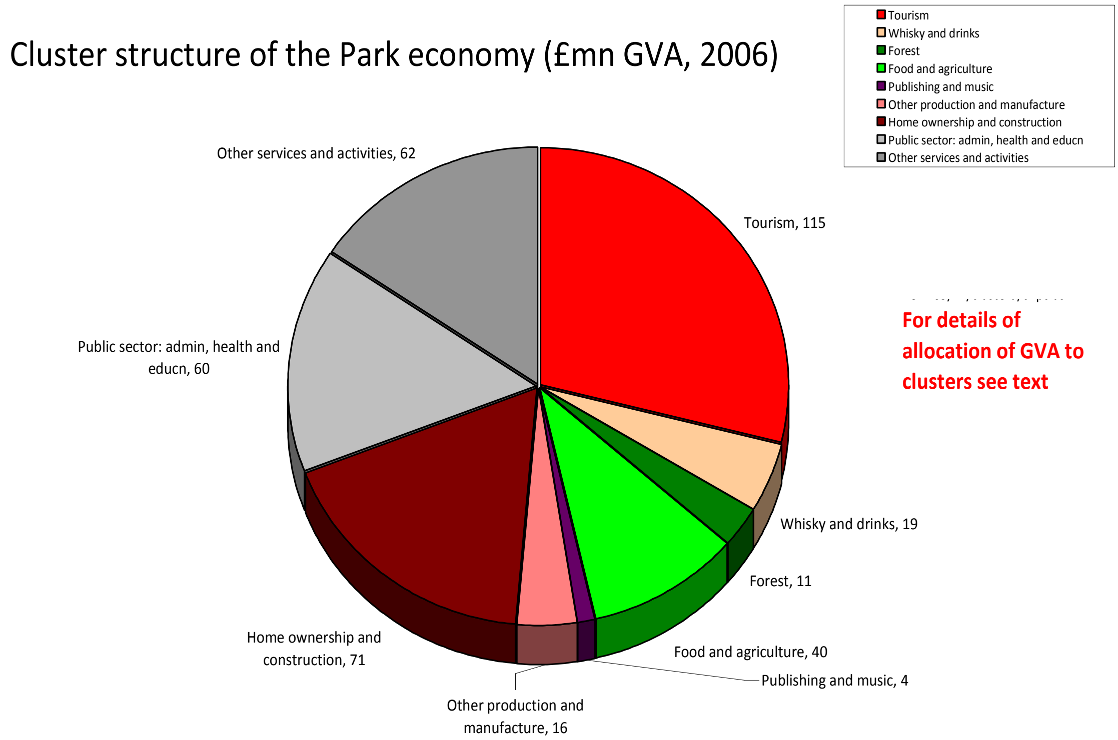
8 Clusters of related industrial and economic activities

A cluster is not just a statistical idea but an economic concept - a group of activities, industries and organisations whose linkages and interrelationships enhance performance and competitive advantage. It is often helpful to use the more economic and socially-oriented idea of a cluster of related activities than the statistically-oriented one of industrial sectors.

The clustered structure of the Park economy is one of its main features. About half of the value added is created in five clusters, all of which earn substantial revenues from non-residents. The other half of the economy mainly serves Park inhabitants, although it also includes some 'exporting' industries which appear to be relatively self-standing. They have strong linkages in a *regional* and *national* context, for example to North Sea oil, but are not obviously parts of *local* clusters.

Clusters overlap – for example forest tourism activities are part of both the forest cluster and the tourism cluster, and distilleries with visitor centres likewise belong to the two clusters of drinks and tourism. To avoid double counting, for Figure 43 covering the entire park economy, all 'overlapping' value added has been divided up between its two or three clusters, so that the total GVA adds up to the Park GVA. This means that the figures shown against each cluster should be considered a 'minimum' figure for the GVA created in that cluster.

Figure 43 Allocation of Park GVA to clusters[7]



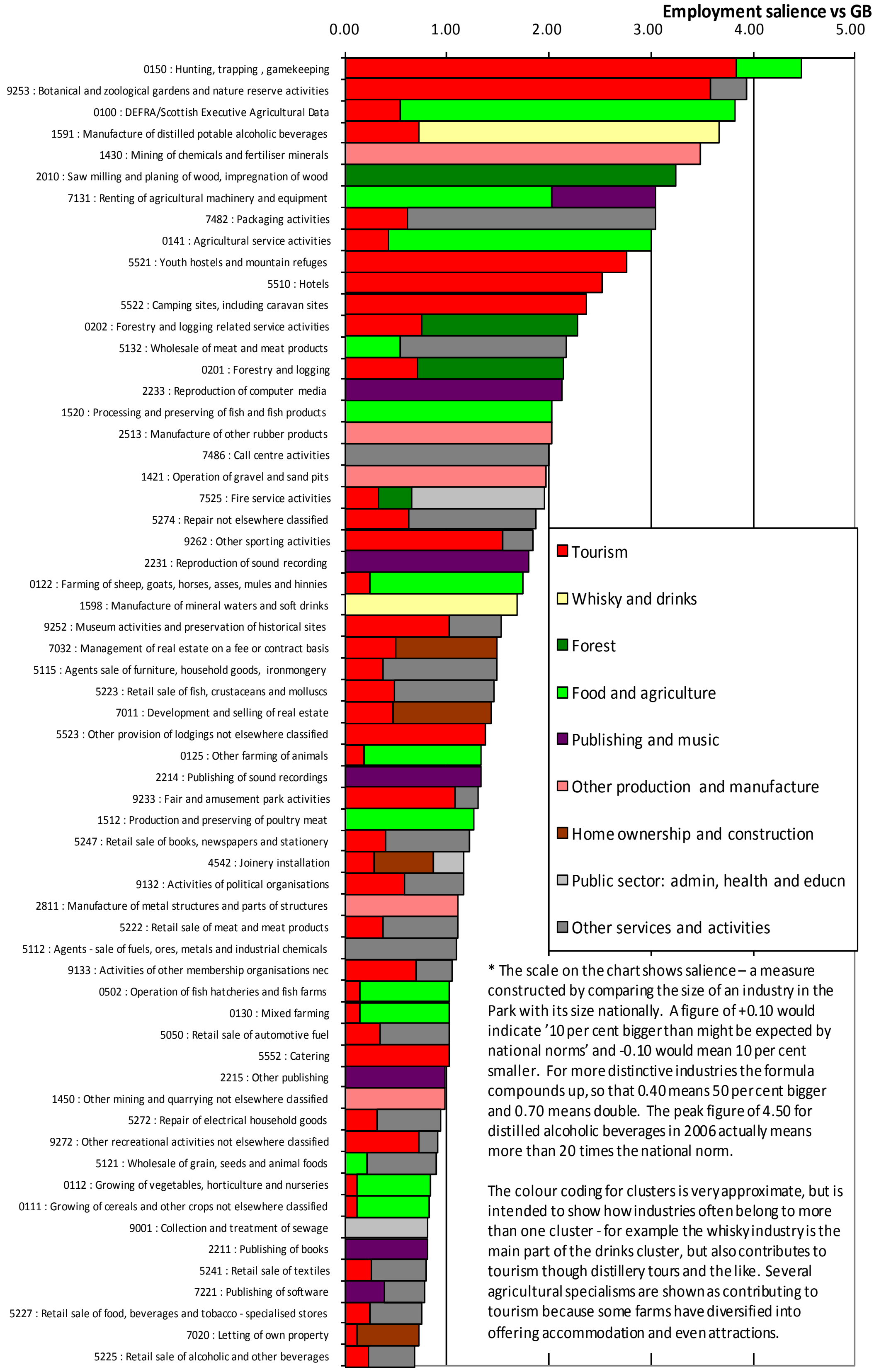
It is useful to look at it in these nine sections:

- The tourism cluster
- The whisky and drinks cluster
- The forest cluster
- The cluster of other food and agriculture
- Information and creative industries, especially publishing and music
- Other production and manufacturing industries
- Home ownership and construction
- The public sector: administration, health and education
- Other industries and activities

In Figure 44 we present industry salience in a way designed to bring out the cluster structure. The length of an industry bar indicates how distinctive an industry is (in exactly the same way as in Figure 40 for employment), but we have shaded the bars according to cluster membership. The chart shows clearly how important tourism and agriculture are in making the Park a 'special place' in economic terms. Thus the predominance of red shows how 'special' a place the Park is from the viewpoint of tourism employment, and the dark and light green show the role of wood products and food/farming in making it special.

The overlapping nature of the Park's clusters would be considered very positive by cluster practitioners: it is frequently asserted that growth and creativity occur as the result of cluster synergy.

Figure 44 Cluster membership of most salient industries



Source: ONS and Cogentsi calculations

8.1 The tourism cluster

Tourism in the National Park earns more than £100m in Gross Value Added and employs about 3,600 people. It thus represents approaching a third of the Park economy. Indeed, our analysis indicates that Badenoch and Strathspey is the most tourism-intensive area in Scotland, and that in proportion to its population it has the strongest 'tourism balance of payments' of any district in the United Kingdom – including archetypal resorts such as Blackpool and Brighton.

The bulk of the jobs, and the value added, are in providing accommodation and serving food and drink. Hotels are by far the largest employer, but on the accommodation side hostels, camping and bed and breakfast establishments are also much larger than the national norm. Restaurants and bars are significant employers. Leisure and recreation is the second largest statistical category, and the one where most visitor attractions appear.

General retailing is fully up-to-size within the Park, but several categories of shop are exceptionally well-represented: hardware (which includes many fancy goods, souvenirs, and gifts) and clothing. Broadly we have included the *excess* GVA and employment from these retailers, over and above the norms appropriate to a population of the Park's size and income level, as part of the tourism cluster.

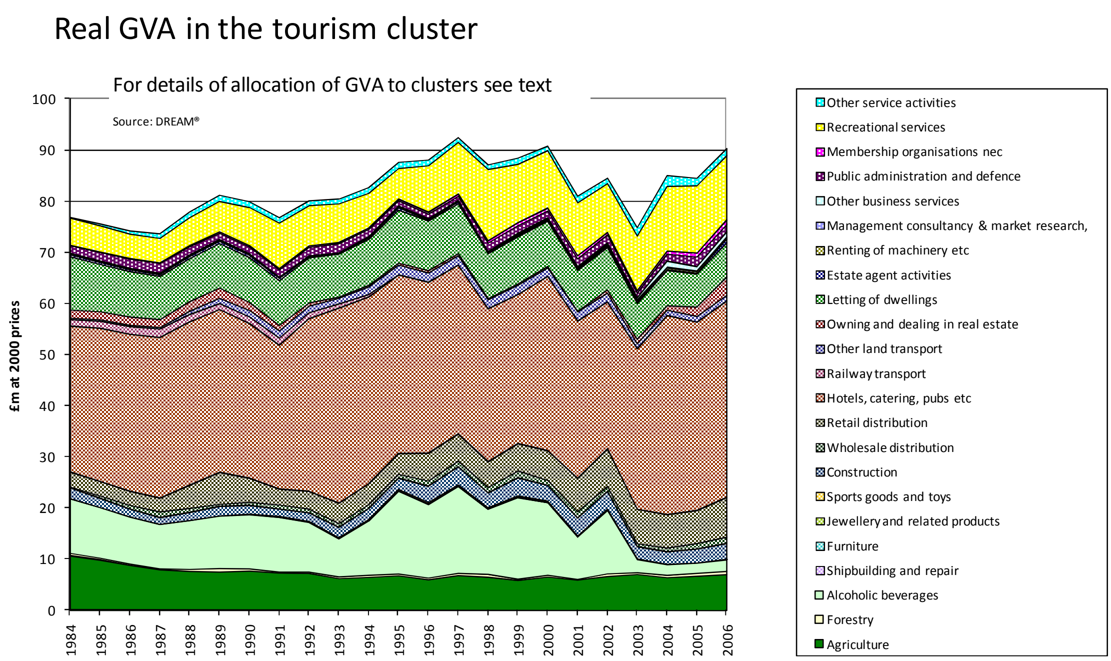
A first assessment indicates that of the 197 industries which exist in the Park[8], 74 have some relationship to tourism.

This includes not only those sectors which are predominantly tourism related, such as accommodation or visitor attractions, but also others for whom tourists and the tourism industry is an important generator of employment and wealth. An example would be various building trades, where a proportion of construction and building maintenance is linked to tourism development, including visitor attractions, accommodation and the public realm.

Figure 45 shows the growth of real GVA in the tourism cluster, from a 1990s plateau at about £60m, there was a significant step up around the time of designation, to about £90m per annum. It is worth noting that 'Real' GVA here means GVA measured at prices ruling in the year 2000. Prices in 2009 are about 27 per cent higher than that, so 2006 GVA in today's money is about £115m.

The upward step arose mainly from an increase in hotel and catering employment, partly associated with the last major redevelopment at the Aviemore Highland Resort

Figure 45 Tourism cluster gross value added



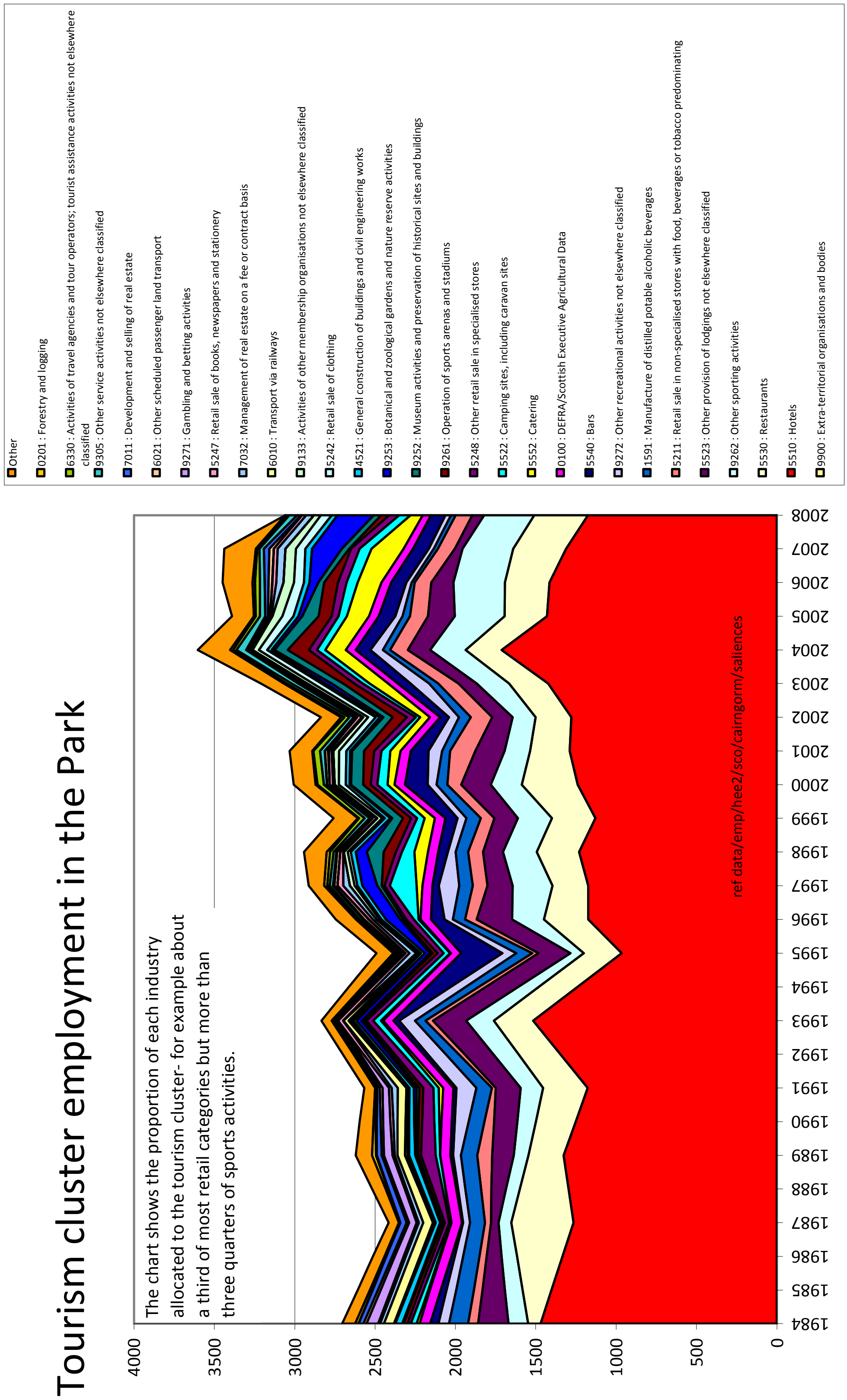
Employment in the tourism cluster is estimated to have peaked at more than 3,500 in 2004. It has contracted slightly in recent years and is currently around 3,000 (see Figure 46). However, this is still significantly more than the 2,500 or so who were employed in the cluster between the mid 1980s and mid 1990s i.e. well before Park designation.

[8] Using the SIC classification of all 515 industries

Hotels and restaurants make up about half of the employment in the tourism cluster. It is quite clear that the other industries that contribute to the tourist experience are truly a cluster of disparate activities including visitor attractions, outdoor activities, retailing and transport.

The destination management organisations that have been established to develop the cluster have both determined to be 'inclusive' of a range of operations, and this is plainly in the interests of the Park economy.

Figure 46 Tourism cluster employment



Visitor attractions

Highland Folk Museum and Landmark Forest Adventure Park

Since the inauguration of the Park, some 29 visitor attractions have been covered in VisitScotland's Visitor Attraction Monitor, compiled by the Moffat Centre for Tourism Research. A further 13 attractions are in the 'Halo' area surrounding the Park. The Monitor in principle is confined to 'tourism attractions', defined by VisitScotland to exclude sporting and cultural attractions, so that skiers, snowboarders, mountain bikers and those attending the theatre or events such as music festivals are not counted in the Monitor.

Not every attraction's figures are published every year, and the Monitor respects any requests for confidentiality that the attractions may make. Despite these caveats, it can be estimated that approximately 1.2 million visits are made to attractions within the current Park boundary each year, and a further 0.4 million to those in the 'halo' area (in which the Perthshire attractions near the A9 feature strongly). As Table 7 shows, the most visited attractions are the Landmark Forest Adventure Park at Carrbridge, Blair Castle near Blair Atholl and three attractions near Aviemore: CairnGorm Mountain Railway; the Rothiemurchus Estate; and Glenmore Forest Park Visitor Centre. Each of these has exceeded 100,000 visitors in recent years. Many of the Park's attractions focus either on the history, the landscape or the culture of the region. Approximately 15 per cent of visits are to distilleries, including three in the Park, one on the boundary, and three in the halo area.

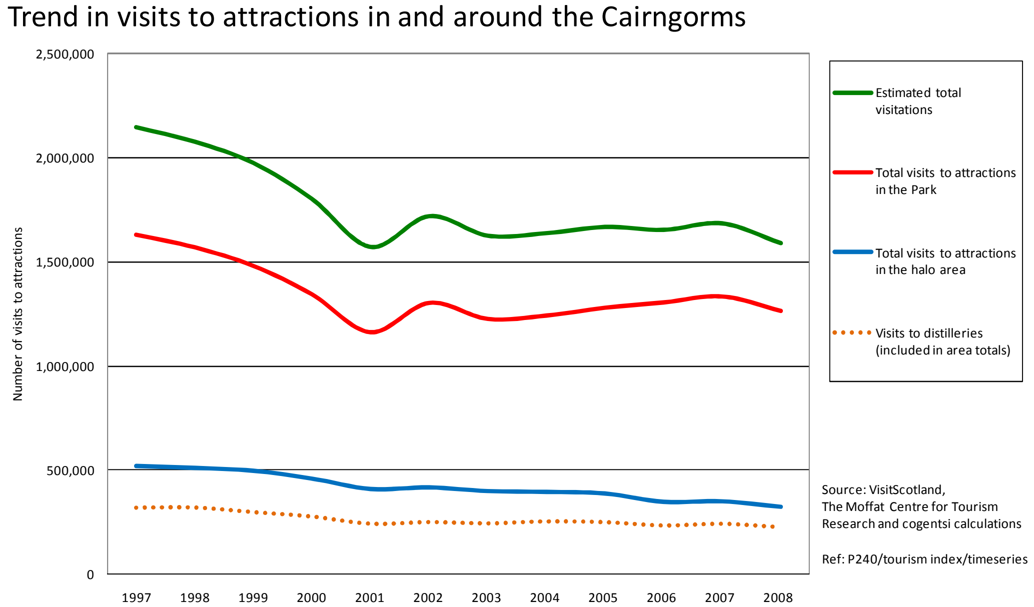
Table 7 Visits to attractions in and around the Cairngorms National Park

Visitor attraction	Local Authority	Park / Halo	2002	2003	2004	2005	2006	2007	2008
Landmark Forest Adventure Park, Carrbridge	Highland	Park					134,000	140,600	
CairnGorm Mountain Railway (excluding skiers)	Highland	Park	168,777	187,015	161,360	162,702	156,354	149,699	145,154
Blair Castle	Perthshire	Park	131,941	131,609	140,688	135,330	147,660		
Rothiemurchus Estate	Highland	Park		34,000	54,490			110,834	106,561
Glenmore Forest Park Visitor Centre	Highland	Park	89,517	90,014	92,000	96,658	102,233	105,143	68,752
Speyside Heather Centre, Dulnian Bridge	Highland	Park		62,550	64,379	72,980	70,702	75,559	
Balmoral Estates	Aberdeenshire	Park	77,012	69,500	65,000	65,000	64,000	60,000	
Highland Wildlife Park, Kingussie	Highland	Park	62,933	64,627	63,511	65,874	67,000	62,676	78,683
Strathspey Steam Railway	Highland	Park		52,263	56,287		49,145	61,586	
Loch Muick & Lochnagar Wildlife Reserve	Aberdeenshire	Park					48,494	48,441	48,654
Revack Estate, Grantown	Highland	Park	36,000	36,500	35,000	35,000	40,000	30,000	30,000
Loch Garten Osprey Centre	Highland	Park				33,048	35,604	31,259	
Glenshee Ski Centre	Angus / Aberdeenshire	Park				36,300	42,000	9,463	
Blair Athol Distillery, Pitlochry	Perthshire	Park	33,000			32,000	33,000	37,491	
Dalwhinnie Distillery	Highland	Park	24,805	25,485	24,576		18,993	19,942	
Highland Folk Museum, Newtonmore	Highland	Park		19,273	17,873	17,494	16,780	36,904	32,322
Highland Folk Museum, Kingussie	Highland	Park	35,871	15,563	14,257	6,628	7,401	13,878	
Watermill & Tearoom, Blair Atholl	Perthshire	Park		10,000	22,660	31,333	27,874	30,537	35,000
Cairngorm Reindeer Centre	Highland	Park	18,414	17,480	18,455	18,484	17,918	19,357	21,361
Royal Lochnagar Distillery Visitor centre	Aberdeenshire	Park	11,300	11,027	11,244	11,561	8,547	9,864	8,079
Braemar Castle	Aberdeenshire	Park	13,461	14,227	12,402				
Tomintoul Museum and Visitor Centre	Aberdeenshire	Park	12,718	14,488	11,122	12,999	12,887	13,228	10,214
RSPB Insh Marshes	Highland	Park	12,000	12,000	12,000	12,000	11,400	10,000	12,422
Inshriach Nursery	Highland	Park				18,000	20,000	23,500	22,850
Working Sheepdogs, Kingussie	Highland	Park	6,380						
Corgarff Castle, Strathdon	Aberdeenshire	Park	4,874	4,885	5,055	3,241	4,121	5,705	4,304
Auchgourish Gardens, Boat of Garten	Highland	Park	4,850	3,930	4,220	5,670	5,027	2,300	2,200
Clan Macpherson Museum, Newtonmore	Highland	Park		3,740	4,172	4,061	3,455	4,164	4,188
Atholl Country Life Museum, Blair Atholl	Perthshire	Park	1,080	1,734	1,663	1,703	1,682	2,126	2,353
Glenlivet Distillery	Moray	Halo		39,949	45,191	45,730	44,241	47,867	44,500
Edradour Distillery, Pilochry	Perthshire	Halo	88,699	94,716	100,826	97,082	88,885	95,291	87,910
Scottish & Southern Visitor Centre	Perthshire	Halo		61,975	56,300	56,921	49,302	46,023	47,334
Crathes Castle	Aberdeenshire	Halo	89,138	91,701	84,491	76,802	64,108	61,422	52,240
Tomatin Distillery	Highland	Halo	33,698	30,729	28,749	30,613	28,866	21,772	21,146
Drum Castle, Banchory	Aberdeenshire	Halo	37,000	27,640	25,371	25,896	18,663	22,946	18,170
Glenfarclas Distillery	Aberdeenshire	Halo	13,400	10,516	10,668	10,274	10,933	9,345	9,314
Kirriemuir Gateway to the Glens Museum	Angus	Halo					9,553	9,820	9,952
Edzell Castle, Brechin	Angus	Halo	6,857	7,119	8,362			7,816	7,109
Barrie's Birthplace	Angus	Halo	4,604	4,541	5,116	6,247	5,167	6,202	5,381
World Horse Welfare	Aberdeenshire	Halo		4,500	4,500	5,000	5,500	7,000	7,000
Banchory Museum	Aberdeenshire	Halo	4,757	5,108	4,648	4,538	2,931	3,731	3,598
Kirriemuir Camera Obscura	Angus	Halo	4,627			4,713	4,263	4,255	4,207
Estimated total visitations			**1,720,000**	**1,626,000**	**1,638,000**	**1,668,000**	**1,654,000**	**1,685,000**	**1,590,000**
Percentage change			**9.0%**	**-5.6%**	**0.7%**	**1.8%**	**-0.8%**	**1.9%**	**-5.8%**

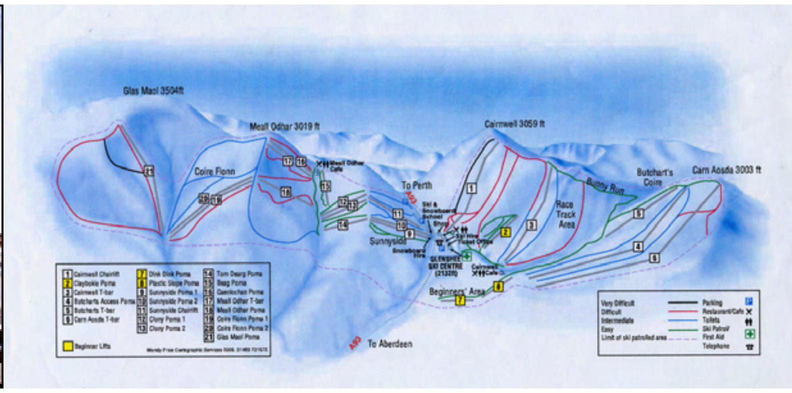
Source: VisitScotland / Moffat Centre Visitor Attraction Monitor Ref: P240/tourism index/table

Since the Park's inception the number of visits has been relatively flat, as the last line of Table 7 shows. The apparent decline in the late nineties, shown in Figure 47, may be a result of changes in the method by which visitors are recorded at one of the major attractions.

Figure 47 Visitor attraction trends



Winter sports



CairnGorm Mountain Railway and the piste map of Glenshee

The Park contains three of the five Scottish downhill ski centres (CairnGorm, the Lecht and Glenshee). Between them they attract about four out of every five people who go skiing (or snowboarding, etc) in Scotland (see Table 8).

Aviemore (CairnGorm) opened its first chairlift in 1961 and now has the 2 kilometre long funicular railway and 13 other lifts. It is the largest of all the Scottish downhill resorts, accounting for half of all skiers to the Park. Over the year the funicular carries more non-skiers than skiers and snowboarders, and vies with the Landmark Adventure Park as the most popular single visitor attraction in the Park for non-skiers. The Lecht and Glenshee are more compact but have 15 and 23 lifts respectively.

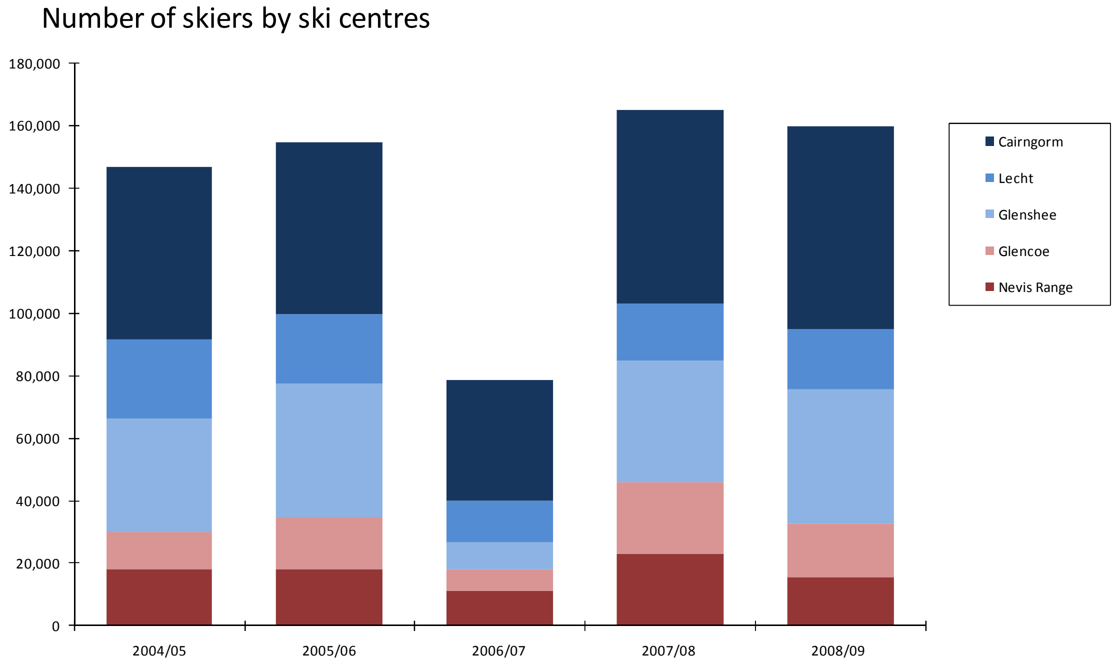
Table 8 Skier days at Scotland's five ski resorts

Season	Cairngorm	Glenshee	Lecht	Nevis Range	Glencoe	All Cairngorms centres	All Scottish centres	Cairngorms share of Scottish total
2004/05	55,586	36,000	25,252	18,338	12,000	116,838	147,176	79%
2005/06	55,000	42,460	22,303	18,430	16,623	119,763	154,816	77%
2006/07	38,553	8,521	13,200	11,149	7,300	60,274	78,723	77%
2007/08	62,000	39,007	18,061	23,021	23,000	119,068	165,089	72%
2008/09	65,000	43,000	19,110	15,876	16,899	127,110	159,885	80%
Average	55,200	33,800	19,600	17,400	15,200	108,600	141,100	77%
Share of Scottish skiers	39%	24%	14%	12%	11%	77%	100%	
Standard deviation	10,242	14,410	4,550	4,328	5,882		35,512	
Coefficient variation	19%	43%	23%	25%	39%		25%	

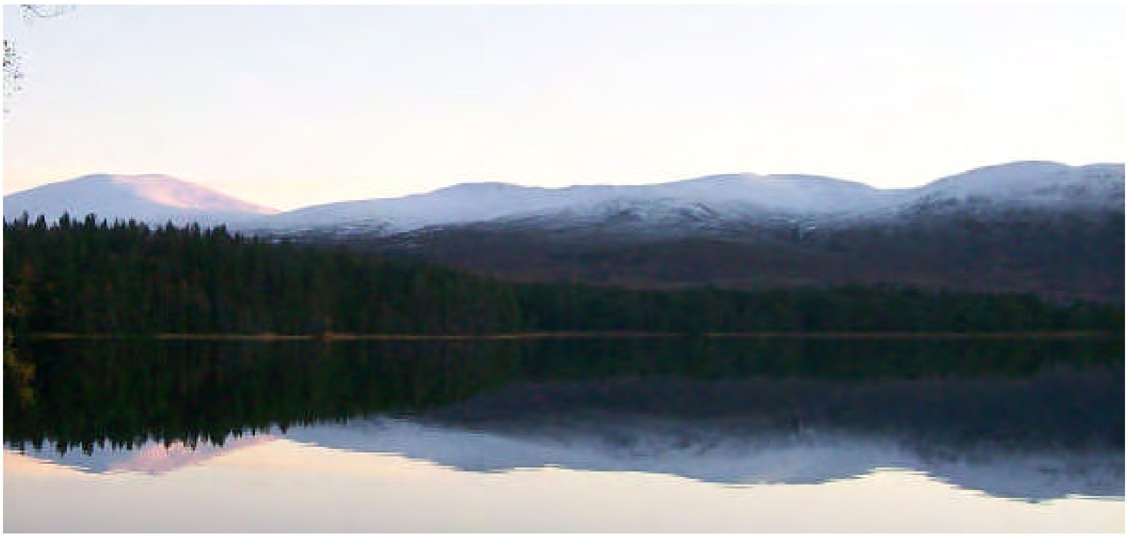
Ref: P240/skier numbers all areas 0509/table

In an average winter the three Cairngorms resorts attract a total of 120,000 skiers. Winter sports thus make up about one tenth of the tourism visitors to the Park. However, the experience of the winter of 2007 shows how vulnerable Scottish resorts are to mild weather, particularly the lower centres (see Figure 48). During that season, when the Braemar weather centre (located at a height of 327 metres) recorded no temperatures below freezing, the number of skier days in the Park fell to about half of recent levels. Glenshee suffered an 80 per cent fall on the previous year with numbers to the Lecht contracting by 40 per cent and a fall of 30 per cent at CairnGorm.

Figure 48 Trends in Scottish skier days



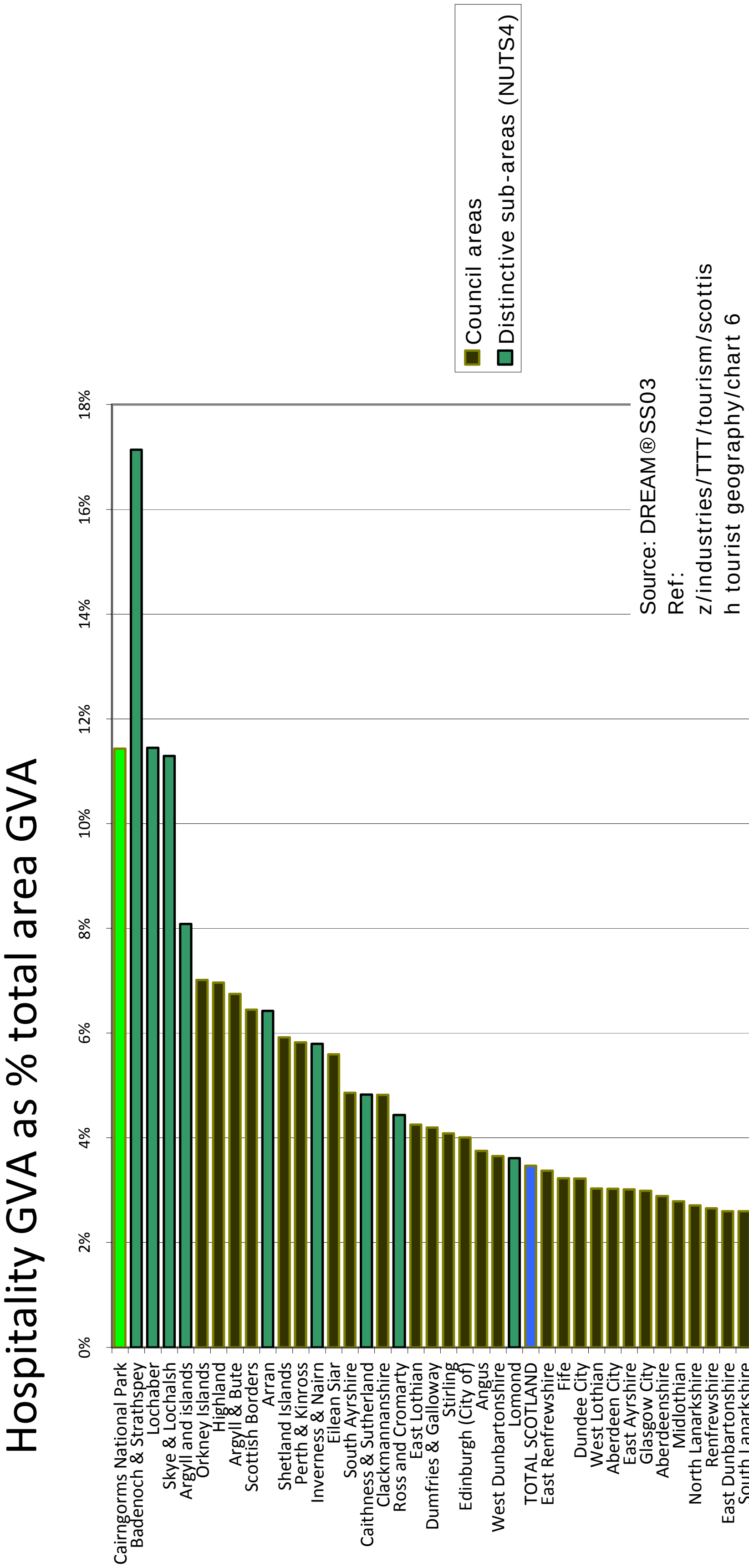
Tourism in a Scottish perspective



Loch Garten

In Badenoch and Strathspey the National Park contains the most tourist-intensive parts of the Scottish economy, but Moray as a council area is somewhere that is statistically less tourist-intensive, at least when measured in terms of hotels and restaurants. Aviemore dominates the picture, and as a result the Park as an entity has a much higher tourism intensity than any Council area in Scotland.

**Figure 49		Hospitality intensity of Scottish areas**



The tourism business

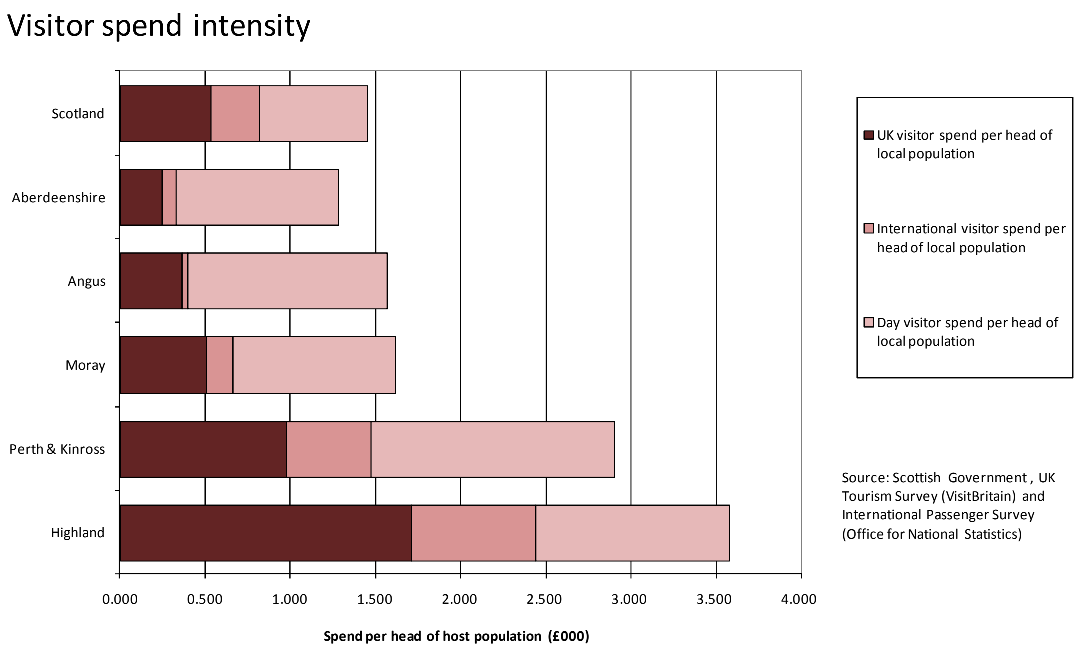
Producing a full estimate of visitor numbers, overnight stays and expenditure is beyond the scope of the present study. However a detailed estimate was made for 2005 spending in individual Council areas across Scotland, and this showed the unusually high importance of tourism in areas in and around the Park.

Across Scotland, tourism expenditure is almost £1,500 per resident. However, as Figure 50 shows, tourism expenditure in Perth and Kinross is twice the national figure, at almost £3,000 per local resident whilst the figure for Highland is even higher at over £3,500.

Elsewhere, both Angus and Moray have tourism revenue which is marginally higher than the national average, while the figure in Aberdeenshire is marginally lower.

However, these figures are likely to understate the spend intensity within the Park boundaries. In all probability the figure for the Park as a single unit would be well above the £3,500 rate for Highland, possibly around £5000 based on the size of the hospitality sector, but further research and modelling would be necessary to ascertain this.

Figure 50 Visitor spend intensity by Council areas around the Park



STEAM data

Global Tourism Solutions (UK) Ltd makes a regular estimate of Park tourism business using their STEAM model. This uses accommodation counts and structural details of the local tourism economy, coupled with occupancy surveys, to generate estimates of tourism revenue and employment. A summary of recent output from STEAM is shown in Table 9.

Table 9 Chained STEAM estimates

Revenue by Category of Visitor	2002	2003	2004	2005	2006	2007	2008	6-year change
(£'s millions at 2008 prices)								
Serviced Accomodation	129	135	124	116	106	118	113	-12%
Non-Serviced Accomodation	55	53	43	44	41	41	40	-28%
Visiting Friends & Relatives	2	2	2	2	2	2	2	-15%
Day Visitors	34	34	34	32	32	32	31	-9%
TOTAL	220	225	203	195	181	193	186	-16%
Tourist Days								
(Thousands)								
Serviced Accomodation	1159	1172	1109	1086	1017	1100	1060	-9%
Non-Serviced Accomodation	1367	1271	1064	1098	1057	1121	1068	-22%
Visiting Friends & Relatives	88	88	82	82	85	87	86	-3%
Day Visitors	776	780	819	804	839	835	797	3%
TOTAL	3390	3311	3075	3070	2998	3143	3011	-11%
Tourist Numbers								
(Thousands)								
Serviced Accomodation	666	590	562	562	487	477	495	-26%
Non-Serviced Accomodation	211	195	180	185	167	171	170	-19%
Visiting Friends & Relatives	19	19	18	18	19	19	19	-2%
Day Visitors	776	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3%
TOTAL	1672	1584	1579	1569	1512	1503	1481	-11%

Source: STEAM, Global Tourism Solutions   Ref: P240/steam/cnp whole park indices 20091123/sheet 1

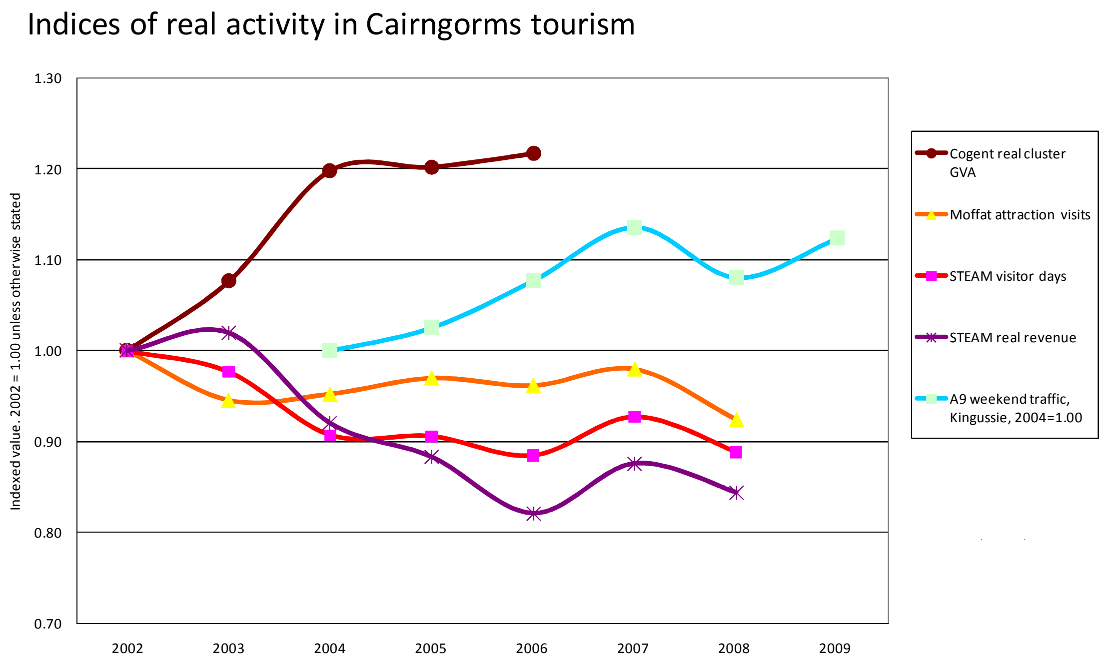
Detailed measurement of the rest of the economy carried out for this study clearly shows that the employment figures that have been reported in STEAM are much higher than they should be, probably more than double the correct number. Some of the expenditure figures reported in STEAM, on the other hand, seem low. These issues are discussed at length in Appendix 3: 'STEAM' tourism data.

Although it would be prudent to dismiss the level of tourism employment suggested for the Park by STEAM, the model's methodology is consistent from year to year, and therefore the trends shown in the model's output may be a guide to developments in the tourism industries, when taken alongside other figures such as the employment and GVA estimates here, and the data on attractions from the VisitScotland / Moffat Centre Attraction Monitor.

STEAM suggests that the number of visitors has been falling at a rate of two per cent per year since 2002, and the amount each spends (in real terms) by about one per cent per year. The mix has also changed, with self catering falling much faster than serviced accommodation. Stay length in serviced accommodation has risen from 1.7 to 2.1 days.

These figures tell a rather different story from the Attraction Monitor, the real GVA estimates based on Office for National Statistics data, and the road traffic at Kingussie. As Figure 51 shows, the Attraction Monitor suggests a broadly constant level of visits to established attractions, while the rise in real GVA indicated by DREAM and the road traffic indicators would suggest that spending is increasing.

Figure 51 Trends in tourism - STEAM vs other indicators

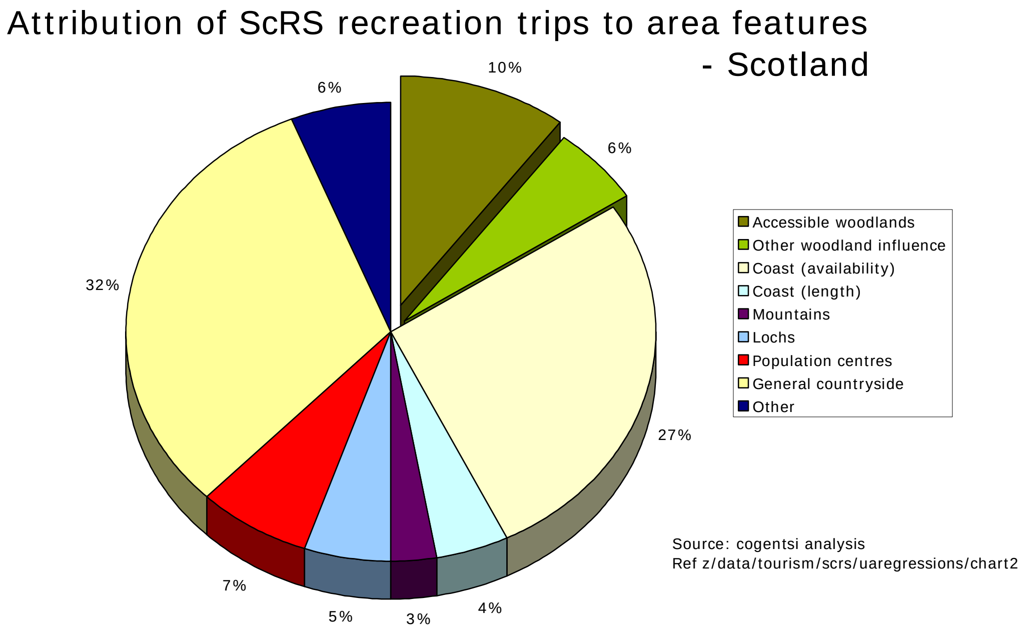


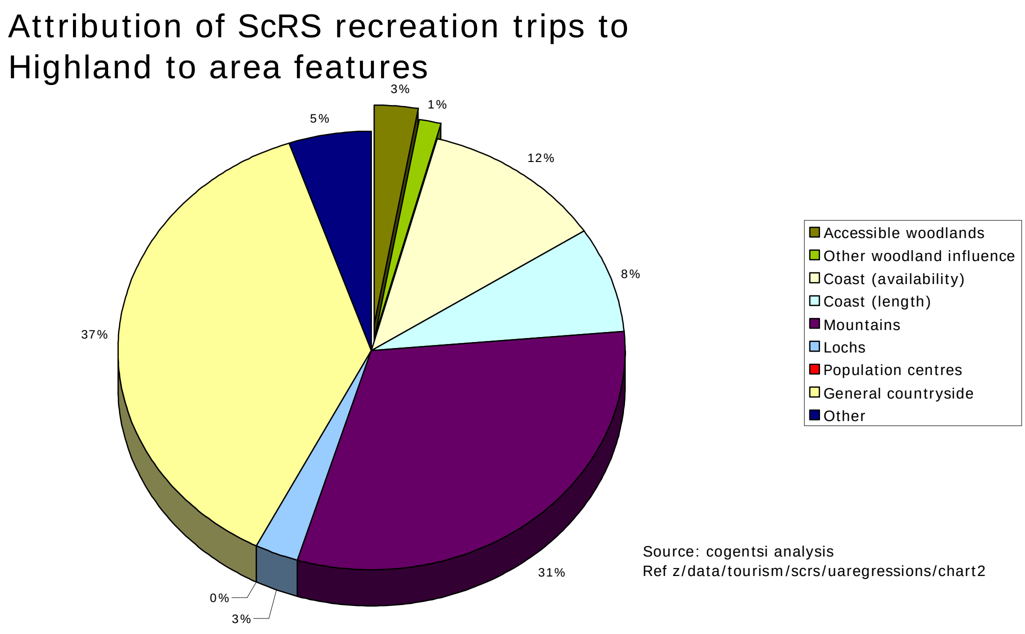
If visitor numbers have really been falling as STEAM suggests, while employment and other costs have been going up, we would expect considerably worse financial conditions than have actually been the case. It would appear that the trend suggested by STEAM, as well as the level, should be treated with caution.

Recreation trips

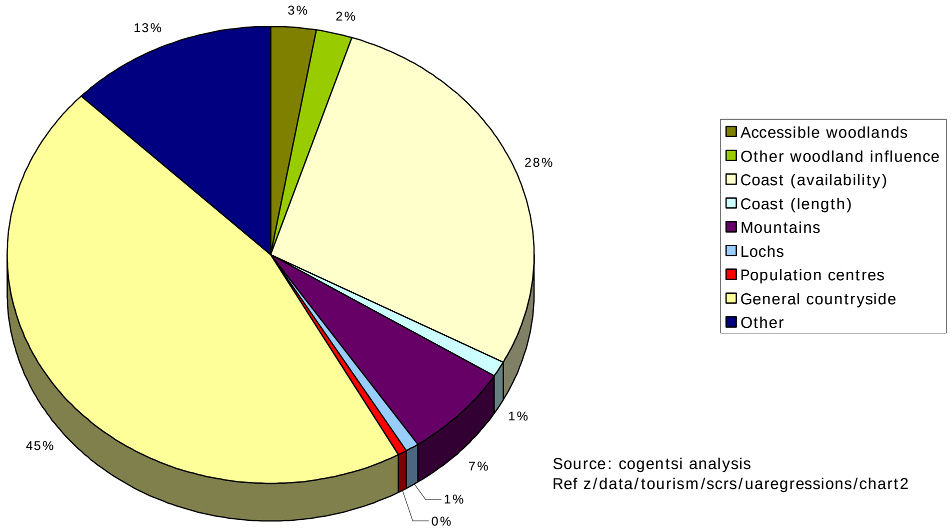
On what basis do people choose the destination for their leisure trips? What features do they seek out? Using the Scottish Recreational Survey (ScRS) conducted for Scottish Natural Heritage and the Forestry Commission, Cogentsi has modelled how different physical features play a role in attracting Scottish recreational visits to each Council area. For the five council areas contributing to the Park boundaries (Highland, Angus, Aberdeenshire, Moray and Perth and Kinross), the role of mountains is very clearly much greater even than it is for Scotland as a whole (see Figure 52).

Figure 52 Role of area features in attracting visitors



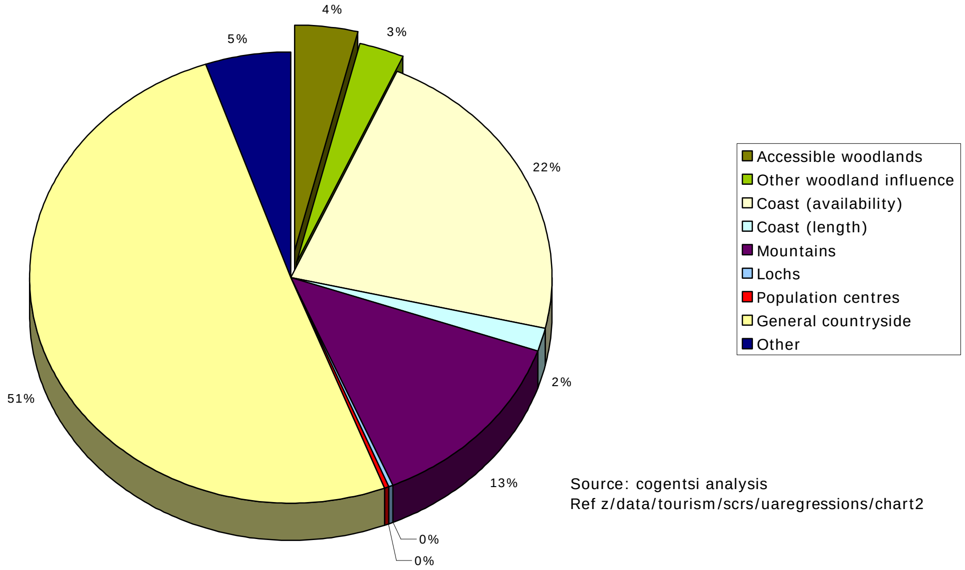


Attribution of ScRS recreation trips to Angus to area features



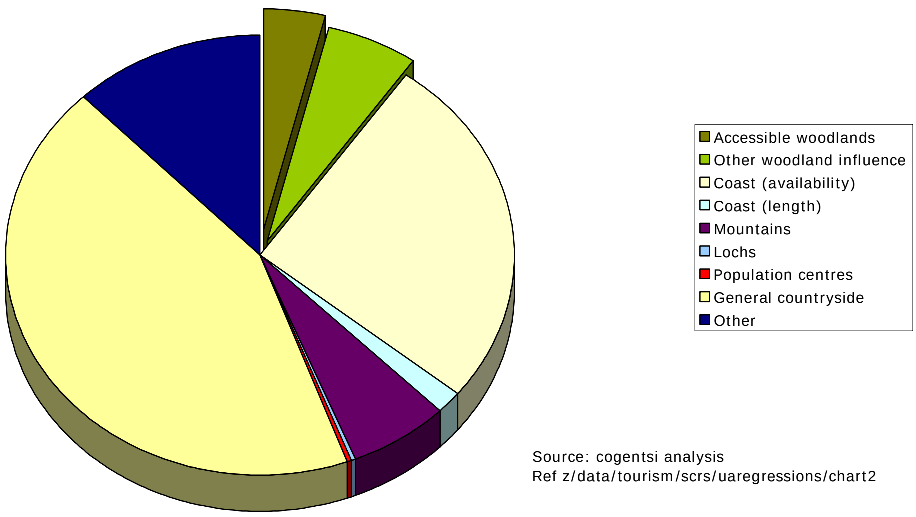
Source: cogentsi analysis
Ref z/data/tourism/scrs/uaregressions/chart2

Attribution of ScRS recreation trips to Aberdeenshire to area features

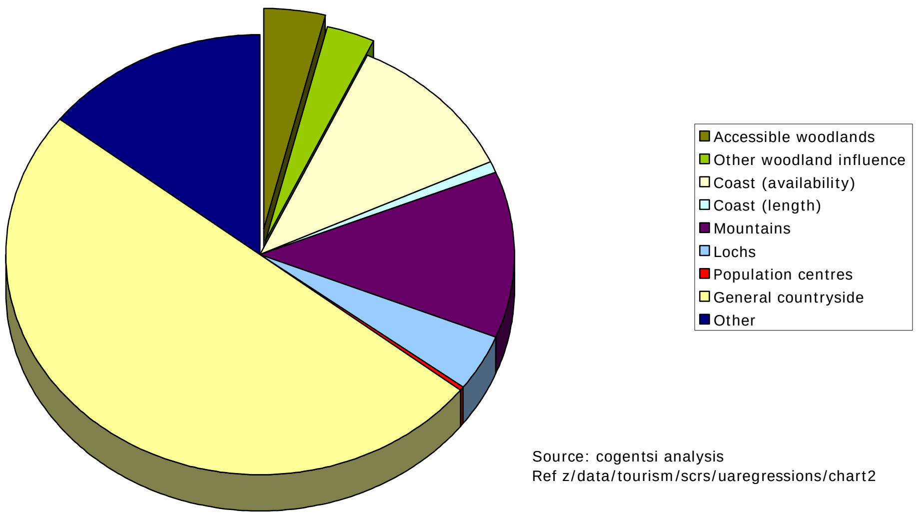


Source: cogentsi analysis
Ref z/data/tourism/scrs/uaregressions/chart2

Attribution of ScRS recreation trips to Moray to area features



Attribution of ScRS recreation trips to Perth & Kinross to area features



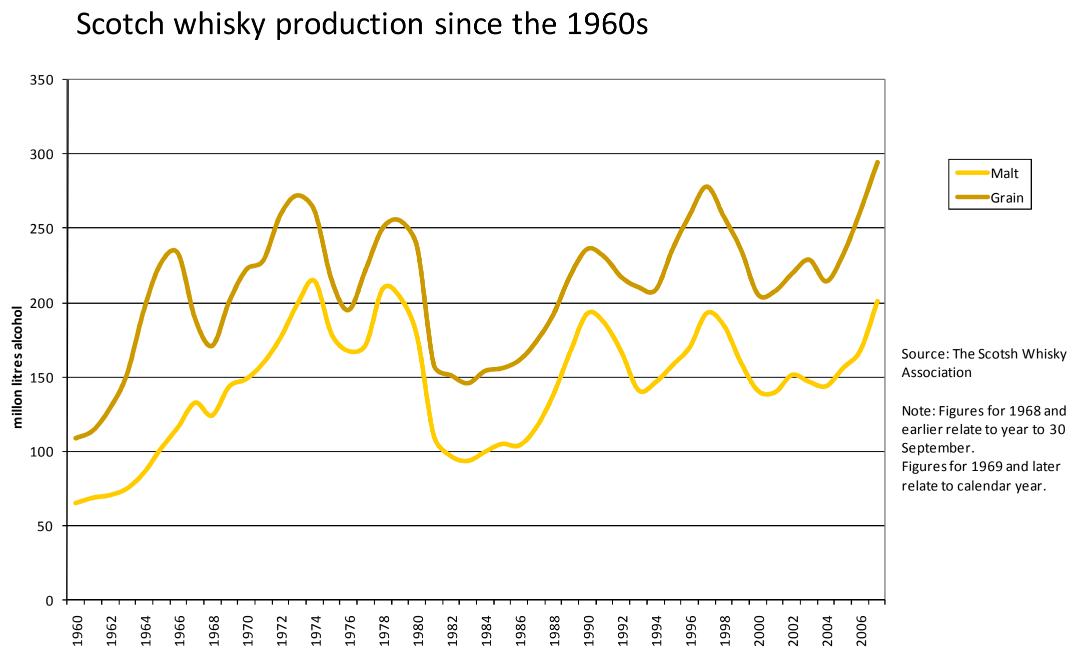
The countryside in its widest sense is a crucial attractor of visitors. It is what the visitor might term the pull of the 'great outdoors'. However, the role of the Park's mountains is clearly the most distinctive feature of its tourism offering – hardly a surprise, but a useful quantification of why people come. Forests play a very significant role in the Park, but not as great in relative terms as in other less mountainous areas such as Argyll and Galloway. Coastlines and the 'buzz' of major population centres of course play no role at all in the Cairngorm's attractiveness to visitors. Since the coasts and the cities draw 38 per cent of Scotland's visitors, this makes it all the more remarkable that the Park houses Scotland's most popular destination.

8.2 The whisky cluster

The Cairngorms National Park and its hinterland is home to one of the most famous whisky producing regions in Scotland and the World – Speyside. This grew from the original barley crops in the region and it is still the case that barley is the main crop in Cairngorms agriculture.

Over the past half century, national whisky production has grown from 173 million litres of alcohol to 495 million, a sustained average growth rate of 2.2 per cent per year. Of this current production, 40 per cent is malt production and 60 per cent is the production of grain whisky (see Figure 53).

Figure 53 Scotch whisky production



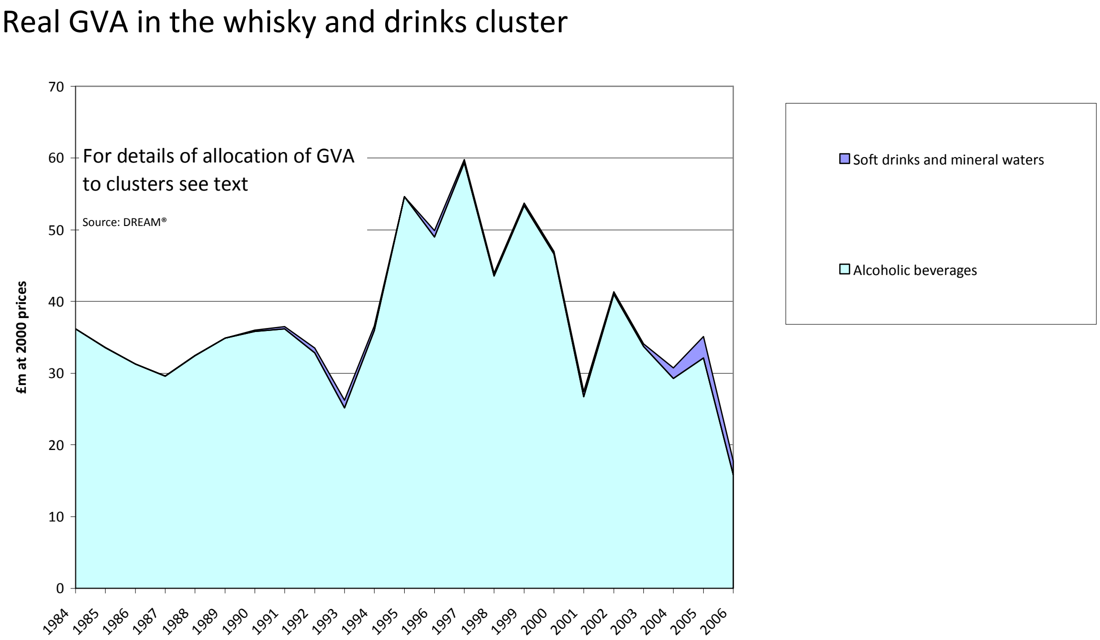
However, over recent years the importance of whisky manufacturing to the economy of the Cairngorms National Park has lessened. Since the designation of the Park the numbers employed in the whisky cluster have fallen from 300 to a little over 100 (see Figure 54). This continues a long term trend - 25 years ago almost 500 residents of what is now the Park made their living from whisky.

Much of this contraction in local employment can be put down to increased mechanisation and remote monitoring and control within the manufacturing process so that large distilleries can now be run with only a handful of staff.

Figure 54 Cairngorms drink sector employment

In addition, the value which the whisky cluster adds to the local economy also appears to be waning. From a peak of over £50m in the late 1990s and £40m when the Park was designated, the latest data (relating to 2006) suggests that whisky now contributes only £20m of gross value added to the Cairngorms economy (see Figure 55).

Figure 55 Alcoholic beverage sector gross value added



Whilst much of the whisky industry in and around the Park has always been linked to the actual manufacturing process, elsewhere in Scotland there are large numbers employed in other aspects of the industry, such as bottling and marketing. Over the past 35 years the long term trend in the cluster has been for a declining headcount. However, most of this decline took place during the 1980s and over the past ten years numbers employed have remained largely stable (at least until the reductions in the numbers employed in bottling were announced in the summer of 2009). The trends are shown in Figure 56.

Figure 56 Scottish employment trends in distilling

The effect of this is that, at least according to official statistics, the Park's share of Scotch whisky employment has declined over the past decade – from a peak of five per cent in the late 1990s to 1.8 per cent (see Figure 57).

Figure 57 **Proportion of Scotch whisky jobs in the Cairngorms**

Despite this rather downbeat assessment of the cluster it is important to note that whisky distilling still plays an important part in many towns and villages in and around the Park. Distillery visits remain a significant attraction, and the product's image and culture is considered a vital element of the area's tourism branding.

8.3 The forest cluster

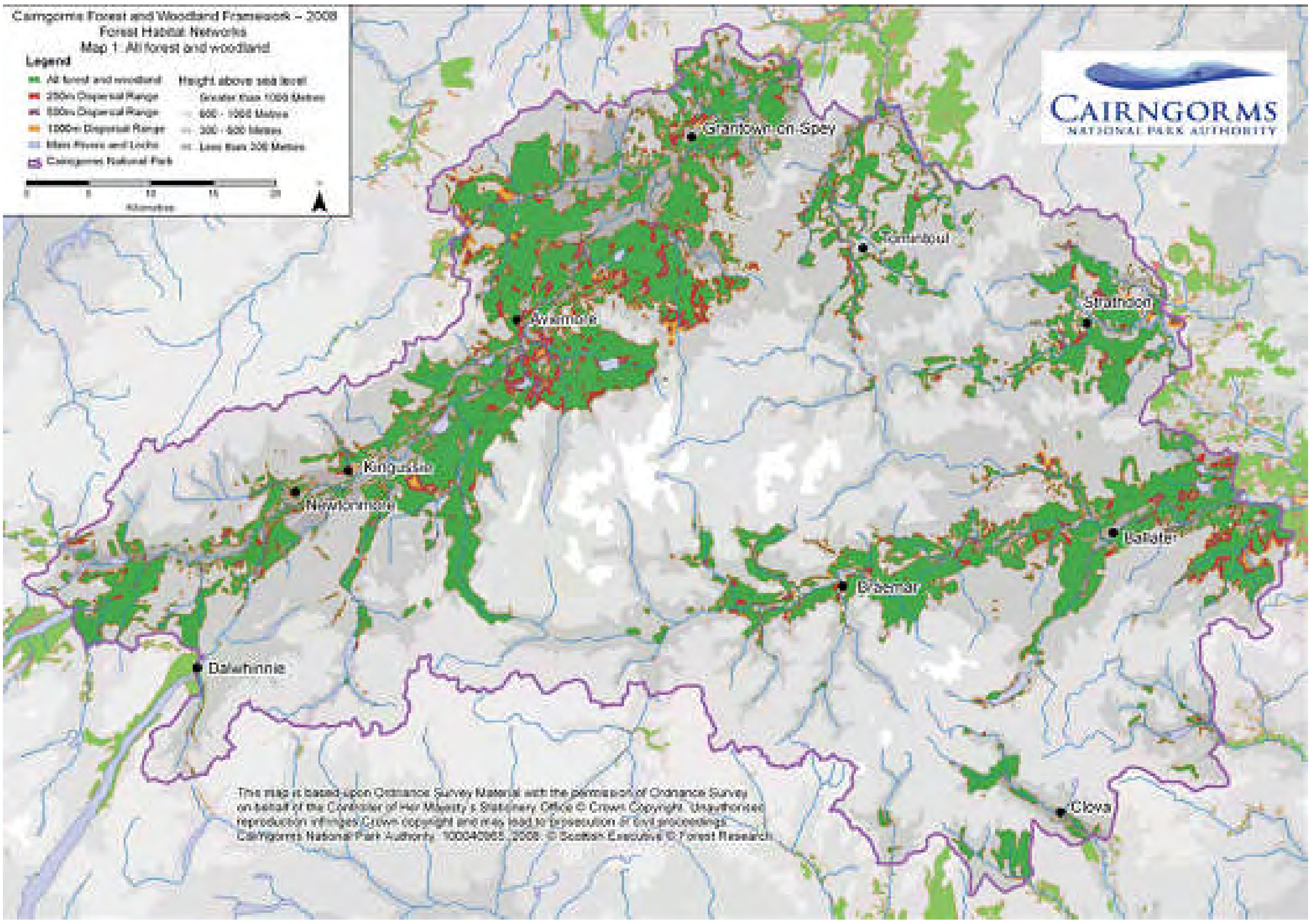
Forestry within the landscape of the Cairngorms National Park

Although plantations of spruce, pine and larch are the most prevalent, natural woodlands in the Cairngorms include the most extensive tracts of Caledonian pine forest in the UK and the best examples in Scotland of montane willow scrub, aspen and bog woodland.

Natural woodland cover peaked about 600 years ago, but then fell, reaching about eight per cent in the mid 17th century as land was brought into cultivation. There was something of an hiatus until the decline accelerated as the industrial revolution took hold from the mid 18th century, so that there was little usable timber left by the mid 19th century.

It was the First World War that emphasised the strategic importance of timber in the technology of the time, with naval uses still of some importance but a burgeoning demand for pit props as coal production took off.

The severe strategic shortfall led to the establishment of the Forestry Commission, with the acquisition of land and extensive planting in the 1920s.



The saplings that grew into today's cluster of forest industries in and around the Cairngorms were planted long before the establishment of the National Park. As well as the expansion of Forestry Commission estates, private landowners were encouraged to devote their property to forestry in perpetuity by the 'Dedication Scheme' from 1947 to 1981, and the Thatcher government continued a level of grants and subsidies to planting up to 1986. The Park, containing significant land not readily suited to agriculture, had many plantations intended for timber production, frequently Sitka Spruce. Coverage was up to about 17 per cent of the land by 1988. The intensity and style of planting was not always found aesthetically pleasing, and the dense forests were designed for wood production and not recreation, as for example in the picture of Strathdon. The plantations did, however, provide a burgeoning supply of feedstock for forest-based industry, which expanded significantly from the early 1980s to the mid 1990s, and now contributes almost three per cent of the gross value added generated within the Park.

Forest planting in more recent years has included more deciduous species (at national level, up from two per cent of planting in 1971 to 42 per cent in 2007), and in general the pattern of planting has provided better access so that the forests contribute substantially to the tourist offering of the Park.

Figure 58 Forest sector gross value added

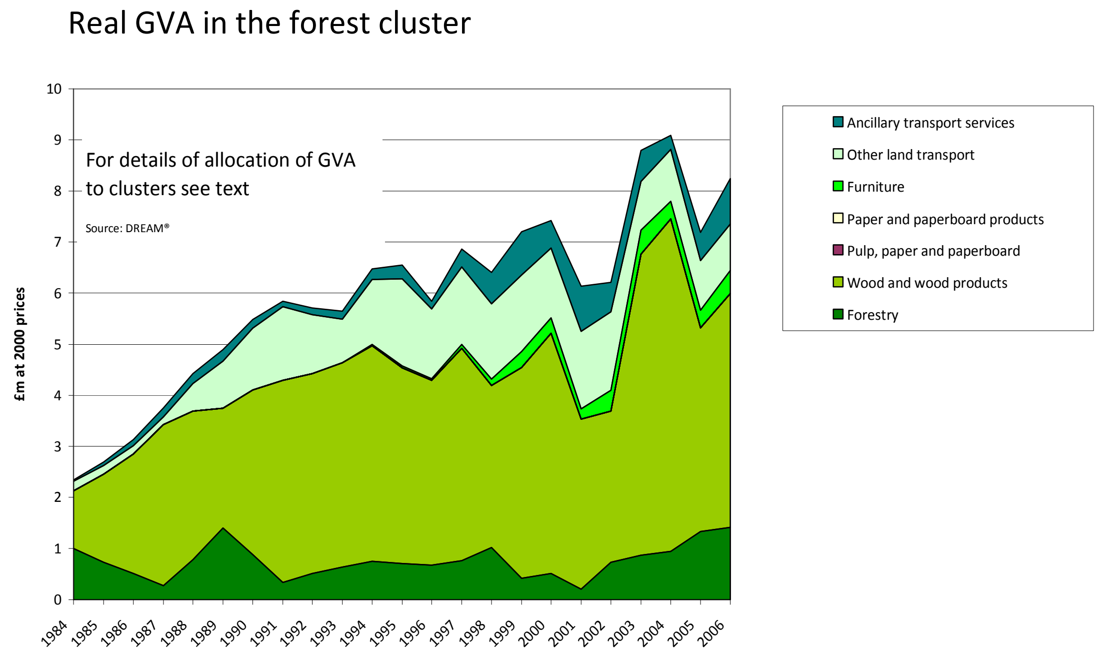
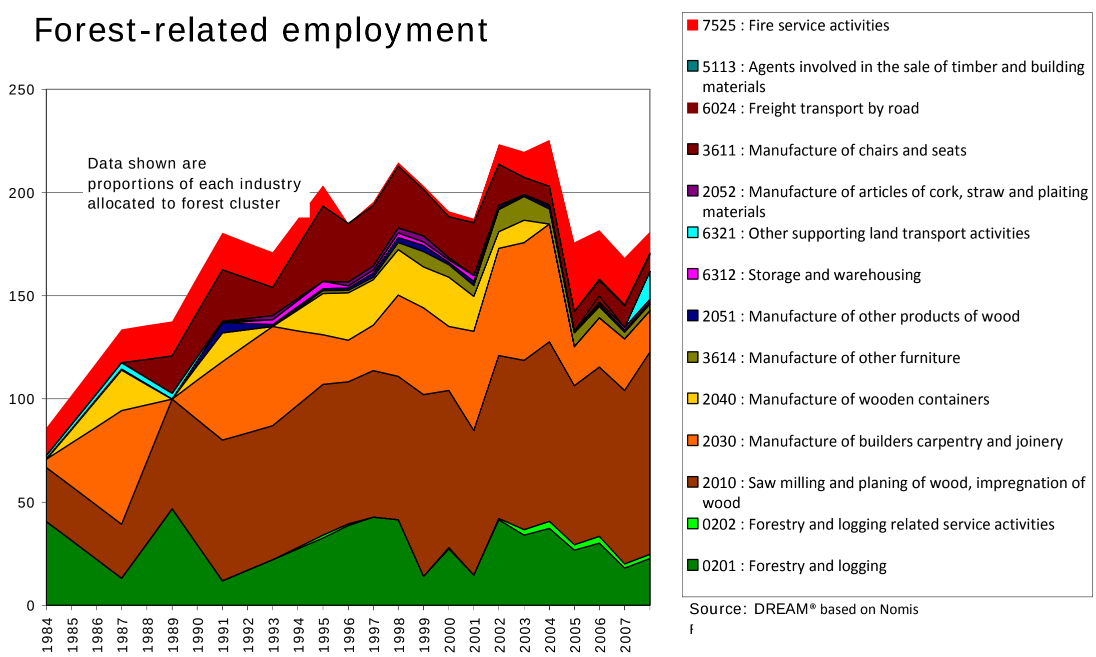


Figure 59 Forest sector employment



It is clear that in terms of economic importance by far the largest parts of the forest sector in the Park are primary sawmills and joinery manufacture. There are some signs in the statistics of business evolution in the forest cluster as some of the tree plantations have matured – for example there has been some shift in wood products from making pallets to builders' joinery, requiring higher quality timber to start with, and more sophisticated skills and equipment.

Forestry itself is not shown as of such great economic importance. This is in part a result of the general weakness of timber prices which has pertained since the early 1990s, and of the fact that the primary timber industry is only partially market-motivated. To a substantial extent it responds to subsidies and grants which are not accounted as part of GVA, and are offered as part of public policy to motivate what are necessarily very long term investments in land preparation, planting and maintenance.

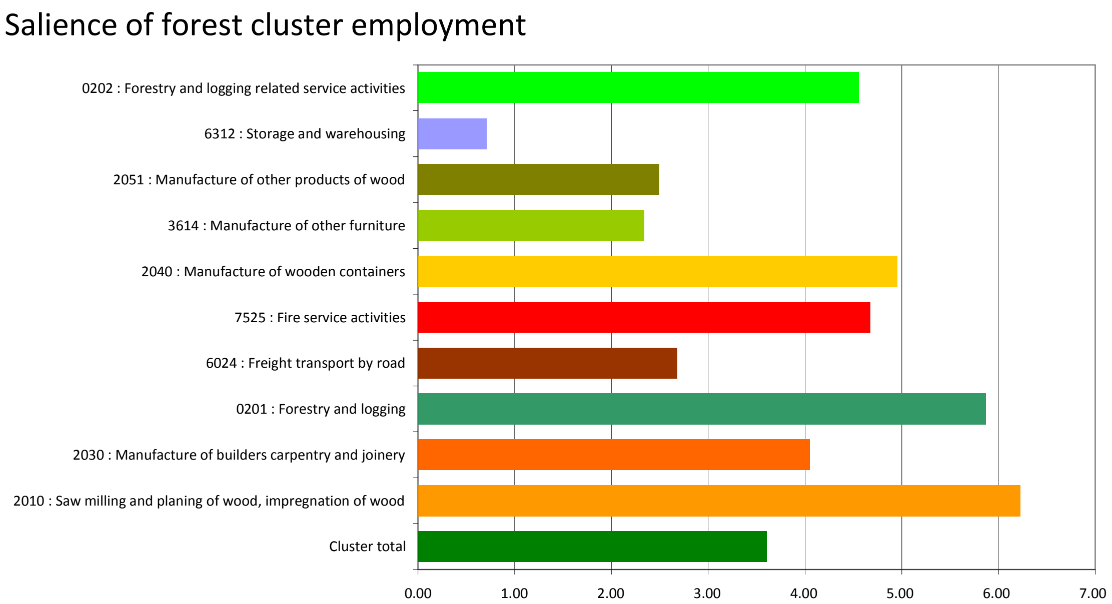
Competitiveness and industry structure

The forest cluster in the Park has a salience of 3.6, indicating that it employs almost 40 times ($e^{3.6}$) as many people as forest-related industries normally do in a community of this size.

Across the country the forest product industry includes large scale paper and board mills which would be unlikely to find a place in the Park.

However the region has a very significant presence in a range of forest industries, with two industries - saw milling and forestry and logging - particularly well represented (see Figure 60). One sector which is shown as particularly large in relative terms is forestry contractors registered in the Park, but in fact the number of people recorded as employed is not large (but unfortunately statistically confidential). This is an informal sector and businesses in it overlap with those in agricultural contracting. Forest operations employ a significant amount of labour-only subcontracting, and use is made of gang labour with nationally and internationally recruited teams. The informality tends to lead to the suspicion that it may play a larger part in the real economy than the statistics reveal.

Figure 60 Distinctive components of the Cairngorms forestry cluster

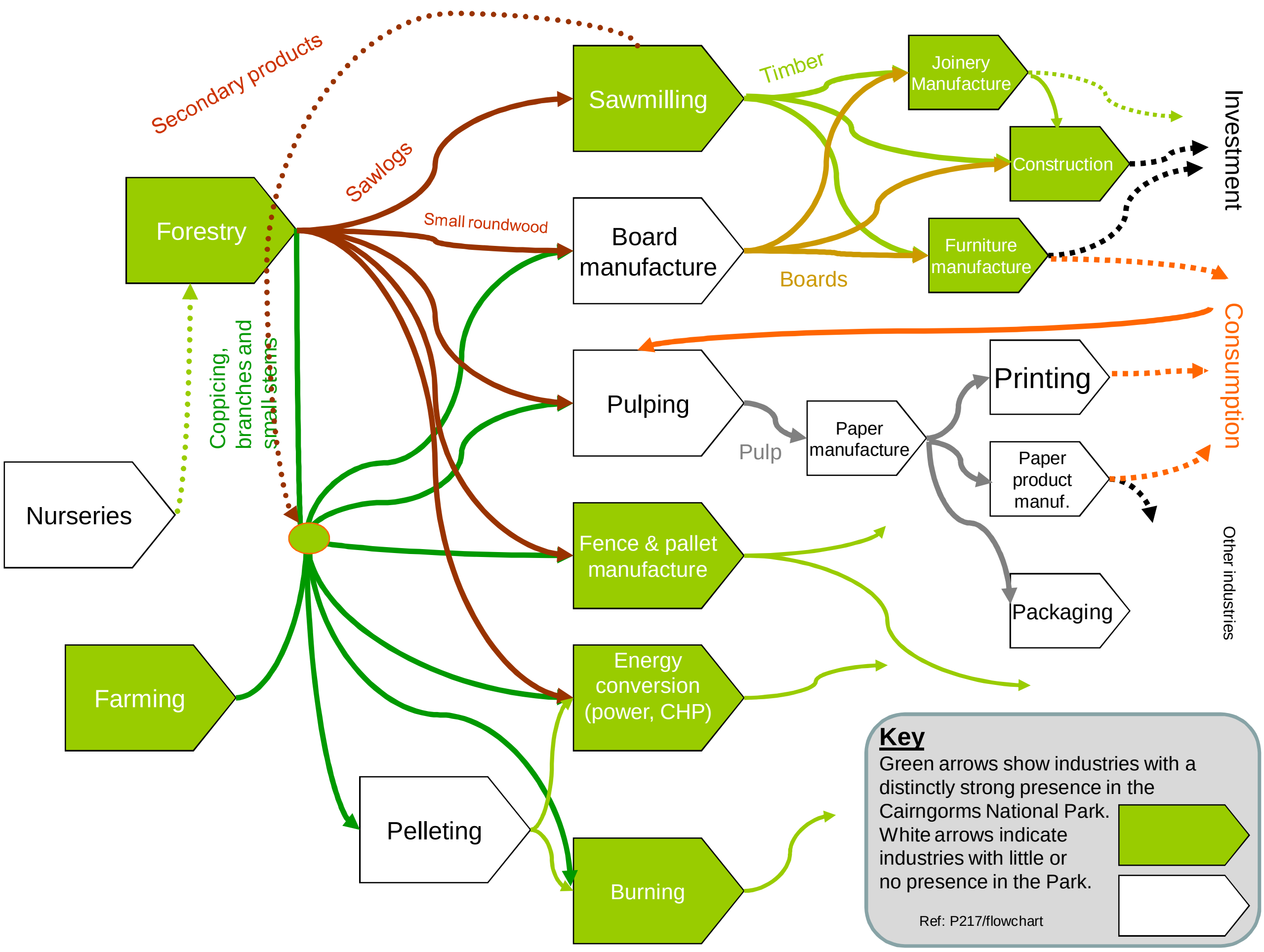


Each of the industries within the forestry cluster plays its own part in the supply chain. Figure 61 indicates those which are relatively well represented within the Park (shown as green arrows) and those which have little or no representation within the area (shown in white).

Three of the non-shaded industries are close at hand – forest nurseries exist in Forres, Fochabers and Rhynie for example, Norbord manufacture ‘Sterling’ oriented strandboard at Inverness, and Arbuthnott produce wood pellets in Kincardineshire.

Only the paper chain is missing from the value chain for the Park’s forests, although the furniture industry is not proportionately as large as other industries in the cluster

Figure 61 Forest cluster flowchart



The fact it already has a very strong presence is not to say the forest cluster cannot be strengthened – more added value furniture, for example, might offer employment at a variety of scales, and the Park's construction industry could make further use of locally indigenous materials and develop its own vernacular architecture, as has happened in other timber-rich areas.

Principal businesses

BSW sawmill site at Boat of Garten

The largest single employer in the cluster, **BSW Timber** operates a sawmill at Boat of Garten. The firm is based in the Scottish Borders, and has recently (November 2009) consolidated its position as the largest sawmilling business in Britain by buying Howie Forest Products. The firm now has a 25 to 30 per cent share of timber production from

British coniferous forests. With seven sawmills in the UK and one in Latvia, BSW produces around 900,000 cubic metres of sawn timber products per year. The company produces its timber decking in Latvia, with other timber products being produced in the UK. The business has a turnover in excess of £120 million and employs approaching 800 staff between the UK and Latvian operations. Local employment is about 70. Annual timber input at the 5 hectare site in Boat of Garten is 80,000 cubic metres of roundwood and the mill produces 50,000 cubic metres of sawn timber.

There is also a sizeable product sawmill operated by Russwood at Newtonmore, focusing on larch products and a proprietary heat treatment for architectural spruce. These have been included in striking designs for the new visitor centre at Culloden, The Kitchen restaurant in Inverness, and the headquarters of the Loch Lomond and the Trossachs National Park Authority in Balloch.

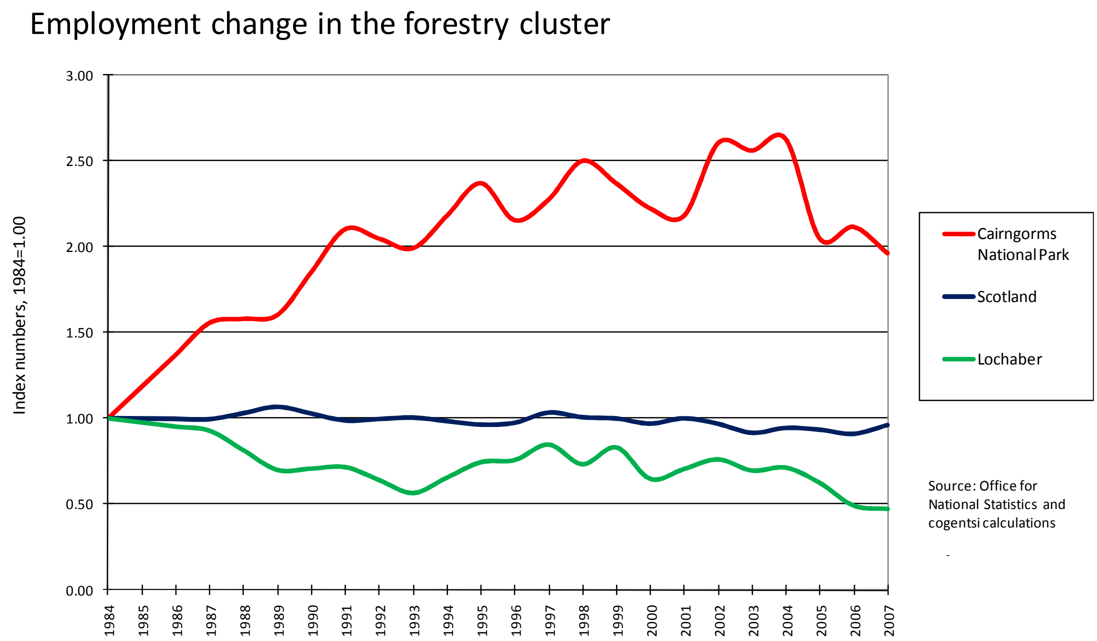
There are significant sawmills just outwith the Park boundaries, both in Aberdeenshire and in Moray, and several smaller ones which will all draw on Park timber.

Comparisons

Trends in employment in the forest industries have been more positive in the Cairngorms than either Scotland or Lochaber, as shown in Figure 62. This is partly the result of factory closures elsewhere, such as the Wiggins Teape factory in Lochaber, and of productivity growth across the sector.

Nationally small sawmills have been closing to be replaced by higher technology facilities serving a much wider catchment area and producing more standardised products. In 1992, 1,492 businesses in Great Britain were classed as sawmills. By 2004 this figure had fallen to 861. Fewer and fewer sawmills have been serving more and more customers. In contrast the number of builders' joinery establishments across the country has risen from 3,699 in 1992 to 5,407 by 2004.

Figure 62 Employment trends in forestry – Cairngorms and comparators



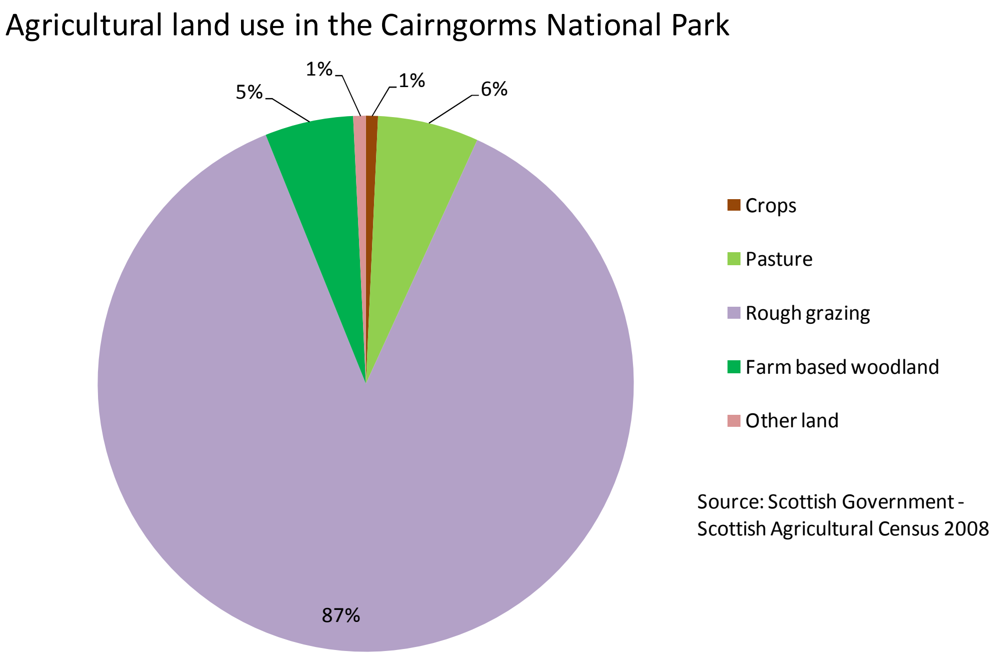
8.4 The cluster of other food, drink and agriculture

Silaging in the Cairngorms National Park

There are currently (according to the 2008 Agricultural Census) a total of 464,000 hectares of farmland in the Cairngorms National Park. This is split into 700 agricultural units[9], although employment data would suggest that there are only around 350 individual farm businesses.

Although according to Shaw and Thompson (2006) 70 per cent of the land in the Park is 'in agricultural use', the bulk of agricultural land in the Park is classed as rough grazing (see Figure 63). Currently 87 per cent of all agricultural land has this classification, with a further six per cent being under improved pasture. Less than one per cent of the Park's agricultural land is cropped (other than for silage / hay, which is classed as pasture). Barley is the most common crop grown in the Park.

Figure 63 Agricultural land use



Although they make up a very small proportion of the total agricultural land, there has been a dramatic change in minority land uses in recent times. The amount of land which is cropped has almost halved over the past 25 years, from over 6,000 hectares in the early 1980s to 3,100 hectares in 2008. Since the Park was designated in 2002, 700 hectares of farmland have been removed from the cropping rotation. This reflects the fact that crop growing on less favoured land is increasingly difficult for farmers to justify financially. Subsidy regimes now place more emphasis on protection of the environment and less on food production and the investment in machinery to harvest crops (or more likely payments to contractors) can be prohibitive for those with only small areas to harvest.

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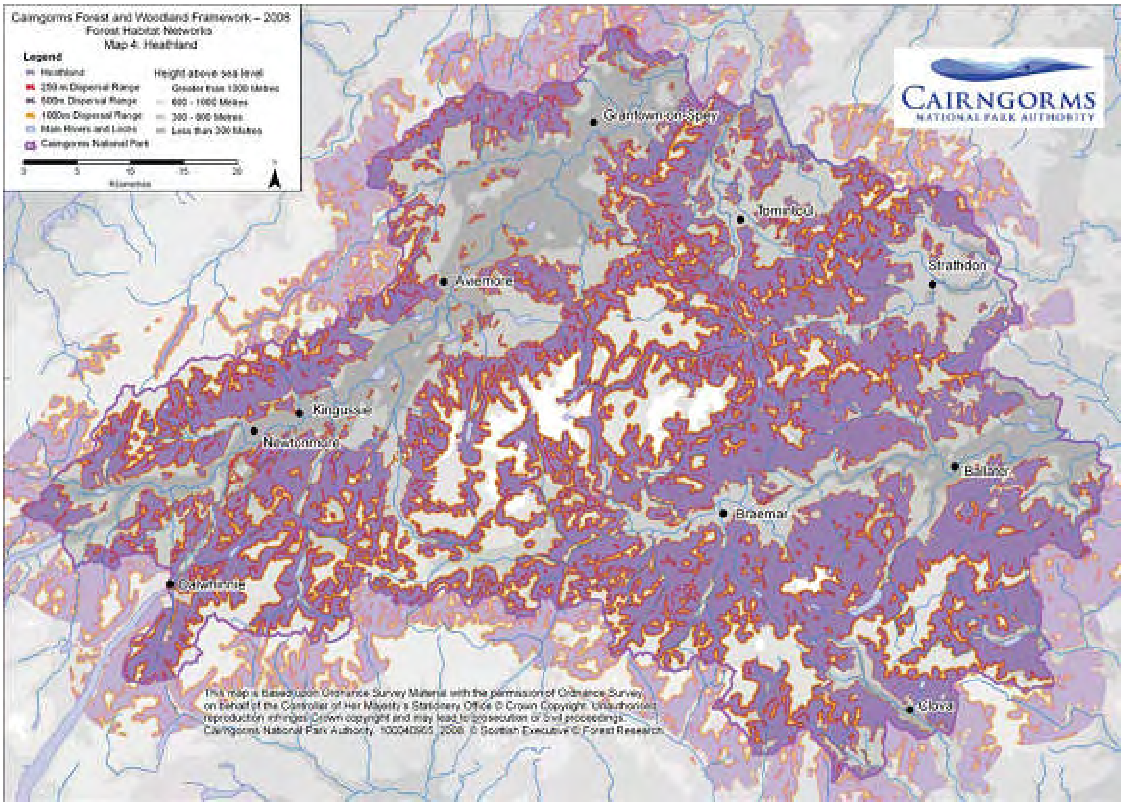
[9] Note that it is common now for a number of agricultural units to be operated together as a single farming enterprise as a result of the merger of neighbouring farms over the years.

By contrast, the area of farm-based woodland has risen dramatically (although admittedly from a very small base). Over the past 25 years its extent has risen fivefold, and by 35 per cent since the Park's designation. Almost as much farmland is now in woodland as is in improved and rotational pasture. The increased use of woodfuel (if oil prices remain high) make it likely that this will increase, in part as woodland proper and to an extent in short-rotation coppicing.

Figure 64 shows the distribution of the poorest agricultural land – the heathland. Whilst the highest hill tops are not classed as agricultural land, practically all the improved farmland is found in the valley bottoms, with the bulk along the banks of the Dee and the Spey.

Figure 64 Heathland / rough grazing in the Cairngorms National Park



Most farms in the Cairngorms National Park are involved in the production of beef and lamb, with an emphasis on external (as opposed to internal) and extensive (rather than intensive) methods of production. In 2008 there were 240 agricultural units with a total of 128,000 sheep and 112,000 lambs. In addition, a total of 235 units were involved in beef production, with a total of 31,000 head of cattle.

By contrast the more intensive forms of agriculture are less prevalent in the Park. Pig production is concentrated at a few sites, with 12 units having a total of 4,300 animals. 86 units are involved in poultry production, the vast majority of which house laying or breeding stock. There is very little broiler production.

Dairying is also not a major farming activity in the Park. In 2008 twelve local farm units had a total of 300 head, and in some cases several farm units were consolidated for operation as a single farm.

Excluding poultry and pigs, whose numbers fluctuate widely from year to year, the number of livestock in the Park has fallen since the designation of the Park. With the bulk of these animals outside for some or all of the year, recent trends indicate that cattle and sheep numbers are falling (see Figure 65). The most dramatic fall is in the dairy sector, where numbers have fallen by almost half between 2003 and 2008.

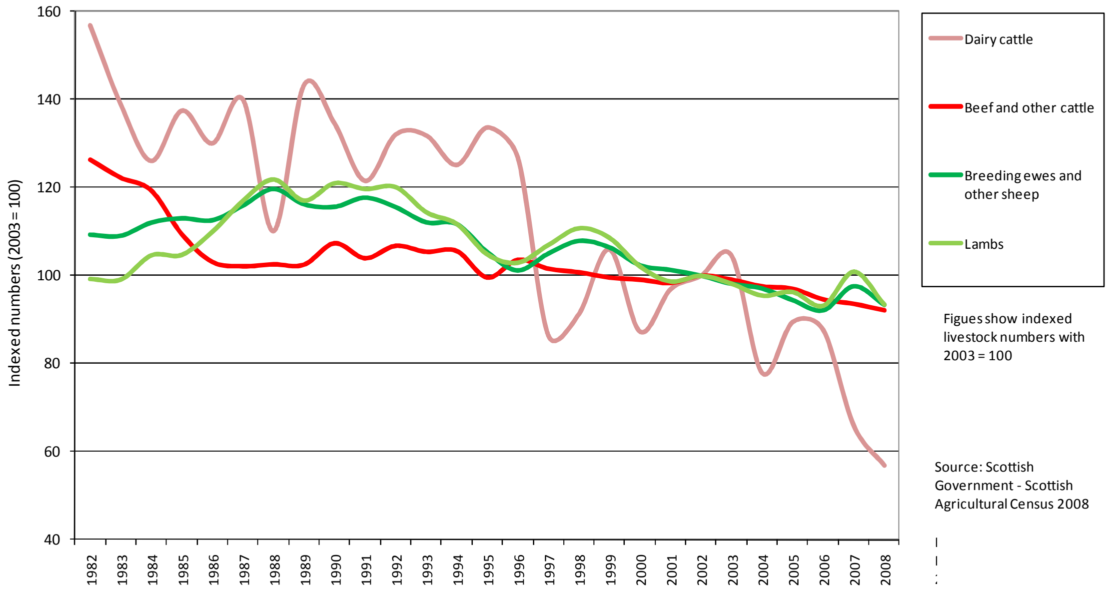
The fall in the headcount for beef cattle and sheep is less dramatic, but nevertheless there is a downward trend. In the early 1980s there were over 40,000 head of beef cattle in the Park, some 10,000 more than there are today. Between 2003 and 2008 numbers have fallen by around 2,000 or eight per cent.

A tranquil farming landscape at Balnaan

Sheep numbers and lamb production have also declined. There are around 30,000 fewer sheep and 30,000 fewer lambs in the Park now than at their recent peak in the late 1980s. Between 2003 and 2008 both sheep and lamb numbers have fallen by more than 6 per cent. This is likely to have been caused by the combination of low prices and the shift from production subsidies to the single farm payment.

Figure 65 Livestock number trends

Trends in livestock numbers in the Cairngorms National Park

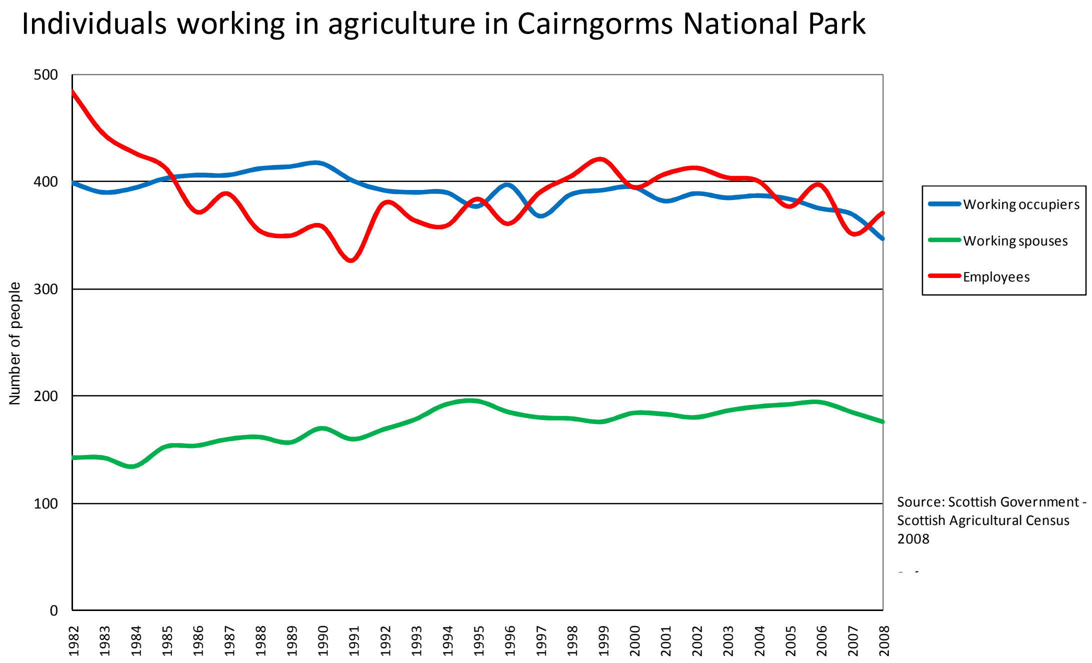


Employment in the cluster

Around 900 people earn their income from the Park's farms. 350 of these individuals are working occupiers, with a further 180 being spouses. Around 370 individuals are employed by the Park's farmers.

Over the past 25 years the number of working occupiers has remained largely stable, although indications are that in the last five years there has been a downward trend resulting in 10 per cent fewer working occupiers now than when the park was designated. The use of family labour has risen by a quarter since the early 1980s (see Figure 66) although most of this growth took place in the 1980s and early 1990s. There was a dramatic decline in the number of employees in the 1980s to a low of 330 in 1991 when agriculture faced particularly difficult times. Following a recovery during the 1990s, over the past ten years the number of employees has taken a downward trend once more.

Figure 66 **Numbers of people earning a living from agriculture**



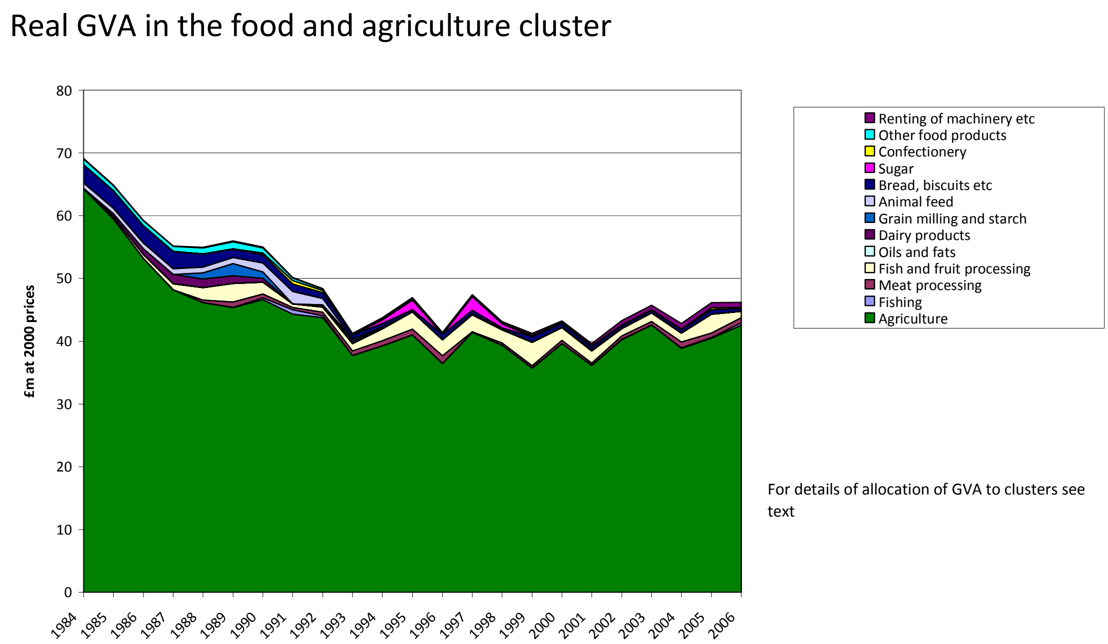
One cause and consequence of the shrinking of the typical holding to ‘farmer plus spouse’ or ‘farmer plus spouse plus one employee’ has been the growth of agricultural contracting. This in turn is tied up with the advance of technology, as over the decades specialised machines have been developed whose capacity, even in a limited season, is far greater than the size of a single farm. About 120 people in the Park work in ‘agricultural services’.

Economic value of agriculture

Agriculture contributes around £42m in added value to the Cairngorms economy each year (see Figure 67). In so-called ‘real terms’ this is a rise of around 20 per cent on the equivalent figure 10 years ago, but in fact prices have declined (until very recently) so the agricultural share of total GVA measured in ‘money of the day’ has contracted.

Food processing adds an additional £3m of GVA. There appears to have been substantial bakery activity 25 years ago, which disappeared in the late 1980s, but we have no information on this.

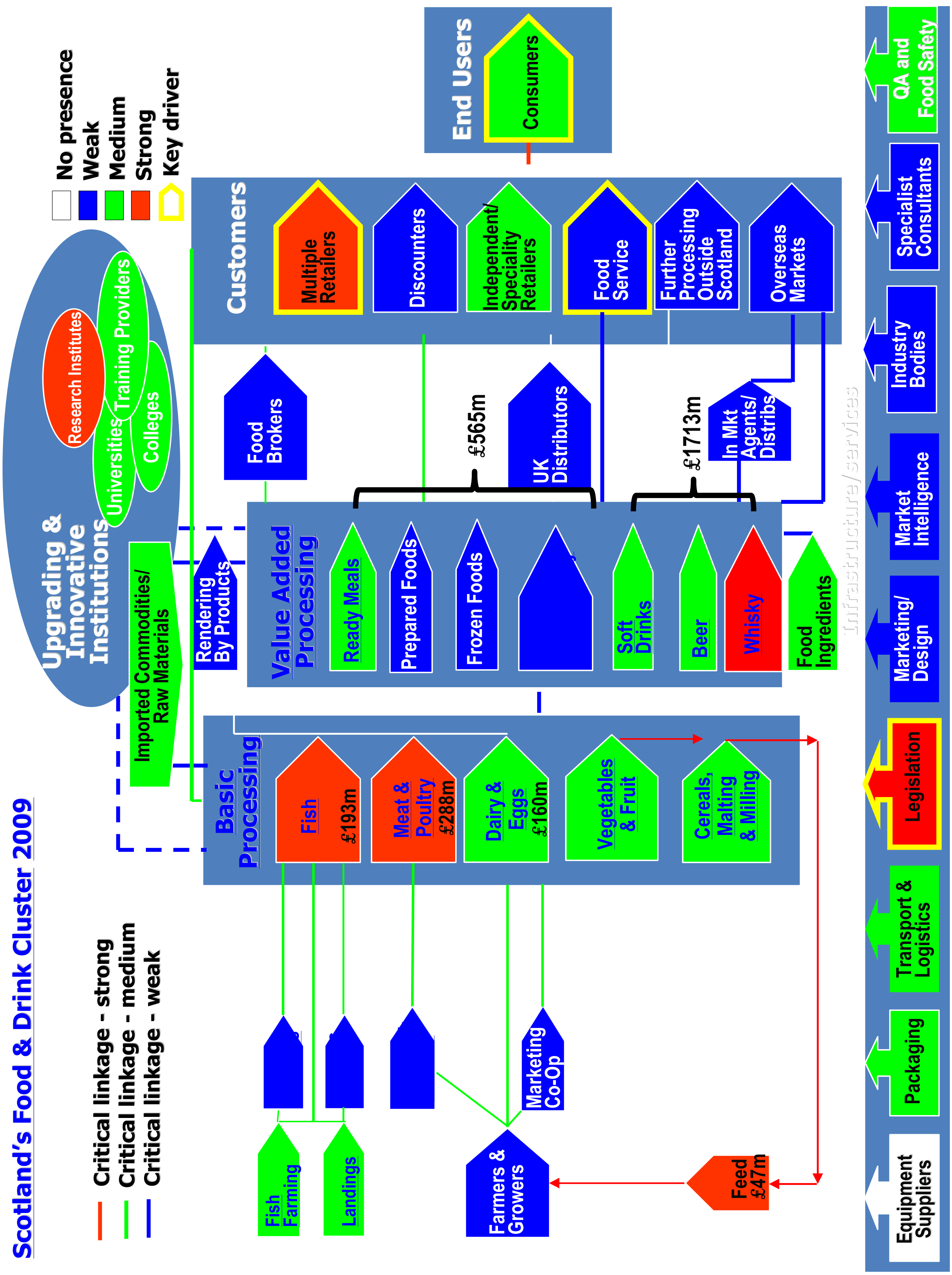
Figure 67 **Other areas of the agriculture, food and drink sectors gross value added**



Food and drink in a cluster perspective

Figure 68 shows an assessment of the structure of the Scottish food and drinks industry in cluster terms, prepared by *Food and Drink Scotland*.

Figure 68 **Scotland's food and drink cluster – structure, strengths and weaknesses**

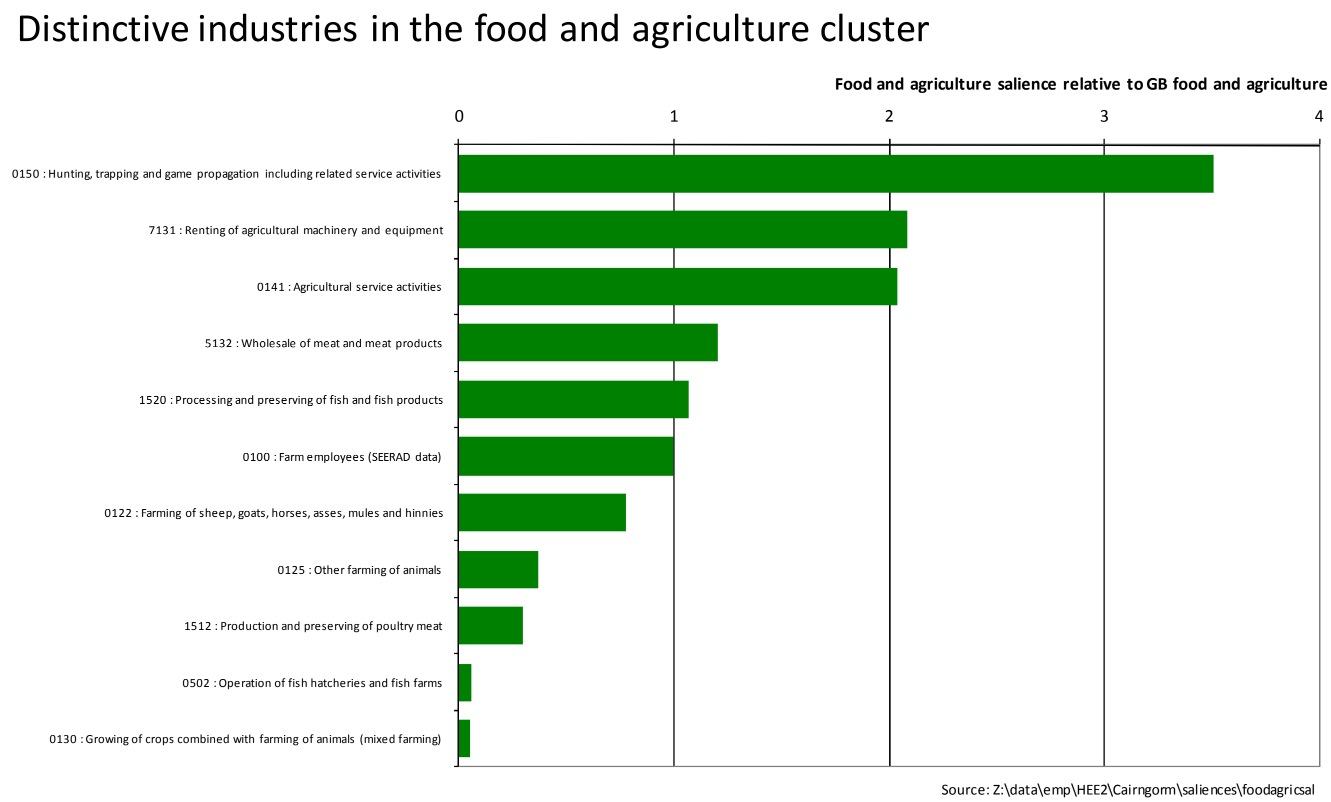


Source: Food and Drink Scotland

However, the food and agriculture sector within the Cairngorms National Park is quite distinctive compared to Britain as a whole. The most distinctive feature is the importance on hunting and other game sports, as illustrated in Figure 69. This is discussed in more detail in the next section.

The chart also highlights the strength of the sector at the beginning of the food chain – in both primary production i.e. agriculture itself and the *initial* processing of fish, meat and poultry.

Figure 69 The distinctiveness of the local food and agriculture cluster



Country sports and estates

This most distinctive aspect of the Cairngorms food and agriculture economy is linked to tourism and to property ownership, and perhaps for this reason defies measurement by official surveys. It is very difficult to gauge exactly the value of country sports to the economy of the Cairngorms.

Red deer and roe deer stalking, grouse and pheasant shooting and salmon fishing are significant employers in the National Park. The number of people officially recorded by the Annual Business Inquiry as employed specifically in the game propagation and hunting industries is fewer than 10, while those recorded as 'managing real estate' oscillates between 40 and 140 in different years of the Inquiry. Surveys of landowners in the Cairngorms Partnership area (Cairngorms Partnership, 2003) indicated that field sports including red and roe deer stalking, high and low ground shooting and fishing, across 46 landowning businesses directly employed up to 77 full-time equivalents between 1998 and 2002. Grouse moors of 92,000 hectares yielded annual bags ranging from 5,000 to 1,000 brace, and the annual deer cull was around 5,000. Owners consider it unlikely that these figures have changed dramatically over the last decade.

The upper reaches of the Spey, the Dee and the Esks fall within the Park, and the Tummell/Tay are close to the Perthshire extension. There are a significant number of lochs stocked for fishing. In a Scottish perspective angling is economically very important, with estimated expenditure nationally in 2003 of £112m. A 2004 study[10] found that some of the highest-spending visitors, particularly overseas fishers seeking salmon and trout, fish in localities in and around the Park. Therefore a significant part of the net additional effect of angling on the Scottish economy is likely

[10] The Economic Impact of Game and Coarse Angling SEERAD (Glasgow Caledonian University and cogentsi, 2004) http://www.scotland.gov.uk/Publications/2004/03/19079/34369

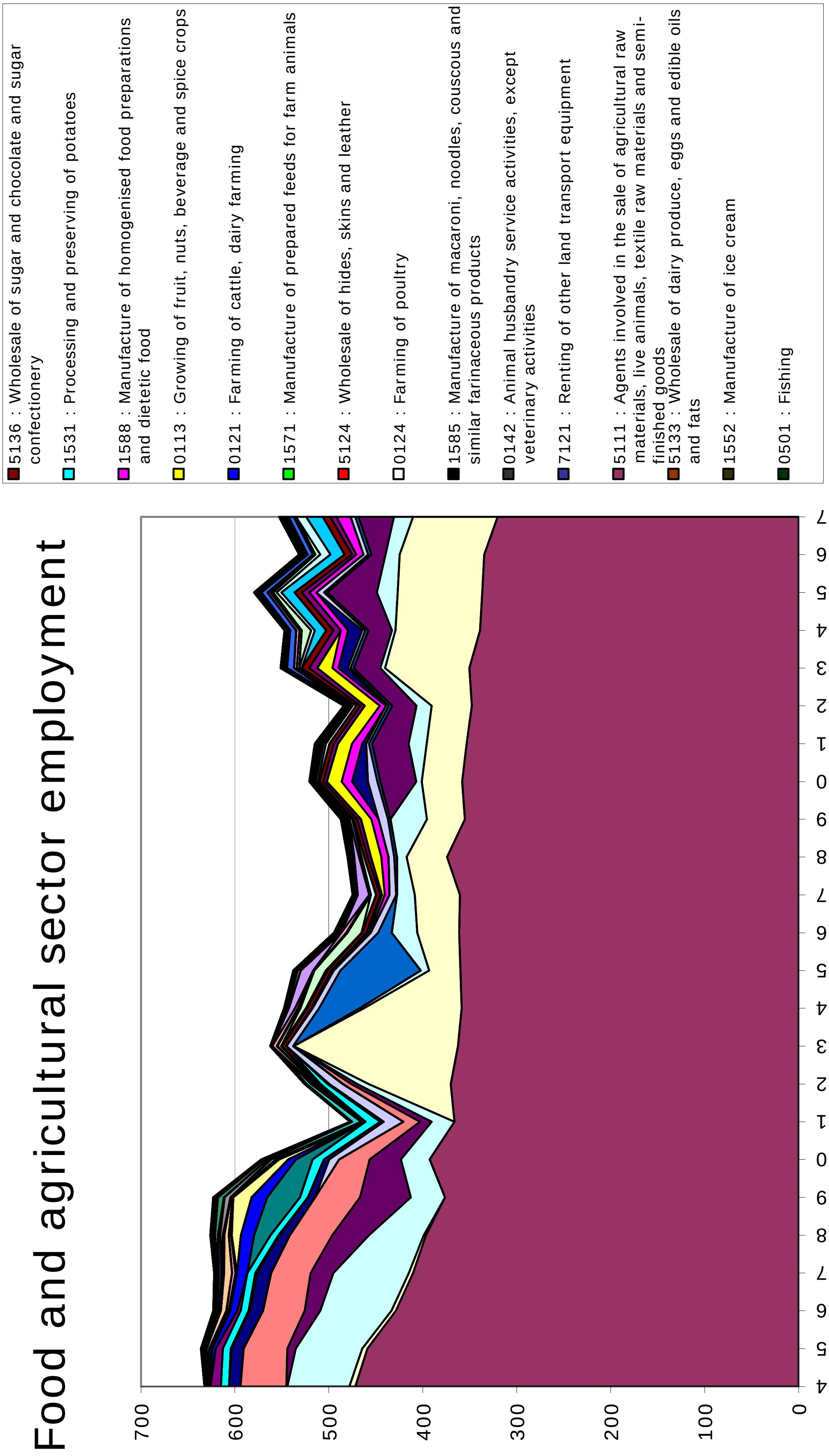
to arise locally. Across the country this totalled £105m on sales (gross output), £48m on income (GVA) and 2,800 jobs (direct, indirect and induced. Of the total national impact about one third arose in the Highlands (including Moray) and one quarter in Aberdeenshire, and these might suggest GVA in the range £2-5m and several dozen direct jobs in fishing alone. Catches have been rising, with nearly 6000 Salmon recorded for the Dee in 2009, against an average of 4000 from 2005 to 2008.

Estate owners and managers take a flexible approach to marketing, and it is suggested that the expenditure *associated with* country sports has grown in significance in recent years. Those who take part are accompanied by friends and families who undertake other visitor activities, there are increasing number of high value commercial participants[11].

To provide a full picture of the economic value of country sports and related food production to the National Park it would be necessary to conduct a separate survey requiring substantial co-operation from estate owners and visitors.

[11] Expenditure of these people, and indeed of the sportsmen and women themselves, is in principle already accounted for in the tourism cluster, although there will remain issues about the ability to reflect specialised activities with the sample size affordable for national surveys.

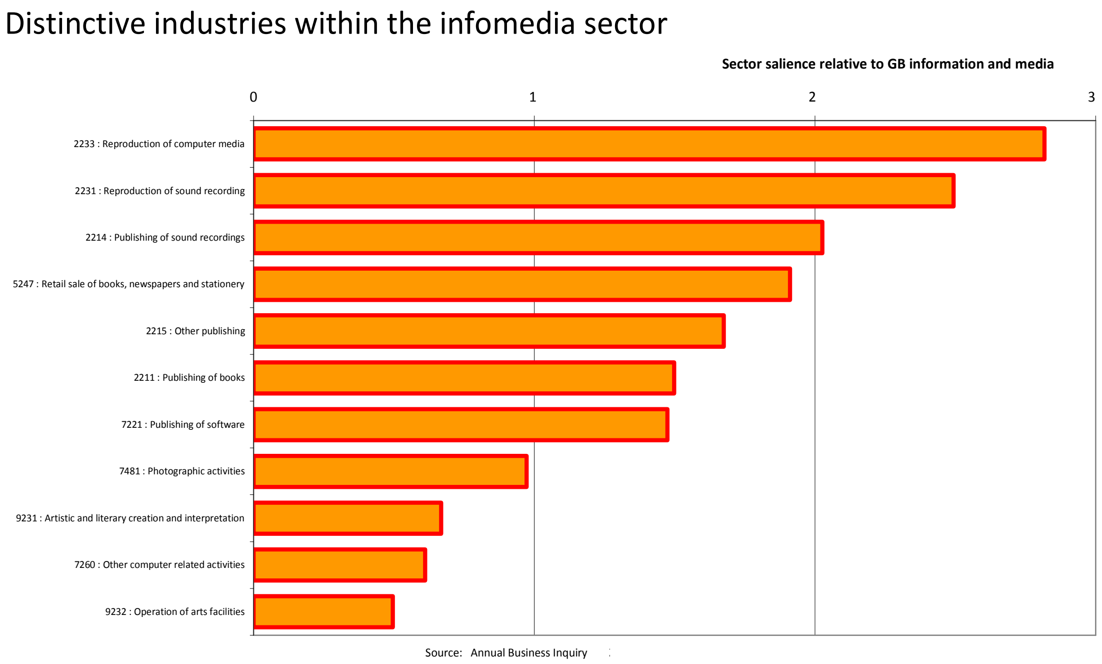
Figure 70 **Other areas of the agriculture, food and drink sectors’ employment**



8.5 Creative, media and knowledge-based industries

Although relatively small, the development over the past decade of a cluster of businesses involved in publishing may be of some cultural importance in due course, and represents one of the Park's footholds in the Scottish Key Sector of creative industries. Out of a total of 34 industry codes related to information and entertainment, 15 are not present in the Park. Of those that are, a significant number are in the areas of music and publishing, leading to a local presence, relative to the area's population, which is much greater than the national average (see Figure 71).

Figure 71 Corporate creativity within the information industries



The creative cluster is only a fraction of the size of some of the Park's main industries, such as tourism and agriculture. However, as Figure 72 indicates, it has grown from practically nothing twenty years ago to employ 90 people and generate wealth of £4m per annum, and hence is a valuable addition to the economy of the Park.

Figure 72 Media sector gross value added trends

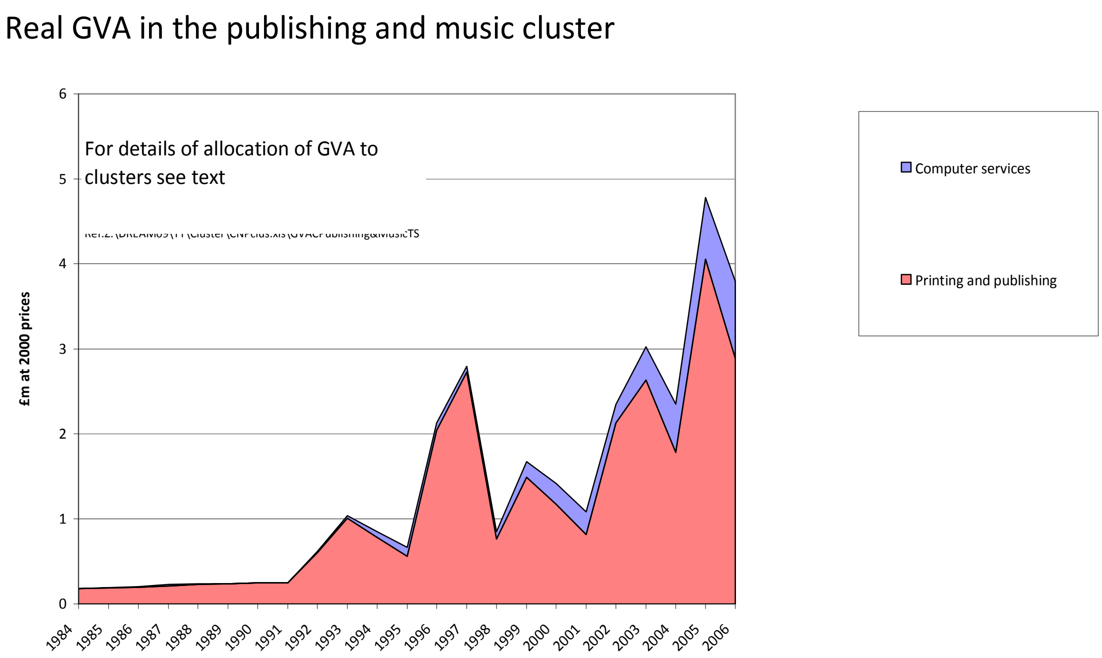
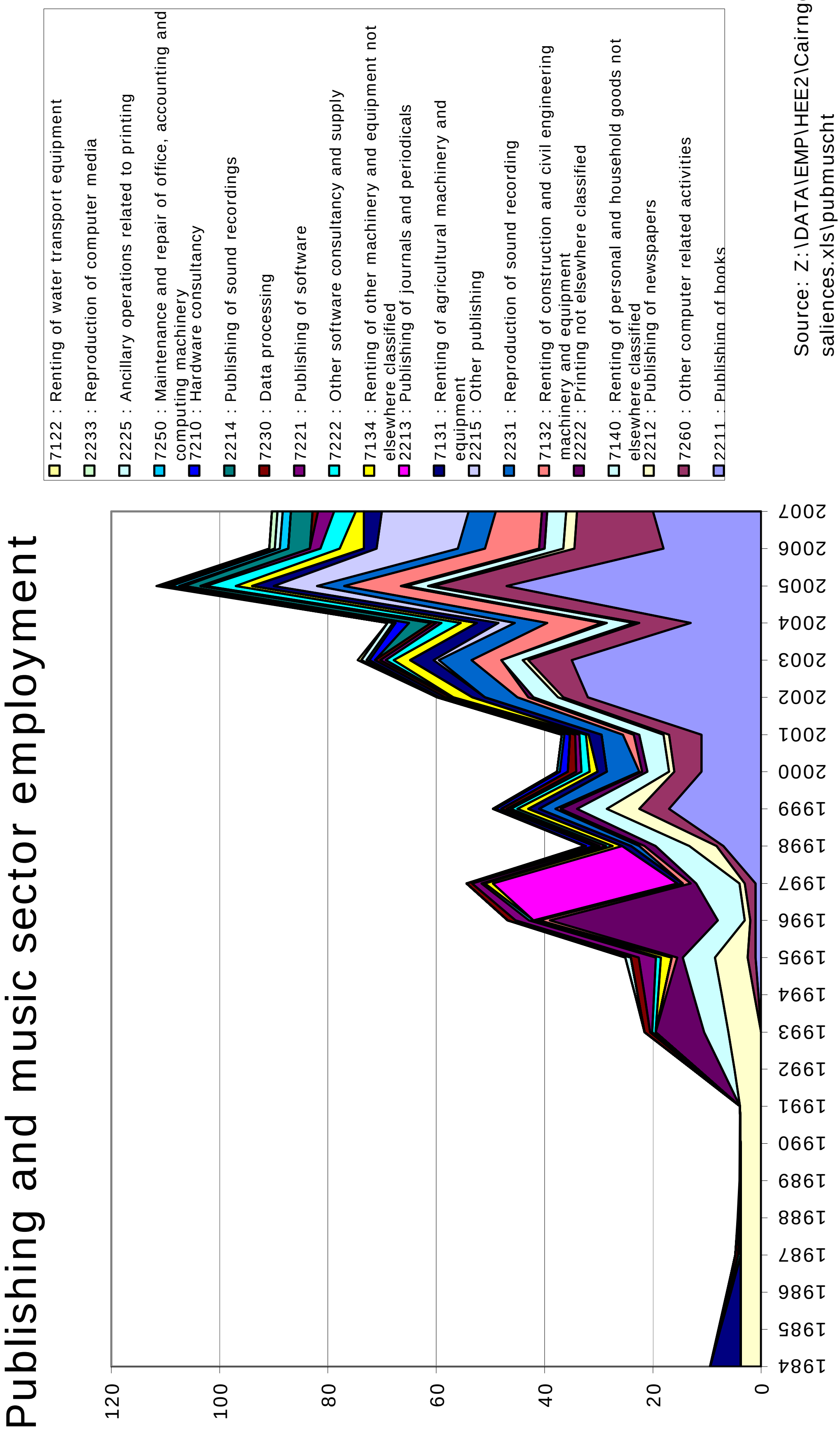


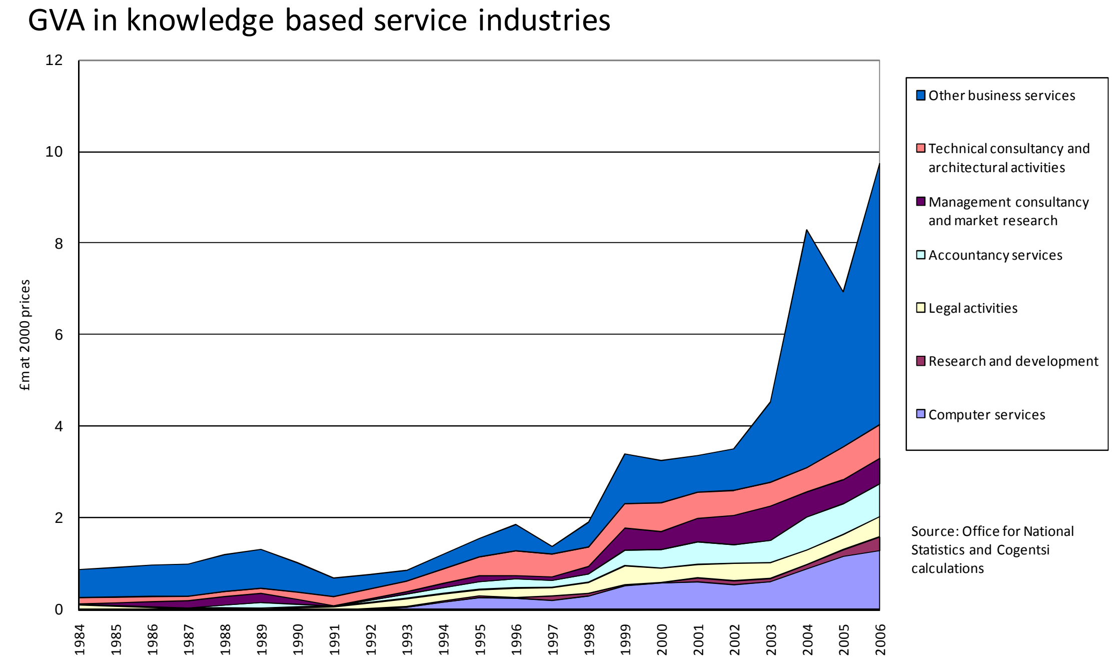
Figure 73 **Media sector employment**



An example of , the activities of Spartan Press at Laggan focus on the publishing and distribution of classical music, but they also print and reproduce short runs of music and CDs. Their main competitors are very large corporate publishers, such as Music Sales and EMI, as well as traditional music publishers doing things in similar fields (e.g. Boosey & Hawkes, A&C Black, Schott etc). They are a significant element in quite a wide field of small independent music presses, which includes other educational organisations that publish their own material, alone or in partnership (such as ABRSM, OUP, CUP and other university presses). Assuming they are broadly commensurate with their wider UK equivalents in terms of turnover and employment, they are a sizeable business in Park terms.

Recent years have shown a significant increase in the growth of local knowledge-based and information-related industries, as telecommunications have improved (see Figure 74).

Figure 74 GVA in other knowledge based service and creative industries



These figures include a contact centre in Aviemore, operated by Stirlingshire based HERO tsc, who also operate a number of contact centres elsewhere in the UK and Asia. A number of these facilities have developed in communities across the north of Scotland, including BT in Alness and Thurso and Vertex in Dingwall and Forres. In relatively low-wage economies such as the Cairngorms they perform a very valuable function in balancing the labour market.

HERO tsc call centre in Aviemore