



**TRADE AND AGRICULTURE DIRECTORATE**

**THE ROLE OF AGRICULTURE AND  
FARM HOUSEHOLD DIVERSIFICATION**

**IN THE RURAL ECONOMY OF THE**

**UNITED KINGDOM**

## *Foreword*

This report reviews information on the role of agriculture and farm household diversification in the rural economy of the United Kingdom. It was prepared by a consultant, Berkeley Hill, Professor Emeritus of Policy Analysis, University of London / Imperial College London.

It is one of 13 country reviews prepared under Output area 3.2.1: Agricultural policy reform (Item 3.2) of the programme of work and budget of the Committee for Agriculture for 2007-08.

Based on material compiled from the available literature, these country reviews address all or most of the topics listed below:

- Definitions and underlying concepts of “rural” as they exist at the national level.
- The availability of data pertaining to the share of agriculture and the agro-food sector in the economies of OECD countries at the national level and in rural areas and trends therein.
- The availability of data relating to the income situation of farm households and in particular the availability of information related to non-farming activities.
- The extent to which non-farming income-earning activities of farm households are farm based (*i.e.* using farm resources as in the case of farm tourism) or rural based (located in rural areas).
- The extent to which the industries upstream and downstream from primary agriculture are located in rural areas.
- The strength of multiplier effects between farm/farm based and up/downstream industries and rural economies.

The information in these country reviews was used as background to the report "The role of agriculture and farm household diversification in the rural economy: evidence and initial policy implications" [TAD/CA/APM/WP(2009)1/FINAL], which was declassified by the Working Party on Agricultural Policies and Markets in February 2009.

## TABLE OF CONTENTS

Definition of rural areas in national statistics .....	5
Role of agriculture in rural areas .....	13
Role of agri-food industries in rural areas .....	20
Diversification of activities by farm households in rural areas .....	25
Factors enhancing/limiting farm household diversification into non-agricultural activities .....	34
Focus on farm tourism.....	39
Multipliers effects of agriculture and other rural activities .....	43
Bibliography .....	53
Annex 1. The basis of the new classification system in England and Wales .....	54
<b>Boxes</b>	
Box 1. OECD methodology to define rural areas.....	6
Box 2. Recommendations for developing farm tourism.....	42

## THE ROLE OF AGRICULTURE AND FARM HOUSEHOLD DIVERSIFICATION IN THE RURAL ECONOMY OF THE UNITED KINGDOM

In January 2008 the OECD commissioned a report on the role of agriculture and the agro-food sector in rural areas of the United Kingdom. It was to be based on national and regional statistical information and published literature. The Terms of Reference (ToR) stipulated that the report would answer the following questions:

- **Definition of rural areas in national statistics:** How are rural areas defined in national statistics? What typology is used to classify rural areas? On which criteria is it based? Are there different definitions/typologies used for specific studies?
- **Rural areas in the national economy:** What is the share of rural areas in total population, land, GDP and employment?
- **Role of agriculture in rural areas:** What is the share of agriculture in land use, GDP and employment at national level, in rural areas or regions? What is the share of farm family members in the rural population? How have these shares evolved in the last two decades?
- **Role of agri-food industries in rural areas:** What is the share of agri-food industries (upstream and downstream) in GDP and employment at national level, in rural areas or regions? What is the share of forestry in land use at national level, in rural areas or regions? How have these shares evolved in the last two decades?
- **Diversification of activities by farm households in rural areas:** What are the activities in which farm households are engaged on the farm and outside? To which extent are they related to farm activities? Do they take place on or off the farm? What is the number of farms engaged in these various non-agricultural activities? Which member of the farm household is engaged in non-agricultural activities? What is the share of farm household income derived from the various non-agricultural activities?
- **Factors enhancing/limiting farm household diversification into non-agricultural activities:** What are the main factors explaining farm household diversification (or the lack of) into non-agricultural activities: the general economic situation (employment), accessibility/connections, attractiveness, regulations and policies?
- **Focus on farm tourism:** Is it developed (same questions as in 5 and 6)? What are the tourism services provided by farm households (housing, meals, recreation, etc.)? What are the factors explaining the development (or lack of development) of farm tourism?
- **Multiplier effects of agriculture and other rural activities:** What are the multiplier effects of agriculture in rural economies compared to those of agri-food industries, farm tourism, public services or any other activity?

This report is structured in sections that address each main question directly. In some instances, the overlap between issues means this structure has to be adapted.

It should be noted that in the United Kingdom (UK) responsibility for agriculture and rural development is devolved to the separate administrations for England, Wales, Scotland and Northern Ireland, with a further delegation in England to regional development agencies. This disaggregation applies to the statistical information this study is required to cover, though some are available on a UK basis. There are separate mechanisms in place by which developments in rural areas are monitored; in England this is carried out by the Commission for Rural Communities.

Although for the purpose of securing funds from the EU Budget for the support of rural development there is a single UK Rural Strategy, in practice this is largely an envelope of convenience. There are four separate strategy documents which form the backgrounds to the separate Rural Development Programmes (RDPs), and the information they contain on rurality and the place of agriculture in the rural economy is disaggregated. Consequently, to assemble a UK response to the questions posed by the OECD requires a degree of synthesis. This is not always possible for technical reasons (for example, different definitions of what constitutes a rural area may be in use). In such circumstances, attention in this report will focus on England, which often shares a common approach with Wales, though still with some disparities.

The general point is that the governmental administrative arrangements for agriculture and rural development in the UK present a challenge to the establishment of a whole-UK response to the questions raised by the OECD. For some topics inconsistencies, gaps and partial coverage are impossible to avoid.

#### **Definition of rural areas in national statistics**

From a theoretical stand point the definition of rural that is most appropriate will depend on the aspect of the social, economic and natural part of the environment the particular policy wishes to influence. A substantial danger exists that a definition of rural, created for and appropriate to one purpose, may be hijacked and used in situations where it is manifestly a misfit. A UK example of misuse apparently occurred in the case of rural housing (NAC Rural Trust, 1987).

#### ***The EU/OECD definition***

Several definitions of what constitutes a rural area are in use in the UK. A highly significant definition is the one incorporated into applications for funding under the EU's Rural Development Regulations to assist nationally-run rural policy instruments. For the purpose of designing Rural Development Programmes and submitting them for approval to the European Commission, the UK applies the definition devised by the OECD, a practice shared by all other Member States. Though the Commission has made its own explorations with definitions of rural areas, it has adopted the OECD approach in the round of rural development programming, at least for the period 2007-13. The OECD definition is based on population density. It classifies NUTS 2 or 3 regions into Predominantly Rural region (PR), Intermediate Region (IR) and Predominantly Urban region (PU). For details see Box 1.

In its submission to the European Commission of its National Strategy for rural development in the period 2006-13 (Defra, 2006a) the UK acknowledges that the OECD methodology is the only definition of rural areas internationally recognized, but considers that it imperfectly reflects the rural character of many areas, particularly in densely populated regions. For example, using the OECD system results in no predominantly rural areas for the whole of England (whether classified at NUTS levels 2 or 3), and Defra claims that it also distorts the picture across the rest of the UK. Figure 1 illustrates that areas coloured green (predominantly rural NUTS 2 units) are confined Scotland, with much of central and southern-east England classed as predominantly urban, though it is not reasonable to conclude that such areas have no rural problems or lie outside the coverage of rural policy. England has an average population density of 382 people per square km, which in the context of the European Union (EU27) gives it the third highest overall population density, behind the Netherlands and Malta. Thus, definitions of rural are applied in

England in a context that is largely urban by the standards of many other countries. On the other hand, the Welsh Assembly Government points out that, according to the OECD definition, the whole of Wales can be termed rural with the exception of the major population centres on the southern coast (Cardiff, Newport and Swansea) (WAG, 2008).

Despite reservations about the appropriateness of the EU/OECD population-density based definition, in the interests of comparability across the EU it is used in the EU's Common Monitoring and Evaluation framework for rural development policy, such as when establishing sets of baseline data.

**Box 1. OECD methodology to define rural areas**

The OECD methodology is based on population density (OECD, *Creating rural indicators for shaping territorial policy*, Paris, 1994). It is based on a two-step approach:

- First, local units (e.g. municipalities) are identified as rural if their population density is below 150 inhabitants per square kilometre.
- Then, regions (e.g. NUTS 3 or NUTS 2), are classified in one of the 3 categories:
  - Predominantly Rural region (PR): if more than 50% of the population of the region is living in rural communes (with less than 150 inhabitants per km<sup>2</sup>);
  - Intermediate Region (IR): if 15% to 50% of the population of the region is living in rural local units;
  - Predominantly Urban region (PU): if less than 15% of the population of the region is living in rural local units.

Changes introduced in the second step of the methodology (OECD, *Regions at the glance*, Paris, 2005):

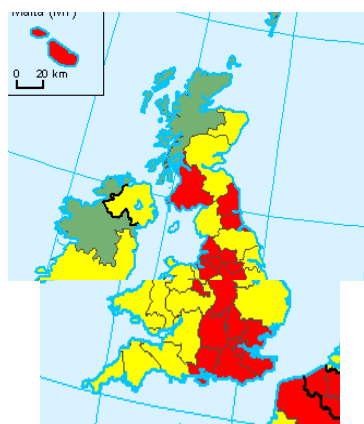
- if there is an urban centre > 200 000 inhabitants (in EU) representing no less than 25% of the regional population in a "predominantly rural" region, it is re-classified as "intermediate"
- if there is an urban centre > 500 000 inhabitants (in EU) representing no less than 25% of the regional population in an "intermediate" region, it is re-classified as "predominantly urban".

An "urban center" in Europe is defined as a local unit LAU2 (e.g. municipality) with a population density above 150 inhabitants per km<sup>2</sup> and total population above 200 000 inhabitants. Characterisation of the rural character at regional level, where most of the statistics are available, allows drawing easily a picture of the different types of areas at national level.

As for the first step, the method requires information on population and areas at local level, the characterisation can only be made with a long periodicity (in general every 10 years when a population census is made).

Source: CEC, 2007.

**Figure 1. Regional classification at NUTS 2 level**



Code: Red = Predominantly urban: Yellow = Intermediate:  
Green = Predominantly rural

## ***National definitions***

For domestic purposes the UK prefers methods of defining the rurality of geographical areas that take account of the specific characteristics of each of the countries within the UK. The choice of definition of rural has been a matter of active debate and practical development in the UK. Evidence assembled in *The State of the Countryside 2001 Report* (Countryside Agency, 2001) demonstrated that a range of concepts of rural had been defined and made operational by public institutions. A study on rurality (SERRL, 2001a) lists some ten different approaches being used within the UK. Criteria used to define the rural areas in the UK have varied from the largely intuitive through those based on single indicators (land use, population density and so on) to more formal statistical definitions based on multivariate analysis of various indices deemed to indicate rurality (the various approaches are reviewed in Phillips and Williams, 1984; Hodge and Whitby, 1986 and SERRL *et al.*, 2001a).

In March 2001 the former Department of the Environment, Transport and the Regions (DETR) commissioned from a consortium of universities a study of urban and rural definitions used for policy purposes. In the *Preliminary Draft Final Report* (SERRL *et al.*, 2001a) five broad types of purpose for applying a definition of rural were identified, though the distinctions are not absolute (they have been rearranged from the original).

- ***For the statutory allocation of resources:*** The only clear example of this in England is the ‘Right To Buy’ provisions of the legislation in relation to rural housing, requiring clear definition.
- ***For the more or less direct targeting of resources:*** An example is the two stage process by which a broad allocation is made centrally to qualifying rural districts, then local authorities select appropriate areas within their jurisdiction; Rural Bus Grant and Rural Business Rate Relief are examples of this process.
- ***In the construction of various “headline indicators”*** such as those in the *Rural White Paper* (DETR/MAFF, 2000) are likely to require appropriate definitions of ‘rural’.
- ***For constructing urban/rural statistical descriptions:*** This frequently conducted and important application requires consistency between the geographical units used to create the urban *and* rural definitions and administrative areas (including wards and parishes).
- ***For analytical purposes,*** including the locating of survey points within urban areas and the population banding of urban areas for sample survey and data reporting purposes.

The SERRL review concluded that the three sets of criteria commonly used to assess rurality (land cover, population characteristics, and social/economic organizations) had become, in a sense, increasingly out of step in the UK. The SERRL commented that “when it comes to defining and delineating urban and rural areas for policy (*i.e.* practical) purposes, [the fact that the terms “urban” and “rural” have become increasingly indistinct] means that no single solution is likely to meet more than a “fair proportion” of the range of policy requirements(SERRL *et al.*, 2001a). It nevertheless continues that “an approach involving the combination of data could appear more ‘definitive’ and be more easily defended among a wide range of people”.

In a further document (the User Guide) that came from this project (SERRL *et al.*, 2001b) the researchers describe the nature of four definitions of rural areas that were “core”, in the sense that they were more widely used than others and appeared to meet current user needs. These four were the definitions used by:

- the Countryside Agency (the predecessor of the CRC) in its *State of the Countryside (SoC)* reports, based on economic, social and demographic structures;
- the Office for National Statistics (ONS), also using socio-demographic variables but taking these from the 1991 population census and forming a general disaggregation of all areas of the country into a broad range of types (much more than just rural or non-rural);
- the DETR Local Government Finance Group, based on sparsely of population, and
- the Countryside Agency for the purposes of its Rural Services Survey, using a rule-of-thumb of settlement size.

The first two had applications both at local authority and ward levels, the third only at local authority level, and the fourth only at parish level. The SERRL demonstrated that substantial differences in coverage (area and population) result from using the different definitions.

The important point is that any simple classification system (binary rural/non-rural classification or one that adopts a set of categories of rural types) is unlikely to be adequate for describing all the characteristics of rural areas that are of interest to policymakers. On the other hand, the use of multiple definitions invites confusion, especially when non-experts attempt to combine datasets using different definitions. There is virtue in having a standard approach that can be widely shared across government departments.

### ***The new multi-departmental definition of rural for England and Wales***

In line with this thinking, following a review in 2002 of existing definitions, a project was launched by a combination of government departments and agencies to develop a new rural definition that could be applied within policy to help target support to groups, communities and businesses. These public bodies were the Department for Environment, Food and Rural Affairs (Defra), the Office for National Statistics (ONS), Office of the Deputy Prime Minister, the Welsh Assembly and the Countryside Agency. (The absence of representation from Scotland and Northern Ireland might be noted).

The new rural definition for England and Wales was launched in the Department for Environment Food and Rural Affairs' *Rural Strategy* in 2004 (Defra, 2004a) and recognised as a 'national statistic' by the Office for National Statistics shortly afterwards. It is based on population density (or, more strictly, household density), but in a flexible way that allows both settlement type and its context (in terms of the household density of the surrounding area) to be reflected. This system seems particularly appropriate for England, where the countryside often contains substantial settlements and where there is a wide variation in extend to which it is populated. Details of the underlying methodology of the new rural definition are given in Annex 1.

At its most detailed level it involves allocating each Census Output Area (units connected to the ten-yearly population census, containing of approximately 125 households) into one of eight different area type, as shown in Table 1. It should be noted that 'rural' comprises the six cells that are not explicitly "urban".

**Table 1. Classification of census output areas by settlement type and context**

Settlement type	Context
Urban >10 000	Less sparse
Town and fringe	Less sparse
Village	Less sparse
Hamlet and isolated dwellings	Less sparse
Urban >10 000	Sparse
Town and fringe	Sparse
Village	Sparse
Hamlet and isolated dwellings	Sparse

Source: CRC, 2007a, *Defining rural England*.

The core classification of Census Output Areas (COAs) has been adapted for larger geographical units that comprise multiple COAs, including Electoral Wards (the smallest unit of local government).

According to the *State of the Countryside 2007* (CRC, 2007b), two classifications using the new multi-departmental definition have been recognised by UK government:

- Office of National Statistics' categorisation of small areas
- Defra's Classification of District and Unitary Authorities.

It might be argued that it is the latter ability to classify Local Authority Districts and the closely-related unitary authorities (collectively labelled LADs) that is the more useful in the present context. Much official data for England is only collected at the level of the 354 LADs into which England is divided. Central government and other agencies also seek to exercise their 'rural proofing' responsibilities via information gathered at the LAD level (CRC, 2007b).

Using this classificatory approach England's 354 LADs are allocated to one of six broad classes based upon the number and proportion of their populations in the main settlement types derived from the 'local' rural definition.

Three classes are predominantly *urban* in nature: Major Urban', 'Large Urban' and 'Other Urban' comprising 176 LADs in all.

The main *rural* types, of which there are 178, are called "Significant Rural", "Rural-50" and "Rural-80", identified by the proportion of people in rural settlements of all kinds: "Rural-80" LADs have between 80 and 100% of inhabitants in rural settlements, "Rural-50" LADs have more than 50%, whilst "Significant Rural" LADs have more than the national average of 26%. These broad classes can, if required, be further broken down into the different *types* of specifically rural settlement they contain (listed later in Table 4). Most "Rural 80" LADs, for example, have a predominance of people living in villages. The map of the classification is shown as Figure 2.

In Wales the convention has been to treat nine predominantly rural counties as comprising "rural Wales". It is understood that application of the new multi-departmental definition to Wales has largely supported this convention. The nine counties are Denbighshire, Conway, Gwynedd, Ynys Mon, Powys, Cereigion, Pembrokeshire, Carmarthenshire and Monmouthshire. This means that a high proportion of

Wales is considered rural by this definition, and there is relatively small difference between datasets for Wales in total and for those for areas deemed to be rural (Figure 3).

Scotland and Northern Ireland do not apply the system devised for England and Wales. In Scotland, the General Register Office for Scotland (GROS) has produced a definition of 'settlements' which is based on the density of addresses calculated for each of the 138 thousand postcodes in Scotland (GROS, 2008). A settlement is generally equivalent to a group of neighbouring localities. Rural Scotland may be defined in terms of these settlements as, for example, all land outside settlements above a given size. A standard rural definition is in place, which defines rural areas as those areas outside settlements of 3 000 or more, but adds greater sophistication by distinguishing between accessible and remote rural areas on the basis of drive time to larger settlements. With the additional drivetime element, this definition is often referred to as the Scottish Household Survey Classification. In Northern Ireland the Statistics and Research Agency (NISRA) published a Report by the Inter-Departmental Urban-Rural Definition Group in February 2005 which considered this question in depth. The report recommended that Government Departments and other users should consider defining urban and rural areas in ways that are appropriate to the specific programmes and projects under consideration. In the absence of a programme-specific definition, it proposed that settlements with a population of 4 500 or less should be defined as rural (DARD, 2006).

### ***In conclusion***

To sum up, a two-lane approach to defining rural areas is used in the UK. For purposes of EU policy, the EU/OECD system based on population density is employed. For national purposes, England and Wales now share a common approach to the classification of small areas and local government districts, based on a rather sophisticated set of criteria. Scotland and Northern Ireland do not apply this system but prefer alternatives. This means that no UK-wide classification is feasible other than by using the OECD system – a situation that is rather unsatisfactory, given the nature of rural areas in the UK and the inappropriateness of the OECD approach for reflecting its complexity at the local level.

Figure 2. The classification of Local Authority Districts, England

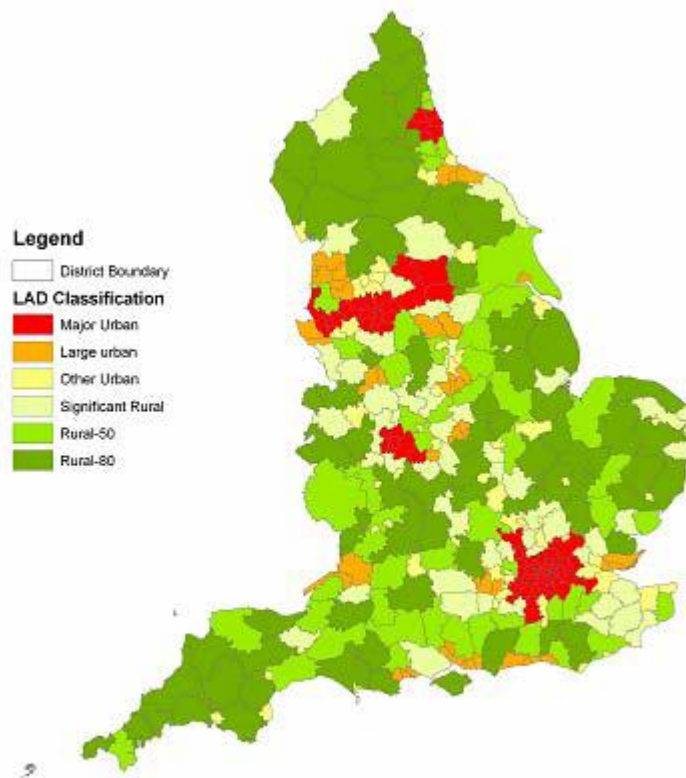
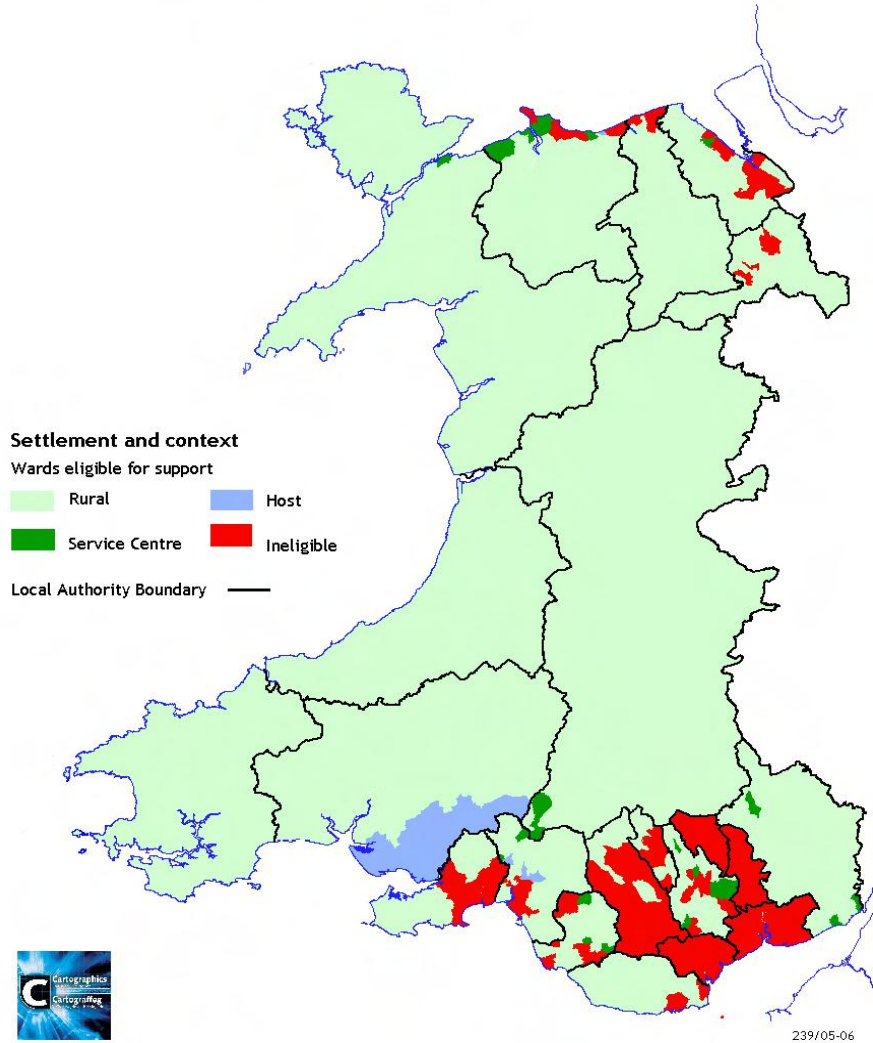


Figure 3. The classification of Unitary Authorities by type, Wales

### National Statistics Classification



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Byddai ei atgynhyrchu heb ganiatâd yn tom'r hawlfaint a gallai arwain at eich erfyn neu ddwyn achos sifil yn eich ebyn. Rhif trwydded : 100017916

Source: WAG, 2008.

## Role of agriculture in rural areas

### *The share of agriculture in land use, economic activity and employment in rural areas*

Using the *OECD definition* and the classification of NUTS 2 and NUTS 3 regions into Predominantly Rural, Intermediate, and Predominantly Urban, the proportion of area, population, GVA (GDP not being available at this level of disaggregation) and employment are shown in Table 2, taken from the European Commission's 2007 Report on rural development in the EU (CEC, 2007).

**Table 2. Significance of agriculture in rural areas (2004)**

Indicator	NUTS 3		NUTS 2	
	UK	EU25	UK	EU25
<b>% territory in rural areas (2004)</b>				
Predominantly rural	24.2	53.5	16.3	36.2
Intermediate regions	54.2	36.8	54.8	47.0
Predominantly urban	21.8	9.6	28.9	16.8
<b>% population in rural areas (2004)</b>				
Predominantly rural	2.0	17.5	0.6	10.0
Intermediate regions	28.4	36.7	33.3	44.9
Predominantly urban	69.6	45.8	66.1	44.5
<b>% Gross Value Added in rural areas (2004)</b>				
Predominantly rural	1.4	12.2	0.5	7.0**
Intermediate regions	24.4	30.6	29.5	39.6**
Predominantly urban	74.2	57.2	70.0	53.4**
<b>% employment in rural areas (2004)</b>				
Predominantly rural	n.a	19.4*	1.0	9.8
Intermediate regions	n.a	35.2*	33.5	43.1
Predominantly urban	n.a	45.4*	65.6	47.1

*n.a.*: not available; \* Excludes Italy and the UK; \*\* excludes Greece.

Source: CEC (2007), Rural Development in the European Union Statistical and Economic Information Report 2007.

It is clear that Predominantly Rural Regions are of small importance in the UK in terms of population, employment and economic activity (as indicated by GVA), accounting for some 2% or less of the national total. The UK's position is markedly different from the EU25 average, where shares are some tenfold greater. As was pointed out above, none of these PR regions are in England.

There is quite a large impact on the share of PR area if the classification is carried out on a NUTS 2 or a NUTS 3 area basis, the latter being smaller. In England there are 30 NUTS 2 areas (counties or groups of counties), Wales 2, Scotland 4 and Northern Ireland 1. For NUTS 3 there are 93 in England (local authorities and groups of them), 12 in Wales, 23 in Scotland and 5 in Northern Ireland. On the basis of NUTS 2, only 16% of the territory is Predominantly Rural, but this rises to 24% when measured using the smaller NUTS 3 basis. The share taken by the Intermediate regions is little affected, and the main compensating impact is on the Predominantly Urban areas, which are smaller under the NUTS 3. Similarly, the shares of population, employment and GVA in PR regions are higher on a NUTS 3 basis than when classified using the bigger NUTS 3 areas, but they are still small. Both the shares of population and GVA in Intermediate regions are somewhat lower on a NUTS 3 basis, and the shares in Predominantly Urban areas a little higher.

Overall, in socio-economic terms it is hard to avoid the conclusion that in the UK the picture is dominated by urban areas.

A word of caution is needed. Comparison of indicators in Table 3, relating to 2004, with those submitted by the UK government in the process of securing approval for Rural Development Programmes (Table 4), shows some surprising differences. Granted, there is a difference in the year (mostly 2003 in the RDP), and it is not explicit that the RDP uses a NUTS 3 classification. But even so, the differences between the two tables call for some exploration. The 30% shown for the share of territory taken by PR regions in the RDP submission contrasts with the 24% in the Commission's 2007 Report. This degree of change in a single year is unlikely to be real. Perhaps the later figures have benefited from access to the 2001 Population Census results.

The UK's submission also provides some indicators of land use (Table 4). It is evident that in the UK agriculture tends to use a rather higher share of the territory than the EU average, and natural land cover (of which the uplands of Scotland and Wales constitute a major part) is also rather high. In contrast, forestry is of lesser importance in the UK. Of particular relevance is the share of land that is in Less Favoured Areas, as in these the economic, social and environmental contributions of agriculture are often thought to be of particular value (although this will be challenged later). Just under half (47%) of the Utilized Agricultural Area (UAA) is classed as LFA, a little less than the EU average once all the categories of LFA are combined (55%).

**Table 3. Importance of rural areas (OECD definition)**

Indicator	UK	EU average
<b>% territory in rural areas (2003)</b>		
Predominantly rural	30.1	56.2
Intermediate regions	48.9	35.9
Predominantly urban	20.9	7.9
<b>% population in rural areas (2003)</b>		
Predominantly rural	2.6	18.6
Intermediate regions	28.2	37.7
Predominantly urban	69.2	43.7
<b>% Gross Value Added in rural areas (2002)</b>		
Predominantly rural	1.8	13.1
Intermediate regions	24.0	31.7
Predominantly urban	74.2	55.3
<b>% employment in rural areas (2002)</b>		
Predominantly rural	2.4	16.3
Intermediate regions	26.1	34.9
Predominantly urban	71.5	48.9

Source: Defra (2007a), *England Rural Development Programme 2007-13*, Annex 1A.

**Table 4. Indicators of land use (from the Common Monitoring and Evaluation Framework indicators for axis 2 of the Rural Development Regulation 1698/2005)**

Indicator	UK	EU average
<b>Land cover (2000): % area in</b>		
agriculture	58.7	46.7
forest	12.0	31.0
natural	24.7	16.0
artificial classes	7.4	4.0
<b>LFA (2000): % UAA in:</b>		
Non LFA	52.9	44.6
LFA mountain	0.0	16.3
other LFA	47.1	35.6
LFA with special handicaps	0.0	3.2
<b>Areas of extensive agriculture (2003):</b>		
% UAA for extensive arable crops	0.0	10.1
% UAA for extensive grazing	28.0	21.2

Source: Defra (2007a), *England Rural Development Programme 2007-13*, Annex 1A.

Using the new *Defra definition* of a rural area it is possible to produce a rather more detailed picture, though for only England. On the basis of the ONS classification, which uses small areas (in contrast to the Defra approach that classifies Local Authorities), 19.3% of the population of England lives in rural areas, about half of whom live in small towns. Only 3% live in settlements smaller than villages and only 1.4% are defined as living in sparse areas. Table 5 shows how the definitions are distributed around England.

**Table 5. Populations of rural and urban England, 2001, ONS approach**

Area definition	Population	%
<b>Less sparse</b>		
Hamlet and isolated dwellings	1 380 115	2.8
Village	3 285 346	6.7
Town and fringe	4 230 458	8.6
Urban >10K	39 527 964	80.4
<b>Sparse</b>		
Hamlet and isolated dwellings	145 234	0.3
Village	246 448	0.5
Town and fringe	217 811	0.4
Urban >10K	103 126	0.2
Rural	9 505 412	19.3
Urban >10K	39 631 090	80.7
England	49 136 502	100.0

Source: CRC (2007b) *State of the Countryside 2007 Report* using data from the Office for National Statistics.

In Wales, the 9 predominantly rural local authority areas cover 1.71 million ha, or 82.1% of the total area of the national territory (2.08 million ha). They contain a one third 33% of the Welsh total of 2.9 million ha (WAG, 2007)(Table 6).

**Table 6. Wales: distribution of population by type of local authority area, 2004**

	Rural Unitary Authorities	Valley Unitary Authorities	Rest of Wales	Wales
Population ('000)	985	793	1 175	2 952
Percentage	33.4%	26.8%	39.8%	100%

Source: WAG (2007), *Rural Development Plan for Wales, 2007-2013, The Strategic Approach*.

As noted above, Scotland and Northern Ireland do not use the approach to defining rural areas that is shared by England and Wales. Using the Scottish Executive's core definition of rurality, in which settlements of less than 3 000 people are considered rural, the population of rural Scotland (from the 2001 census) was 945 000. This can be further refined to take account of drivetime to add an accessibility element to the definition. According to the Scottish Household Survey definition, "Accessible Rural Scotland" includes areas within 30 minutes drive time of centres of population of over 10 000 people. Excluding locations within 30 minutes drive time of centres of population of 10 000 or more to give a "Remote Rural Scotland" category reduces the population of Rural Scotland to 281 000 (the text and table and the original are not quite consistent). Table 7 shows the Scottish population using the various categories included in the Scottish Household Survey classification.

**Table 7. Population of Scotland by type of settlement – core definition**

	Population	Percentage
Urban Areas	3 456 000	68.3
Small Towns	661 000	13.1
Accessible Rural	663 000	13.1
Remote Rural	282 000	5.6
<i>Urban</i>	<i>4 117 000</i>	<i>81.3</i>
<i>Rural</i>	<i>945 000</i>	<i>18.7</i>
<i>Accessible Areas</i>	<i>4 647 000</i>	<i>91.8</i>
<i>Remote Areas</i>	<i>415 000</i>	<i>8.2</i>
Total	5 062 000	100

Source: RSPS (2003), *Rural Scotland Price Survey*.

On the basis of the default option offered in Northern Ireland (that settlements with a population of 4 500 or less should be defined as rural), approximately 65% of the Northern Ireland's 1.7 million inhabitants live in urban areas and 35% in rural areas (DARD, 2006). Thus the proportion of people living in rural areas seems to be rather higher than in other parts of the UK.

### *The structure of employment in rural areas*

The structure of employment by sector in rural areas seems, overall, to be remarkably similar to that of urban areas. In many ways, rural areas are no longer unique. The occupational composition of rural areas in England is very similar to that of the country as a whole, as is demonstrated by evidence from the latest Population Census (Table 8) which classifies respondents into the industry of their main activity. Only in the relatively greater importance of agriculture (and fishing) in rural areas – hardly a surprise – does there appear to be much difference, and even in rural areas these sectors account for less than 3% of employment (including self-employment). Other and somewhat earlier sources had put the figure higher, though the upper estimates were only about 7%. In both rural and urban areas the main employers were the public sector, finance and manufacturing. This similarity of economic structure has been known for some time, though it received public endorsement in two documents from the centre of government that took an overview of rural policy and its objectives; these were the report to the Prime Minister by the Cabinet Office, *Rural Economies in 1999* and *Sharing the Nation's Prosperity: Economic, social and environmental conditions in the countryside in 2000* (Cabinet Office, 1999, 2000). Importantly, these also contained broad descriptions of the living conditions of rural England that, at this high level, dispelled the myth of general rural disadvantage and economic and social decline. Subsequently the information had been updated by the Countryside Agency in its annual *State of the Countryside* reports (indeed, there is textual evidence of substantial overlap between the CA's early reports and these Cabinet Office papers).

**Table 8. Employment by sector, England, 2002**

	<b>Urban</b>	<b>Rural</b>
Agriculture and fishing	0.3%	2.6%
Energy and water	0.6%	0.8%
Manufacturing	12.7%	15.4%
Construction	4.2%	5.1%
Distribution, hotels and restaurants	24.1%	26.7%
Transport and communications	6.5%	5.2%
Banking, finance and insurance, etc	21.9%	15.1%
Public administration education and health	24.3%	24.1%
Other services	5.3%	5.1%
All	100.0%	100.0%

Source: ONS Census 2001 given in Countryside Agency, 2004.

It is also worth noting that agriculture as an occupation is not confined to the employment of people living in areas classed as rural. In the 2001 Population Census the analysis showed that there were 203 153 people aged 16 to 74 working in agriculture, forestry and fishing, though another 122 961 lived in urban areas (Defra, 2007b). However, this industry group was the only one in which the number of rural people was larger than the number of urban ones.

Table 9 provides a later and more detailed breakdown of the occupations of people in rural areas. It uses the Defra classification of Local Authority Districts (LAD) in England, described earlier, to examine the structure of sector (main) occupations across various degrees of rural area. In England even in the most rural LADs agriculture (together with hunting and forestry) accounted for less than 1% of jobs. It follows that the further contraction of farming, following the long-term trend or the result of policy reforms, is unlikely to make a large impact on the availability of jobs even in the most rural of areas, and that policies to stimulate farming are not obvious candidates for the effective use of public funds to create employment,

at least not directly. The main sectors in the two most rural groups of LADs are wholesale and retail trade, manufacturing, real estate and health care. Compared with large urban areas, the most rural ones obviously have more agriculture; they also have more hotels and restaurant activity but rather less financial services.

**Table 9 Distribution of jobs across sectors, England, 2004**

Percentage

Industry	Rural 80	Rural 50	Significant rural	Other urban	Large urban	Major urban
A: Agriculture, hunting and forestry	0.8	0.5	0.3	0.1	0.1	0.1
B: Fishing	0.0	0.0	0.0	0.0	0.0	0.0
C: Mining and quarrying	0.4	0.3	0.1	0.1	0.1	0.1
D: Manufacturing	14.7	15.4	13.5	12.8	12.3	9.4
E: Electricity	0.3	0.4	0.4	0.5	0.5	0.3
F: Construction	5.5	5.4	4.8	3.9	4.5	4.1
G: Wholesale and retail trade; repair of motorcycles and personal and household goods	19.2	18.3	19.1	19.7	18.7	16.8
H: Hotels and restaurants	9.0	7.2	7.2	6.2	6.3	6.4
I: Transport, storage and communication	5.2	5.4	5.3	7.1	5.2	6.7
J: Financial intermediation	1.5	2.2	3.3	3.6	4.1	5.7
K: Real estate, renting and business activities	12.6	13.6	15.5	15.5	15.4	19.6
L: Public administration and defence; compulsory social security	5.0	5.3	4.9	5.1	5.4	5.7
M: Education	9.3	9.9	9.0	9.4	10.0	8.6
N: Health and social work	11.0	11.3	11.7	11.7	12.7	10.7
O: Other community, social and personal service activities	5.3	4.8	5.0	4.3	4.5	5.8

Source: CRC (2006) The State of the Countryside 2006.

The sectoral composition of rural areas should be viewed alongside the institutional structure of businesses, as this may be important in terms of contributing to the dynamism of the economy. The rural economy is an important source of small businesses and new start-ups (Defra, 2007c). Rural areas of England account for approximately 19% of the population and around 25% of the business stock, resulting in more businesses per head in rural compared to urban areas. In terms of business start-ups per 10 000 of population, rural areas are roughly equal to or better than the English average for business start-ups (when the City of London is excluded). However, rural businesses tend to be smaller than in urban areas, a higher proportion have no employees and while they have the highest growth aspirations, they are actually the most likely to have stayed the same size. Lack of managerial skills is cited as a key limiting factor for rural businesses, and this is a factor that applies both to agriculture and other sectors (SBSAU, 2006).

In Wales, the percentages of occupations in rural areas (the nine local authority areas that are deemed to constitute rural Wales) is quite similar to Wales overall once the role of agriculture has been taken into consideration, which is itself only marginally different from that of the UK. The largest difference was that Rural Wales has rather more “skilled trades” (17% in contrast to 13% for Wales overall and 11% for the UK). In its contribution to the economy, agriculture only provides a small contribution to Welsh GVA (1.1% including subsidies, or less than 1.0% if direct subsidies are excluded). After falling throughout the

late 1990s, this figure has remained relatively constant since 2000. In rural Wales (the 9 rural local authorities) agriculture generated some 3.2% of GVA, in contrast with 0.3% in the rest of Wales (WAG 2007), though even this figure is not large in an absolute. As will be seen later, the sectors with which farming is linked have a much larger economic footprint.

In Scotland agriculture makes a larger contribution to the economy than in the UK as a whole, although its contribution remains relatively small at a macro-economic level. It accounted for 1.2% of Scotland's GVA in 2004, compared to 0.8% at a UK level. It employed 45 000 full-time equivalents in 2004. This represents 2.2% of the total workforce in Scotland, or 5% of the rural workforce. In Northern Ireland agriculture too is relatively more important than the in UK overall (DARD, 2006).

### ***Share of farm families in the rural population***

The Terms of Reference of this study refer to farm families and their position in the rural population. It is not clear what is meant by a "farm family". For a precise answer to be given there would have to be considerable clarification of a number of definitional issues. These would include the definition of a family, including how this differed from a household. Important, the criteria by which a family was classed as a "farm family" would need careful consideration, since the label might be associated with labour input (and therefore include people who worked on farms as hired labour might cause a family to qualify), with farm business operation as an entrepreneur (who might also be the manager), business ownership. Qualification might be applied in terms of the amount or proportion of time spent in agriculture by individuals or by the family as a whole, or the share of income they derived from farming.

In practice, irrespective of the definitions selected, it is unlikely that reliable information could be reported in this project as the UK does not have official figures on the number of farm families (as distinct from individuals), either in total or among the rural population. The figures for the main sector in which individual residents worked quoted above (less than 3% and perhaps less than 1% even in the most rural of areas in England) is probably not far from share that complete households would represent, though estimates might be rather higher if extended families were taken as the unit over which assessment takes place.

As alternative estimate might be made starting from the number of agricultural holdings recorded in the Farm Structure Survey for the UK (178 000 in 2005)(Eurostat, 2006) or in Defra's annual June survey<sup>1</sup> Although official statistics assumes that there is one operator per holding, in reality on many of the larger farms there may be several households that have some entrepreneurial function. On the other hand, many of the smaller holdings would be owned and occupied by families for whom their farm represented only a small part of their economic activity, and for some it might be primarily residential rather than production-orientated. Another approach might be to start from the number of people who claimed to be farmers, partners or directors. There were 351 000 of them and their spouses who worked on the farm in 2005. 154 000 of them claimed to be whole-time, but these figures would correspond to a smaller number of families/households because of the coverage of spouses. Under such circumstances any estimates of the relative numerical importance of farm families would be very conjectural.

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1. 311 000 for 2005, the higher figure reflecting the different cut-off point and the inclusion of 'minor holdings' (Defra, 2007d).

## **Role of agri-food industries in rural areas**

### ***The role of the agri-food industry in the economy***

For about a decade the Annual report Agriculture in the UK, issued by Defra, has contained a section that takes a broad view of the food chain and its position in the general UK economy, and detailed statistics are available from 1998 onwards. Table 10, extracted from the 2006 edition (Defra, 2007d), shows that the agri-food industry (including agriculture) contributes some 7-8% of national Gross Value Added, rather more in the earlier years and a little less in more recent years. In terms of share of the workforce, the agri-food sector accounts for a little above 14%, (3.7 million in 2004, or 14.5% of UK employees) and there is no obvious trend.

The table clearly establishes that agriculture is only a small element within the agri-food industry and that its contribution to the economy continues its long-term decline. In the period since 1998 agriculture has only provided between one eighth and a tenth of the food chain's contribution to national GVA. In 1998 agriculture provided 1% of GVA but in 2005 fell to half this level. There are grounds for thinking that the 2005 results for agriculture are below trend, which has a knock-on effect on the GVA for the broader agri-food sector. It is also thought that 2006 will display some recovery, though this is unlikely to change the general picture.

Of course, while agriculture is largely an activity that takes place in rural areas (the Predominantly Rural and Intermediate regions of the OECD classification), this is not true of other elements in the food chain. Retail and catering will tend to be found mostly in areas in which most of the population lives, which are urban.

Upstream industries are not covered in Table 10, yet it is obvious that there are links between farming and its supplies, and that changes in the economic fortunes of agriculture will have implications for the input industries. However, of the major purchased inputs from other sectors (fuel and power, agri-chemicals, financial services etc.) most of these are likely to come from urban areas.

**Table 10. Agri-food sector contribution to the national economy, United Kingdom**

GBP million (unless otherwise specified), calendar years

	1998	1999	2000	2001	2002	2003	2004	2005	2006 (prov.)
Agri-food sector's contribution to total economy gross value added at current prices									
Agriculture	7 471	7 208	6 700	6 783	7 151	7 881	7 613	5 325	5 580
Food Manufacturing	17 969	18 602	18 830	19 257	19 561	20 679	21 457	20 934	..
Food Wholesaling	5 834	7 070	5 560	6 823	7 106	6 633	7 821	7 275	..
Food Retailing	16 852	18 326	18 827	17 139	17 316	17 947	18 833	19 619	..
Food Non-Residential Catering	13 319	14 108	15 311	16 387	17 898	18 359	21 143	20 607	..
% of national gross value added (current prices)	8.2	8.3	8.0	7.7	7.6	7.4	7.5	6.9	..
% of national GVA by agriculture alone *	1.0	1.0	0.8	0.8	0.8	0.8	0.7	0.5	
Workforce in the food sector (thousand persons)									
Agriculture	608	586	557	512	496	478	493	490	484
Food Manufacturing	483	487	478	461	447	440	423	418	411
Food Wholesaling	219	227	221	215	213	213	212	215	217
Food Retailing	1 060	1 043	1 088	1 151	1 205	1 214	1 171	1 184	1 157
Food Non-Residential Catering	1 214	1 256	1 253	1 301	1 355	1 360	1 401	1 394	1 373
% of total workforce in employment	..	..	..	14.4	14.7	14.6	14.5	14.3	13.9
% of total workforce by agriculture alone				2.0	2.0	1.9	1.9	1.9	1.8
Imports of food, feed and drink	17 055	17 214	16 828	18 267	19 091	20 944	21 942	23 429	..
% of total UK imports	9.0	8.8	7.6	8.0	8.4	8.9	8.7	8.6	..
Exports of food, feed and drink	9 197	8 880	8 702	8 506	8 915	9 881	9 702	9 942	..
% of total UK exports	5.6	5.4	4.7	4.5	4.8	5.2	5.1	4.7	..
Self-sufficiency									
% of all food	67.5	67.6	66.8	62.6	62.4	63.5	62.3	58.5	58.1
% of indigenous type food	81.9	81.6	80.3	75.0	75.5	76.6	75.0	72.0	71.5

\* Author estimate from figures.

Source: Defra (2007d), *Agriculture in the UK 2006 Report*.

## *Forestry*

Compared with agriculture, forestry is relatively minor in terms of economic activity and employment, though its impact on landscapes may be disproportionately large. The earlier table of land use (Table 4) showed that forestry occupied some 12% of the territory in 2000, a proportion that is relatively low by EU standards. Figures taken from the website of the Forestry Commission of Great Britain (but covering the whole UK) find that in 2007 there were 2.8 million hectares of woodland in the UK, representing 11.7% of the total land area; this percentage ranges from 6.4% in Northern Ireland to 17.2% in Scotland. The public sector (in the form of the Forestry Commission / Forestry Scotland) is a major player, as is evident from Table 11. The same can be said for private sector foresters. Thus, in the context of the UK, it should not be assumed that forestry is an activity that is carried on by farmers, though undoubtedly some farmers could also be regarded as undertaking forestry. For example, grants have been available to encourage the afforestation of farm land by providing grants (under the Rural Development Programmes in England and Wales) to sustain incomes during the establishment phase.

Table 12 shows that the present areas of forests are at a historically high level, with larger proportions of the territory in forestry only to be found many centuries in the past. Much of the increase has taken place in the last forty years.

In terms of employment the picture is not entirely clear, as there are at least two sources of data that are not fully compatible. The Annual Business Inquiry (ABI) carried out by the Office for National Statistics (ONS) includes statistics on employment broken down by Standard Industrial Classification (SIC). The ABI was extended to include forestry in 2001; SIC 02 (forestry) has a narrow scope; though it includes logging and related services it does not cover activities like timber haulage and government administration. The ABI finds that forestry employs some 12-14 000 people (in contrast with the 484 000 in UK agriculture). This represents only a small fraction of the workforce in the wood processing sectors, but these also include businesses undertaking primary processing of imported material and also some secondary processing. Though forestry itself can be expected to take place largely in rural areas, the location of processing plants may be urban.

An alternative source of forestry data is the periodic Forest Employment Survey. Total employment (including self-employment) in the forestry and primary wood processing industries in Great Britain (*i.e.* the figures do not cover Northern Ireland) in 1998-99 was estimated to be around 30 000 full-time equivalents (Table 14). Around one half were based in England, 36% in Scotland and 14% in Wales. 36% were employed working for primary wood processing industries, 29% for private woodland owners, 16% for forestry companies and contractors and 13% for the Forestry Commission. Restricting consideration to the firms that would be regarded as in forestry (rather than wood processing) gives estimates that are broadly in line with, if somewhat higher than, the estimates in Table 13.

In terms of contribution to the national economy, UK forestry activity generated some GBP 325m of GVA in 2005 (Table 15). To put this in perspective, UK agriculture generated GBP 5 325 million in 2005 but this only formed 0.5% of national GVA, so the impact on the national economy of forestry is extremely small. Forestry saw an increase in GVA of some 10% from 2001 to 2005, though GVA in primary wood processing decreased by 9% to GBP 1.4 billion and, as noted above, GVA in agriculture dropped notably in 2004 and 2005.

**Table 11. Area of woodland by ownership and forest type at 31 March 2007**

Thousand hectares

Forest type and ownership	England	Scotland	Wales	Northern Ireland	UK
<b>Conifers</b>					
FC/ FS woodland	149	430	93	56	728
Non-FC/ FS woodland <sup>2</sup>	218	618	65	10	912
<b>Total</b>	<b>367</b>	<b>1 048</b>	<b>158</b>	<b>66</b>	<b>1 640</b>
<b>Broadleaves<sup>1</sup></b>					
FC/ FS woodland	53	27	13	5	98
Non-FC/ FS woodland <sup>2</sup>	704	266	114	15	1 098
<b>Total</b>	<b>757</b>	<b>293</b>	<b>127</b>	<b>20</b>	<b>1 197</b>
<b>Total</b>					
FC/ FS woodland	202	457	107	61	827
Non-FC/ FS woodland <sup>2</sup>	922	884	178	26	2 010
<b>Total</b>	<b>1 124</b>	<b>1 341</b>	<b>285</b>	<b>87</b>	<b>2 837</b>

Source: Forestry Commission, [Forest Service, 1995-99 National Inventory of Woodland and Trees](#).

**Table 12. Woodland area in the United Kingdom – an historical perspective**

Year	England		Scotland		Wales		Northern Ireland <sup>2</sup>		UK	
	Area (000 ha)	% <sup>1</sup>	Area (000 ha)	% <sup>1</sup>	Area (000 ha)	% <sup>1</sup>	Area (000 ha)	% <sup>1</sup>	Area (000 ha)	% <sup>1</sup>
1086		~15								
c1350		~10		~4						
17thC		~8		~4				~1.5		
1905	681	5.2	351	4.5	88	4.2	15	1.1	1 140	4.7
1924	660	5.1	435	5.6	103	5.0	13	1.0	1 211	5.0
1947	755	5.8	513	6.6	128	6.2	23	1.8	1 419	5.8
1965	886	6.8	656	8.4	201	9.7	42	3.1	1 784	7.3
1980	948	7.3	920	11.8	241	11.6	67	4.9	2 175	9.0
1995-99	1 097	8.4	1 281	16.4	287	13.8	81	6.0	2 746	11.3
2007 <sup>3</sup>	1 124	8.6	1 341	17.2	285	13.7	87	6.4	2 837	11.7

1. Percentage of the total surface area including inland water. The total surface areas, including inland water, taken from the Annual Abstract of Statistics 2002 (published by the [Office for National Statistics](#)) are: England 13 042 000 hectares; Scotland 7 813 000 hectares; Wales 2 078 000; hectares Northern Ireland 1 358 000 hectares; United Kingdom 24 291 000 hectares.

2. For Northern Ireland, 17th century figure is estimate for all Ireland, 1905 figure is estimate for Ulster 1908, 1947 figure assumes no change from 1939-40 Census.

3. Non-FC woodland figures for 2007 for England, Scotland and Wales are based on the [1995-99 National Inventory of Woodland and Trees](#) (NIWT) and adjusted for new planting and sales of FC woodland, but at present no adjustment is made for woodland converted to another land-use.

Source: Forestry Commission, [Forest Service](#).

**Table 13. Employment in Forestry and Wood Processing, 2001-2005**

Thousands

<b>Standard Industrial Classification (SIC)<sup>1</sup></b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
SIC 02: Forestry	13	14	12	13	12
SIC 20: Wood products					
20.1 Sawmilling	13	13	11	11	10
20.2 Panels	7	7	6	6	6
Other SIC 20 Secondary products	70	74	71	71	69
<b>Total</b>	<b>90</b>	<b>94</b>	<b>88</b>	<b>88</b>	<b>85</b>
SIC 21: Pulp & paper	95	93	86	83	76
<b>Total wood processing (SIC 20 + 21)</b>	<b>185</b>	<b>187</b>	<b>174</b>	<b>171</b>	<b>161</b>

Source: [Annual Business Inquiry](#) - average employment in year (Office for National Statistics, June 2007).

**Table 14. Employment (including contractors and self-employment) in forestry and primary wood processing industries, 1998/99**

Full-time equivalents

<b>Employer</b>	<b>England</b>	<b>Scotland</b>	<b>Wales</b>	<b>GB</b>
Forestry Commission	1 331	2 011	567	3 909
Private woodland owners	4 242	3 196	987	8 425
Forestry companies and contractors	2 077	2 223	298	4 598
Wood processing industries	5 581	2 917	2 130	10 628
Other employers	1 508	347	117	1 972
<b>Total</b>	<b>14 739</b>	<b>10 694</b>	<b>4 099</b>	<b>29 532</b>

Source: [Forest Employment Survey 1998/9](#).

**Table 15. Gross Value Added in Forestry and Wood Processing, 2001-2005**

GBP million

<b>Standard Industrial Classification (SIC)<sup>1</sup></b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>SIC 02: Forestry</b>	294	292	316	321	323
<b>SIC 20: Wood products</b>					
20.1 Sawmilling	312	346	354	356	421
20.2 Panels	222	232	245	275	254
Other SIC 20 Secondary products	1 781	1 881	2 070	2 327	2 268
<b>Total</b>	<b>2 315</b>	<b>2 459</b>	<b>2 669</b>	<b>2 958</b>	<b>2 943</b>
SIC 21: Pulp & paper	3 717	3 770	3 472	3 325	2 861
<b>Total wood processing (SIC 20 + 21)</b>	<b>6 032</b>	<b>6 229</b>	<b>6 141</b>	<b>6 283</b>	<b>5 804</b>

Source: [Annual Business Inquiry](#) (Office for National Statistics, June 2007).

## **Diversification of activities by farm households in rural areas**

Increasing international evidence supports the comment by Fuller (1991) that “full-time farming is the aberration in modern farming history and multiple job-holding is the norm.” As a universal phenomenon “Multiple job-holding is a flexible mechanism for adjusting to changes in agriculture, family needs, and shocks in the external environment.” That diversification is a chosen path of many UK farm families facing economic pressures in agriculture is well-established by UK studies. Although it would be wrong to assume that this is the only path by which pluriactivity arises and that downward shifts in the profitability of farming are the only drivers. Nevertheless, the UK government has a clear policy interest in encouraging diversification by farms as a way of broadening the industry’s base and improving the viability of individual businesses, an approach that received support by the report of the Policy Commission on the Future of Farming and Food (Curry Commission, 2002).

Despite its potential as a policy lever, the study of diversification among farm households in the UK is severely constrained currently by a number of factors, including:

- The lack of a satisfactory dataset that has, as its basic unit, the farm household. Indeed, in the UK there seems to be no consensus on how that unit should be defined. For the study of diversification it would be valuable to be able to follow individual cases over time, and links of this nature are a familiar weakness even of official surveys of farm businesses.
- A tendency to constrain the study of diversification to activities that are associated with the agricultural holding, rather than the household-firm that is the institutional unit that in reality undertakes the production. Consequently, the information on diversification that is available for the UK from studies of farms probably understates the extent to which agriculture is combined with other activities, because those activities that are not connected with the resources used on the farm (though still under the control of the institutional unit that the farm household represents) are omitted.

Though the impression is sometimes given that pluriactivity is a recent phenomenon in the UK, this is erroneous. Hill (2000) quotes the report from more than a century ago of the Royal Commission appointed to examine the hardship caused to certain large sections of British agriculture in the depression of 1879-96. This Commission encountered part-time farming and noted that the attraction of combining farming with another occupation was chiefly for the resulting security, but it was not uncommon for the arrangement to be “extremely profitable”. The Report cited the New Forest where smallholders were said to have three sources of livelihood; their farming, common rights to pasture and the collection of fuel and turf, and small businesses such as dealing in small goods and stock. Elsewhere, work combined with farming included fishing, retailing, road haulage, wholesale distribution, factory work, mining, and banking. With the addition of management and some more of the professions the list would serve well to describe what has been found in the 1970s and 1980s (Harrison, 1975; Gasson, 1988).

Another common assumption, not borne out by the evidence, is that pluriactivity arises from full-time farmers (or farm families) developing other gainful activities in response to downward pressures on the rewards from agriculture. In the UK only some (perhaps one fifth) have arisen in this way; the studies summarised in Gasson (1988) demonstrate that many other paths are found, including new entrants who have established careers in other sectors who have accumulated resources that enable them to buy farm real estate. Again this is nothing new. The Royal Commission of the late 19<sup>th</sup> century mentioned above cited a Mr. Channing who remarked: “Further, there have been, and still are, all over England and notably in Scotland, considerable numbers of men, some of whom know nothing of farming, others next to nothing, who have made money in other callings, and deliberately take farms because they prefer a country life, and without much anxiety as to commercial results”. Another path is the “U” turn, in the form of people

returning to family farms when their farming parents retire or die. Change of occupancy (within a family by succession, or by sale) is often associated with a farm becoming operated on a pluriactive basis.

Furthermore, pluriactivity should not be seen only as a transition stage to or from full-time farming. A central finding of the work reviewed by Gasson is that it is frequently a permanent arrangement, having a range of advantages that can be economic, social, and environmental, or a mix of these motives. Nor is it restricted to the smallest farms; an element of pluriactivity is found across the farm size spectrum, and at the top end it is often found that farming is only one of a portfolio of business interests that extend across several economic sectors, and these are not necessarily closely related to agriculture, forestry or the food sectors. Of course, the picture is affected by the threshold set for inclusion in statistics as a farm; the dividing line between a large garden and a small farm is always problematic, but the situation in the UK is not as clouded by the phenomenon of domestic production for subsistence consumption as in many of the new EU Member States. Finally, the UK experience is that incomes from off-farm activities are typically greater than those that come from the non-agricultural use of farm resources (which might include the provision of tourist accommodation, the use of farm buildings to house other businesses, and so on).

It is now well accepted among agricultural economists (including those at the OECD) that a broad view of the activities and incomes of the operators of farms is necessary to be able to explain both current production pattern of land use, investment behaviour (both productive assets and environmental capital), farm viability, succession and entry and exit decision, with the concurrent structural changes. The relevance of diversification to agricultural policy is reflected not only in a series of special studies funded by Defra but also the issuing of regular statistical notices about its incidence.

According to Defra (2008), several data sources exist that may be used to throw light onto the extent of diversification in the UK, interpreting the term broadly to cover all the economic activities that the farm household-firm may pursue, whether on or off the holding. The main data sources (for England) are:

- The official annual farm accounts survey, the Farm Business Survey (FBS).
- The Survey of Personal Incomes (SPI) conducted by HM Revenue and Customs (which in principle can cover the UK).
- The June Survey of Agriculture and Horticulture (formerly the June Census) 1998-2003.
- Survey of Labour, Machinery and Diversification on Agricultural Holdings 2005.
- Farm Diversification Benchmarking Study 2002, University of Exeter (CRR, 2002).
- Study on the effects of public funding on farmers' attitudes to farm diversification, University of Exeter (CRR, 2006).
- Study on the effects of CAP reform on Tenant Farmers Diversification Activities – Baseline study (University of Coventry, 2006).

Some are in principle capable of covering the entire UK. For example, data on the structure of agriculture and labour inputs form part of the UK's statistical obligations to the EU, so results have to be available on a UK basis. Similarly the FBS in England and Wales has its equivalents in Scotland and Northern Ireland, and results have to be provided to the EU's FADN/RICA for the entire UK. But the devolution of responsibility for agriculture to the separate administrations in the UK's constituent countries means that statistics are often fragmented and that survey questions that are not part of the legal obligations of EU membership may not be used at sub-UK level. In the list above the last three pieces of research were confined to England, and there may not be an equivalent in the other parts of the UK.

### *Other gainful activities of farmers in the structural and tax statistics for the UK*

Recent empirical evidence for the entire UK can be taken from the results published by Eurostat taken from the EU Farm Structure Survey (FSS), to which the annual June census and labour surveys contribute data. The FSS asks questions on whether the holder and members of the holder's family that are working on the farm (but not those who do no such work) have an Other Gainful Activity (OGA). This may be in self-employment or as an employee of another institutional unit. An assumption is made that a sole or main holder can be identified, which means that partnerships are only represented by a single person, whereas in reality there may be more than one person exercising entrepreneurial functions, some of whom may have gainful activities outside the farm (these people are likely to be picked up in the FSS as other family members). Results are shown in Table 16.

The general impression is that over a third of UK holder/managers have an OGA, rather more on small farms (a half) and rather less on the larger sized farms (about a quarter). Somewhat higher proportions of spouses working on the farm have OGAs, with a similar fall across the size bands, with other family members showing percentages between those of spouses and holders. Some 41% of subsistence farm holders reported an OGA in 2005; a disproportionately large share of these subsistence holders were beyond statutory retirement age (41% were of 65 years and over, compared with 28% of holders on all active farms), so the lack of OGAs can probably be explained by the presence of pensions as a source of livelihood.

**Table 16. Percent of UK holders and family members with an Other Gainful Activity (OGA), 2005**

	Agricultural area (hectares)				All farms
	<20	20-<50	50-<100	100 =+	
Sole/main holders (000)	70.6	40.2	32.7	34.6	178.1
- with an OGA (%)	49.4	39.4	27.2	23.3	37.9
as main occupation (%)	38.5	23.1	11.6	7.0	23.9
as a secondary occupation (%)	10.9	16.3	15.6	16.2	14.0
Spouse of sole holder working on the holding (000)	31.0	17.4	15.3	16.9	80.6
- with an OGA (%)	53.0	44.8	39.7	39.3	45.8
Other family member working on the holding (000)	26.9	21.4	22.7	32.3	103.3
- with an OGA (%)	49.1	48.3	36.7	29.6	40.1
<i>Holders on subsistence farms (below 1 ESU) not included in the above (000)</i>					96.0
- with an OGA (%)					41.5

Source: Farm Structure Survey 2005, reported in Eurostat (2006) *Statistics in Focus 2000-2006*.

Unfortunately for the present purpose, the statistics do not show situations where either the holder or the spouse or the family member has an OGA. There is considerable overlap of these categories, and the literature suggests that the spouse is more likely to have an OGA where the holder has one (suggesting that societal factors may be important in shaping work patterns). In the absence of precise information, a range can be postulated. If there were total overlap, then the lowest estimate for holdings with an OGA would be 38%; if there was no overlap between farmer and spouse this figures rises to 58% for couples. Analysis for Northern Ireland suggests that the actual figure lies about half-way between the two bounds (DARD, 2005). Given that spouses who claim to do no work on the farm are not covered in the FSS, overall it is not unreasonable to assume that something in the order of half of all UK farming couples have another gainful occupation. This is before taking account of other family members who may form part of the management or others who may live in the farm household.

The estimates for the OGAs of farm operators, spouses and family members given in Table 16 are not entirely consistent with other figures published by Eurostat on the structure of agriculture<sup>2</sup>, which show 27.1% of holdings in the UK as having an OGA in 2005. Nevertheless this rather imprecise and uncertain picture is enough to demonstrate that the operators of UK farms are active in other parts of the economy.

Another perspective of the diversified economic activities of farmers comes from tax data, in particular the agricultural and horticultural cases in the Survey of Personal Incomes. There are some severe technical limitations, such as the nature of the tax unit, and the inability to distinguish between self-employment earnings from agriculture and from other activities. Nevertheless, the results demonstrate that farm operators do not confine their economic activities to what happens on their farms. Table 17 indicates that only 13% of farmers in the United Kingdom in 2000/01 and 2004/05 appear to have had no additional income whatsoever from investments (which may represent accumulated earnings from farming), pensions or employment (that is, as employees of others). Of the possible combinations of income sources, the most common, accounting for around 38-39% of the sample, was self-employment and investment income. The highest average level of total income recorded was for those 4-5% of farmers with income from self-employment (most of which was from agriculture and horticulture), and income from investment, employment and pensions. How rents from letting out property (which other sources indicate is a common form of diversification) are treated in the SPI is not clear.

**Table 17. Farmers' sources of income assessed for tax, United Kingdom, 2000/01, 2004/2005**

Source of income		Percentage of farmers (a)		Average amount of total income (GBP)	
		2000/01	2004/05	2000/01	2004/05
Only self-employment income (b)		13	13	7 874	9 163
Self employment and one other source	Investment	39	38	14 518	17 552
	Employment	4	5	12 855	14 923
	Pension	3	3	7 833	8 204
Self employment and two other sources	Investment and employment	15	15	27 543	34 657
	Investment and pension	21	23	15 114	18 953
	Employment and pension (c)				
Self employment and three other sources	Investment employment and pension	5	4	48 463	57 685
All sources		100	100	17 044	20 532

(a) Individuals with a registered self-employment income from agriculture or horticulture.

(b) Virtually all thought to arise from agriculture or horticulture.

(c) Sample size too small to derive reliable estimates.

Source: Defra (2003), *Farm Incomes in the United Kingdom 2001/2002*; Defra (2007e), *Farm Diversification* – updated May 2007.

Bearing in mind that diversified activities that are put though the farm business accounts are included within agriculture and horticulture, the SPI shows that “other trades” contributed about 8% of the total income of persons classed by tax inspectors as farmers (Table 18). This will mean activities for which

2. Eurostat, 2007, Agriculture Main Statistics 2005-2006, Table 1.2.4

separate sets of accounts for self-employment are presented (as might happen if a haulage business or off-farm shop were operated by the farm family, or some other occupation such as a lawyer was followed). Businesses run as companies (whether farms or other activities) would not be covered in the agricultural or “other trades” groups; payments to their operators would be treated as income from employment and appear in “Other earned income” or from property (dividends, etc.). Thus the results have to be treated with caution when assessing the relative contribution made by diversification to the income of farm operators.

**Table 18. Numbers of farmers and composition of average income assessed for tax, UK, 2004/05**

	<b>Average income per person including zero income, GBP</b>	<b>%</b>	<b>Average income per person excluding zero income, GBP</b>
Agriculture and horticulture	8 062	39	8 062
Other trades	1 637	8	19 503
Other earned income	4 112	20	17 280
Pensions	2 187	11	7 270
Investment	4 535	22	5 724
Total	20 532	100	

Source: extracted from Table 3 of Defra (2007e), *Farm Diversification – January 2007*, based on data from the Survey of Personal Incomes, Board of Revenue and Customs.

With this caveat in mind, there are some regional differences that might be noted. Farmers in Northern Ireland had the highest incomes from other trades, and Scotland the highest from other earned income.

### ***Surveys of diversification on farms***

In view of the increasing policy interest in diversification, Defra commissioned a baseline study for 2002, carried out by the University of Exeter (CRR, 2002). Though covering only England, its key findings are relevant to this present work. They can be summarised as follows:

- a high proportion of farms already undertook diversification activities (over 58%), with the share varying by location (68% in the South East of England compared to 48% in the North West);
- the most common diversification activity was the letting out of buildings;
- owner occupied holdings were less likely to be diversified than wholly tenanted holdings;

agricultural services (*e.g.* machinery hire, haulage, consultancy, supply of agricultural sundries) account for more than 1 in 3 of diversified enterprises (though these activities, which belong to primary agricultural production, have been excluded from later work, on the grounds that they are not really diversification in the sense that the term is frequently used and understood);

- trading enterprises were found on almost 33% of diversified holding;
- provision of accommodation and catering was found on 24% of diversified holdings;
- equine services were found on nearly 25% of diversified holdings;
- nearly 25% of diversified holdings had at least one activity characterised as recreation and leisure services;
- the scale of both output and net profit from diversified activities varied enormously;

- drivers for diversification were varied, with the most important being a need for a supplementary income source;
- more than 6 out of 10 enterprises were set up without the operator identifying any real degree of difficulty;
- there was a proportion of farmers who were natural entrepreneurs.

Rather lower figures for the percentage of farms with diversified activities are provided by alternative and later data sources; differences in methodology (and especially what is considered a diversified enterprise) are likely explanations.

In England the Survey of Labour, Machinery and Diversification (SLMD) has taken over as a source of data on diversification on farms from the June Survey of Agriculture and Horticulture, which provided results for 1998-2003. It should be noted that diversification in this context means the use of farm resources for non-agricultural purposes, so that other occupations, trades or employment that the farmer and/or spouse may engage in that are not connected with agriculture in this way are excluded, thereby cutting out what is commonly the major source of non-farming income. Results cited by Defra (2008) for England, Wales and Northern Ireland show quite large differences among these countries (the omission of Scotland is not explained, though it is known that equivalent data are collected). Table 19 shows that diversification has a far higher incidence in England than in Wales, with the lowest figures found in Northern Ireland. Because the category “contracting” may include primary agricultural processes (such as one farm undertaking under contract field cultivations for another), often not considered as a form of diversification in the context of policy, figures are shown both with and without contracting. Furthermore, it is necessary to point out that the England figures in the SLMD source are far lower than in the 2002 baseline study – less than half – which underlines the need to be very careful over mixing datasets and drawing false comparisons.

**Table 19. Percentage of farms reporting diversified activity or contracting, UK contribution to the EU Farm Structure Survey 2005**

	England	Wales	Scotland	Northern Ireland
Diversification	21%	15%		5%
Diversification or contracting (agricultural or non-agricultural)	27%	17%		9%

Source: Defra (2008), citing EU Farm Structure Survey

Another source of information on diversification is the Farm Business Survey. This collects data (for England) on the presence of other sources of income, and limited information on their magnitudes. The orientation of the FBS towards what might be thought of as commercial producers and the application in its coverage of a threshold of farm size that, while enabling a high proportion of production to be represented, excludes many operators of small holdings, must be borne in mind. In 2004/05 almost two-thirds of FBS farms in England had either diversified enterprises on the farm or the farmer or spouse had income from off-farm employment or self-employment. Almost half the farms had some diversified enterprise, and on almost a third the farmer and spouse had off-farm income from economic activity (Table 20).

**Table 20. Incidence of diversified activity and off-farm employment, England, 2004/05**

	England
Number of farm businesses $\geq$ 0.5 SLR	60 800
Percentage of which	
Have diversified enterprises	46%
Farmer or spouse have off-farm employment or self-employment	30%
Have neither	37%

Source: Farm Business Survey, given in Defra (2006b) *Farm diversification – January 2006*.

More recent work on the extent of diversification using the FBS (Defra 2008) has concentrated on a restricted range of activities that might be considered as particularly under the control of the farm's management. In this Defra notes that diversification is defined as: "*the entrepreneurial use of farm resources<sup>1</sup> for a non-agricultural purpose for commercial gain.*" In this context farm resources are defined as land or capital that was previously used for agricultural purposes. Where a farmer/spouse takes up external employment, then this will be classified as an Other Gainful Activity (OGA) rather than as diversification. However, any activities on which the farmer/spouse spends their time will still be classified as diversified activities whenever any land or capital previously used for agricultural purposes are also employed (e.g. a farmer running a shop selling produce from the farm). The definition of capital in this context excludes money. For example, if a farmer uses some of his profits from farming to invest in stocks and shares rather than investing in the farm, then this would not be classified as diversified activity. Rather, this would be revenue from other gainful activity.

This approach by the FBS is not entirely satisfactory, because the definition of diversification involves some rather arbitrary dismembering of the economic activities of the complete household-firm. Whether an activity is defined as diversified or as an OGA depends on a combination of factors. For example, according to Defra (2008) this includes whether the farm resource previously used for agricultural purposes could be switched back to agricultural use; whether the accounts of the activity are separate from those of the farm; and how long it has been a diversified activity. Diversification also implies some kind of entrepreneurial activity on behalf of the farmer. In the face of evidence to the contrary, Defra declares that "It is useful to think of diversification as a transition rather than an end-state".

Defra (2008) gives examples of what would be included as diversification:

- *Non-agricultural contracting.* Non-agricultural contracting is included in diversification because it is likely to involve some entrepreneurial activity by the farmer.
- *Letting of buildings.* Letting of buildings is included in diversification where it is undertaken for non-agricultural commercial purposes and would not be undertaken if the resource was to continue to be used for agriculture.

The following are excluded from diversification in this analysis:

- *Letting of land for agricultural or non-agricultural end-purpose.* Even if the land was subsequently used for non-agricultural activity, this is not diversification as it is not the farmer who is undertaking this activity. Also, it is assumed that the farmer does not have any entrepreneurial role in the letting of land. This means letting of land for way-leaves is not a diversified activity.
- *Agricultural contracting.* This is excluded because, although it could include some entrepreneurial activity from the farmer, the activity itself is agricultural.

- *Hiring of other assets for an agricultural or non-agricultural end-purpose.* Letting of other assets is excluded because it is unlikely that this will involve the farmer in any entrepreneurial activity.

The results from the Farm Business Survey (FBS) published in Defra (2008) relate to farms of size at least a 0.5 Standard Labour Requirement (SLR), a size considered sufficient to occupy a farmer half-time. Around 60 000 of the 120 000 farms in England are below this size. They account for only 4% of agricultural production and 10% of agricultural land area but, because of their very part-time nature they may well have significant amounts of diversified activity not included in these published results. How much is not known.

Defra (2008) notes that, when defining and measuring diversification in this way, half of farm businesses above the 0.5 SLR threshold in England have some diversified activity, the main one being letting out buildings for non-agricultural use; when this is excluded, the proportion of farms was 27% in 2006/07, up from 25% in 2005/06 (Table 21).

**Table 21. Number of farms (SLR ≥ 0.5) with diversified activities — England, 2003/04 to 2006/07**

	2003/04	2004/05	2005/06	2006/07	% of farms in 2006/07
Total Number of Farm Businesses (SLR≥0.5)	60 000	60 800	61 700	59 500	100%
Of which: have diversified activity	31 400	29 000	30 900	30 000 <sup>1</sup>	50%
Farms with diversified activity other than letting buildings	10 800	11 700	15 300	16 100 <sup>2</sup>	27%

1. The 95% confidence interval for this estimate is (28 400-31 500).

2. The 95% confidence interval for this estimate is (14 700-17 500).

Source: Farm Business Survey cited in Defra, 2008.

Total income from diversified activities in 2006/07 was GBP 430 million, an increase of 5% compared with 2005/06. Diversified enterprises accounted for 19% of farm income in aggregate in 2006/07 (Table 22) although there were wide variations between farms. The remaining farm income consisted mainly of Single Farm Payment (SFP).

**Table 22. Components of farm income for farms  $\geq$  0.5 SLR — England, 2003/04 to 2006/07**

	Income 2003/04 (GBP mn)	Income 2004/05 (GBP mn)	Income 2005/06 (GBP mn)	Income 2006/07 (GBP mn)	% change 2006/07 2005/06
Total Farm Business Income (including diversification)	2 320	1 840	1 910	2 250	18%
<i>of which:</i>					
Income from agriculture (excluding subsidies and payments to agriculture)	420	-200	-210	80	n/g
Subsidies and payments to agriculture (excluding agri- environment payments)	1 430	1 520	120	30	n/c
Income from Single Payment Scheme	0	0	1 380	1 430	4%
Income from agri-environment work	150	180	200	280	39%
Income from diversified enterprises	320	340	420	430(1)	5%

n/g Not given because quantities were negative in 2005/06.

n/c Not comparable because of changes in subsidies and payments to agriculture.

SLR: Standard Labour Requirement. A definition of it is given at <http://statistics.defra.gov.uk/esg/asd/fbs/sub/slr.htm>.

1. The 95% confidence interval for this figure is GBP 370 million to GBP 500 million around an estimate of GBP 430 million.

Source: Defra (2008) citing the Farm Business Survey (subsidies and payments may therefore differ from official scheme figures).

In terms of the activities that generate the income from diversification, sixty percent of diversified income was generated from letting out farm buildings for non-agricultural use (Table 23). For the 21 000 farms which let out buildings, the income they obtained from this (GBP 260 million) was approximately 20% of their total farm income (GBP 1 130 million). For food processing and retailing this proportion was 30% (GBP 60 million of GBP 190 million). Nearly 30% of farms which had diversified contained more than one diversified enterprise. Only a small proportion of farms (1.5%) failed to make a profit on their diversified activities.

Though not a panel survey, over 80% of the Farm Business Survey sample is identical between two adjacent years. Consequently, it is possible to look at start-ups and termination among diversified enterprises. According to Defra (2008) “the level of sampling error for these longitudinal analyses is a little higher than analyses for a single year but they provide a useful additional insight”. Defra reported that about 10% of farms which had diversified enterprises in 2006/07 had started them within the previous 12 months, and about the same proportion which had diversified enterprises in 2005/06 gave them up during 2006/07. The number of farms with new enterprises slightly exceeded the number giving them up, so the total number increased. For single diversification activities, letting of buildings for non-farming use showed the biggest decline, and sport and recreation showed the biggest increase.

**Table 23. Income from diversified enterprises — England, 2006/07**

	Number of farms	percentage of farms	Total farm income for these farms (GBP million)	Income of diversified enterprise (GBP million)	Average enterprise income (GBP/farm)
Farm Business income (including diversification)	59 500	100%	2 250	--	
Farms which engage in:					
Diversified enterprises (all kinds)	30 000	50%	1 440 0	430	14 50
letting buildings for non-farming use	21 400	36%	1 130	260	12 200
processing/retailing of farm produce	4 500	8%	190	60	14 200
sport and recreation	6 700	11%	300	30	5 100
tourist accommodation and catering	2 600	4%	70	40	13 800
other diversified activities	4 800	8%	250	50	10 500

Source: Farm Business Survey, cited in Defra, 2008.

### ***Final comment***

It is clear that there are difficulties in obtaining evidence on the extent to which the operators of farm businesses are engaged in non-agricultural activities. This stems primarily from an agri-centric orientation in which diversification is seen as something that farmers do, but if they take this process beyond a rather arbitrary level and degree of separation from the farming activities, the diversification somehow assumes an independent life and drops away from the farm. A more reliable approach would appear to be one that, from the start, embraced the complete household-firm and all its activities (with suitable treatment for corporate farms), so that a comprehensive view of resource allocation becomes possible.

### **Factors enhancing/limiting farm household diversification into non-agricultural activities**

A characteristic of farm households that have non-agriculture as one of their activities (on or off the farm) is their heterogeneity. Thus any analysis has to be capable of embracing both the farmer who has been forced by income pressure into seeking alternative ways of using his farm's resources, the household where the next generation chooses to follow a career outside farming (whether for reasons of lack of opportunity in the family farm business or for other motives of a social or economic nature), and the businessman or wealthy individual who has bought a farm for financial or environmental or social reasons. While perhaps the main policy interest in the present context is in those families already in agriculture that use diversification as a way of coping with the longer-term trends to which agriculture is exposed and with economic shocks, in particular those resulting from policy reform, the presence of other forms of diversified households should not be forgotten.

The international literature on agricultural adjustment suggests that at the household level the main factors affecting change and adaptation, of which diversification forms a part, are as follows:

- Human capital characteristics, including age, experience, education, training and personal qualities such as the attitude to risk, intelligence, and motivation.
- The nature of the farm and farm business, including its capital base and access to borrowing, the size of farm, its profitability, land type and related enterprise pattern, etc.

- The environment in which the farm is situated, which includes proximity of potential demand for diversified output and ease of access to these markets, good infrastructure in the form of transport (especially where consumers are required to visit the farm site) and IT facilities.

The heterogeneity of farm operators means that, within agriculture at any one time there will be sets of circumstances that are highly favourable to diversification of economic activities (whether as an off-farm OGA or on-farm diversification) and others where there will be insuperable resistance. Furthermore, some of the factors are susceptible to manipulation by policy interventions (in particular, by grants and subsidies where cost is an issue) whereas others are largely fixed (such as the attitudes of farmers to diversification, which may only change under extreme circumstances or where one generation of a family takes over from its predecessor) (Hill, 2007). Where human capital development is concerned, some of the farmers who most need to grow their business skills are also those most resistant to encouragement by policy measures to do so.

Most of the recent evidence on factors facilitating or impeding change relates to on-farm diversification (the use of farm resources in a non-agricultural ways) rather than the broader phenomenon of household pluriactivity (on or off-farm). With this in mind, the FBS results for 2006/07 show that there is a surprisingly small difference across age bands in terms of the incidence of diversified (on-farm) activities, though this may be because the real impact is hidden. The FBS records the age of the principal farmer, which in partnerships may mask the presence of younger family members who are in practice influential in management decisions. With this caveat, the results suggest that older farmers tend to be associated with marginally higher incidence of diversification (51% by number for the 65 years and older group, and 54% for the 55-64 age band, compared with 48% of farmers in the under 45 and in the 45-55 age band, with an all-ages average of 50%). The proportion of farm output from diversified enterprises was marginally higher among the youngest under 45 group (13%) but lowest in the 45-54 and over 65 groups, with an all-ages average of 11%. But this finding should not be interpreted in a way that suggests that older farmers find diversification easier; not only are there a host of other human factors to be considered (such as the presence of other and younger family members) but also there will be those related to the farm and the resource base it represents (its size, capital stock, location, etc.). Thus a distinction has to be drawn between the present incidence diversification, how the present position has been reached, and what determines future change.

As a guide to the factors enhancing or limiting the ability of farm household to diversify, a useful starting point is the check-list provided by Farming Connect for farmers in Wales who wish to set up tourist attractions (Farming Connect undated), which can be easily made more generic:

- Proximity to main roads and population centres, accessibility, car parking;
- Compliance with regulations *e.g.* food hygiene and, especially, planning permission (in that regulation on change of use are likely to impinge on the development of non-agricultural activities on farms);
- Interaction with the farming process (*e.g.* implications for animal and plant health, and the effect of these on the diversified enterprise)
- Insurance issues
- Other local competitive or complementary enterprises;
- Skill requirements for marketing, customer services and management;
- Re-investment capability

### *Defra report on barriers to farm diversification, 2007*

Defra, for England, convened a special Joint Industry-Government Working Group to examine the barriers to farm diversification, which reported in 2007 (Defra, 2007c). It reviewed a range of published research reports that contained information on the incidence of diversification and factors associated with it (including CRR, 2002 and 2006; Hill, 2007, University of Coventry, 2006). The group's conclusion was that a wide range of issues can affect both decisions to undertake diversification projects and the future success of those projects. These included

- validity of market research;
- capacity to develop a considered business case;
- quality of business skills and training generally, and availability of appropriately skilled personnel;
- lack of specialist business advice;
- regulatory controls (including but not limited to the statutory planning system that controls changes of the use of land and buildings from agriculture to other activities);
- lack of access to broadband IT;
- implications for tax and inheritance where diversification changes the status of land or buildings (by removing the special treatment that is available to agricultural property).
- under certain circumstances, access to finance was also identified as a potential barrier. Grant funding and schemes such as the Small Firms Loan Guarantee Scheme were of assistance to many farmers but not all were able to take advantage of them. The England Diversification baseline study (CRR 2002) found that just over half (51%) of diversified farms had done so without grant support, though these tended to have been established before grants were available and were involved in "traditional" diversifications (such as contracting and Bed & Breakfasts).

Tenant farmers as a group had a range of issues specific to their particular circumstances. They often found accessing capital difficult as they did not have the collateral available to farmers who own their own land. Tenant farmers could also have problems with their tenancy agreements, in that these may carry restrictions on land use.<sup>3</sup>

While the Working Group concluded that that all of the issues listed above were relevant, two categories of barrier were judged to be significantly higher than the rest. These were:

- lack of generic business skills in the farming industry (which impacts not only on diversified enterprises but also the core business). These include market research, marketing, business planning, business management and customer relations.
- planning controls, as currently designed and implemented.

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3. The Farm Business Tenancy, a new type of landlord/tenant agreement created by the Agricultural Tenancies Act 1995, allows more flexibility for tenant farmers to diversify their activities. In addition there is now a code of practice which aims to facilitate gaining agreement for diversification activities on tenant farms.

The Group also:

- assessed the barriers in terms of the seriousness of their impact either on decisions to diversify or the ultimate success of diversified activities;
- identified the fundamental origins of the main barriers, and brought forward evidence in support of those conclusions; and
- made recommendations for lowering or removing the barriers.

### *Business skills*

The Working Group particularly identified business planning as a key skills gap for diversified enterprises, though this also applied to the core farming business. People skills, in terms of staff management and customer relations, are also required, and these are areas with which many farmers are unfamiliar. A number of barriers to the acquisition of these business skills were postulated, many of which are shared by other small businesses in rural areas. These include the lack of awareness of the benefits (both to the business and personally), problems with access to training facilities, and time scarcity (including the difficulty of releasing what may be a high proportion of the labour force, even if this is only one person). It must be conceded that evidence on some of these factors is mixed.

It is worth noting that the people other than farmers (stakeholders, administrators and advisors) tend to be strongly in favour of training and mentoring, seeing it as an important pre-requisite of capital investment within diversification to ensure it is used to the greatest capacity and value. However, many farmers are unconvinced. According to a CRR (2006) survey, diversified farmers had had no training in 67% of the enterprises they had set up. Those diversified farmers who had received a grant were much more likely to have received training though still in the minority (45%). However, this was a much higher proportion than those diversified farmers who had not received (27%) or not applied for (21%) grants. Only 4% of diversified farmers who had not received training considered that this lack had had any impact on the success of the business.

The Defra 2007 Working Group made a number of recommendations that included the evaluation of the effectiveness of current rural business training, its promotion among farmers, and ways of improving the delivery mechanism to facilitate uptake.

### *Planning issues*

In its study of the effect of public funding on farmers' attitudes to diversification (CRR 2006) the University of Exeter asked farmers with current diversified enterprises what were their major challenges in setting up each diversified enterprise and also which of these had been their greatest challenge. Planning was cited as one of the major challenges for 32% of current diversified enterprises, ahead of all other challenges, followed by securing grants (29%), securing financing (18%) and marketing (15%). 20% of diversified enterprises put planning as the *greatest* challenge they had experienced in setting up their current business, again the largest number, followed by securing grants (18%), with marketing and securing finance tying at 9%. Among cases where a diversified enterprise was NOT set up, farmers gave planning issues as the reason for not going ahead for 24% of enterprises, second only to failure to secure a grant (40%) and ahead of financing issues (16%) and expected profitability/financial return (13%). Among farmers considering diversifying, 23% cited sorting out planning constraints as a significant challenge, second only to market opportunities.

The evidence above shows that farmers perceive planning as a substantial barrier towards diversification activities in England. Furthermore, there is a suggestion that it has become more of a

problem, in that it was more strongly represented in the CRR (2006) research than in its base-line study of four years earlier (CRR, 2002). What is clear is that diversification is not only an issue for agricultural policy, as it impinges on other policies, including those for which diversification on farms might pose a threat. In particular, the willingness of Local Planning Authorities to embrace business development in the countryside has to be considered.

The Defra Working Group on diversification provided fifteen recommendations on ways in which the planning system could be modified so that it did not pose such a substantial barrier to diversification. Many were concerned with the cohesion and coherence of the planning process, breaking down barriers between policy areas and achieving better balance, but some were more practical, such as raising the threshold below which diversification can proceed without the application of detailed controls.

Though the evidence cited relates mostly to England, the importance of planning is recognised elsewhere. For example, the Scottish Executive (undated) has issued a guide to farm diversification and planning permission in Scotland.

### ***Public assistance to diversification***

Finally, it is worth noting the information on the role of public assistance to diversification. The rather dated evidence, mentioned above, suggests that much on-farm diversification (possibly half) has taken place without assistance. Nevertheless, the Rural Development Programmes for the UK have contained schemes to facilitate it. In the period 2000-06 England had the Rural Enterprise Scheme (RES) and Wales the Farm Enterprise Grant (FEG). By the time the mid-term evaluations of these RDPs took place in 2003, in England the progress on RES in assisting on-farm diversification had been satisfactory (some 364 projects out of a target for the period of 500) but off-farm projects to extend the base of economic activities in rural areas (only some of which were undertaken by farmers as off-farm activities) were less successful (achieving only 12-18% of target project numbers)(ADAS/SQW, 2003). By its closure Defra stated that over 1 200 (on-farm) diversified projects had been assisted, with another 3 500 new tourism and craft related enterprises having received support (some belonging to farmers). To put this in context, England had some 191 000 holdings in 2003, suggesting that only a small minority of farms were involved. In Wales by 2003 the scheme to aid diversification into non-agricultural enterprises had made relatively little progress for a variety of reasons (including restrictions on activities because of the outbreak of foot-and-mouth disease) (AgraCEAS, 2003). Formal *ex post* evaluations of these schemes have not yet taken place; they are due to take place in 2008 and, when available, will provide valuable information on scheme performance.

Also under the RDPs there have been Vocational Training Schemes (VTS) for people working in agriculture and forestry that were frequently relevant to diversification, and grants for processing and marketing agricultural products were open to farmers (though mostly taken up by other firms in the food chain, and not necessarily ones located in rural areas). Spending in the areas of diversification (including tourism), training and adding value is continued in the programming period (at least for England and Wales).

A feature of this public assistance under the RDPs is that it has been broadly spread. It has not been targeted at, for example, only farms where the holding is the main occupation of the occupier, or where incomes from farming were particularly in need of supplementation. The basic Regulations for the two programming periods 2000-06 and 2007-13 (Council Regulations (EC) Nos. 1257/1999 and 1698/2005 respectively) do not specify tests of eligibility on the nature of the operator, and the schemes do not appear to have applied tests in practice. Draft literature published in April 2008 by SEEDA (one of the regional development agencies that administer the RDP) for schemes in the programming period 2007-13 carry this convention forwards. Applicants for diversification grants (including into tourism) are simply listed as

being in agriculture or horticulture, with provision for farms that are arranged as companies (SEEDA 2008).

Despite this, there is an implied policy focus of interest on the larger farms, as indicated by the target (in the England RDP) of increasing farm revenues from diversified sources by 25% on full time farms in England by the end of 2006 (see Table 27 of ADAS/SQW, 2003). Literature emerging from Defra (and the other agricultural departments) often uses the term 'full time farm' in the sense that it is estimated to require a labour input of equivalent to one person working full-time, *i.e.* it is an indicator of farm size. The term does not usually refer to whether the occupier has another source of earned income.

### **Focus on farm tourism**

A distinction must be made between rural tourism, tourism as an activity of the operators and their families, and tourism on farms. Agriculture can contribute to rural tourism in several ways. As an activity that shapes the appearance of the countryside, making it attractive to visitors, it may enhance economic opportunities for the tourist sector, farmers themselves may provide some of the services tourists demand on their holdings, and farm owners and operators may provide resources to the tourism sector elsewhere in the locality (such as by investing in houses for letting or by farm families working in catering businesses. Farm households can be involved with tourism on the farm or off it (most of which might be expected to be in rural areas) and can do so either in a self-employed capacity or by being employed by others.

According to VisitBritain (2004a) citing other studies, rural tourism has been defined both as "a variety of visits away from home to locations outside main towns and seaside resorts, be they holidays, day trips, business trips or to visit friends and relatives" (Countryside Agency 2001) as well as "tourism where enjoyment of the countryside is the primary motive." (English Tourism Council and MEW Research, 2002). According to the Countryside Agency, in 2000 rural tourism attracted a spend of GBP 14 billion (in England) and its estimated 25 000 businesses hosted 80 million visits and overnight stays from domestic visitors. On a more local level, expenditure of GBP 943 million by visitors in the far South-West county of Cornwall in 1998 was estimated by SW Tourism to amount to 23% of Cornwall's GDP. In Wales rural tourism makes a significant economic contribution to rural communities as a major source of employment (some 12%) and economic activity (WAG, 2008). Only in the most rural of Welsh counties does agriculture account for a similar share of employment. The Wales Tourist Board estimated that rural tourism is worth around GBP 350 million to rural communities per annum; to put this in context, the GVA of Welsh agriculture (including subsidies) was GBP 418 million in 2003 (WAG, 2008). In contrast, the narrower concept of 'farm tourism' is only concerned with the direct role that farm operators take in the provision of services for tourists by using farm resources. Thus farm tourism can be defined as 'any accommodation business or visitor attraction based on a working farm' (Morris, 2002b).

In the UK tourism is of special policy concern in rural areas designated as Less Favoured Areas (LFAs), as they contain many popular tourist attractions, particularly in National Parks. It is clear that a decline in tourism would have a substantial effect on their economic conditions. IEEP (2004) found that studies of the Foot and Mouth crisis, which had effectively halted tourism for many months in large parts of the LFAs in 2001, demonstrated well the economic value of tourism to these areas. But agriculture's role in providing the features that attract people to rural areas is not well-established. According to IEEP (2004) "While visitors appear to value the farming landscape, their preferences are not always well understood and many visitors do not make direct use of the hills and moors but visit instead villages, tourist facilities and woodlands and forests". Thus it is not clear what sort of agriculture should be promoted to increase tourism (or to minimise losses), and whether the public cost of doing so would be justified by the public benefits.

It must also be acknowledged that tourism has certain characteristics that need to be taken into account when considering its use as a policy lever; for example the employment it generates may be highly seasonal, predominantly low-paid, and vary between locations (which may attract day visitors or long-stay holidaymakers, with different impacts).

### *Tourism as an activity of farm operators*

The Farm Structure Survey (FSS) reports tourism as one of a range of categories of Other Gainful Activities of the occupiers of UK agricultural holdings in 2005, (see Table 24 which contains the EU27 situation for contrast). This implies that the activity is either off the farm, or at least it is regarded as a separate business from the farm.

**Table 24. Percentage of holdings with an Other Gainful Activity, UK and EU27, 2005**

	UK	EU27
Total holdings with an Other Gainful Activity	27.1	13.3
Tourism	12.0	1.3
Handicraft	0.4	0.1
Processing of farm products	1.4	6.8
Wood processing	0.5	0.3
Aquaculture	0.1	0.2
Renewable energy production	0.2	0.4
Contractual work	10.4	2.1
Other	10.0	5.3

Source: Eurostat (2007), *Agriculture Main Statistics 2005-2006*, Table 1.2.4.

Bearing in mind that (a) there is some doubt of the consistency of this source with other statements of FSS results, (b) that the percentages may not be intended to be cumulative, since holdings may have more than one OGA, and that (c) a distinction may exist between an OGA and diversified activities taking place on the farm using farm resources, it nevertheless seems that tourism is among the most numerically important categories by which farm operators generate income additional to that coming from the production of agricultural commodities and services. The UK's share of holdings with tourism OGAs is much higher than in the EU27 overall and is the largest recorded among Member States; the next highest being Austria (8.3%) and Germany (3.9%).

### *Tourist enterprises on farms – farm tourism*

Rather more confidence may be ascribed to data from UK sources. Defra (2004b) reports two data sources that explicitly refer to tourism, but both appear to relate only to the activities that take place using farm resources (that is, on-farm diversified activities). There must be some doubt when using this approach about the way the results should be interpreted. For example, the provision of tourist accommodation in the farm dwelling is clearly covered (in as much as it is recorded as an enterprise) whereas the use of cottages formerly used by farm workers may or may not be considered as constituting farm resources. This may reflect how long ago they were occupied by labour used for production purposes. If a farmer purchases a dwelling explicitly to use to supply accommodation services to tourists, even if in close proximity to the farm, this would appear not to be covered.

With caution in mind, the results from the annual June Census, indicate that just over 5% of holdings have tourist enterprises (which includes camping, caravanning, self-catering and services such as bed-and-

breakfast), with very little change within the period 1998 to 2003. The share was a little lower among very small farms (4.3% in 2003) and very large farms (4.8%) and highest among the small ones (6.5%). Across farming types, the percentage in 2003 was highest on mixed farms (7.8%) and Cattle and Sheep farms in Less Favoured Areas (7.6%), and lowest among Pig and Poultry farms (3.3%). In terms of geography, farms in the South-West (which includes the tourist-orientated counties of Cornwall, Devon, Dorset and Somerset) a consistently higher proportion of farms were diversified into tourism (8.1%) than the other regions, which clustered in the range 3% to 6%.

Sport and recreation need also to be considered (which in the June Census included equestrianism, fishing, golf schooling). In 2003, 7.6% of holdings were involved in these enterprises, and the level had almost doubled since 1998. The very large farms had the highest proportion of holdings with these activities (13.1% in 2003) and the smallest ones the least (6.7%). Cereals farming had the highest incidence (11.2%) and Pig and Poultry the lowest (3.0%). Regionally, highest percentages were found in the South-East and London (13.3%) and lowest in Yorkshire and Humberside (5.7%); population pressure rather determinant than scenic beauty.

### ***Market characteristics***

In 2004 the Countryside Commission reported that 17% of (English) farmers were diversifying, and many chose to venture into accommodation. According to VisitBritain (2004a), reporting research by Morris (2002b):

- holidays are the main purpose of staying on farms, accounting for some 90% of farm-based nights. There are seasonal peaks around Easter, August and October, corresponding with UK school holidays;
- of the total, over three quarters (77%) of farmhouse nights were accounted for by stays of four nights or more.
- People are prepared to travel long distances for farmhouse holidays, and 94% of farm visitors use a car as their main means of transport.
- Farmhouse visitors are more likely to participate in activities such as walking, riding and visiting heritage attractions than countryside tourists in general.
- Most visitors to English farms are UK citizens, with only 15% from overseas.
- Visits to farm attractions (as distinct from farm accommodation) have different economic characteristics. Customers are normally day-visitors or in accommodation not on the farm. The average stay is 2.5 hours. Nearly half the visitors are children, often in school parties. Admission charges (GBP 3-4 for adults and GBP 2-3 for children) account for 50-50% of turnover, retailing for 20-30% and catering for 15-20%.

VisitBritain (2004a) points out that the continued supply of serviced accommodation requires new entrants to find this activity (in combination with farming) an attractive business proposition.

### ***Factors affecting the development of farm tourism***

Various initiatives exist in the UK to develop rural tourism, including farm tourism, and factors have been identified that are believed to facilitate the rate of expansion. The close relationship between forestry and tourism has already been noted. The issue of landscape and environment is dealt with later (in section 8) when considering the multipliers of public spending on farming. Here attention is more on the business attitudes and skills required.

An example of an analysis of the conditions needed to encourage tourism is contained in the strategic plan for the 2007-2013 Rural Development Programme in Wales (WAG, 2007) and is repeated in the RDP (WAG, 2008). Building on the output from a working party on countryside tourism (the 2004 The Action Plan For The Countryside Experience) a number of strategic priorities were identified and key areas of work listed. Among the latter, and of direct relevance to farm operators, was the need to improve access to the countryside through rights of way, circular walks, trails etc. and through capitalising on the Countryside Rights of Way (CROW) Act provisions in 2005. Improving facilities (rather than increasing their volume) was also mentioned. According to the RDP there had to be more emphasis on increased earnings levels and profitability, achieved through increasing the turnover per staff member through longer seasons and higher quality, higher value services. The RDP saw a stronger role for business management training and advice programmes, in particular to assist entrepreneurs adapt to changes in the tourism market, although there was also a need for operative skills training.

According to VisitBritain (2004b), reporting various pieces of work by Morris (2000 to 2004), numerous practical recommendations are possible to encourage farm tourism (Box 2). Some of these can only apply to farms with specific attributes, for example only those with redundant barns will have the opportunity to convert them. However, the need for general business skills as well as those more directly applied to aspects of tourism, comes through as an important factor. In England under the latest round of Rural Development Programmes tourism on farms is an element for which support can be given for diversification (under Axis 1), while assistance to other businesses engaged in rural tourism can also be made available (under Axis 3)(SEEDA, 2008). It also features in Axis 3 of the Wales RDP for 2007-13.

**Box 2. Recommendations for developing farm tourism**

Turn redundant barns into bunkhouse and camping barns. They are unique, have low conversion and operating costs, and are marketed by YHA.

- Add value and appeal to experience by providing additional activities and facilities for visitors such as farm trails, fishing lakes, craft working, cycling hire and storage, horse stables, picking fruit, wind turbines, etc.
- Improve quality of accommodation and attractions, whilst maintaining and enhancing the unique character of buildings and environment.
- Farms near towns and cities can target the business market, though these often require facilities such as desk space and phone sockets for computers.
- Accommodation is needed near specific routes and trails, such as the Pennine Bridleway, which is used by riders, cyclists and walkers.
- Enhance the catering aspect. Farmhouse breakfasts are a key selling point. Promote local food and drink products.
- Develop a flexible range of accommodation and services to suit a variety of needs.
- Consider green business accreditation, recycling schemes, energy saving measures and encouragement of wildlife exploration on farms. Quality of environment is important and tourism should support, not damage, it.
- Take advantage of ICT, which allows fast and efficient communication with customers, partners and suppliers and helps with marketing efforts and business management. Online booking services are effective and most customers have access to the web.
- Training allows continuous improvement in business practices and encourages cost cutting and innovation.
- Know your customers. Identify the target market, listen to their requirements and provide the right quality of service and facilities.
- Local groups (like Farm Stay UK) can generate ideas and develop products. Other specialist groups could be formed for camping barns, cycling, riding, etc.
- Farm tourism could be branded more strongly through national grading schemes and marketing campaigns.
- Spread risk. Diversify the business and provide for different customer groups.

Source: VisitBritain (2004b), (after work by Morris, 2000 to 2004).

### ***Summing up on tourism***

To sum up, tourism on farms is only one element of rural tourism, and a distinction has to be drawn between the provision of accommodation on farms and attracting visitors to farms (which will often not involve staying there overnight). Again there is some problem in quantifying the extent to which operators of farms are also involved in the provision of services and attractions because at least some of the data sources exclude activities by farm families that are not closely associated with the resources used in farming. The provision of accommodation in cottages that were once occupied by farm workers may be a case in point. Nevertheless, the business competence of farm operators seems to be a key factor in determining the rate of development of farm tourism, as it does diversification in general. Because of the structure of the farming industry such skills are likely to be sub-optimal, and a case may exist for the public provision of training in them and advice as part of policy towards agriculture and rural areas.

### **Multipliers effects of agriculture and other rural activities**

From a policy perspective it is valuable to know the relative performance of the different levers by which economic activity in rural areas can be stimulated. Agriculture, other (diversified) enterprises on farms, non-agricultural activities which may be located in rural areas (including rural tourism), or even those that are urban-based but have strong links with rural residents (such as urban centres that provide jobs for people who commute from the countryside), are all candidates. So too are the means of communication (transport infrastructure, IT facilities, etc.) that enable economic links to function. When incomes and employment are discussed, frequently the attention focuses on quantities. However, when job creation is concerned, it may be equally important to have regard to qualitative aspects – the full-time or part-time nature of the employment offered, its seasonal or constant nature, level of associated pay, sustainability with respect to economic shocks, and the biographics of the people for whom opportunity is provided (gender, age groups, skills levels, ethnic origin etc.) are all of potential interest. Clearly, the social impact of public spending that generates jobs for unskilled school-leavers belonging to rural resident families is potentially very different from that which encourages an inflow of population, especially if the in-migration contains a high proportion of entrepreneurs wishing to take advantage of perceived quality of goods produced in the countryside.

It is also important to bear in mind the distinction between effectiveness and efficiency of policy intervention. Given the small share that agriculture represents in the composition of jobs and sources of income of rural residents, it is highly unlikely that stimulating agriculture will be an effective means of increasing the overall level of economic activity, either nationally or that associated with rural areas. Indeed, Defra indicated to potential tenderers for the mid-term evaluation of the 2000-06 England Rural Development Programme that any effect on the broader economy would probably be undetectable. Nevertheless, applying funds to create jobs and incomes in the agriculture sector may still represent an efficient use of resources, in that the marginal gain may be high compared with the value of feasible alternatives, and spending funds in this way might be economically rational.

A general problem with considering multipliers is that the rural economy is not a system that contains distinct boundaries. Indeed, a case can be put that there is no such thing as a rural economy in the UK, because the degree to which economic transactions that take place in rural areas are connected to what happens in other areas. This was one of the problems encountered in the attempt to build a comprehensive inventory of all support going to rural areas, in pursuit of a more rational and efficient pattern of rural spending, undertaken for MAFF in the later 1980s (Hill *et al.*, 1989, 1991). Winter and Rushbrook (2003) reviewed the literature on interactions between economic sectors in rural areas, citing Courtney and Errington (2000) for whom economic linkages are a network of transactions of varying nature which either contribute to the income generation within, or leakage from, the local economy. In the present context the issue is not so much whether a local economy exists (in any event, there is likely to be substantial variation

in this respect between different rural areas) but the nature of the multipliers involved, which in turn will reflect the internal processes and the leakages to economic agents elsewhere. According to Winter and Rushbrook (2003) “Those concerned to promote endogenous models of development have emphasised the importance of interactions which limit economic leakages from particular localities, thereby both maximising local multipliers and reducing certain externalities such as those associated with long-distance transport”.

However, there is a strand of thinking that suggests that the attempt to use multipliers, at least at the level of the rural economy is miss-placed. Expert evidence given to a government inquiry into the impact of banning hunting with dogs, concluded that, while multipliers based on input-output analysis are valid at national economy level, they are not a reliable tool when trying to assess the effect on rural areas (Midmore, 2000, principally citing Midmore, 1991 and Harrison-Mayfield, 1996). Attempts to make *ex ante* estimates in this way in the case of the imposition of milk quotas had been “hopelessly wrong”. Perhaps reflecting this, Winter and Rushbrook (2003) point out that conventional multiplier research seems to have diminished in academic fashion in recent years and does not figure highly in recent peer-reviewed academic literature, although continuing to play a part in many pieces of applied research.

In practice the size of multipliers associated with alternative forms of public spending on agriculture does not appear to feature centrally in discussions of rural policy in the UK. Far more important than multipliers to the allocation funds to alternative types of intervention are the details of the Regulations under which support from EU funds are available to schemes arranged nationally or sub-nationally.

### ***Multipliers at national level.***

There is a general awareness that support to agriculture (under Pillar 1 of the CAP) has implications for the broader UK economy, though there appears to be little hard evidence of the magnitudes involved and how multipliers compare across sectors. Errington *et al.* (1996) review multipliers in the context of the 1992 CAP reforms and, with the use of the Land-Use Allocation Model (LUAM) of the University of Reading, conclude that, in addition to the anticipated 3.7% reduction in hired labour and 1.4% in family labour (equivalent to 3 500 and 1 900 full-time jobs respectively), there would be larger implications up- and down-stream. In the sectors supplying agriculture (*e.g.* machinery production and repairs), the results suggested a reduction in labour requirement of 6 000 full-time jobs, and downstream (*e.g.* abattoirs and creameries) some 13 900 job losses. These impacts differed widely between regions, reflecting *inter alia* the type of farming. Though the authors were aware of the need to create opportunities in other sectors, they did not quantify or rank them. They pointed out that these opportunities need not be on the farm; skills training and the ability to access to jobs in the locality were central factors.

Some work based on macroeconomic input-output techniques has gone on to rank the impact on the whole economy of supporting agriculture, though not (apparently) at UK level. The Scottish Executive has published multipliers taken from its Social Accounting Matrix (SAM) exercise, with each of its 123 sectors ranked. An extract is given in Table 25.

Table 25. Type I, output, income, employment and GVA multipliers: Scotland, 2004

↓ Industry group ↓	Output multiplier	Rank	Income effect	Rank	Employment effect	Rank	GVA effect	Rank	Income multiplier	Rank	Employment multiplier	Rank	GVA multiplier	Rank
1 Agriculture	1.6	16	0.3	109	14.8	43	0.6	56	2.0	12	1.7	29	1.8	24
2.1 Forestry Planting	1.4	47	0.4	45	24.4	11	0.7	30	1.4	55	1.2	88	1.4	62
2.2 Forestry Harvesting	1.9	4	0.5	16	21.8	17	0.7	37	2.1	11	2.3	9	2.7	6
3.1 Sea Fishing	1.4	67	0.2	124	11.0	91	0.6	75	2.5	7	1.4	50	1.3	75
3.2 Fish Farming	1.5	33	0.2	122	8.9	105	0.4	114	2.2	10	1.8	22	1.8	21
4 Coal Extraction etc	1.6	18	0.3	97	11.1	89	0.4	121	1.8	18	1.7	28	2.3	11
5 Extraction - Oil and Gas	1.7	11	0.4	53	10.7	94	0.5	90	1.9	15	2.6	6	2.5	9
6 Extraction - Metal Ores	1.0	126	1.0	126	1.0	126	1.0	126	1.0	6	1.0	126	1.0	126
7 Other Mining and Quarrying	1.5	35	0.4	70	10.1	96	0.6	62	1.5	44	1.7	27	1.6	40
8 Meat Processing	1.8	6	0.4	88	14.7	46	0.5	106	1.8	16	1.9	15	2.5	7
9 Fish and Fruit Processing	1.7	9	0.4	80	16.9	24	0.6	77	1.6	31	1.6	34	2.2	14
10 Oils and Fats	1.3	69	0.4	83	14.0	56	0.5	86	1.3	83	1.2	93	1.3	67
11 Dairy Products	1.8	5	0.3	103	11.5	84	0.5	112	2.0	13	2.2	10	2.8	5
12 Grain Milling and Starch	1.7	14	0.4	85	11.8	81	0.6	82	1.7	24	2.1	11	1.9	19
13 Animal Feeding Stuffs	1.4	48	0.2	117	7.1	117	0.4	122	1.7	22	2.0	12	1.6	29
14 Bread, Biscuits, etc	1.3	89	0.4	59	15.1	37	0.5	98	1.2	95	1.2	95	1.3	74
15 Sugar	1.0	126	1.0	126	1.0	126	1.0	126	1.0	12	1.0	126	1.0	126
16 Confectionery	1.5	38	0.4	89	11.7	83	0.5	87	1.6	6	1.7	30	1.6	32
17 Miscellaneous Foods	1.4	41	0.4	55	14.1	55	0.6	80	1.4	30	1.5	49	1.5	41
18.1 Spirits and Wines, etc	1.3	85	0.3	111	6.2	119	0.6	50	1.5	54	1.8	21	1.3	86
18.2 Beer Brewing	1.4	51	0.3	92	9.0	104	0.5	104	1.6	43	1.9	14	1.6	28

Source: Scottish Executive.

This shows that agriculture ranks quite high in terms of the size of the Type 1 multipliers (primary and secondary effects, but not including induced effects, although Type 2 multipliers in which the latter are covered are also published); agriculture is among the top third of sectors, not quite as high as forestry harvesting but rather better than forestry planting. No attempt has been made here to appraise the robustness of the coefficients generated. Also, these Scottish results apply to the general economy, and the impacts are not confined to rural areas. It can be expected that many of the inputs are produced in urban areas (fertilisers, fuels etc.) and the outputs similarly pass downstream to urban locations.

### ***Evidence on impacts and relative performance in rural areas***

Here the main interest is *ex post* evidence on the way that support given to agriculture or other sectors has spread to other parts of the rural economy, as reflected in incomes and employment. Unfortunately, there is not much of a robust quantitative nature for the UK.

Much of what is available is fragmentary and comes from research studies and evaluations, including those of the Rural Development Programmes in the constituent countries of the UK. These were not specifically designed to investigate multipliers or the relative performance of alternative ways of providing support to rural areas. The RDPs are aimed very largely at farmers, landowners and foresters, with very little public support available for operators of other types of businesses. In the UK evaluations of other structural funds that potentially might yield information on multipliers across sectors in areas that happen to be rural do not seem to focus on this issue; furthermore, in England there is little Objective 1 coverage of rural areas.

In their review of literature on the rural economy of England, Winter and Rushbrook (2003) cite work that relates to issues of integration, the multiplier effects and economic leakage. The thrust of their findings is that there are many factors other than parameters of rurality (such as population density and/or distance from an urban centre) that determine the extent of leakages and the size of multipliers. For example, the New Economics Foundation (NEF) project "Plugging the gaps" looked for ways, in both urban and rural areas, to determine the multipliers and leakages of different types of business activity and economic development. Drawing on work funded by the Countryside Agency focusing on a locality in Cornwall, the NEF claimed that every GBP 10 spent on a local organic food initiative generated GBP 25 in the vicinity, substantially more than the GBP 14 if the GBP10 was spent in a supermarket. In another study the NEF conducted a multiplier analysis in 2002 of a local cash point in a market town in Leicestershire (Ibstock), discovering that every GBP 10 withdrawn from the cash point led to GBP 6.30 spent locally compared to only GBP 3.80 in the case of GBP 10 withdrawn from a building society.

Though some general conclusions are possible (including that very small and independent firms, *i.e.* those that are not branches of a larger national or international organisation, are likely to be more closely integrated into the local economy in terms of both their purchases and their sales, with the implication that their multipliers will be greater) the picture of sectoral differences is far from simple. Where comparisons enabled the industrial sectors (in terms of their Standard Industrial Classification - SIC) of two small towns to be compared, the firms that were least closely connected to the local economy were inconsistent – in one area they belonged to the agriculture group, and in another it was those falling within the .business services category). When such variation is apparent is not safe to make any general conclusion about multipliers associated with different sectors in the UK, other than that relating to the complexity of the situation.

The relative importance of agriculture varies widely throughout the UK but is likely to be at its highest in areas dominated by hill farming (though even there its economic share has been in decline), which are at the same time relatively remote. Special attention has been given to agriculture's economic role in these locations (regions and localities)(IEEP, 2004). Employment and economic activity associated

with hill farming can be significant there, though this will reflect the size of the unit used for assessment. For example, while agricultural employment was only 1% at a District-wide scale, in a smaller case study area (in the southwest Lake District), the figure rose to 10%, providing an important source of employment for some 359 people. Hill farming also benefits the wider rural economy through purchases of inputs and distribution, marketing and processing of outputs. According to IEEP (2004), regional output and employment multipliers have been estimated at around 1.5 in the South West – *i.e.* each livestock farming jobs supported an extra 0.5 jobs elsewhere in the economy, upstream and downstream. In the assessment of IEEP, the justification for public support for hill farming in agricultural terms is arguably weak but strengthened when the multiplier effect of agriculture is considered. Even so, “the level of public expenditure required to maintain a relatively small number of jobs and produce primary products such as beef, lamb and milk seems disproportionately large to the benefits accrued.” “Having said this, given the limited employment opportunities in many parts of the LFA, the costs to society through, for example the need for social security support, to compensate for the loss of employment opportunities could itself, be significant. These factors must be weighed up in any future consideration of levels of support for hill farming.”

The four Rural Development Programmes for the period 2000-06 underwent a mid-term evaluation in 2003. The Common Evaluation framework asks a number of questions that are relevant to this section. In particular there is a request for evaluators to indicate the number of jobs created/maintained, both in agriculture and in other enterprises in rural areas. Given the rather imprecise meaning of creating/maintaining a job, the difficulty of establishing the counterfactual, and the short period that the various schemes had been running, it should be noted that in England the evaluation report estimated that the impact on labour in agriculture had been 11 070 FTE, with a further 1 136 FTE in other enterprises (ADAS/SQW, 2003). At the time some GBP 692 million of public spending had taken place, but much of this would have been for purposes other than jobs creation/maintenance (the RDP includes agri-environment and payments to farmers in hill areas). Only in grants to aid processing and marketing was it possible to establish the impact on the income of the non-farm population (probably because major beneficiaries were non-farmers).

In Table 26, taken from the 2003 England RDP mid-term report, the jobs created and maintained in the farm/forestry sector and the non-farm sector have been added together. The cost of new commitments by scheme under the RDR is compared to the jobs created or maintained calculated from the responses from a survey of beneficiaries. This only includes jobs directly created or maintained on beneficiary holdings. The supplier effect and multiplier effect has not been estimated. In addition, the costs are the sum of the actual payments made to beneficiaries under each scheme (programme costs) and exclude the cost of administration (usually referred to by Defra as running costs) and the contributions of beneficiaries. The average cost per job created by the programme was GBP 81 235 and the average cost per job created or maintained was GBP 28 648. But this covered a variety of types of schemes (listed in Table 26, with acronyms explained). The schemes which might be regarded as having a primarily economic development focus (RES, PMG, VTS and ECS), cost GBP 27 million (8% of the programme) and created or maintained 2 480 jobs at an average cost per job of GBP 10 885. This is substantially lower than the cost of creating or maintaining jobs using environmental schemes (see below) and points to the need to match instrument to desired outcome.

**Table 26. Jobs Created or Maintained and Costs by Scheme – England RDP, 2003**

Scheme	Jobs			Cost GBP	Cost GBP per job created	Cost GBP per job C&M
	Created	Maintained	C&M			
CSS	588	2 125	2 713	47 320 199	80 477	17 442
ESA	420	805	1 225	26 246 799	62 492	21 426
OFS	195	907	1 102	22 576 671	115 778	20 487
HFA	480	1 840	2 320	161 897 021	245 827	50 861
FWPS/WGS	1 664	709	2 373	64 840 921	38 967	27 324
PMG	522	863	1 385	7 595 311	14 550	5 484
RES	438	657	1 095	16 583 177	37 861	15 144
VTS	0	0	0	2 452 018	n.a.	n.a.
ECS	0	0	0	365 528	n.a.	n.a.
Total	4 307	7 906	12 213	349 877 644	81 235	28 648

n.a: not available; CSS = Countryside Stewardship Scheme; ESA = Environmentally Sensitive Area scheme; OFS = Organic Farming Scheme; HFA = Hill Farm Allowance scheme; FWPS/WGS = Farm Woodland Premium Scheme/Woodland Grant Scheme; PMG = Processing and Marketing Grant scheme; RES = Rural Enterprise Scheme; VTS = Vocation Training Scheme; ECS = Energy Crop Scheme.

Source: ADAS/SQW, 2003.

In Wales there are claims for quite large multipliers. For example, the strategy document that lies behind the Rural Development Plan for Wales 2007-2013 (WAG, 2007) states that “economically, agriculture supports more than 10% of full-time employees in many parts of rural Wales when a multiplier effect is taken into account.” This assertion was repeated in evidence by a representative of a Wales farmers’ union to a House of Lords Committee inquiring into the future of the CAP (HoL, 2008, Q348). The RDP itself contained more specific figures on multipliers. According to the Welsh Assembly Government estimates suggest that the employment multiplier for the sheep sector in Wales is 1.53, and for the cattle industry, 2.03 (so for every one job created in the sheep industry, 0.53 full time equivalent jobs are created in the wider economy). Income multipliers are estimated to lie between 1.42 and 1.78. When viewing these figures, it should be noted that there is evidence of upward bias in the calculation of multipliers. However, the mid-term evaluation of the 2000-06 Welsh Rural Development Plan could not provide evidence to support these estimates, in part because of the delayed start of schemes, though contractors were frequent beneficiaries of capital projects supported by grants from the RDP (ADAS/SQW 2003).

In the same House of Lords session the representative of the Scottish farmers’ union asserted that “There is some recent work which shows that [agriculture’s multiplier] is much higher than, for instance, in the hotel and catering side and also on the retail side”.

### ***The socio-economic impact of environmental improvement***

Economic stimulation is not only the result of interventions aimed primarily at economic activity. The environmental conditions in rural area can have an economic impact, and public spending on improving the environment (such as agri-environmental schemes) can increase incomes and jobs. This can happen directly (through jobs created in the process of achieving or maintaining improvements) or indirectly through, for example, the encouragement of tourism, enhanced brand image of goods produced in attractive locations, firm relocation and inward migration. Winter and Rushbrook (2003) reported:

- a number of studies of how specific natural characteristics of landscape and environment were used to help in the branding of products, for example through quality assurance schemes (citing C. Morris, 2000 and C. Morris and Young, 2000);
- of the “commodification of natural processes or outputs” may take place, as in game shooting for instance (Cox *et al.*, 1996);
- of how particular landscapes or wildlife sites might benefit the economy (Crabtree, 1997).

Some policy evaluations of agri-environment schemes have given modest attention to how payments are multiplied within the rural economy (*e.g.* ADAS, 1996). As a specific example, the grant-aided maintenance of Devon hedges to achieve Biodiversity Action Plan (BAP) targets has been shown to have a wide range of spin-off economic benefits (Mills *et al.*, 2000). The aim of the research was to estimate the *additional* income and employment impacts to the local economy arising from an injection of GBP 1 million per year for five years for hedge restoration. The conclusion was that, when both direct and indirect effects were considered, income generation within the local economy amounted to GBP 2 439 732. The greatest income impact was on contractors and farmers who implemented the work, and this generated a further GBP 158 662 of expenditure in the local economy. An overall expenditure multiplier of 1.3 was calculated. This work did not attempt to extend the analysis into the impact on business location, tourism, recreation, residential re-location, etc. Similarly, a review of the employment impact of agri-environmental schemes in Scotland noted that most of the extra labour required was supplied by contractors (SNH, 2002), though there was no clear consensus in previous studies of the overall impact on rural employment.

Another example of research that has examined both the direct and indirect effects of an environmental scheme was a study of Countryside Stewardship Scheme (CSS) agreements between 1991 and 1994 (Harrison-Mayfield *et al.*, 1998). This estimated that from early CSS agreements, the direct employment effect was +50 on-farm jobs, the effect on suppliers was +479 jobs and the output effect (on down-stream sectors) was negative –509 jobs, giving a net effect overall of +20 jobs. The fact that the positive and negative indirect effects were both larger than the direct effects on farms emphasises the need to take these into account in any satisfactory evaluation.

In the England RDP mid-term evaluation of 2003 a number of schemes that are primarily aimed at environmental goals were included (ADAS/SQW, 2003). Considering only these schemes (ESA, CSS, OFS, HFA and FWPS and WGS), the cost was GBP 323 million (92% of programme spend) and they directly created or maintained 9 733 jobs, at an average cost of GBP 33 173 per job. For the three overtly agri-environment schemes (CSS, ESA and OFS) the costs per job directly created or maintained is in a narrow range from GBP 17 000 to GBP 22 000.

Another, later, example of the socio-economic impact of agri-environmental spending is the evaluation of the Welsh Tir Gofal scheme (AgraCEAS, 2005). This found that the total expenditure change in Wales as a result of the provision of grants to farmers under Tir Gofal for management agreements was around GBP 4.2 million (including match funding contributed by farmers but adjusting for imports from outside Wales of the inputs required by the environmental scheme). Of this, around 73% was with Welsh industries, with much of the remainder (23%) going to Welsh households, including those of the farmers themselves (direct payments to labour, or grant payments retained as farm income). The remaining 4% leaked out of the Welsh economy as taxes or further imports. Once indirect effects were incorporated the final expenditure/output impact on the local economy was GBP 6.3 million, and this was associated with around 112 full-time jobs equivalents. In terms of the sectoral impacts, around half of the expenditure was concentrated in just two sectors, agriculture, forestry and fishing, and construction. In terms of employment, over 60% of the impact was in these two sectors. When only capital projects of an environmental nature under Tir Gofal were considered (grants and matching funds provided by the farmers), the majority of the GBP 14.25 million stayed in the economy as payments to Welsh industries or

households. This spending then generated indirect effects and gave an overall impact on the economy of over GBP 21 million, supporting some 385 full-time job equivalents.

Direct measurement of the broader impacts of environmental spending is problematic. Nevertheless, Winter and Rushbrook (2003) refer to a National Trust study (1999) which estimated that 79% of all annual holiday trips to Devon were motivated by the conserved landscape. The definition of the term “conserved landscape” was broad, describing fields, woods, moorland, villages and coastline. The trips were estimated to last 20.7 million nights with a visitor spend of GBP 749 million. In addition, a total of 23 900 full-time equivalent jobs were supported by landscape-motivated holiday trips. Of these 16 000 were direct, the balance of 9 000 coming from linkages and multiplier effects.

It would be wrong to give the impression that environmental and landscape improvement is only delivered by agriculture and forestry, and that the employment associated with the care and management of the natural heritage is exclusively rural. In Scotland rural areas contain only 40% of the estimated 8 230 jobs which relate to care and management of the natural heritage, whereas they represent only 11% of all jobs in Scotland (Scottish Natural Heritage - SNH). However there may be rural locations where they are disproportionately significant. According to SNH, INC (1995) found that 22% of natural heritage jobs in the Highlands and Islands were in areas designated as economically fragile, which contain 13% of all employment in the Highlands and Islands. These economically fragile areas tended to have a high quality natural environment and were thus particularly suited to natural heritage-based economic activities with positive environmental impacts.

### ***Multipliers of other sectors in rural areas***

#### *Tourism and forestry*

By comparison, the role of rural tourism (not just that taking place on farms) in creation of jobs and incomes via multipliers has received more attention. For example the Countryside Agency cites the following (Countryside Capital underpins rural tourism (Countryside Agency, 200\*)):

- 18 000 people were directly employed in tourism in Gloucestershire of which 58% were in rural areas, and Gloucestershire Tourism estimated that tourism expenditure indirectly supported a further 8 700 jobs in the county (an implied employment multiplier of 1.6).
- Visitors made over 21 million day and overnight visits to Lincolnshire in 1999 and spent GBP 807 million. This converted to an estimated GBP 973 million, when expenditure by businesses servicing this tourist market was added, and implied an output multiplier of 1.2.

Similarly, forestry in England has been the subject of reviews of its broader impacts on the economy. Survey work reported by the Forestry Commission estimated a range of multipliers and hypothesised a range of scenarios (Forestry Commission, 2000). The key points are that:

- The total gross output generated by the forestry and processing industries in England was GBP 2 939 million, 37% of which was attributable directly to forestry and processing activities (GBP 1 085 million). The rest was indirect and induced. Thus the implied total gross output multiplier was 2.71.
- Direct estimated forestry and processing net output amounted to GBP 380 million. The net output multiplier was 2.63, meaning a total net output of GBP 1 000 million.
- The total number of jobs (full time equivalents) supported by the forestry and processing activities in England was 34 100, 84% more than the number of jobs attributable directly to the forestry and processing sectors (18 500). The total employment multiplier was 1.84.

- 94% of the direct employment impact (equal to 17 500) falls within the local area, defined as within 20 miles from the forest. The local employment multiplier (1.36), and the rural + local employment multiplier (1.43) were much lower than the total (*i.e.* England) employment multiplier (1.84).
- The estimated employment multipliers for processing were much greater than for forestry (respective multipliers of 2.49 and 1.40). The net output and gross output multipliers for processing were also much greater than those for forestry.
- Amongst forestry activities, harvesting accounted for a large proportion of direct jobs, 5 200 compared with 3 600 in maintenance and 2 200 in establishment. It also generated larger employment multiplier effects than the other two forestry activities, with a multiplier of 1.49 compared with 1.29 for maintenance and 1.38 for establishment.
- Within the different forest types, productive and traditional estate forests accounted for the majority of jobs generated directly (respectively 4 600 and 3 400) compared with 1 800 and 1 200 in small farm and community woodlands. The employment multiplier effects were also greater in the former two. Moreover, the employment multiplier for softwood was significantly higher than for hardwood (2.63 and 1.38 respectively).

Among the scenarios investigated, the study suggested that a 50% increase in English timber harvesting would add to the English economy another 3 900 jobs, a GBP 270 million supplementary gross output and an extra GBP 103 million net output. Looking at the issue from the opposite perspective, the removal of all forestry activities would impact quite dramatically on the English economy since, besides the loss of direct employment, gross output and net output effects for forestry, some processing activities are partially dependent on the supply of domestic (*i.e.* English) timber. The total impacts of such a removal amount to 16 500 jobs lost, a decrease of GBP 914 million in gross output and a total English net output diminished by GBP 400 million.

Another Forestry Commission project looked at the total economic benefits from forestry in the South West of England and found that there can be significant indirect effects. The study found that the direct value of timber production in that region was GBP 17 million a year, but that the processing of both local and imported timber was estimated to increase the value of the sector to around GBP 151 million per year. Obviously the amount of imported material is an issue in estimating the multiplier. But the study also found that other economic uses of woodland and forestry, including recreation, tourism and sporting activities, provided major returns to the regional economy. Thus it may be more appropriate to consider forestry and forest-related tourism as a combined category.

In Wales tourism is significant as a source of jobs and income. According to the strategy document prepared as part of the Rural Development Plan for Wales 2007-2013 (WAG, 2007), tourism ‘supported’ 37 300 jobs and a further 5 000 to 6 000 in self-employment in 2001 in tourism-related sectors in rural Wales (the 9 rural local authorities). This represented 12% of all employment in rural Wales, compared with 8% nationally. It also formed 42% of all employment in tourism-related sectors within Wales (data from NOMIS and the Labour Force Survey). Fishing tourism in Wales is estimated to contribute GBP 80 million, but this includes sea fishing tourism and is not restricted to activities in areas that are classed as rural.

The same Welsh document points to the large recent growth in the use of forest for the tourism industry (mountain biking, etc.) and the provision of facilities for these activities. At March 2005 there were some 286 000 hectares of woodland in Wales, of which 38.0% was in public ownership (the Forestry Commission). The RDP estimated that state and private forests in Wales contribute some GBP 30 million per annum to tourism. This would have been in addition to the value of its direct production; the gross output of the Welsh forestry industry was estimated to be around GBP 400 million and it supports around

4 100 full time equivalent jobs, mostly in rural areas where employment opportunities are limited. The bulk of these jobs are in the sawmilling and processing sector.

***Comment***

The lack of evidence on the relative performance of schemes directed at agriculture and other sectors in generating economic activity and jobs, both on farms and elsewhere in rural areas, is regrettable. A more economically rational way of allocating resources to the different levers that affect economic activity of rural residents might be possible if such information were available to policymakers. There are severe methodological problems in attempting to measure indicators that apply only to rural areas because of the close intermixing between economic activities of people and firms located in rural and urban areas. It seems unlikely that those multipliers that have been calculated would be regarded as evidence strong enough on which to base major decisions on resource allocation.

In the absence of robust multipliers, judgement has to be made on other criteria. The general impression is that, if the aim is to promote jobs and incomes in rural areas, it is preferable to spend on human capital improvements, better infrastructure and correcting for other manifestation of market failure than to support agriculture against the long-term pressure on it to restructure. However, at present this can only be inadequately substantiated.

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**Annex 1.**  
**The basis of the new classification system in England and Wales**  
**(summarised from Shepherd 2007)<sup>4</sup>**

**The rural definition at the level of localities**

Two features of the rural settlement landscape are identified in the definition: settlement morphology and settlement context. Compared with the OECD recommendation of a 1 km grid to define a local community level of rurality, this approach is 100 times more detailed. Furthermore, it puts settlements in their wider context.

Every residential postal address in England and Wales (around 23 million addresses) is allocated to a 1 ha grid cell. The key analytical step is the calculation of a density profile for each cell in the grid using a constant numerator but different denominators. For the identification of settlement type the denominators are set at 200 metre (m), 400 m, 800 m and 1600 m around each cell. For the calculation of the much larger scale context measure, the denominators are 10 km, 20 km and 30 km, chosen to represent average distances to services of different kinds. In Geographical Information Systems terms a ‘moving window’ consisting of a set of fixed denominator concentric density zones is passed over each cell in the grid and the average household densities at each scale are calculated for each cell.

Empirically it can be shown that different types of rural settlement exhibit a typical density profile. Thus a ‘compact village’ would have a density of greater than 0.18 residences per hectare at the 800 m scale, a density at least double that at the 400 m scale and a density at the 200 m scale at least 1.5 times the density at the 400 m scale. For a ‘small rural town’ the numbers, respectively, would be 2.1, 7.3 and 18.3. In practice, the method was found to be capable of identifying at least nine distinct rural settlement types including rural town, town fringe, village, village envelope, hamlet and isolated dwellings. The same principle was applied at wider geographic scales to identify the population context or ‘density landscape’ in which a rural settlement type is found. This can be interpreted as the generalized accessibility of a settlement (*i.e.* average expected distances) to town shopping, local authority services and emergency services. In the case of the new rural definition generalized densities were calculated at three scales: 10 000 m, 20 000m and 30 000 m.

The final stage in the definition process is the classification of the basic national census areas (namely, Census Output Areas, Super Output Areas, wards etc.) according the proportion of population in each settlement type within the census area concerned. In the case of the settlement morphology measure an area is classified according to the majority of resident population in one of three settlement types: rural town, village and ‘dispersed’ dwellings. In the case of settlement context an area is “scored” as “sparse” if it has the majority of its population at a specific level of average density in all three geographic scales.

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4. A full discussion of the definition methodology and results with detailed mapping can be found on the Office for National Statistics website at [www.statistics.gov.uk](http://www.statistics.gov.uk), the Defra website at [www.defra.gov.uk](http://www.defra.gov.uk) and on the Rural Evidence Research Centre website at [www.erc.ac.uk](http://www.erc.ac.uk)

## The rural-urban classification of local authorities

Four principles were applied in creating the English LAD classification:

- a rural-urban classification of LADs is primarily a data presentation and analysis tool. It is not a policy *targeting* tool. A LAD classification should be constructed in such a way that it supports policy analysis. This implies an appropriate disaggregation of the classification such that the degree and type of rurality within a LAD can be identified;
- consideration should be given to the ‘strategic’ settlement pattern of England as viewed from the perspective of the geographic scale of LADs. Broadly, there is a group of LADs that comprises all or some of the largest urban areas in the country, a group that is clearly identifiable as ‘rural’ and a group that is of an intermediate type or varying in levels of ‘mix’ of urban and rural character;
- the specific criteria used to allocate LADs to one group or another in the classification should be based upon both absolute (number) and relative (percentage) values of the various settlement characteristics of which the districts are comprised. Absolute numbers indicate the total of people to be provided with services in rural areas, percentage values indicate the intensity of rurality of one LAD compared with another; and
- although in the rural definition *sensu stricto* settlements with more than 10 000 population are deemed ‘urban’ wherever they are located, a specific category of “larger market towns” (population 10 – 30 000), was created for the rural classification to identify those towns which provided a wider hinterland of rural towns, villages and hamlets with services and employment.

The six broad types of LAD (of which three are rural) are described in the main text.