme on land management, the first analyses show that they are not significant at present. The new scheme is not very clearly understood by farmers, and the increase in payments has limited any negative consequences. Only 16% of the farms have increased their farmed area between 2000 and 2002. In the long-term, the consequences should be a convergence of the stocking rate to around 1 LU/ha. But in extensive farming systems (with alpine pastures), the consequences are very difficult to estimate. Qualitative evaluation will be carried out as part of the review of the RDP in 2003.

4.6 Summary

The LFA compensatory allowances have great economic importance for the less-favoured areas in France, in particular in mountain areas where the compensatory allowance represents 20% of farm income. The new scheme, put in place in 2001, has

⁷ Optimal practices are defined as practices which avoid pollution and the development of scrub. These optimal practices are locally defined (in each department).

tried to retain the existing balance in expenditure between mountain areas (80% of the expenditure) and other less-favoured areas. The transition between the two systems has been ameliorated by an increase of the budget of 20% over two years.

Good farming practice is mainly based on adherence to an acceptable stocking rate. Maximum and minimum levels that have to be respected are defined nationally with some possibilities for local adaptations. Allowances are defined for different types of LFA and in relation to stocking rate.

The consequences are economically positive for LFA farms. Impacts on land management are not expected to be great but some convergence in stocking rates is expected in the long-term. Increased overall payments should help to maintain farming particularly in mountain areas. At this early point in the application of the new system it is very difficult to predict the impacts on the environment.

5 Greece

5.1 Rural Development

In Greece there are two sources of funding for LFAs, both of them based on 1257/99. The first comes under the Operational Programme (OP) for Rural Development and Rural Space Restructuring 2000-2006. The funding comes from the guidance section of EAGGF. A Management Authority has been created for the OP.

The following are stated as objectives of this programme⁸:

- Improvement of the competitiveness of Greek agriculture in face of increasing international competition;
- Sustainable and integrated development of the countryside in order to increase its competitiveness and attractiveness and restore its social and economic functions; and
- Conservation and improvement of the environment and natural resources in the countryside.

Within this programme there are seven priority axes. One of them is entitled “Integrated Local Development Plans”. They are programmes, targeted to specific LFAs, having as their main objectives the provision of assistance to farmers in order to make their farms viable. The measures include small land reclamation works, support for management and marketing, protection of cultural heritage, promotion of pluriactivity etc., with a total expenditure of €581,971,621. This accounts for 19% of the total OP for Rural Development which requires a 46% private investment and a national contribution of 16%.

The second source of funding comes under the Single Programming Document for Rural Development 2000-2006. Funding for this comes from the Guarantee section. This includes the compensatory allowances and other measures (Early retirement, agri-environment measures and afforestation). The Ministry of Agriculture has created a new administrative authority (Management Authority) for the management of the EAGGF Guarantee second pillar schemes.

Around 16% of the public expenditure has been allocated to the LFA measure.

5.1.1 LFA objectives

The objective of LFA policy in Greece is to compensate for part of the income loss attributed to natural handicaps, in order to maintain a minimum, acceptable population level, which through farming activities and continuation of agricultural land use contributes to the maintenance of the rural landscape, conservation and expansion of sustainable farming systems.

5.2 Land use and the LFAs

Greece is characterised by the wide dispersal and size of the LFAs throughout the country. It is a mountainous country with 28% of the land area between 201 and 500 m altitude and 33 % above 500m. Most of the Greek land area is classified as mountainous or less-favoured. This area is 82.6% of the national total land area and 68.5% of the UAA.

⁸ Operational Programme (OP) for Rural Development and Rural Space Restructuring 2000-2006. Ministry of Agriculture, 2000

Greece is unusual in having a high proportion of cultivated land in its LFAs (mainly cereals such as durum wheat) (Table 5.1). Despite the adverse conditions in the less-favoured areas, a not insignificant number of people (27.9% of the population) continue to declare their residency there⁹.

Table 5.1. Percentage of cultivated land in LFAs per region

Region	%	Region	%
Eastern Macedonia & Thrace	73	Stereia Hellas	65
Attika	22	Central Macedonia	62
Western Macedonia	95	Peloponnese	68
Epeiros	82	Northern Aegean	100
Thessaly	33	Southern Aegean	99
Ionian Islands	97	Crete	85
Western Greece	51	Total	66

Source: Ministry of Agriculture, 1993 (elaborated by N. Maraveyas, AUA)

In contrast to areas of the country where there is intensive cultivation highly subsidised by the CAP, there is a long history of land abandonment in mountainous and less-favoured regions. Compensatory allowances have to a large degree slowed down the rate of desertification in these areas.

The policy reforms in Agenda 2000 will exert pressure on farms in those areas where cereals are cultivated. Agricultural incomes are expected to fall, bringing with it social consequences, such as the abandonment of marginal land. Such abandonment would produce a further decrease in the already low level of self-sufficiency in livestock feed supplies which is a particular problem in areas that are remote and inaccessible. Abandonment can also have adverse environmental effects though increased fire risk and destruction of terraces.

5.3 Farms and farming in the LFAs

190,000 farms received compensatory allowances in 1994. This had fallen to 131,863 in 2000 when the average payment was €754 per farmer. In 2001, only 109,874 farmers have been paid at an average of €811¹⁰ (Ministry of Agriculture, Directorate of Informatics, 2003). It is not entirely clear why there has been this reduction in the number of farmers receiving payment although the averages may include delayed payments from previous years (see footnote). The reduction in numbers of farmers paid could be explained by payment delays in some regions. The changes are not thought to be related either to reductions in the numbers of LFA farmers or to changes in implementation rules.

⁹ It should be remembered, however, that the national census figures tend to inflate the actual number who live in these areas, as family members who have already migrated to urban centers continue to declare residence in the areas of their origin so as to stave off the further decline in basic infrastructure and services provided by the state in such regions.

¹⁰ As an indication of the accountancy problems we note that by February 2003, in two prefectures from which more than 10,500 farmers applied (8% of the total) for the 2001 CA, no farmer has as yet received payment.

5.3.1 Compensatory allowances and farm incomes

According to Papageorgiou (1999) the mean contribution of the compensatory allowance to family farm income is approximately 10%. The vast majority of farmers when asked whether the compensatory allowance contribution was important answered that it was, but to a very limited extent. When the same farmers were asked what their opinion was regarding the size of the allowance, 88.4% said that it is very low.

Farmers working in LFAs also show a certain degree of pluriactivity: the majority earn 20-40% of their income from work outside the agricultural sector.

5.3.2 Farming systems in the LFAs

Data sources available for describing farming systems in the LFAs in Greece are seriously handicapped. They are based on Eurostat's FADN (Farm Accountancy Data Network) data. In that dataset only farms over two European Size Units (ESUs) in size are represented. This means that less than 50 % of Greek farms are included. This bias is aggravated in the case of LFAs since the proportion of small farms is greater in these areas.

However, the ELPEN (2003) project yields some preliminary results. These results represent only farms for which more than 50% of the value of production comes from grazing livestock. The bias towards bigger farms is clearly reflected here since the FADN data indicates that farms oriented mainly towards goat breeding use only 7% of the total UAA with 5% of the livestock, when it is known from official statistics that goats account for over 20% of the livestock in Greece and almost 85% of the sheep and goat population is in LFAs (Hadjigeorgiou and Papavasiliou, 1997). Cattle-oriented farms use 15% of the UAA with only 1% of the LU when in fact sheep-oriented farms account for 94% of the livestock and almost 80% of the UAA.

According to ELPEN (2003), most of the livestock farms' UAA in the LFAs is used for rough grazing with 95% of the animals grazing there. As regards intensity of land use, a little more than 20% of area covered by farms represented is used under high-input systems (i.e. more than €150 of inputs per ha) with more than 25% of the animals. As regards farm size, it seems that 34% of the UAA is used by medium size (20-100 LU) farms and the rest by smaller ones (<20 ha), while farms over 100 LU are not represented. Small farms manage 72% of the livestock.

5.4 Environmental Characteristics

Of the 8m ha of land owned by the state, 3m ha are under strict protection as forest land. The remaining 5m ha have been classified as pasture and is almost entirely in the LFAs. From 1991, communities became responsible for the management of this land. They could rent them to the stockbreeders. Due to the low rent paid (less than 0.5 euro/head) and the lack of controlled grazing, the pasturelands were degraded both from a productive and an environmental point of view. Undergrazing or overgrazing led either to a reduction in the biodiversity of pasturelands or erosion and desertification especially in areas of steep or even moderate slopes. A national act (no.1374/87) for the protection of the so called "pasturelands" soon proved an inadequate policy tool and the need for its reform is of paramount importance for the improvement of pastureland management and protection. The delay of this reform reflects the intense social conflicts arising from different land using interests.

In addition, the gradual degradation of terraces caused by uncontrolled grazing has caused serious environmental problems (i.e. increased soil erosion) resulting in land

abandonment. This phenomenon is clearly seen in fragile systems such as those in the Western part of Lesbos island where the desertification process is almost irreversible.

5.5 LFA payments - Compensatory allowances

5.5.1 Previous implementation

Compensatory allowances (CA) have been implemented in Greece since the first year of accession to the EEC (1981). The payments consisted of headage and area-based elements, with rates varying with the age and location of farms and areas. Some of the specific characteristics of its implementation were (Papageorgiou, 1999)

- Up to 30 LU were taken into account for CA, while the first 20 LUs received increased payments.
- Young farmers received higher amounts per LU.
- Farmers of all ages received increased aid if they lived in the small Aegean islands.
- The maximum area compensated was 15 ha.
- The maximum aid varied (in 1997) from €2,377 to €4,974 depending on the age of farmer and location, the highest amount being for young farmers with cattle in the Aegean Islands. Only persons having agriculture as their main occupation were eligible.

5.5.2 Current compensatory allowances scheme¹¹

The public expenditure budget for the LFA compensatory allowances is €119.6m for 2002 rising to €178m in 2006. The current payments per ha are given in Table 5.2.

The following are some specific issues that were taken into account in the design of the new scheme:

- The age of farmers. Priority was given to young farmers in order to improve the age structure of the farming population.
- Training and skills as well as viability of the farm enterprise. Priority was given to skilled and trained farmers, and viable farms.
- Additional weight was given to activities related to livestock production (pastures, fodder crops) in order to improve the existing structural imbalance of 70%/30% between plant and livestock production.
- Mountainous areas were considered as more handicapped.
- Insular areas in the small Aegean islands were given priority due to increased isolation and accessibility problems.
- Crops and land uses which are less input demanding (e.g. pastures, leguminous crops) were given preference because of their more limited impact on the environment.

¹¹ Ministry of Agriculture, Programming Paper for Rural Development 2000-2006, (2000).

Table 5.2 Rates of LFA compensatory allowance under 1257/99 (euro per ha)

Land use	Young farmers		Other beneficiaries	
	Green certificate and viable enterprise	No agricultural training	Farmers in Small Aegean islands	Farmers in other areas
Mountainous areas				
Feedstuff for the market, aromatic medicinal plants, leguminous, cereals, non-food crops	80	75	70	60
Other crops	45	45	45	45
Grassland cut for use on the holding	100	90	80	70
Grazing pastures	84	75	66	58
Other LFAs				
Feedstuffs for the market, aromatic medicinal plants, leguminous, cereals, non-food crops	80	70	60	50
Other crops	40	40	40	40
Grassland cut for use on the holding	95	85	75	65
Grazing pastures	84	71	63	55

The above considerations lead to some particular characteristics of the new scheme such as:

- Mountainous areas receive higher rate of allowance than other LFAs.
- Young farmers receive increased amounts per ha. Even more increased compensation is offered to young farmers holders of the green certificate (farming training certificate) and heads of viable farms.
- Farmers, young as well as old, receive increased aid if they live in the small Aegean islands.
- The maximum area compensated is 15 ha except for pastures where 50 ha is the maximum.
- Only persons having farming as their main occupation are eligible.

Apart from the differentiation among beneficiaries there is a differentiation among land uses and crops supported. Thus grass cut for use on the holding receives increased per ha amounts followed by:

- Grazing pastures; and
- feedstuffs for the market, aromatic and medicinal plants, leguminous and cereals (except durum wheat) as well as non-food crops.

High revenue crops like tobacco, cotton, citrus, fresh vegetables and flowers are not supported. Fodder crops were given favourable treatment in order to increase the degree of self-sufficiency on livestock farms, a very important factor in remote and isolated areas.

5.5.3 Effect of 1257/99 on total LFA payments

The headage element in the previous scheme has been removed and the levels of allowances have generally been increased.

As an example of the change, take the case of a young farmer with exactly 210 goats (= 30 LU) and 300 ha in a mountainous area. Based on the previous situation the farmer would receive €1,760 for the first 20 LU (88*20) and €630 for the remaining 10 LU, a total of €2,390. With the new system the same farmer would get €75 for each hectare, a total of €2,250. By acquiring the green certificate through a training programme, and if the farm is characterised as viable, the amount would increase to €2,520.

The maximum payment per farm varies from €3,250 to €5,000, the upper bound being for young farmers with green certificates and viable farm businesses in mountain areas. This compares with the previous maxima of €2,377-€4,974. The average payment is €801 per farm.

5.6 Code of Good Farming Practice

The codes of GFP include requirements for both crop and livestock production. There is an obligation for each farmer to submit a management plan made by an agronomist describing all the actions to be taken.

Crop production

- Crop rotation including leguminous crops.
- Limited fertilizer application especially N fertilizers.
- Anti-erosion measures in vulnerable areas.
- Protection of surface waters, forests and Environmentally Sensitive Areas (ESAs).

Livestock production

- No grazing fires allowed.
- Limited stocking on pasture land, especially in the islands.

Proposed changes¹²

The Management Authority (see 5.1) has proposed two changes to improve the scheme.

1. All crops should be eligible for support in the small Aegean islands. At present, high revenue crops such as tobacco, cotton etc. are excluded.
2. No mandatory management plan. The official reason is that the cost of these plans had to be deducted from the CA and the plans were considered to have no practical value.

5.7 Impacts on land use and the environment

The new system has been implemented for too short a time to draw any conclusions on its environmental impact. However studies conducted by the authors for other purposes indicate the following:

¹² Draft paper for the Improvement of Rural Development Programme, 2002

Depending on the farming system prevailing in an area the effects could be quite different. Thus, in the case of a system heavily dependent on subsidies for subsistence while production is of minor importance, the introduction of per ha payments followed by the imposition of a code of good agricultural practices could lead to a positive environmental impact by reducing grazing pressure. On the other hand, in a system where the compensatory allowance is only a small part of the income and production is the main driver, the imposition of a 'strict' code of good agricultural practice, as a prerequisite for receiving the CA, could lead to non-compliance with the code. Farmers may state the maximum animal numbers allowed by the stocking rate conditions for the area, rather than the true number. In practice, in order to compensate for the reduction in the CA, more animals may well be kept.

The indication is that careful monitoring will be required to indicate how farmers respond to the new measures.

5.8 Overall impacts of the measures

The LFA scheme is unlikely to deliver on its secondary objectives, (secondary in comparison to the main objective of income support), i.e. environmental conservation and improvement in the age of farmers or more general rural population, unless these are a more integral part of a wider programme. In the view of the authors this should include structural measures such as investment aid to farmers and especially to young farmers, early retirement schemes, aid to rural tourism and craft, promotion of locally produced and processed quality products, and agri-environment measures that promote sustainable farming systems (see 5.1). Without this there is a high probability that the LFA allowances will be mainly a social measure, important and indispensable for the inhabitants of the LFAs, but not contributing to the restructuring of the countryside.

5.9 Summary

Compensatory allowances, since their establishment in Greece following accession to the EEC, have played an important role in the continuation of farming in the LFA areas, especially for extensive livestock systems (i.e. sheep and goats or grazing cattle). They have reduced the rate of population loss. Apart from the positive environmental impacts resulting from the continuation of farming, (e.g. reduction of erosion and fire protection, rural landscape preservation), a lack of regulation of land use and utilization has led to environmental degradation, either by over-exploitation (e.g. overgrazing in the accessible areas) or under-exploitation (e.g. abandonment of terraces, undergrazing, loss of biodiversity).

No concrete conclusions can be drawn regarding the impacts of the new LFA arrangements due to the very short time since implementation. Environmental impacts could vary according to the farming system prevailing in the specific LFA. The successful implementation of the RDP will depend particularly on the extent to which working links are established between primary production and other sectors of the local economy (processing of quality products, recreational services etc.).

6 Spain (Catalonia)

6.1 Catalonia

Catalonia is an autonomous region (*Comunidad Autonoma*) located in the Northeast of the Iberian Peninsula. It has a border with France and represents 6.3% of the Spanish land area. The region is very mountainous, with the Pyrenees in the north and lower altitude mountains in the centre. In the south, much of the land has major limitations for agriculture due to poor soil quality and low rainfall.

6.2 RDP structure

Compensatory allowances in LFAs are included in a horizontal RDP which includes the entire Spanish territory, with the exception of Navarra and the Basque Country (both these regions have a specific tax and legal system which allows them to finance this measure with their own financial resources, integrated in their RDP). This horizontal Programme contains the four accompanying measures and includes the LFA compensatory allowances. There are two other “horizontal” RDPs. The first is devoted to the “Improvement of production structures” (including investment in agricultural holdings, setting up of young farmers and measures for the management of water resources) in Objective 1 regions. The second provides the same measures for regions not included in Objective 1. In addition, each autonomous region has its own RDP with the remaining measures.

The Spanish territory is divided into mountain areas (where farmers have been paid compensatory allowances since 1986), high depopulation risk areas (compensatory allowances paid since 1989) and areas with specific limitations (compensatory allowances paid since 1993). At present, only the areas within the socio-economic perimeter of influence of National Parks are classified as areas with specific limitations. However, the Spanish Minister of Agriculture has been considering the possibility of declaring all areas included in the Natura 2000 network as “Areas with environmental restrictions”.

6.3 Characteristics of the LFAs

A total of 19,894,000 ha of UAA in Spain are classified as LFA (80.4% of the total UAA in Spain). In Catalonia, the LFA totals 619,100 ha, which is 56% of the total UAA in the region.

The Catalan LFA area has a demographic density of 20 inhabitants/km², (185 hab/km² for Catalonia). These areas are characterised by an elderly population. The depopulation trend in the LFA was mitigated in some areas during the 1990’s as a result of tourism development. Nevertheless, in the remaining LFA, the depopulation trend has continued. The number of farms is declining in all Catalan regions, but the decline is greater in the less-favoured areas.

Most of the Catalan LFA is mountainous. In these mountain areas, especially in the Pyrenees, the main agrarian activity is livestock rearing. However, the agricultural sector represents only 10% of employment. Some less-favoured areas have an important tourism sector. Whereas mountain areas specialise in livestock production, other LFAs are dominated by the production of cereals, oil and wine.

6.4 Compensatory allowances

6.4.1 Objectives and scope

The compensatory allowance objectives are:

- To give support to the farmers who work in such areas;
- To improve farmers' quality of life;
- To contribute to the conservation of natural resources; and
- To maintain rural livelihoods.

It is expected that some 150,000 farmers in Spain will benefit from these measures which cover an area of some 12 million hectares.

The number of farms benefiting from the compensatory allowance has decreased over time due to depopulation, a reduction in the number of farms and increased pluriactivity. In 1990, 219,226 Spanish farms received CAs, but this fell to 178,587 in 1995 and 111,410 in 2001 under the new scheme.

Table 6.1 show the corresponding changes in Catalonia. In 2000, 6,087 farms received compensatory allowances with a total expenditure of €2,519,747, averaging €414 per farm. The average compensatory allowance received is quite small and represents only 3-5% of total farm income.

Table 6.1 Change over time in the number of farmers receiving compensatory allowances in Catalonia.

Year	No of farmers receiving compensatory allowances
1990	10,279
1995	8,457
2000	6,087
2001	6,400
2002	6,390

In Catalonia, there was a slight increase in the number of farmers receiving LFA payments with the new scheme (Table 6.1). According to the regional Administration, this increase was possibly the result of the greater attractiveness of the programme's higher payments.

6.4.2 Eligibility

The beneficiaries of LFA assistance must comply with the following requirements:

- Their farm must be totally or partially situated in the LFA.
- Farming must represent the main economic activity of the farmer, which means that at least 50% of the farmer's income must come from farming activities, with a total time dedication of over 50%.
- They must be legally registered as an individual, SAT (Sociedad Agraria de Transformación) or co-operative. The SAT and co-operative must have at least one full time farmer as a partner.
- The farmer must reside in the same or neighbouring municipality as that of the farm.

- The farmers must maintain their farming activities for five years following the assistance.
- The farm must have a maximum of 1 LU per ha of forage, or 2 LUs where rainfall exceeds 800 mm/annum, and a minimum of 0.2 LUs per ha.
- The farm must have an area of more than 2 ha (1 ha in the Canary Islands).

The policy to exclude many part-time farmers was a political one. Around a third of farmers in Catalonia are part-time, and part-time farming is important throughout Spain where much of the agricultural activity is seasonal (e.g. olives, vines, citrus).

6.4.3 Payment structure

All types of farms are eligible for compensatory allowances (CAs) as long as the eligibility criteria are met. The payment rates are as given in Table 6.2. Payments per ha are highest for the smallest farms and those with specific limitations. Rates of payment decline with increasing farm size.

Table 6.2 Structure of payment rates for compensatory allowances (€ per ha)

Type of LFA	Farm size (ha)				
	<5	5-25	25-50	50-100	>100
Mountainous areas	75	56.25	37.75	10.75	0
Areas of high depopulation risk	45	33.75	22.50	11.35	0
Areas with specific limitations	120	90.00	60.00	30.00	0

However, the rates given in Table 6.2 are not the rates paid: a further series of coefficients is applied in order to calculate the final rates as follows:

- The assistance is multiplied by 1.2 when the declared income of the farmer is less than 50% of the Reference Income calculated by the Ministry of Agriculture.
- The forage surface is multiplied by 1.0 in the case of permanent pastures, 0.5 in the case of pastures with 2 to 6 months of use, and by 0.15 when the area is fallow or uncultivated land.
- The cultivated area is multiplied by a factor of 1 when it is irrigated, by 0.5 when it is of extensive cultivation and non-irrigated, and by 0.3 in the case of crops that are not classified as forest.

6.4.4 Example of calculation

Applying the figures from the table and the adjustment coefficients would mean that, for example, a 79 ha farm in mountain area will receive:

- €75 * 5 for the first 5 ha: €375
- plus €75 * 20 ha. * 0.75 = €1,125
- plus €75 * 25 ha. * 0.5 = €937.5
- plus €75 * 29 ha. * 0.25 = €543.75

Total = €2,981.25, but because there is a maximum amount of €2,000 (from 2001), the amount received will be €2,000.

6.5 Previous LFA system

Prior to the 2000 reform, the compensatory allowances were paid according to two criteria:

- Number of livestock per farm calculated as a function of the LUs and a technical-economic coefficient of the farm.
- UAA dedicated to cultivation according to a crop equivalent unit related to the type of crop cultivated.

These parameters defined the “liquidation units” per farm that gave the right, subject to defined maximum payments, to €42 per unit in mountains areas, €24 per unit in areas with depopulation risk, and €62 per unit in areas associated with National Parks.

It is difficult to compare the ex-ante and ex-post situation of the reform because of their different payment structures. The most important change is that land area rather than livestock units is used to calculate the allowances.

Over the period between 1996-2000, the compensatory allowance payments in Spain averaged €65.2m annually, 8.8% of the rural development programme expenditure. During 2001-2006, the compensatory allowances have been allocated an average annual budget of €99.9m, or 5.3% of the total RDP expenditure. This is an increase of 50% over the previous period. It was partly a response to the demands of the farmers’ unions for convergence of the compensatory allowances with the EU average, but also compensates for the tighter environmental requirements as defined in GFP.

No transitional mechanisms were introduced but an error in the Spanish regulation (*Real Decreto 3482/2000*) led to a significant increase in the payments for the year 2001. This reflected the fact that the regulation had failed to establish a maximum payment. In 2002, a maximum payment limit of €2,000 was introduced. In Catalonia, this error resulted in the total paid for the year 2001 being 90% more than for 2000.

6.6 Good farming practice requirements

The Spanish regulation (*Real Decreto 3482/2000*) introduced GFP cross-compliance as a condition for LFA assistance. The conditions are as follows:

- To preserve soil as a basic agrarian resource and to fight against erosion:
 - Prohibition of conventional ploughing in favour of contour ploughing.
- To optimise the use of energy:
 - Agricultural machinery has to be tested under current regulations
- To use water efficiently:
 - Compliance with current water use regulations.
 - Irrigation systems have to be maintained in order to avoid water leaks.
- To preserve biodiversity through appropriate harvest and post-harvest practices.
- To rationalise the use of fertiliser:
 - Fertilisers: in accordance with the nitrate guidelines, except for areas with high concentration of intensive pig farms.
 - Manure: is not to be applied on flooded or snow-covered plots of land.
- To use pesticides rationally:
 - Manufacturer’s instructions must be followed.

- The management and disposal of bottles and other containers should comply with the regulations established by the competent authority.
- To reduce pollution of agrarian origin:
 - Pruning debris to be adequately handled.
 - Remains from used plastics and other residues have to be removed from the plot of land and appropriately disposed of.
- Other practices:
 - Final crops: crops must not be abandoned once their economically useful life is exhausted, and in any case, they will be kept free of any pest, illness or parasite.
 - Stocking rates: stocking rates on the grazing areas of farms must not exceed 1 LU/ha (regions with maximum rainfall of 600 mm per year); 1.5 LU/ha (regions with 600-800mm per year); 2.00 LU/ha (regions with minimum rainfall of 800 mm per year).
- Minimum environmental rules:
 - Apart from complying with the good practices mentioned above, the beneficiary must observe the environmental legislation contained in a number of other regulations.

6.6.1 Control system

There is a dual control system in place. First, administrators must verify whether the farm complies with GAP requirements when applications for assistance are received, and second, 5% of farms are subjected to on-site inspection.

Good practice cross-compliance does not discourage applications for compensatory allowances, mainly due to the fact that:

- Most farms already comply with most of the mandatory requirements.
- The penalty for non-compliance is limited to the reimbursement of the payments.

In Catalonia, according to a representative of *Unió de Pagesos* (the main farmers' union), the most problematic element of good farming practice is the requirement relating to manure.

6.7 Impacts of the new regulation

6.7.1 Socio-economic

The LFA covers a large part of the Spanish UAA but compensatory allowances per farm are relatively low and have a very limited effect on farm and land management. According to *Unió de Pagesos*, prior to 1257/99 the compensatory allowance average in Spain was 26% of the EU average. After the reform it increased to 31-32%. In Catalonia, according to some experts, this amount stands at only some 3-5% of the total farm income.

No changes have been made with regard to the physical delimitation of LFA areas that benefit from compensatory allowances. However, even though the spatial context is unchanged, it is possible to identify those who have gained and lost from the changes under 1257/99.

Losers

The losers of the new system are the livestock farmers with very small amounts of land. In the Spanish sheep sector, shepherds often own the livestock but do not have their own land. They use communal lands or negotiate rights to graze animals with the landowners. This is common practice in Castilia, Galicia, Asturias and Cantabria. In Catalonia, the intensive livestock farms (with a high number of animals per ha) now receive a lower level of total compensatory allowance than previously.

Winners

In general terms, most of the farmers in the LFA now receive higher payments. Nevertheless, the main gainers have been the farmers who own large land areas. The payments to the smaller farms that are eligible for the minimum grant have increased from €232 to €300. In 2001, the larger farms were granted much more assistance than they received within the previous system. In 2002, they also received higher sums, even though the increase was not as great (no figures are available for the payments made in Spain in 2001 and 2002).

6.7.2 Impacts on land use and the environment

Despite the changes introduced into the LFA allowance system since 2001, no significant impacts on land use are expected from these changes because the compensatory allowance payments are too small to impact on decision-making by farm families. However, the implementation of good practice is expected to be positive for the environment and hence contribute to the conservation objectives for the LFAs.

6.8 Summary

The reform to the compensatory allowances has meant a substantial increase in the financial resources allocated to less-favoured areas. The compensatory allowance budget has been increased by 50% for the next period (2001-2006). The reform transforms the allowances from headage to area-based payments and also introduces a good-practice compliance measure. The potential beneficiary areas of the compensatory allowances (mountain areas, high depopulation risk areas, and areas influencing National Parks) have not been modified.

The amounts paid out continue to be relatively small in relation to other European countries and consequently have a small impact on the farm families' decision-making. The number of beneficiaries of the compensatory allowances has diminished since it was first applied in Spain. With the new system, in general terms, most of the farmers in LFA now received more money than before. Nevertheless, the main winners have been farmers who own large areas of land. The losers are livestock farmers with a small amount of land. Whilst no significant changes in land use are expected, there will be positive environmental impacts due to the imposition of GFP.

7 Finland

7.1 Rural Development Programme

The new Rural Development Plan for Finland, covers the co-financed accompanying measures to be implemented in continental Finland during the period 2000-2006. The plan included the schemes for less-favoured areas and agri-environment schemes.

The (horizontal) RDP complements the other EU programmes aiming to develop rural areas which are:

- the two Finnish Objective 1 SPDs where rural development is co-financed by EAGF Guidance Section; and
- the Regional Rural Development Plan outside Objective 1 regions.

As an exception, on the Åland Islands the rural development plan covers all rural policy measures. These consist of accompanying measures (LFA and agri-environment) as well as other regional rural development actions (i.e. investment aids and other development measures).

The planned RDP payments (€734.36m) for the year 2000 include €410.21m for LFA allowances and €247.75m for agri-environment measures.

The programming document extends the coverage of the less-favoured areas in Finland with specific handicap by 377,755 hectares on the basis of Article 20. The amendment results in a total of 2,174,246 hectares of agricultural land (the total UAA) designated as less-favoured. In the same plan the agri-environmental scheme is also implemented in the whole of continental Finland with an estimated coverage of 1.6 m ha, which is about 74 % of the total agricultural land, i.e. 74% of the new LFA.

7.1.1 LFA Component of the new RDP

The objective of the compensatory allowance scheme for less-favoured areas is to secure the continuation of environmentally sustainable agriculture in the northern climate of Finland where harsh natural conditions are unfavourable for agriculture. In these circumstances a substantial LFA compensatory allowance and adequate level of other compensation measures form the basis for the development of farming enterprises. The continuation of farming often plays a decisive role in rural areas in maintaining the basic settlement and viability of communities and hence the managed cultural landscape.

The operational objective of the LFA scheme is to compensate for the costs caused by the northern location of the country. The short growing season, low temperatures and sparsely populated areas, combined with long distances lead to decreased production and increased costs. The aim of the LFA allowances is to maintain a reasonable income level for farmers as compared to EU regions with more favourable natural conditions. The scheme also helps farmers to maintain the standards of good farming practice. The environmental objectives of the LFA scheme are complemented with the specifically environment oriented agri-environment scheme.

It is hoped that all the eligible farmers will apply and about 2.2 million hectares will be involved in the programme.

7.2 Characteristics of the LFA

In the new RDP, the LFA scheme covers the total country and all those farms that meet specific requirements. The main qualifying criteria are: the farmer has to be 18-65 years

old, the size of the farm must be more than 3 ha of cultivated land, the farmer must live on the farm or within reasonable distance, the crop has to be harvested and a five year commitment has to be made. The participation level in the LFA scheme in 2001 was as high as 96 % of the farms in the country and 97 % of the cultivated area. These figures show that almost all the farms are eligible in the scheme. In the previous scheme the LFA covered 85 % of the country, excluding the southernmost areas.

In the new Finnish scheme the concept of LFA is primarily used to compensate for the domestic natural conditions as compared to the rest of the EU, and not between various areas in the country itself. This interpretation has its background in the fact that the harsh northern climate prevails across the whole country. Furthermore, in Finland the concept of LFA is not connected so much with mountainous areas, because high altitudes are not as important as in some other EU countries.

The LFA payments are based on the arable land only. In Finland, most farms own arable land. The exception is a relatively small amount of forest farms, which do not receive any EU subsidies connected with agriculture. It may appear strange that the compensatory allowances are based on the arable area but this is used as the most practical criterion (see also 7.3. below). Livestock farms are supported under other EU and national support schemes.

7.3 Environmental and social objectives

Environmental issues are also included in the objectives of the LFA scheme. Continued farming contributes to the preservation of open farming landscapes and maintenance of cultural environments created by rural settlement. The landscape values of national and provincially valuable landscapes formed by farming activities during previous centuries are endangered if forests start to grow again on abandoned fields. Because less than 5% of the total area of the country is in open, cultivated fields, the issue of open landscapes is an extremely important one in Finland.

Environmental objectives related to specific areas such as the coastal regions of the Baltic Sea and water protection areas of agriculture and arable farming are also included in the LFA scheme. Furthermore, the changes in agriculture, especially afforestation, are threatening the conservation of biodiversity. Compensatory allowances are thus only granted to agricultural land that is ploughed regularly, which of course prevents any growth of trees and bushes.

It should be noted here that overgrazing is not a problem in Finland: only the reindeer tend to overgraze their forest pastures, which are, however, not included in the LFA scheme.

Because the LFA scheme is applied in the whole country it is not directly targeted at social issues in any specific region. The increasing allowance levels from south to north reflect the seriousness of handicaps. Depopulation is more severe in the northern and eastern parts of the country, but all the rural areas of Finland suffer from a degree of depopulation.

7.4 Description of policy mechanisms now used in the LFAs

7.4.1 Compensatory allowances

The scope of schemes is very wide as noted earlier. The eligibility rate was more than 95 % in the year 2001. The minimum land area for eligibility is 3 hectares.

The level of payment is €150 /ha in support area A (the southern part of the country), €200 /ha in areas B and C1 (the middle part) and €210 /ha in areas C2-C4 (eastern and northern part). The compensation level increases from south to north reflecting the increasing severity of natural handicaps.

Some estimates of the economic effects of the LFA allowances on different types of farms were made when the new system was to be introduced in Finland. The estimates in the year 2000 are presented in the Tables 7.1-7.3. The EU subsidy regions for agriculture in Finland are named as regions A, B, C1, C2, C2 north, C3 and C4 starting from the south. In the tables, estimates of the relative contribution of LFA compensation to farm income are presented for the main producing regions for milk, pigmeat and grain.

Table 7.1 Estimates of the relative share (%) of LFA compensation as compared to main economic indicators of milk farms in different subsidy regions (2000)

Subsidy region	LFA payments as % of total output+ subsidies	LFA payments as % family farm income	LFA payments as % total subsidies
A (south)	7	22	21
B (central)	10	28	27
C1 (central)	9	25	22
C2	9	26	22
C2 (north)	10	28	22

Table 7.2 Estimates of the relative share (%) of LFA compensation as compared to main economic indicators of pig farms in different subsidy regions (2000)

Subsidy region	LFA payments as % total output+ subsidies	LFA payments as % family farm income	LFA payments as % total subsidies
A	5	25	13
B	6	33	17
C1	7	33	18
C2	7	34	19

Table 7.3 Estimates of the relative share (%) of LFA compensation as compared to main economic indicators of grain farms in different subsidy regions (2000)

Subsidy region	LFA payments as % total output+ subsidies	LFA payments as % family farm income	LFA payments as % total subsidies
A	16	64	29
B	21	82	38
C1	22	70	37
C3	22	71	38

7.4.2 Public expenditure cost

According to the financial plan the total cost of the compensatory allowances for LFAs is €2,958.69m in 2000-2006. The share of EU's contribution is €974.85m. In Objective 1 area (eastern and northern Finland) the average Community co-financing rate in the LFA allowances is 54% and in the other parts of the country it is 26%. The Objective 1 area covers 216 200 km², which is about 64% of the total area of Finland.

The planned RDP payments for the first year 2000 are presented in the Table 7.4. The total payments were planned to be €734.36m, of which the EU-share was €330.56m. The cost of the LFA scheme was more than half of the total planned expenditure, i.e. €410.21m.

Table 7.4. Financial plan for rural development programme in Finland for the year 2000 (m euros)

	Total	EU-share
LFA Scheme		
LFA allowances	410.21	142.46
- Objective 1	101.95	57.66
- other continental	308.26	84.80
Agri-environment Scheme	247.75	156.18
- Objective 1	63.09	52.95
- other continental	184.66	103.23
Total	657.96	298.64
Old commitments from period 1995-99	70.20	29.02
Åland Archipelago	6.20	2.90
All rural development programmes	734.36	330.56

7.5 Good farming practice

Compliance with Good Agricultural Practice (GAP) is a basic requirement for all contracts in the LFA scheme. Each farmer receives a guidebook of GAP. The farmers have to comply with the national legislation implementing the Nitrates directive, minimum standards in line with relevant Community directives and the respect of Community legislation regarding animal welfare and regulations on the use of illegal hormones. The nitrate limit set for manure corresponds to that of 170 kg N per hectare and the total limit of N varies between 130 and 250 kg according to the needs of the cultivated crops.

Furthermore, land application of fertilizers and manure is restricted to periods when land is not frozen or covered with snow. Certain restrictions are also applied on steeply sloping grounds and in water-saturated or flooded ground, or near to watercourses.

Good farming practice requires that cultivation and fertilization of the land is undertaken an appropriate manner. The crop must also be harvested or the area grazed. In addition, there must be compliance with specific local conditions. The compliance with GAP is controlled on farms receiving the LFA allowance and environmental issues are taken into account in the evaluation. The compliance rate would appear to be very high, because 96 % of farmers received LFA payments in the year 2001.

7.5.1 Agri-environment scheme

In Finland an extensive agri-environment scheme has been applied since the beginning of EU-membership that started in the year 1995. The rules for this programme have become stricter and, for the period 2000-2006, the rules are additional to those of the LFA scheme. Thus Good Farming Practice is a starting point for participation in the agri-environment scheme. Besides these GAP requirements a number of others have to be

observed. These stricter regulations are reflected in the expected participation rate, which is only 75 %. This lower rate is partly explained by the fact that areas under set-aside do not receive payments under the General Protection Scheme (GAEPS).

The agri-environment scheme consists of basic measures, additional measures and special measures. The basic and additional measures together form the General Protection Scheme. To be eligible for the general scheme, farmers have to sign a set of compulsory undertakings that vary depending on the type of farm, i.e. whether the farm only produces crops or if it also has animal production.

The General Protection Scheme consists of a number of different measures. The basic measures are:

- Environmental planning and monitoring.
- Basic fertilization levels of arable crops.
- Plant protection.
- Headlands and filter strips.
- Maintaining biodiversity and landscape.
- Basic measures on livestock farms.

Besides these compulsory measures, farmers have to select one additional measure from a given list of undertakings. A Special Protection Scheme (SPS) is an additional, voluntary scheme in agri-environment programme with a series of more demanding measures and corresponding payment levels.

7.6 Evaluation of impacts of current LFA instruments

7.6.1 Social and economic impacts

Social, economic and environmental factors that were important in the design of the new schemes were discussed above. The most important social factors are based on the population and income characteristics of the already sparsely populated rural areas. The population of rural areas has been continuously decreasing in recent decades. Now the depopulation is reaching such a critical level in many rural areas that preserving social services is becoming difficult and may cease. Only the cities and rural areas near cities have experienced positive population change in the past decade. This positive development was strongest in the southernmost part of the country as well as in the region around Oulu in the northern part of the country.

In rural areas, basic agriculture traditionally plays a strong role as the backbone of economic life. Past experience has shown that the development of other industries cannot replace diminishing agricultural activities except in some rare cases based on specific local advantages. Thus the viability of rural areas depends on development in the farming sector. If the economic situation of farms deteriorates, the depopulation of rural areas will accelerate and total villages will be abandoned except for some non-permanent inhabitants such as summer residents.

Consequently, the economic and social factors that sustain rural areas are closely related. As discussed earlier, the harsh climatic conditions in Finland as compared to most regions in the EU make the agriculture uncompetitive due to low returns and high costs. Thus the only way to alleviate the situation is to apply different subsidies in such a way that the farms can survive and continue farming operations.

There appears to be no information available regarding the distributional effects of the new scheme that would indicate which farms are "winners" and "losers" under area payments as compared to the previous headage payments. The comparisons are further handicapped by the fact that the payments for other schemes were simultaneously adjusted in order to keep the profitability of different types of farms across the country at a reasonable level.

7.6.2 Environmental impacts

The environmental factors connected with the LFA and other environmental schemes can be divided roughly into two groups. On the one hand, it is important to preserve the historical, cultural open landscape that has been created by agricultural activities during previous centuries. These activities have also created some very special local biotopes, which are essential in securing the current level of biodiversity. Some of these special biotypes e.g. connected with forest grazing and grazing on marginal agricultural areas, are already disappearing¹³.

On the other hand, modern agriculture has many negative impacts on the environment. These impacts are of various forms: high nitrogen and phosphorus levels are harmful for water bodies, plant protection chemicals can cause a variety of problems, erosion and run-off can damage water courses, biodiversity and landscape are affected both in negative and positive directions, and animal manure may cause air and water pollution. These problems were an important focus for the regulations in the agri-environment scheme.

Farm and land management seem to be little affected by the changes in the LFA measures. The changes in different schemes are designed in such a way that no significant distortions should emerge. The new arrangements include compliance with GAP. However, this relates only to the avoidance of negative environmental effects. The agri-environment scheme provides the main thrust for environmental improvement.

7.7 Future policy development

In Finland there has been little discussion of the implications of the introduction of area based LFA payments for future rural or agricultural policy development. The main issue is the problem of the capitalization of the subsidies, which leads to increased land prices and land rents. The consequences of this development are well-known. It will tend to slow down structural change and current landowners become important beneficiaries.

7.8 Summary

A new Rural Development Plan for Finland covers the co-financed accompanying measures to be implemented in continental Finland during the period 2000-2006. The plan includes the schemes for less-favoured areas and agri-environment, so called horizontal schemes. The budget for LFA allowances is 56% of the total.

The coverage of the less-favoured areas in Finland with specific handicap was extended to the total agricultural land area of 2,174,246 hectares. The complementary agri-environment scheme is also implemented in the whole of continental Finland with an estimated coverage of 1.6 m ha, which is about 74 % of the total agricultural land or the new LFA.

¹³ When Finland joined the EU in 1995, the UAA eligible for EU subsidies was based on agricultural use in previous years, and this left forest grazing and grazing on marginal land outside the UAA.

The objective of the LFA scheme is to secure the continuation of environmentally sustainable agriculture and reduce the depopulation in the northern climate of Finland where harsh natural conditions are unfavourable for agriculture as compared to most regions of the rest of the EU. The operational objective of the LFA scheme is to compensate for the higher costs and reduced returns caused by the northerly location of the country. The environmental objectives of the LFA scheme are complemented by the specifically environment-oriented agri-environmental scheme.

Impacts of the new measures on farm and land management are expected to be very limited. The changes were designed to avoid significant distortions.

The new arrangements include compliance with GAP. However, this relates only to the avoidance of negative environmental effects. The agri-environment scheme provides the main thrust for environmental improvement.

8 Overall Assessment

8.1 Introduction

The less-favoured area measure under 1257/99 is limited to one instrument – the payment of compensatory allowances. The role, importance and potential impact of the LFA measure in different Member States can be assessed by examining:

- The stated policy objectives for the LFAs;
- The proportion of the agricultural land designated as LFA;
- The allocation of RDR financial resources to the LFA measures;
- The structure of the compensatory allowances;
- The impact on farming incomes; and
- The impacts on land use and the environment.

It is too early in the application of the RDR to assess the actual impacts of the changes to the LFA measure embodied in 1257/99. There will, in any case, be great difficulty in separating out the impacts of changes in the payment of compensatory allowances from other market and policy-induced changes in agriculture. We can, however, attempt to identify likely impacts where significant changes to the compensatory allowances have been made.

8.2 LFA policy objectives in Member States

Regulation 1257/99 lists the objectives in supporting LFAs. These are:

- to ensure continued land use and thereby contribute to the maintenance of a viable rural community;
- to maintain the countryside;
- to maintain and promote sustainable farming systems which, in particular, take account of environmental protection requirements.

Within this framework, Member States have set out their individual objectives for LFA policy and the payment of compensatory allowances (see Table 8.1). Not surprisingly, given that the framework is already laid down in 1257/99, there is a high degree of similarity between countries. The general aim is to maintain farming in the LFAs not only for the benefit of the farm and rural populations but also in relation to the landscape and other services derived from farming. But there are differences in emphasis. Some countries are more narrowly focussed on income support to farmers and the maintenance of agriculture as a land use (e.g. France, Finland). Compensation for income differences between LFA and non-LFA farms is specifically mentioned as a policy aim in France, Germany and Greece.

Other countries have less agriculturally-orientated objectives, or at least see the support of agricultural incomes as an intermediate step in the delivery of other rural and environmental objectives. Population maintenance is an objective in Greece, and the closely related ‘maintenance of rural livelihoods’ in Spain. Population maintenance is not a widespread issue for LFA policy in Austria, Bavaria or France although there may be more localised areas where population loss is a concern.

Limited use is being made of LFA allowances to explicitly procure public goods from farmers (maintaining or enhancing landscape, biodiversity and habitats etc.). There is evidence from correspondents that some countries may have wished to give a stronger

environmental role to LFA policy. The Commission's view appears to be that agri-environment measures already have this role and provide the main delivery mechanism.

Table 8.1 Summary of LFA policy objectives

Austria	<ul style="list-style-type: none"> <input type="checkbox"/> Maintain agricultural land use and associated rural community, through the development of the rural environment; <input type="checkbox"/> Contribute to the settlement and land use management systems under difficult production conditions; and <input type="checkbox"/> Remunerate public goods produced by farms in less-favoured areas.
Germany (Bavaria)	<ul style="list-style-type: none"> <input type="checkbox"/> Maintain farming in the LFA; <input type="checkbox"/> Maintain the cultural landscape for tourism and recreation; <input type="checkbox"/> Prevent an income gap between non-LFA and LFA farms; and <input type="checkbox"/> Composition and protection of a farm structure which is adapted to the conditions associated with its location.
France	<ul style="list-style-type: none"> <input type="checkbox"/> Compensate for the differences of income between farms in LFAs and farms in other regions (to compensate for higher costs in LFA areas); <input type="checkbox"/> Favour good agricultural practices in LFAs; and <input type="checkbox"/> Favour smaller farms. (The compensatory allowance is limited to 50 ha of agricultural area and the first 25 ha receive a higher rate of payment).
Greece	<ul style="list-style-type: none"> <input type="checkbox"/> Compensate for part of the income loss attributed to natural handicaps, in order to maintain a minimum, acceptable population level, which through farming activities and continuation of agricultural land use contributes to the maintenance of the rural landscape, conservation and expansion of sustainable farming systems.
Spain (Catalonia)	<ul style="list-style-type: none"> <input type="checkbox"/> Support to the farmers who work in such areas; <input type="checkbox"/> Improve farmers' quality of life; <input type="checkbox"/> Contribute to the conservation of natural resources; and <input type="checkbox"/> Maintain rural livelihoods.
Finland	<ul style="list-style-type: none"> <input type="checkbox"/> Secure the continuation of environmentally sustainable agriculture in the northern climate of Finland where harsh natural conditions are unfavourable for agriculture.

Even so, conservation, environmental or sustainable farming objectives are indicated for most LFAs (Table 8.1). France appears to restrict the role to that of favouring good agricultural practice. Environment is seen as the preserve of other RDP measures (CTE's and the successor scheme) that are also available to LFA farmers alongside the LFA compensatory allowances. Other Member States list, as objectives, the support of sustainable farming and/or specific environmental objectives (e.g. maintenance of cultural landscapes). In these cases, environmental objectives are delivered through focusing LFA support on particular types of farms and farm activities. By supporting farm incomes there are knock-on benefits for cultural landscapes and this underpins tourism and recreation (e.g. in Bavaria and Austria).

Some countries see a distinct role for LFA payments. This is perhaps most marked in Finland and Austria. In Austria, a key objective is to maintain the farmed landscape to support tourism. In Finland, where all the farmed area is designated LFA, the aim is to use payments as a subsidy for Finland's production disadvantage in comparison with other EU states. The maintenance of an open and farmed landscape is an important policy priority. In Greece and Spain, the LFA measure is used to provide socio-economic support to maintain rural populations and reduce the tendency to abandonment and desertification. Where farming dominates the rural economy, its support is a key factor in maintaining rural communities. There can be substantial regional variation and, for example in the Catalonian LFA, farming is a minor employer and its role in maintaining the rural economy is less important.

8.3 Relative importance of the LFA budget

Table 8.2 shows the proportionate breakdown of LFA spending within the RDR budget of selected Member States. LFA policy is most significant, in terms of relative expenditure, in Finland and Austria. Both countries have the clear policy aim of maintaining farming and a farmed landscape. Spain is at the other expenditure extreme, a reflection of its greater emphasis on other rural development measures. By comparison, the UK has a sizeable LFA allocation, reflecting (i) the size of the LFAs and the corresponding importance of LFA agriculture¹⁴, and (ii) the limited use of other RDR measures apart from agri-environment and forestry.

Table 8.2 Planned allocation of RDR spending 2002-2006 (%)

	LFA/AER	Early retirement	Agri-environment	Afforestation	Other measures
Austria	28.6	0.0	54.3	0.2	16.9
Germany	11.1	0.1	26.2	1.1	61.5
France	17.2	2.3	13.9	0.7	65.9
Greece	16.4	19.7	6.9	2.8	54.2
Spain	4.8	2.8	9.5	7.0	75.9
Finland	51.0	5.7	28.9	1.0	13.4
UK	31.1	0.0	35.9	7.5	25.5
EU-15	15.6	3.1	24.6	3.7	52.9

Source Dwyer *et al.* (2002)

Note LFA/AER refers to less-favoured areas and areas with environmental restrictions as indicated in Chapter V of 1257/99.

8.4 Structure of LFA compensatory allowances

Systems for calculating the level of allowances vary between countries and usually represent modifications from those used prior to 1257/99. In general, the aim is to set allowances in relation to the degree of income handicap relative to non-LFA farms. In Finland it is used as an additional subsidy for Finnish farmers.

Payment rates (and eligibility) in Member States are mainly set according to the following criteria:

- geographical categorisation of LFA types within the overall LFA.
- disadvantage categorisation of land (for agricultural production) using scoring systems in relation to soil, climate etc.
- actual land use.
- farm characteristics (e.g. size).
- farmer characteristics (e.g. level of training).
- minimum and maximum rates of payment.

Table 8.3 shows how eligibility conditions and differentiation are used in different countries. Most countries use a high degree of differentiation in the payment scheme so

¹⁴ The LFA as a proportion of UAA is 20%, 77% and 84% in England, Wales and Scotland respectively.

as to target the support. In Austria, for example, the rate of allowances is set by the degree of natural handicaps as determined by a scoring system, farm size (higher rates for the first 6 ha of land), whether livestock are present, and land use (forage and other land). Austria has the greatest range of payments. These vary from under 10 euros to over €600 per ha. Elsewhere, rates vary less, ranging from: €25-220 in Bavaria; €49-223 in France; €40-100 in Greece; €45-120 in Spain; and €150-210 in Finland. Several countries limit the overall size of payments (e.g. €12,000 in Bavaria) or the number of hectares that can be claimed for (e.g. 50ha in France; 100 ha in Austria and Spain; 50 ha of pasture and 15 ha of other LFA land in Greece). Austria and Spain also modulate (reduce) payment rates to favour small farms (e.g. on claims between 60 and 100 ha in Austria and between 5 and 100ha in Spain).

Germany also uses a detailed scoring system for determining the degree of natural handicap. France relies mainly on a geographical classification to identify disadvantage. Greece and Spain differentiate in part according to the characteristics of the farmer and the business in order to target support to viable farms and farmers dependent on farming for their income. France and Spain require that farmers obtain at least 50% of their income from farming and in Spain farmers must spend 50% of their time on farming to be eligible. In Greece, only farmers for whom farming is their main occupation are eligible.

Of all the countries studied, Finland had the least differentiated system because a key aim is use LFA allowances to provide general (horizontal) support to Finnish farming, all of which is now classified as LFA. By contrast, in Austria and Bavaria, which have a high percentage of part-time farms, all LFA farms types are eligible.

8.4.1 Area-based payments

The changes to the LFA regulations embodied in 1257/99 mean that headage payments are no longer allowed and all Member States have changed to an area system. Only in the case of Germany were payments previously based in part on an area calculation.

This raises the question of what constitutes the eligible area on which payments are made. Land used for cattle, sheep, goats and dairying is generally eligible, and dairying is given additional support in Austria to assist in maintaining local supplies. In most countries payments on cropped land are restricted or reduced (e.g. France, Austria, Germany). In Austria preference is given to fodder-based livestock systems.

Table 8.3 Criteria determining level of LFA compensatory allowances

	Main Eligibility Conditions	Payments depend on:
Austria	<ul style="list-style-type: none"> <input type="checkbox"/> Minimum land area of 2 ha UAA. <input type="checkbox"/> All agricultural area must be utilised. <input type="checkbox"/> All LFA farm types are eligible 	<ul style="list-style-type: none"> <input type="checkbox"/> Points scored in relation to persistent natural handicaps (mountain farm register points system), land type (forage or other land), type of holding (with/without LUs), farm size (eligible UAA, maximum UAA compensated is 100 ha.). <input type="checkbox"/> Länder aid for dairy farms depends on forage area, extent of natural handicap, distance to milk collection point.
Germany (Bavaria)	<ul style="list-style-type: none"> <input type="checkbox"/> At least 3 ha of UAA in the LFA. <input type="checkbox"/> All LFA farm types are eligible but areas of maize, sugar beet, vines, wheat, vegetables and set-aside receive no payment.. 	<ul style="list-style-type: none"> <input type="checkbox"/> Area of eligible land. <input type="checkbox"/> Graduated system based on LVZ, arable land and grassland areas. <input type="checkbox"/> Maximum payment of 15,000 euros.
France	<ul style="list-style-type: none"> <input type="checkbox"/> less than 65 years old. <input type="checkbox"/> at least 50% of income from the agricultural activity. <input type="checkbox"/> at least 3ha of agricultural area. <input type="checkbox"/> at least 3 LU except in certain areas (dry mountains) where the eligibility also concerns permanent crops. <input type="checkbox"/> The LFA allowance can be obtained for all types of cattle farming only in the mountain areas. There are some restrictions for dairy cattle in the piedmont areas and dairy cattle are excluded in the other less-favoured areas. <input type="checkbox"/> The LFA allowance can be obtained for permanent crops only in the dry less-favoured areas. 	<ul style="list-style-type: none"> <input type="checkbox"/> LFA category – high mountain, mountain, piedmont, simple LFA. (The compensatory allowance is limited to 50 ha of agricultural area and the first 25 ha receive a higher rate of payment).
Greece	<ul style="list-style-type: none"> <input type="checkbox"/> Less than 65 years old. <input type="checkbox"/> at least 50% of income from the agricultural activity (25% in small Aegean islands) and at least 50% of their time devoted to agriculture. <input type="checkbox"/> Off-farm family income should not exceed the reference income determined by the Ministry of Agriculture (for 2000-2001 it was €11,738). <input type="checkbox"/> At least 2 ha. <input type="checkbox"/> Permanent residents of LFAs except moving livestock breeders. <input type="checkbox"/> Do not have permanent off farm employment or pension. 	<ul style="list-style-type: none"> <input type="checkbox"/> Maximum area compensated is 15 ha (50 ha if pasture). <input type="checkbox"/> Age of farmers. Priority is given to young farmers. <input type="checkbox"/> Mountainous areas are considered more handicapped. <input type="checkbox"/> Insular areas in the small Aegean islands are given priority. <input type="checkbox"/> Skilled and trained farmers and viable farms are given priority. <input type="checkbox"/> Additional weight to activities related to livestock production (pastures, fodder crops). <input type="checkbox"/> Crops and land uses which are less input demanding (e.g. pastures, leguminous crops) are given priority.
Spain (Catalonia)	<ul style="list-style-type: none"> <input type="checkbox"/> farming must represent the main economic activity of the farmer (see 6.4.2). <input type="checkbox"/> farm must be legally registered as an individual, SAT (<i>Sociedad Agraria de Transformación</i>) or co-operative. <input type="checkbox"/> farmer must reside in the same or neighbouring municipality as that of the farm. <input type="checkbox"/> The farm must have a maximum of 1 LU per ha of forage, or 2 LUs where rainfall exceeds 800 mm/annum, and a minimum of 0.2 LUs per ha. <input type="checkbox"/> The farm must have an area of more than 2 ha (1 ha in the Canary Islands). 	<ul style="list-style-type: none"> <input type="checkbox"/> LFA category – mountain, depopulation risk and specific limitations. <input type="checkbox"/> Size of the farm. <input type="checkbox"/> Income of the farm. <input type="checkbox"/> Use of land. <input type="checkbox"/> Irrigated and non-irrigated.
Finland	<ul style="list-style-type: none"> <input type="checkbox"/> arable land (min area 3 ha, crop must be harvested). <input type="checkbox"/> farmer must reside on or near farm. 	<ul style="list-style-type: none"> <input type="checkbox"/> Area of arable land. <input type="checkbox"/> LFA Region.

Note: the requirements for good farming practice and a commitment to pursue farming for 5 years (as required in 1257/99) are not included in the table above.

In Mediterranean countries where cropping is widespread in the LFAs, the cropped area is typically eligible for payments, although in Greece high revenue crops are excluded. This is not the case in Catalonia where high revenue crops are grown. Greece interestingly includes aromatic, medicinal and non-food crops as eligible land uses. Finland bases the LFA payments on the area of arable land. This is simple to determine and reflects the policy priority to maintain an open landscape (see 7.3).

8.4.2 Level of payments

Table 8.4 gives some information on the proportion of farm income derived from the LFA compensatory allowances. The proportion is highest in French mountain areas and Finland, followed by Austria. Care needs to be taken when interpreting averages because payments are typically highly differentiated. Many countries (e.g. Austria, France, Germany) target small farms by reducing payments rates for larger areas, and fixing a maximum total area or total level of payment. For example, in Austria, farmers receive a higher payment rate for the first 6 ha with tapering of payments for larger areas.

There is often a maximum eligible area for payments or a maximum level of payment per farm:

- In Austria, the maximum area receiving payments is 100ha; in France it is 50 ha;
- In Greece, payment is restricted to 15 ha except for pasture where the maximum is 50 ha;
- In Catalonia the payment per farm is limited to €2,000;
- In Greece, payment maxima range from €3,250 to €5,000 per farm with the higher rate for young farmers with a training certificate in mountain areas; and
- In Bavaria, the payment limit is set at the higher level of €12,000.

8.4.3 Transition issues

In most countries, allowance rates have been increased under 1257/99 to ensure that there are few losers from the change to an area-based system. The increases also compensate for any additional costs associated with good farming practice. In none of the case studies had governments adopted the more cost-effective UK approach of using a safety net to guarantee income in the short-term. It seems likely that, in most countries, these changes in payment rates were made primarily to cushion the transition. In Spain where the LFA measure is limited in its role, pressure from farming interests was important in substantially raising payment levels. In Austria, changes in EU policy under Agenda 2000 enabled the government to substantially increase support for mountain farms, something they had unsuccessfully sought EC permission to do previously.

8.5 Impacts on farm incomes

The outcome for farmers is that, in virtually all cases, revenue from LFA allowances has been maintained and generally increased. In the main the gainers are less intensively stocked and smaller farms, although in France it is farmers with extreme stocking rates that will lose income. In Spain there is a significant group of livestock farmers who will lose income under the new arrangements. They previously received LFA headage payments but are not eligible for area based payments because they only have grazing rights.

Table 8.4 collates information on the contribution of LFA payments to farm income. As discussed above, these aggregated data only give a general indication of the effects in order to facilitate comparison between countries. For example, in France, LFA support contributes 4% of farm income but this varies from 1-38% depending on the farm type. Payments per farm are low in Spain and Greece reflecting small sizes of holdings and in the case of Spain a low level of LFA allowance per hectare. Elsewhere the payments contribute from 1% to over 40% of farm income.

Table 8.4. Contribution of LFA Compensatory allowances to farm income (2001-2002)

	Mean LFA compensatory allowance payment per farm (euros)	Mean income from all public support on LFA farms (euros)	Mean LFA farm income net of costs (euros)	farm income from LFA compensatory allowances (%)
Austria (mountain farms)	4,135	15,791	21,637	19
Germany (Bavaria)	2,520	N/a	N/a	12.0
France*** (mountain area)	4,300-7,000	12,200-19,600	16,700-22,400	22-38
France (simple LFA)	350-2,300	22,300-28,300	15,300-30,700	1-15
Greece	801	N/a	N/a	N/a
Spain*	1,300	N/a	12,000**	10.8
Spain (Catalonia)**	963	N/a	14,000**	6.9
Finland	5,640	21,336	13,236	22-82

* Data for 2001. An error in Spanish regulation led to a significant and exceptional increase in the payments for the year 2001. The more typical average payment figure (€414) given in paragraph 6.4.1 refers to the year 2000. No data are available for 2002.

** No official data. Estimates by agrarian organisations.

*** All French data are for 2000.

8.6 Good farming practice

All recipients of LFA aid must comply with the appropriate code of good farming practice. Member States have established GFP codes that differ substantially in their content and complexity depending on the environmental issues present and the farm practices that they wish to prevent. In some countries (e.g. Germany) there is a robust set of national environmental legislation and the LFA GFP adds supplementary measures. The French GFP code appears to be the lightest and consists mainly of regionally-defined limits on stocking rates. More commonly, the codes comprise rules relating to fertiliser use (mainly nitrogen application levels and restricted periods), disposal of farm manure, soil protection, and restrictions on chemical use.

It is not possible in this study to assess the codes in relation to their effectiveness in limiting environmental damage. All that can be said is that the codes should help to control the practices that are most damaging. Although monitoring is in place, we have no information about the degree of compliance.

8.7 Impacts on land use and environment

Where LFA payments form only a minor part of farm income, as in Spain, we would not expect to find much impact of LFA policy, or changes to policy, on land use. Impacts on the environment would similarly be small, but with a detailed code of GFP they are expected to be positive.

Elsewhere the income contribution of the allowances is greater and there is scope for more marked effects, in particular from the switch to area-based payments. We would expect the shift to an area-based payments system to slightly reduce the profitability of highly stocked systems. But we note (see above) that in some countries (e.g. Austria, France) there were stocking limits under the previous compensatory allowance systems. Much will depend on whether stock that are ineligible for LFA allowances are still profitable.

The widespread increase in LFA allowances in the case studies suggest that the effect on stocking rates may have been ameliorated by changes in the support levels although over time some impact may be expected. In many locations the policy concern is with stocking rates that are too low causing undergrazing and abandonment. It is unlikely that the change to an area basis will have much impact on these concerns. In the case of France the main aim has been to encourage stocking rates within a fairly narrow band so that both under and over stocking are discouraged. In most cases correspondents were unable to clearly identify any impacts of the measures on stocking and farm management. This suggests that they will be minor.

Apart from the switch to area-based payments the key driver for land use will be the overall impact of the change on farm incomes and this is particularly important in more marginal areas where land abandonment or under-use is an issue. In most cases there was a positive impact on incomes as governments adjusted rates upwards. This should contribute to the survival of businesses. Apart from any benefits from the frequency of over or under-stocking, the main environmental benefit is expected to be from the imposition of GFP rules and this will mainly be through reductions in soil and water pollution. It was beyond the scope of the study to quantify these benefits.

8.8 Links to other rural development measures

The LFA regulation in 1257/99 is, in principle, distinct from other elements of the RDR. However, LFAs are frequently associated with high environmental quality and limited development. In Austria, Finland and Bavaria, agri-environment measures are widely taken up on farms in the LFAs and together the measures are self-reinforcing in support of sustainable farming and the public benefits it produces. In Austria the LFA scoring system is also used for elements of the agri-environment scheme, and together, the two schemes provide 63% of the public support for mountain farms. Similarly in Finland there is a strong supplementary effect of both measures on farm incomes and on environmental protection and enhancement.

The role of LFA measures is less clear where the priorities are to develop local economies and sustain population and incomes. Here, the LFA payments support farm incomes but may fail to contribute to longer-term structural change. In Spain LFA expenditure is small and it is difficult to find a case for its expansion. In Greece expenditure is substantial, but even though in areas with Structural Funded operational programmes LFAs are targeted within 'Integrated Local Development plans', correspondents conclude that it will not deliver on the wider social, economic and

environmental agendas for rural areas unless it is better integrated within these programmes.

8.9 Overall impacts of changes in the LFA measure

The conclusion of this study in six Member States is that, overall, the impacts on agriculture of the RDR changes to LFA support will be relatively minor at least in the short term. Average payment rates have been increased to smooth the transition such that few farmers will lose from the change. The main impacts will occur where the compensatory allowances are an important source of farm income or where specific changes in the conditions attached to the payments have been introduced. There has generally been a tighter targeting of allowances to make the payments more cost-effective. In general, the changes will tend to support the maintenance of farming structures and agricultural land use. Where stocking rate and GFP conditions have been modified these should provide environmental benefits from more sustainable use of pasture and reduced water, soil and air pollution.

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