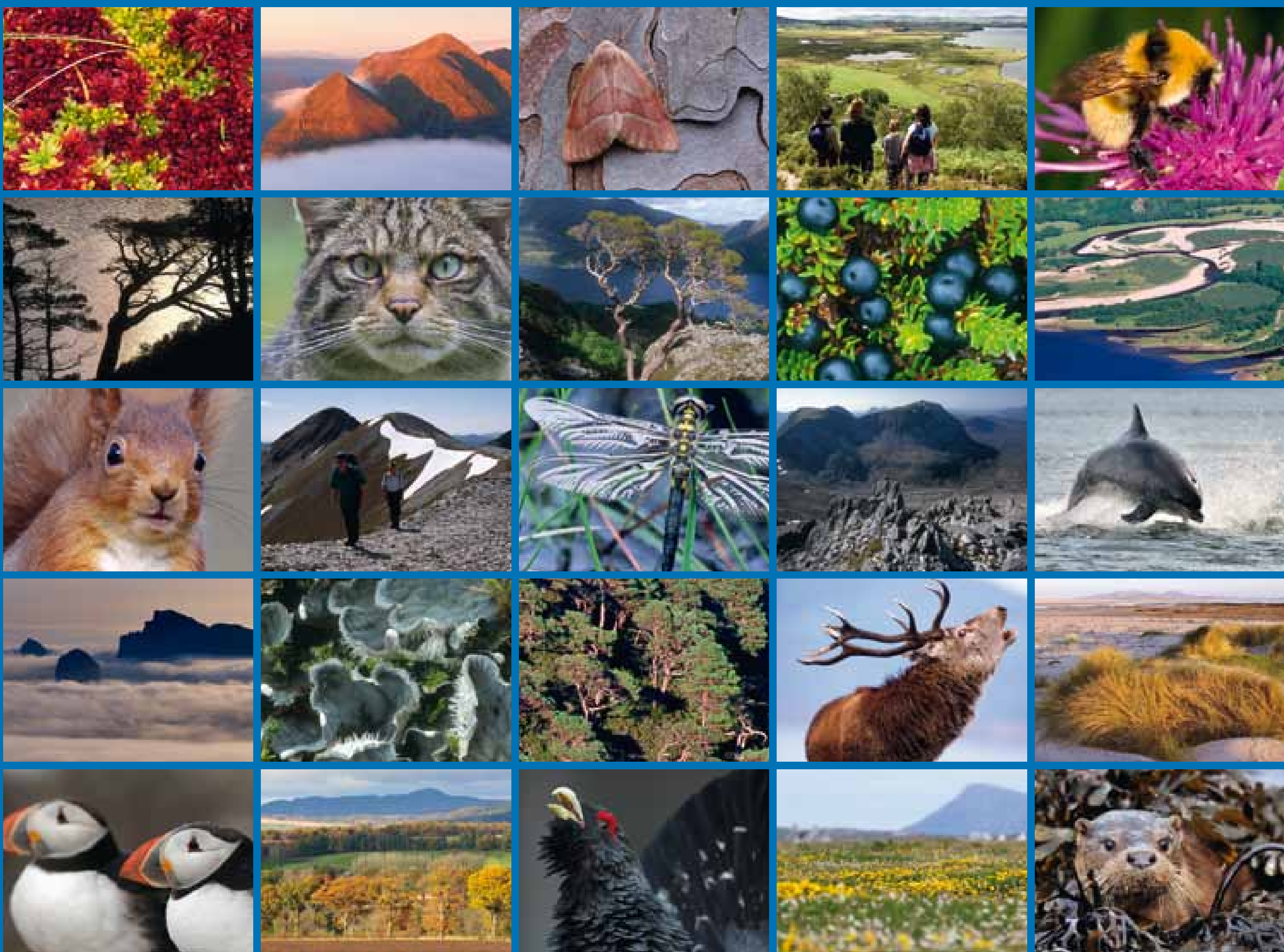
Scottish Natural Heritage
Commissioned Report No. 398

Assessing the economic impacts of nature based tourism in Scotland



COMMISSIONED REPORT

Summary

Assessing the economic impacts of nature based tourism in Scotland

Commissioned Report No. 398 (iBids 7286)

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Background

The primary aim of this study was to establish an estimate of the economic contribution of Scotland's environment to the nation's tourism economy. The report is based on existing studies and uses raw material from some of the studies to calculate standardised impact assessments. No new primary data collection was undertaken.

Main Findings

- Attributing value to nature based tourism is complex and no single report until now had provided the total current value of economic output/activity generated by nature based tourism activities, or quantified the level of jobs in the nature based tourism industry.

- The only practical approach to assessing the impacts of the different natural heritage features and activities to Scotland's tourism was to examine them individually. Subsequently aggregating such impact estimates was not straightforward though, both because of their inter-relationships in practice and because a "counterfactual scenario" of Scotland without any of them would not be meaningful.

- Overall it is estimated that total visitor spending attributable to nature-based tourism per year (rounded and after displacement is deducted) is £1.4 billion with 39,000 associated FTE jobs. These are indicative rather than specific figures.

- Economic and employment impacts are also calculated for the activities and interests given in the typology: wildlife watching, field sports, walking/mountaineering, snow sports, cycling, water sports, horse riding, adventure activities, conservation work, other specialist interests, and scenery. However, there is much less confidence in the accuracy of some of these than of the overall figure due to the difficulty of accurately ascribing a specific motivation for any individual trip.

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1 INTRODUCTION

It has been argued that tourism is a resource industry and natural environmental assets are the very foundation upon which all tourism rests and are usually the most successful in attracting tourists. (Liu, 2003)

1.1 Report remit

Scottish Natural Heritage commissioned this study to review existing reports and information to help assess the competitive advantage, in terms of economic contribution, that the natural heritage provides to Scotland's tourism economy. The study's remit included the following six tasks:

1. Identifying all tourism activities which are directly dependent on the natural heritage.

2. Determining the current value of economic output/activity generated by nature based tourism activities and quantifying the level of jobs in the nature based tourism industry.

3. Estimating the economic importance of Scottish landscapes and scenery to motorised tourism.

4. Analysing the role that the natural heritage plays in Scotland's national tourism marketing.

5. Synthesising the data collated through the study to provide pan-Scotland figures (with a regional breakdown where possible).

6. Recommending further research work required to build a wider base of evidence to quantify the importance of the natural heritage to tourism in Scotland.

The primary aim of this study was to establish a robust set of estimates of the economic contribution of Scotland's environment to the nation's tourism economy. The report was based on existing studies, although we used the raw material in some of the studies for our own impact assessments rather than the impact calculations in the studies where either they were not considered valid or where they covered types of visit (e.g. day trips) that we sought to exclude from our prime analysis.

1.2 Report structure

The methodology used in the study is summarised in Section 2 and the typology that guided our analysis is set out in Section 3. Summaries of relevant studies on each of the principal nature based tourism activities are provided in Sections 4-10, followed in Section 11 by a consideration of the importance of landscapes and scenery.

A summary of the ways in which the natural heritage is used to promote visits to Scotland at the national level is provided in Section 12, and an overall pan-Scotland analysis is provided in Section 13. Further research that would improve understanding of the role of nature in attracting tourists to Scotland is recommended in Section 14, including gaps in information that were identified in the study.

1.3 Nature-based tourism

For the purposes of this study, nature-based tourism in Scotland is regarded as overnight stay visits (including trips by people living in Scotland) that are related wholly or partly to those features that come under the scope of Scottish Natural Heritage (SNH), which is described below.

In broad terms, SNH regards the following elements as the foundation of Scotland's unique natural heritage: geology and geomorphology; soils; land cover; biogeography; and landscape. Scotland's land forms and climate support a diversity of plant and animal communities. Specialist visitors to Scotland might be interested in specific aspects of the above (e.g. particular geological sites), but landscapes (including seascapes), wildlife, and opportunities to walk, cycle and otherwise explore Scotland's countryside and coast are at the heart of Scotland's nature-based tourism. Parks and open green spaces in towns are also regarded as part of Scotland's natural heritage, and these can also attract tourist visitors.

Attributing value to nature based tourism is complex. Specialist wildlife watching and committed fieldsports participants could be considered as the most dedicated nature based tourists. If the bird species on a keen birdwatcher's 'life list' they have yet to see is not present or there are no sea trout in a river system for an angler to catch, they will not come to Scotland. Towards the other end of the spectrum are those driven by the physical challenge or competition of skiing, climbing, sailing, bike riding or running – with the nature context being secondary. For example, even though they may spend money as a visitor on a short break, sub 2.5 hour marathon runners are likely to be more motivated by the race than the natural surroundings of the course.

Further complexity is added when considering activities such as downhill skiing and mountain biking which require a landscape of steep slopes normally found in the uplands – natural heritage features which fit within the SNH purpose. For many participants, the activity is important and the natural heritage setting is secondary. Yet, reverting to first principles, all the additional value generated by these activities would not accrue to the economy if it were not for the presence of the underlying landscape features.

Scotland without the different natural heritage features summarised above is unimaginable, and this makes the attraction of its nature as a visitor "product" impossible to quantify. Conceptually, it is possible (though very difficult) to assess the impact of a single feature (e.g. deer) – i.e. visitors could be asked whether their visit to Scotland were in any way related to the presence of deer – but to ask them to imagine Scotland without the countryside and landscapes in which deer can been seen would not be possible.

Thus, the only practical approach to assessing the impacts of its different natural heritage features to Scotland's tourism is to examine these individually. Subsequently aggregating such impact estimates, is, however, not straightforward, both because of their inter-relationships in practice and because a "counterfactual scenario" of Scotland without any of them would not be meaningful.

We were aware of this difficulty before we began this study, but it soon became clear in assessing the reports that have been produced on the impacts of the different natural heritage features of Scotland (or regions of Scotland) that, had there been an impact report on each feature at the Scottish level, the aggregate impact would have been much greater than the actual impact of all tourism in Scotland.

The authors of reports have generally attempted to a greater or lesser extent, and in different ways, to identify "net impacts", but adjustment from gross to net visitor expenditure is not a precise science, and over-estimation of impacts has been the norm, especially for Scotland as a whole and for regions such as the Highlands and Islands.

In our recommendations for further research, we suggest the development of official norms for tourism and nature related tourism impact assessments. The development and application of these norms may be made easier by Scottish Government focus on outcome agreements and the Scotland's Environmental and Rural Services (SEARS) initiative.

1.3.1 Aspects of Scotland's nature-based tourism assessed in this study

Since our remit was limited to reviewing existing reports, our analysis was constrained by whether reports have been produced on the impacts of particular aspects of Scotland's tourism "product" that are nature-related. In Sections 4 -10 below, we have summarised the relevant findings from reports on the impacts from field sports; wildlife watching; walking; mountain sports (including skiing) and adventure tourism; cycling; horse riding; water sports, and visits to nature-related sites and facilities. Not all reports encompass all aspects of each of these, and many of the reports did not (or were not able to) differentiate participation in activities by tourists, as defined for this study, from others. The role of landscapes, seascapes, lochs, countryside, etc in attracting visitors without a strong interest in any of the above single aspects is covered in Section 11, which includes motorised tourism. If tourists are not accessing Scotland's nature by walking, cycling, non-motorised sailing or kiting, paddle sports or horse riding, they will be motorised – although much tourism that engages with nature involves short walks which are not normally classed as walks as a tourist activity (i.e. a walk is usually reported as an activity if longer than a certain length or time).

1.4 Overview of tourism in Scotland

A tourist trip is defined by VisitScotland (2009) as a *"stay of one or more nights away from home for holidays, visits to friends or relatives, business/conference trips or any other purposes except such activities as boarding education or semi-permanent employment".* Spending by people on these trips (including any advance payments on fares, accommodation, etc) is considered by VisitScotland as tourist expenditure.

It is important to appreciate that "tourist trips" include overnight stay visits by people normally resident in other parts of Scotland – including those entirely on business who would not normally be regarded as "tourists".

The following figures on visits and spend were taken by VisitScotland from the two major sources of UK tourism statistics – the UK Tourism Survey (UKTS) and the International Passenger Survey (IPS). Day trips are excluded.

The figures on employment and Gross Value Added (GVA) (see definition in section 1.7 below), however, were drawn from different sources, and are not compatible with the trip and spend data. Tourism-related employment, in particular, is overstated as it includes employment in hotels, restaurants, etc that is not associated with tourism.

VisitScotland's main factsheet provides our baseline figures, and in 2008, around 15 million tourists (including domestic, overseas and business visitors, and those visiting friends and relatives) took overnight trips to or within Scotland (VisitScotland, 2009), and their annual spend was estimated at £4.047 billion. The UK is Scotland's largest market and accounts for 83% of tourism visitors, who provide 67% of all tourism expenditure in Scotland. Overseas visitors accounted for 17% of trips and 33% of expenditure (staying on average longer).

In 2008, Scottish tourism supported 218,200 jobs (9.2% of the Scottish total), contributed 5% of the Scottish economy's GVA, and represented 11% of the Scottish service sector economy (compared to 9% for the UK as a whole).

As illustrated by a wide range of reports, a very high proportion of visitors to Scotland appreciate being somewhere with distinctive and special natural features – somewhere dramatic and enduring – i.e. values associated with the nation's natural heritage. Without a natural heritage that is appealing to visitors, it is clear from visitor survey data that Scotland would have very few tourist visitors from outside the country other than people on business or visiting friends and relatives. In normal parlance, these visits are less regarded as "tourism" than leisure day trips, and a tourism operator who does not provide accommodation will tend to regard a day tripper's spend as equivalent to the spend by an overnight stay visitor.

The "tourism-related sector" (including hotels, restaurants and shops) is broader than the tourism sector, since it benefits from expenditure by locals as well as tourists. It can be easier to determine the size of the tourism-related sector than the tourism sector, since impact does not need to be allocated between tourism spend and non-tourism spend.

In practice, studies often combine spend from day trips and overnight stays in estimating tourist (or visitor) expenditure – although we have tried to distinguish the separate impacts from these in our reviews of particular studies (where the data in the studies allows this).

In addition to its natural heritage, visitors are attracted to Scotland for its historic environment (e.g. castles), visitor attractions that are not nature-related (e.g. distilleries), culture (e.g. traditional music), attendance at events (e.g. Highland Games), indoor activities (e.g. sporting competitions), etc. Many such visits, however, are generated because Scotland also has an outstanding natural heritage, and a tourist might visit a castle one day and a nature site the next. Historic buildings like castles are often part of the natural landscape, from the local stone they were built with to their topographical location in a glen or above a river crossing. Also, activities such as golf attract more visitors if venues are scenically attractive, and a typical tourist golfer would be enthused by the prospect of seeing wildlife on or from the course.

Thus, the natural heritage is a setting for tourism in Scotland as well as being an attractor. Differentiating the two might be of theoretical interest but, in practice, is not possible with any precision.

1.5 Overview of nature based tourism in Scotland

In its Tourism Prospectus, VisitScotland (2007) makes the point that:

"*Visitors do not primarily come to Scotland because they like the hotel bedrooms! They do not come in order to drive up and down the roads or use the railways and airports. Visitors to Scotland come for an experience that is rooted in our hills and glens, our castles and towns, our history, our culture, our way of life and our people. Visitors participate in any number of activities, pursue many different interests, see many different places but they do so against a distinctive backdrop that is the country of Scotland.*"

The importance of Scotland's natural heritage to its tourism is demonstrated by the Visitor Experience 2008 survey which showed that 90% and 65% respectively of visitors stated that scenery and nature/wildlife were an important or very important factor when choosing Scotland as a holiday destination (Harris Interactive, 2008). A 2005 poll of 60,000 booking enquiries through the online travel agency responsibletravel.com ranked Scotland as the top European eco-destination and ninth in the world (Kelbie, 2007).

VisitScotland notes in its environmental policy that '*VisitScotland is committed to ensuring that our natural and built environment, upon which tourism within Scotland is so dependent, is safeguarded for future generations to enjoy'* (VisitScotland 2006).

In addition to scenery, the natural heritage provides the setting for outdoor activities undertaken by tourists. The Scottish countryside has long been used for walking and field sports. Walking is the most popular outdoor activity and VisitScotland (2009) reports 47% of UK tourists in 2008 undertaking some form of hill walking or low level rambling during their trip.

Adventure activity tourists use Scotland's land and water, and wildlife watching increasingly features on visitors' itineraries. Locally produced food and drink (including whisky, game, and seafood) directly linked to the natural environment plays an increasingly important role in attracting visitor spend, while visitors will also spend money on art and craftwork inspired by the natural heritage.

By way of comparison to scenery and wildlife, the Harris Interactive survey (2008) recorded culture and history to be an important or very important factor for 70% and 67% of visitors respectively. The same survey recorded 89% of overseas visitors and 67% of UK domestic visitors to Scotland visiting an historical attraction as part of their trip. A report by Ecotec (2008) on the economic impact of the historic environment in Scotland concluded that tourism expenditure in Scotland attributable to the historic environment is estimated to support some 37,000 FTE employees in Scotland, and generate nearly £1.3 billion in GVA.

1.6 Overview of outdoor recreation undertaken as day trips

Out There, a sportscotland policy document (sportscotland, 2009), included figures for participation in 2005 which show that 30% of adults resident in Scotland (aged over 16 years) walked two miles or more at least once a month. This is around 875,000 people. A further 11% cycled, 4% went hillwalking, 3% angling, 1% horse riding, and 1% skiing or snowboarding. This participation could include overnight stays as well as day trips.

The Scottish Recreation Survey for 2007 (TNS, 2009) indicated that 44% of the adult population in Scotland made at least one visit per week to the outdoors for leisure and recreation purposes, the same level as recorded during 2006. From within that adult population, 80% claimed to have made at least one outdoors trip in the previous 12 months. This equates to around 337 million visits to the outdoors in Scotland during 2007, a 3% increase on the estimate for 2006. Most of the outdoor recreation visits recorded during 2007 began from home (95%) rather than while staying away from home (for example on holiday).

Of outdoor recreation day visits in Scotland in 2007, 72% involved no expenditure (TNS 2009). Amongst those 28% who made purchases, the average expenditure was £33, while the overall average including those who did not spend anything was £9. The main categories of expenditure were food and drink and fuel. The total value of expenditure during these trips was estimated at around £3.1 billion. Separating out a tourism value from day trip expenditure is a further challenge.

1.7 Establishing economic contribution

Economic impact from nature-related tourism is generated in the main by visitor expenditure, although public and voluntary sector employment can be generated or supported without direct visitor expenditure – for example forestry or countryside management jobs where visitors are not charged for access, RSPB reserve employment, SNH staff involved in enhancing Scotland's natural heritage assets, etc.

Most visitor expenditure impact arises through commercial provision associated with nature, or (more substantially) through visitors spending money on accommodation, food and drink, gifts, travel, etc while on a trip principally or partially related to specific or general natural heritage assets (including driving through attractive countryside).

"Economic contribution to GVA" can be distinguished from "economic impact". GVA (Gross Value Added) is, broadly, income from employment, plus other employment costs to employers, plus operating profits before depreciation. Over a financial year, tourism gives Scotland a higher GVA than it would otherwise have, and its "economic contribution" can be considered as this difference – built up from the GVA differences by sector and sub-sector. Often, this contribution is considered to relate to the additional value added over the year in the sectors in which tourists spend their money (direct impact) plus the additional value added through the supply chain (indirect impact, or the Type 1 multiplier). In assessing "economic contribution", however, it is no more logical to exclude "induced" impacts (generated by the spending in Scotland of those earning additional direct and indirect income) than when assessing "economic impact", when induced impacts are almost always taken into account (Type 2 multipliers).

Economic impact analysis usually relates to the additional employment and income generated by a particular activity in a specified area. Having calculated (or more normally estimated) visitor expenditure on a particular activity and "externalities" (i.e. expenditure on accommodation, food and drink, etc, that can be related to being in an area for the activity), ratios (or survey evidence) can be used to convert this expenditure into employment and / or income from employment estimates. If using the 1992 Scottish Tourism Multiplier Study (STMS) ratios (Surrey Research Group, 1993), or other similar derived ratios, these impact estimates can include direct, indirect and induced impacts without the requirement to estimate them separately. It is then essential to estimate how much of this supported employment is additional within the area for which impact is being assessed. If, for example, a general interest visitor to a bird watching site stays in a local hotel, but would otherwise have stayed in another hotel in the area, their accommodation spending relating to bird watching would not be additional.

Once this "market displacement" is taken into account, net impacts can be calculated – normally by estimating a displacement percentage within the impact area (although a sophisticated analysis would assign different displacements to different categories of visitor). The adjustment from gross to net is usually very difficult (and more difficult the larger the impact area) and spurious accuracy is often assigned to figures that carry a large margin for error – not only because of the displacement adjustment, but also because of the estimation involved in quantifying indirect and induced impacts. Although often used, the term "gross impact" is actually a misnomer as the concept of "impact" is implicitly net impact.

Displacement of spending by tourists from Scotland should consider that some, but not all, of their overnight stay and day spending would otherwise have been spent in Scotland had they not made the trips. Assessing net impacts from overnight stay visits by Scottish residents within Scotland is especially problematic as their alternative could have been a different type of trip within Scotland or other expenditure in Scotland over the year – i.e. had they not taken a particular trip within Scotland, they would not necessarily have taken a trip outwith Scotland. This could be estimated for the different categories of nature based tourism activity, but once all tourism spend for an activity has been estimated, it is then necessary to assess the percentage of this that relates to visitors from Scotland.

Visitors from other parts of the UK or overseas, however, who might have reported in a visitor survey that they came because of, or were influenced by, Scotland's nature are less likely than Scottish residents to have otherwise spent the costs of the trip in ways that would have generated alternative economic impact in Scotland.

In practice, it can be very difficult to separate impacts from overnight stay visitors from those from day trippers (except through targeted visitor surveys), and, indeed, the benefits to an area (especially a very local area) from day trippers can be as (or more) valuable in aggregate as from overnight stay visitors, and just as valid as economic impacts.

Within Scotland as a whole, however, day trips are much more likely than overnight stays to displace other expenditures within Scotland, as most will be taken from a home base in Scotland – the main exceptions being day trips over the English border, e.g. from Carlisle to Dumfries and Galloway.

This displacement, observed from the literature review, is one reason that day trips are often excluded from tourism-related impact studies – in as far as data enables this. A comprehensive impact analysis of certain activities (and event attendance) should, however, take these trips into account where they contribute usefully to impact. An angle on this is where an event or activity wouldn't take place or be provided at all without local demand as well as tourist demand.

1.7.1 The coverage of impact analysis

Typically, tourism impacts are calculated from expenditures made by visitors during their trip. Thus, binoculars bought locally by an overnight stay visitor to a bird watching site would tend to be included as an impact, whereas the expenditure of a Scottish resident birdwatcher buying binoculars for bird watching in Scotland in their home town would not. This calculation also applies to purchases such as outdoor clothing, and mountain biking equipment, not made during the holiday (and thus not picked up in visitor expenditure surveys) which are not 100% displaced within Scotland. Firstly, the item might otherwise have been bought outwith Scotland (e.g. if going on a holiday to the Lake District); and secondly, the alternative use of the money had the nature-based holiday not been taken would have been on miscellaneous items not necessarily purchased within Scotland. On average, an item definitely purchased in Scotland generates more economic impact in Scotland than expenditure that might or might not have been made in Scotland. The value added is higher if the product is also made in Scotland.

Over the year, this exclusion of related spend will underestimate the overall GDP contribution from nature based tourism in Scotland – especially where a major item such as a sailing boat might be bought in Scotland or a holiday home built close to a nature site[•]. Were this spend to be valued, displacement of spending within Scotland would need to be taken into account in converting economic “contribution” into economic “impact”.

Outdoor tourism and day visit activities in the natural heritage are also valued for a range of ‘non market’ benefits. Not necessarily motivated by outstanding achievement or competitive success, people can simply be keen to get out in the fresh air and enjoy the natural heritage and the company of their friends; to gather their thoughts; to take a bit of exercise and develop their skills; or for the thrill and challenge their particular activity may give them.

As illustrated later in this report, outdoor activity such as long walks can often generate less economic impact during the day than alternative activity within Scotland (e.g. shopping in a city). Thus, a displacement analysis for such people might show their economic impact from walking as negative!

[•] Indeed, this type of construction impact is virtually always excluded from formal economic impact analysis, whereas it can be substantial and genuinely “additional” within a local area.

2 METHODS

2.1 Data limitations

We were not able to build a fully comprehensive picture of the contribution natural heritage tourism makes to Scotland's GVA and employment as the core data are not available. Instead, after initial feedback to SNH as clients, we focussed on gathering information from a broad range of sources to provide a general impression of the economic contributions of different aspects of Scotland's natural heritage. The following provisos should be borne in mind when reviewing the results:

- Many reports and surveys were not carried out to assess impacts and do not provide GVA measures or benchmarks;
- The more extensive the geography, the less reliable the GVA measure due to the difficulties in assessing displacement (see further below);
- The studies that we reviewed relate to a range of years, and were conducted using a variety of methodologies, definitions, multipliers etc. Some methodologies are sounder than others;
- This report does not take into account economic contributions arising from non-market benefits, the increased value of property associated with nature based tourism opportunities, or economic benefits from environmental consequences of land given over mainly for nature based tourism activities.

As the objective of the study was to assess current impact, rather than review historical change, we focused attention on reports that are as recent as possible – although it was necessary to go back to the early 2000's for the most up-to-date analysis of some aspects of nature-related tourism in Scotland. Findings in £s from studies carried out for different years were converted in our summary analysis into 2008 prices through indexing to the CPI (Consumer Prices Index) in Section 13.5. 2008 was taken as the base year because the most recent available official tourism data related to this year.

2.2 Project Tasks

Task 1 - Identify all tourism activities which are directly dependent on the natural heritage.

A desk based review of literature was undertaken to identify and classify tourism activities dependent on the natural heritage according to activity type (e.g. individual, mass participation), geographical location, and participation requirements (e.g. equipment, skill level, facilities, etc).

A typology of natural heritage tourism was developed from this and discussed with SNH staff, prior to the finalised version provided in Section 3 below.

Task 2 - Determining the current value of economic output/activity generated by nature based tourism activities and quantifying the level of jobs in the nature based tourism industry.

A desk-based review of economic impact material was sourced from a variety of stakeholders, including public bodies, trade bodies, sport governing bodies and voluntary bodies. Academic literature in the form of peer reviewed journal papers that held relevant material were considered if they were referenced in existing reports. Telephone interviews and Internet searches were used to help gather this material.

Team members already held many relevant reports, and, in addition, could draw on appropriate material contained in previous reports they had themselves produced.

The material identified through this review was analysed where possible to establish:

- Year;
- Scale (national, regional, or local);
- Activity or event specific definition;
- Frequency of activity or event;
- Market research methodology - quantitative or qualitative; sample sizes, etc;
- Employment – direct, indirect and induced (including the multiplier assumptions used);
- Incomes;
- Economic Impacts – Gross and Net of Additionality and Displacement (where this was assessed in the reports).

The assumptions used in the reviewed studies for estimating impacts were assessed and scrutinised for credibility and robustness. Some studies lacked adequate robustness, and in some cases we reworked impact calculations from data in the reports and other information for our summary analysis. For example, incorrect ratios are often used to convert visitor expenditure into employment impacts, especially in reports produced by relatively inexperienced consultants or researchers. Also, consistency was sought in excluding day trippers and local residents who participate in nature based activity.

Task 3 - Estimating the economic contribution Scottish landscapes and scenery make to motorised tourism.

We used regional and national market research and data to estimate approximately the extent of car and coach touring in Scotland. We then assessed the proportion of overall visitor expenditure by tourists in Scotland related to nature (as defined for this study) and estimated indicative values of economic impact from this. Estimating impacts with a reasonable degree of accuracy was not, however, possible.

Task 4 - Establishing the extent to which the natural heritage features in national marketing activities.

National tourism marketing is the responsibility of VisitScotland, and its research staff were contacted and information sought on:

(a) Recent marketing campaigns which use significant natural heritage imagery and reference points;

(b) Recent activity-related marketing campaigns which use natural heritage imagery and related text.

Given the lack of relevant data, we adopted a descriptive approach which indicates the weight given to the natural heritage through the marketing strategy. Valuation was not possible, but we are very sceptical of quoted rates of return on investment in marketing campaigns that we have reviewed. Such valuation is only possible with very well targeted visitor feedback and information to enable deadweight and displacement to be assessed.

Task 5 – Reconciling all data obtained through the study into a single framework – showing this as a pan-Scotland figure, with a regional breakdown where possible.

Our methodology provides some aggregate economic impact estimates, with a regional breakdown where practical for the Highlands and Islands – taking account of different regional multipliers. A commentary on how the results should be interpreted is provided.

Task 6 Outlining further research and/or survey work required to strengthen and support the findings of this study.

We identified gaps in the coverage of natural heritage-related economic impact studies, and weaknesses in existing economic analyses – and make recommendations for further research and adoption of an increasing standardisation of approach.

We considered how the findings from the study could inform policy development on environmentally sustainable tourism in Scotland, especially SNH's future tourism initiatives and support activities.

2.3 Methodological issues

The most common difficulties faced by the consultants who produced the reports that we review in Sections 4-10 below related to (i) Sampling sufficiently robustly to give representative samples for grossing up visitor numbers, visitor expenditures, etc, and (ii) Converting gross visitor expenditure into net employment and income impacts.

2.3.1 Visitor surveys

A fundamental problem, not generally appreciated by those assessing visitor impacts from specific activities undertaken by people while on a visit to Scotland, is that random sampling at sites frequented by visitors undertaking a particular activity will be biased towards those who undertake the activity most intensively. For example, a visitor interviewed at a car park after a long walk would have been more likely to be interviewed (on average) if they took long walks every day of their trip than a visitor who would have taken such a walk on only one day during their holiday.

As a hypothetical example, if five walkers out of ten each day on a particular walk made the walk every day over 5 days and the other five tourists were different people each day who each only walked once, interviewing the ten walkers on one day would give an average of 3 walks per walker, whereas interviewing all walkers over the 5 days would give the correct average number of walks per walker of 1.67.

Adjusting for this bias is not straightforward, but many studies, in failing to do so, greatly overstate the extent of participation in activities. Also, if regular walkers tend to spend less per day on average than occasional walkers (e.g. they are more likely to camp or use a hostel and not spend money on shopping), the apparent spend per day of all walkers will appear lower than it is unless an adjustment is made.

Conversely, when tourists are interviewed at visitor attractions, in town centres, etc, those who spend most of their time during their trip on activities are proportionately less likely to be interviewed than the average tourist, which creates different distortions – as in many visitor surveys not based on exit surveys (which is only practical for islands at ferry terminals and airports).

2.3.2 Assessing employment and income impacts

Employment is generated or sustained by visitor spending and, conventionally, visitor expenditure impacts are converted into full time equivalent employment (FTE) impacts through applying appropriate ratios, even where, in practice, the businesses that receive the additional income from visitors might not take on additional staff, or pay seasonal or part-time staff for more hours.

The STMS (Surrey Research Group, 1993) was commissioned in 1992 because, prior to this, ratios for employment impact to visitor spending were often derived from a Tayside study carried out in 1975 (Henderson and Cousins, 1975). The Tayside ratios indicated a lower employment impact per £ spent by visitors than later empirical evidence suggested, and were not necessarily appropriate for areas other than Tayside.

The STMS (produced for a range of agencies) was based on case studies in six areas – Edinburgh, Dundee, Inverness & Nairn, Skye, Lanarkshire, and Tayside – using existing data not always strictly applicable in some cases (for example, expenditure patterns from the UKTS for Tayside were used for the city of Dundee).

From this and other business survey data, input-output models were constructed to give multipliers and ratios for urban areas, rural areas and remote rural areas. The Highlands and Islands was not a study area, although recent tourism impact reports have used multipliers from the study for smaller rural areas as if they apply to the Highlands and Islands (i.e. the area covered by Highlands and Islands Enterprise).

Even in 1991 (the reference year for the study), many of the multipliers and ratios by sector and area were mutually inconsistent and adjustments were required for accurate impact analysis – although the main ratios broadly matched contemporary empirical evidence•. For example, an increase in expenditure by UK resident tourists of just over £27,000 was estimated to generate 1 FTE job in the city of Edinburgh, and (coincidentally) in Skye, and just over £19,200 in Inverness and Nairn. The study report gave multipliers for types of tourism business and area to four decimal places – although (at best) many will have been accurate to only one decimal place.

STMS results, updated for inflation since 1991, are still used in many studies simply because a similarly comprehensive study has not been undertaken since – even though the figures in the report are now 19 years out-of-date, many of the figures were not accurate even in 1991, and the modelling for types of area was heroic (e.g. the Skye results carried a large importance).

This continuing reliance on the STMS abstracts from productivity changes since 1991, the extent to which earnings from employment might have risen faster than inflation, and changes in visitor expenditure patterns (through both demand and supply factors). In short, using empirical data that relates to relevant sectors and areas is far superior to using STMS, and, where the STMS modelling is used, the ratios should be rounded – e.g. through assuming that £40,000 of visitor expenditure in the Western Isles will support 1 FTE, rather than (say) £41,100 – although it can be necessary, in comparing one year with another, to use figures that otherwise would have spurious accuracy to allow for inflation.

• Steve Westbrook, for example, has always used actual data from the financial accounts for a large sample of businesses assisted by HIE to inform the estimation of multipliers by sector for the Highlands and Islands and Scotland.

3 A TYPOLOGY OF NATURE BASED TOURISM ACTIVITIES

3.1 Context

In developing a typology it is important to recognise that there is a wide range of tourism activities directly dependent on Scotland's natural heritage resource. Scotland's marine environment, its inland water, hills, mountains and glens, caves and cliffs, weather conditions, tides and currents, scenery, flora and fauna, and wild land combine to provide a range of outstanding opportunities for visitors to enjoy outdoor activities.

In Scotland, tourists can hill walk, mountain bike, horse ride, sea kayak, raft, scuba dive, cave, ice climb, surf, ski, board, sail and glide, paint, photograph or watch, shoot or fish. They can actively engage with the landscape and scenery through, for example, sailing on the Minch, winter climbing on the north face of Ben Nevis, kite surfing at Gullane, scuba diving at St Abbs, surfing off Thurso, mountain biking in the Borders, sea kayaking off the coast of Skye, watching ospreys at Abernethy or fishing the River Tay. Alternatively, many choose to engage with natural heritage in a more passive way by, for example, driving along one of Scotland's twelve tourist routes, travelling the scenic rail journey from Inverness to Kyle, taking the ferry to Islay or joining the Hebridean Princess for a cruise to St Kilda or the Shetland Islands.

Scotland also hosts some of the world's premier outdoor events that take place in 'natural' locations, such as the Mountain Bike World Championships at Nevis Range, and the Wilderness ARC World Challenge Adventure Racing event in Lochaber. As noted in Section 1.3, although these events are about physical challenges, it is the Scottish landscape and geology that provides the challenge and, it could be argued, elicits economic value. The nature based backdrop provides an important setting to these events for participants and spectators. Television coverage may further dwell on the landscape setting and provide a promotional benefit. These are, however, mobile events not tied to natural heritage features in Scotland, and organisers could select alternative locations. National and regional events include the Scottish Island Peaks, Hebridean Challenge, Tiree Wave Classic, and West Highland Yachting Week.

3.2 Establishing a typology

Faced with a wide range of activities, Healey and Ilbery (1990) classified natural assets or resources, according to availability, into four main groups:

- 'Ubiquities', which exist everywhere;
- 'Commonalities', which are widely available across many areas;
- 'Rarities', which occur in very few locations;
- 'Uniquities', which occur in one place only

Liu (2003) based his classification on the utilities of natural resources, with the following resource types:

- Touristic resources, which are only suitable for tourism purposes[•], such as sandy beaches and snowy slopes;
- Shared tourist resources, which are mainly used in tourism and a limited number of other industries like fishery and agriculture, such as sea and forest;

[•] Tourism here refers to day trips (e.g. to local beaches) as well as to overnight stays.

- Common resources, which are used in most industries and everyday life, such as land and water.

The typology of natural heritage tourism adopted for this report is relatively simple and is set out in Table 1. The table also summarises the geographical coverage of the reports identified in Sections 4-11.

Table 1 - Nature Based Tourism Typology

NATURE BASED TOURISM ACTIVITIES	SUB ACTIVITY	REPORT COVERAGE
Fieldsports	Sea Angling	Scotland
	Sport Shooting	UK
	Freshwater Angling	Orkney
	Deer Stalking	Scotland
	Game and Coarse Angling	Scotland
Wildlife watching	All types	Scotland
	Key bird species	Scotland
	All types	Highlands & Islands
	Watching cetaceans	West Coast; Moray Firth
	Field Studies	(no reports found)
Walking and mountain sports	Long Distance Routes	Southern Upland Way; Fife Coastal Path
	Walking	Scotland
	Mountaineering & Walking	Highlands & Islands
	Snow sports (snowboarding, downhill skiing, cross country skiing, telemarking, blading skiboarding).	Highlands & Islands
	Adventure Holidays (Corporate activities, gorge walking, rafting, paragliding, abseiling)	Highlands & Islands
Cycling	Mountain biking	Scotland
	Cycling and mountain biking	Scotland; Highlands & Islands
	Mountain bike event	Fort William
Horse riding	Equestrian activities	Highlands & Islands
	Horse industry	UK
Watersports	Paddle sports	River Spey
	Off shore Sailing	Firth of Clyde
	Coastal activities	Scotland
	Wind surfing event	Tiree
Tourism based facilities and sites	Visitor use of path networks	Scotland
	Tourism in forests	Scotland
	Tourism on canals	UK
	Touring by road	(no relevant reports
	Touring by rail	found)

	Cruise ship holidays	Scotland
	Visits to nature reserves and protected areas	Scotland
	Special interest holidays (volunteering)	Scotland

Outdoor culture and heritage in which tourists participate can also be nature-based, but including all of this would overstate the tourism importance of the natural heritage.

3.3 Area coverage

Although the main interest of this study was in establishing impacts within Scotland, and regions (particularly the Highlands and Islands) where possible, some reports on particular areas provide results of wider relevance – either because they appear representative or because an activity is focused in particular parts of Scotland.

Going back before the year 2000 would have provided more evidence for the study, but the relevance of this to current nature-based tourism would either not be possible to assess or would be known to be low.

3.4 Activity types, locations and participation requirements

A synopsis of the types of people who participate in particular activities, the main types of location for these activities, and participant requirements (skills, equipment, support, etc) is provided as Appendix 1.

Some activities (e.g. wildfowling, sub aqua, ice climbing) would only be carried out by experienced people – except where training is provided – and these tend to attract specialist visitors to Scotland. Activities such as mountain biking are available to anybody who has or hires a bike, and provision can be graded by the user's experience or endurance (e.g. by colour or length of trail).

The following sections, 4 – 11, summarise the analysis of the reports identified in Table 1, above.

4 FIELD SPORTS

The findings from the major field sports reports produced in recent years are summarised below, followed by information on other more localised reports.

4.1 Sporting shooting

The Economic and Environmental Impact of Sporting Shooting (PACEC, 2006b).

Contractor: PACEC

Clients: The British Association for Shooting and Conservation, the Countryside Alliance and the Country Land and Business Association, in consultation with the Game Conservancy Trust.

Publication: August 2006

The study objectives were to:

- Define the key components of shooting and associated interests;
- Assess the economic contribution of the sector to the UK economy;
- Identify the conservation and habitat management activities arising from live quarry shooting;
- Evaluate the environmental benefits and costs associated with shooting.

Research Method:

A staged research programme comprising the following main elements began in 2004:

- Literature search and review;
- Survey of providers;
- Survey of participants;
- Survey of suppliers to providers and participants.

Table 2 - Research methods: sporting shooting

Target	No. of Respondents	Survey Method
Stakeholders	40	Face to face and telephone
Case studies	16	Face to face and telephone
Participants	1,128	Postal
Providers	968	Postal
Suppliers	169	Postal and telephone
Public	623	Face to face

Geographical scope: UK (with some reporting at UK Standard Region level. There is no breakdown of findings below the Scotland level).

Participant definition: There is no focus on tourists. “Participant” relates to anyone – local or visitor (day trip visitor, or tourist) – involved in sporting shooting.

Activity definition: Sporting shooting – more specifically, live quarry sporting shooting: the shooting of birds and mammals for recreation.

The key economic effects of sporting shooting (showing UK total and figures for Scotland) are summarised below. The rounding of the figures reflects the level of approximation.

Table 3 - Gross Value Added (GVA): sporting shooting

	First round supplier spend by providers and participants (£m)	**Direct GVA £m**	**Total GVA Supported £m**
UK	1,400	250	1,600
Scotland	230	47	240
Scotland as % of UK	16.4	18.8	15.0

The estimates of total GVA supported seem to us to be too high relative to the first round spend figures.

Table 4 - Employment: sporting shooting

	Total Workers Supported	**Total paid workers**	**Total direct FTE paid jobs**	**Total FTE paid jobs supported**
UK	600,000	390,000	31,000	70,000
Scotland	88,000	58,000	5,300	11,000
Scotland as % of UK	14.7	14.9	17.1	15.7

Most jobs are seasonal or part-time. Indirect and induced multipliers for Scotland appear to us to be generous.

A separate analysis was also carried out to identify the costs and employment of environmental work associated with shooting. Key findings from this analysis are presented below:

Table 5 - Costs and employment of environmental work associated with shooting

	Cost of Habitat and Wildlife Management for Shooting £m	**Labour (FTEs) for Habitat and Wildlife Management for Shooting**
UK	250	12,000
Scotland	43	2,000
Scotland as % of UK	17.2	16.7

We would emphasise that, in Scotland, shooting income can help estates to sustain their entire operations – hence protecting more employment than that involved in managing the land for shooting.

4.2 Deer management

The Contribution of Deer Management to the Scottish Economy (PACEC, 2006a).

Contractor: PACEC

Client: The Association of Deer Management Groups (ADMG). This was a parallel study to the Economic and Environmental Impact of Sporting Shooting study described above.

Publication: September 2006

Study Objective:

- To assess the current contribution of deer management to the Scottish economy.

This study, unlike the UK-wide study, focuses on the impact of all deer management (for both sporting and other purposes) on the Scottish economy.

Research Method:

The research made use of the UK-wide study's findings, augmented by the following work:

- Desk research;
- Additional surveys.

Geographical scope: Scotland as a whole – there is no regional breakdown.

Participant definition: There is no focus on tourists (as defined for this report). Participants are defined as "stalking sportsmen and supporters".

Activity definition: Deer management (including sport). There is a sub-category focusing on sporting shooting of deer.

The summary economic impacts were as follows:

Table 6 - Deer Management in Scotland: Direct Employment

	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Workers (incl part time & casual)	10,000	600	10,600
FTE work carried out (paid & unpaid)	990	126	1,116
Paid workers	7,900	300	8,200
FTE paid jobs	840	126	966

Table 7 - Deer Management in Scotland: Indirect Employment (FTE paid jobs)

	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Game processors and craft, e.g. horn	40	40	80
First round suppliers, e.g. fencing, ammo	690	37	727
Rest of supply chain e.g. timber, lead	710	38	748
Total indirect jobs (in Scotland)	1,440	114	1,554

Table 8 - Deer Management in Scotland: Total Employment (FTE paid jobs)

	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Direct Employment	840	126	966
Indirect Employment	1,440	114	1,554
Total jobs (in Scotland)	2,280	240	2,520

Table 9 - Deer Management in Scotland: Direct GVA (£m)

	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Provider staff costs	9.3	3.6	12.9
Staff additional payments	2.8	0.0	2.8
Total Direct GVA	12.1	3.6	15.7

Table 10 - Deer Management in Scotland: Indirect GVA (£m)

	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Game processors and craft e.g. horn	1.4	1.4	2.7
First round suppliers e.g. Fencing, ammo	23.7	1.3	25.0
Rest of supply chain e.g. Timber, lead	25.0	1.4	26.9
Total Indirect GVA	51.0	4.0	55.0

Table 11 - Deer Management in Scotland: Total GVA (£m)

	Sporting Shooting of Deer	Deer Management (not for sport)	Deer Management (including sport)
Direct total	12.1	3.6	15.7
Indirect total	51.0	4.0	55.0
Total GVA	62.8	7.6	70.4

The GVA calculations appear to us to be compatible with the FTE estimates.

4.3 Game and coarse angling

The Economic Impact of Game and Coarse Angling in Scotland (Glasgow Caledonian University and Cogentsi, 2004).

Contractor: Glasgow Caledonian University (Alan Radford, Geoff Riddington, John Anderson) and Cogentsi (Hervey Gibson).

Client: Scottish Executive Environment and Rural Affairs Department

Study Objective:

- To assess the economic impact of game and coarse angling.

Research Method:

The study encompassed the following elements:

- Literature review;
- Discussions with stakeholder groups;
- Survey of anglers;
- Survey of Fishery Boards and owners;
- Creation of Fisheries and Angler databases;
- Economic impact analysis.

The survey of anglers had two components:

- Mounting a questionnaire on a website;
- Distributing a paper version of the questionnaire through fishing clubs, tackle shops, proprietors, etc.

A total of 920 questionnaires were distributed with a response rate of 32.3% (297 questionnaires returned).

Geographical scope: Scotland, with a regional breakdown of key findings. The regional breakdown was:

- Dumfries and Galloway;
- The Borders;
- Highland, Moray, and Argyll and Bute;
- North East Scotland;
- Central Scotland;

- Western Isles;
- Orkney and Shetland.

Participant definition: The key definition used was "angler", with a division into the following categories:

- Local (from within the fishery region);
- Scottish visiting (from Scotland, but outwith the fishery region);
- Non-Scottish visiting (from other parts of the UK, plus overseas).

NB: Given the large geographical scale of some of the regions the local definition could/will include tourists as defined in this nature-based tourism study.

Overall Impact Conclusion:

The report states that:

"The best estimate therefore is that freshwater angling in Scotland results in the Scottish economy producing over £100 million worth of annual output, which supports around 2,800 jobs *[FTEs]* and generates nearly £50 million in wages and self-employment income to Scottish households ...". These figures are mutually consistent.

The report's estimate is based on use of a model that takes displacement into account. Annual angler days in Scotland were estimated at 1,386,043 (i.e. 1.4 million).

4.4 Recreational sea angling

Economic Impact of Recreational Sea Angling in Scotland (Glasgow Caledonian University *et al*, 2009).

Contractor: Glasgow Caledonian University (Alan Radford), Grid Economics (Geoff Riddington) and, Cogentsi (Hervey Gibson).

Client: Scottish Government

Publication: 2009

Study Objectives:

The main aims of the study were to:

- Estimate the economic impact of sea angling;
- Identify:
  - the important local sea angling centres
  - the main competing areas within and outwith Scotland
  - the principal characteristics of the sea angling sector
  - the key trends;
- Consider future prospects for the sector

Research method:

The study method had a number of elements, including:

- Literature review (including a review of relevant market research reports);

- Sea angling questions incorporated into a Scottish omnibus telephone survey (the questions were presented to 15,037 adults in Scotland);
- Stakeholder survey (95 face to face/telephone interviews);
- Angler survey (120 face to face interviews);
- Case study analysis of five areas:
  - the Upper Clyde Estuary
  - Luce Bay (Dumfries and Galloway)
  - Orkney
  - Loch Etive (Argyll)
  - East Grampian (between Stonehaven and Arbroath);
- Data analysis.

The main impact findings were as follows:

Table 12 - Economic contribution of sea angling to Scotland

Currently Supported		**Would be lost if sea angling ceased**	
Jobs (FTEs)	Household Income* (£'000)	Jobs (FTEs)	Household Income (£'000)
3,148	69,670	1,675	37,042

Table 13 - Economic contribution of sea angling to the HIE area

Currently Supported		**Would be lost if sea angling ceased**	
Jobs (FTEs)	Household Income* (£'000)	Jobs (FTEs)	Household Income (£'000)
1,152	19,125	772	12,827

Note: *Wages, self-employment income, rents and profits

The figures for Scotland are mutually consistent, but we consider the household income generated per FTE in the Highlands and Islands is too low compared with Scotland.

4.5 Country sports

Country sports tourism in Scotland (TNS, 2004).

Contractor: TNS Travel and Tourism

Client: Country Sports Tourism Group

Publication: October 2004

Study Objectives:

The study objectives were to:

- Gather information on current country sports tourists – origin, demographics, information and bookings, trip characteristics, satisfaction with product.

- Investigate the perceptions and attitudes of intermediaries.
- Identify participation trends on UK and international levels.
- Identify leading destinations and examples of best practice.
- Assess Scotland's strengths and weaknesses as a destination for country sports tourism.

Research Method:

The project had a number of elements:

- Desk research;
- Quantitative research – a survey of country sports participants;
- Qualitative research – a series of 30 in-depth face-to-face or telephone interviews with estates, fisheries bodies and agents.

Geographical scope: The focus of the study was Scotland. The quantitative survey included respondents from throughout the UK and abroad.

Participant definition: People who take part in country sports (a wide range of shooting and angling).

Trip definition: The focus of the study was on trips taken which involved at least one night away from home, i.e. holidays or short breaks which involved participation in country sports.

Some Key Findings:

(1) Key numbers:

- The total number of participants in country sports in Scotland is around 400,000, with the majority participating in game angling.
- It is estimated – on the basis of reviewing a small number of previous studies – that the value of country sports tourism in Scotland (i.e. expenditure by visitors who take holidays or short breaks in Scotland to take part in fresh water angling, shooting or stalking) is at least £130 million per year.

(2) Some findings from the quantitative survey (for which there were 677 completed questionnaires) are presented below:

- The majority of respondents had taken a country sports holiday or short break in Scotland with 69% taking their most recent trips during 2003 or 2004.
- Just over half of respondents stated that their most recent country sports trip to Scotland had lasted 4 or more nights (58%), while the remainder had taken shorter breaks of 1 to 3 nights (42%).

- The trips most likely to have lasted 4 or more nights included those undertaken for game fishing or deer stalking, while the majority of coarse angling and pheasant shooting trips were of a shorter duration.

- In terms of places of origin, respondents who lived in Scotland were the most likely to indicate that their most recent trip had lasted less than 4 nights while international visitors were more likely to have spent longer in Scotland.

- In around two-thirds of trips country sports were the only trip purpose (63%) and this was more likely to have been the case during short breaks (73%).

- In most of the remaining trips (32%) country sports were the main, but not the only purpose while on a very small proportion of occasions trips involved country sports but not as a main purpose (4%).

- The country sport was most likely to be the only trip purpose when salmon or coarse angling was undertaken and in trips involving deer stalking or wood pigeon, pheasant, partridge or wild fowl shooting.

- The country sport was more likely to be one of a number of reasons for the trip when trout angling, sea angling or grouse shooting was undertaken.

- For around half of international visitors the country sport was the only reason for the trip, while a similar sized proportion stated that it was the main, but not the only, purpose.

- In addition to the country sport activity undertaken, the following percentages of respondents reported that they, or members of their party, had carried out the following activities during the trip:

Shopping for gifts	36%
Visiting castles and other historic sites	29%
Sightseeing by car	28%
Hiking/hill walking	28%
Bird/wildlife watching	25%
Golfing	13%
Visiting museums, art galleries, etc	13%
Watersports/boating	8%

4.6 Other studies

In addition to the main field sports studies reviewed above, it is evident from our literature search and assessment that a considerable number of local area studies have been carried out. For example:

- An Assessment of the Economic Impact of Water-Related Recreation and Tourism in the Spey Catchment. 2003. Glasgow Caledonian University and University of Edinburgh, 2004.

  This assessment found that anglers contributed £10.9m to the local economy, supporting 367 jobs, with water sports (primarily canoeing) contributing £1.7m locally, and supporting 48 jobs.

- Assessing the Value and Realising the Potential of Sustainable Freshwater Fisheries in Orkney, SQW Ltd, 2006 (Scottish Natural Heritage Commissioned Report No. 156).

- An Economic Survey of Angling in the Kyle of Sutherland Region, Glasgow Caledonian University and Cogent Strategies International Ltd, 2007.

- Assessing the Economic Value and Realising the Potential of Recreational Freshwater Fisheries in the Western Isles: a report prepared for the Western Isles Fisheries Trust. M. James, 2000.

- Red grouse and the Tomintoul and Strathdon communities - The benefits and impacts of the grouse shooting industry from the rural community perspective; a case study of the Strathdon and Tomintoul communities in the Cairngorms National Park. R. McMorran, 2009.

4.7 Conclusions from field sports reports

The main findings from the above reports that inform our impact estimates are summarised below:

1. The Economic and Environmental Impact of Sporting Shooting

- Estimated 10 m gun days in UK

- Estimated 1.5 m gun days in Scotland

- 200,000 people do some shooting in Scotland

- 7.5 days shooting in Scotland per person

Our Assumptions:

(1) • 50,000 Scottish residents (25%)
150,000 Visitors (75%)

NB: Scottish figure = approximately 2% of adult male population (assumption great majority of participants, 90%+, are male)

(2) Overnight trips

- Scottish residents – 50% make 1 trip per year of 3 nights, spending £80 in a 24-hour period (50,000 x 50% x 1 x 3 x £80)
Overnight expenditure = £6 million

- Visitors – 1 trip per year of 4 nights, spending £100 in a 24 hour period (150,000 x 1 x 4 x £100)
Overnight expenditure = £60 million

2. The Contribution of Deer Management to the Scottish Economy

- Deer management (including sport) = 67,000 gundays in Scotland

3. The Economic Impact of Game and Coarse Angling in Scotland
(see 4.3 above for definitions)

- Angler days by visiting Scots =242,979

- Spend by visiting Scots = £16.8 m
- Visiting = not fishing in home region. Visiting will include some day trippers

- Angler days by non Scottish visitors = 369,855

- Spend by non Scottish visitors = £59.9m (£162 per visitor)

4. Economic Impact of Recreational Sea Angling in Scotland

- Annual sea angler days =1,540,206

- Annual trip expenditure = £91,567,000

- Expenditure per trip = £59.45

- 291,000 angling trips in Scotland – 183,000 from Scotland and 108,000 from rest of UK

- The above figure is for all anglers: sea and freshwater anglers

- 376,000 overnight fishing trips in Scotland – assumption that this is all fishing (not clear from the report).

Table 14: Angling impact estimates (our assumptions)

	Expenditure on overnight trips	
	Visitors	**Scottish residents**
Game and Coarse Angling[1] (2004)	£59.9m[2]	£8.4m[3]
Sea Angling (2009)[4]	£36.6m[5]	£9.2m[5]

Notes:

1. All prices historic

2. All expenditure assumed to be linked to overnight stays

3. Spend by visiting Scots = £16.8m (assume that only 50% of this relates to overnight stays = £8.4m)

4. Total expenditure = £91.6 million. Assume that 50% relates to overnight stays (£45.8 million)

Table 15: Impact of all field sports

	Expenditure on overnight trips	
	Visitors	**Scottish residents**
Sporting Shooting	£60.0m	£6.0m
Game and Coarse Angling	£59.9m	£8.4m
Sea Angling	£36.6m	£9.2m
Totals	£156.5m	£23.6m
Overall total	£180.1m	

5 WILDLIFE WATCHING

5.1 Wildlife tourism in Scotland

The report commissioned in 2009 by the Scottish Government on the Economic Impact of Wildlife Tourism in Scotland from the International Centre for Tourism and Hospitality Research at Bournemouth University was received just as we were completing this report and we were not able to assess its findings in detail. The other reports assessed below relate to specific bird species and to wildlife in the Highlands and Islands.

The Bournemouth University study, through household survey, attempted to identify those visitors for whom viewing wildlife was the prime purpose of their trip. In our view, the methodology gave an upward bias to this total, although the survey helped us in determining the relative importance of wildlife in people's decisions to visit Scotland for our overall analysis in Section 13.5 below.

The study's impact methodology was unusual in how additionality and displacement were applied; but, although we believe that the adjustments to reduce the benefits from gross expenditure by wildlife visitors to derive net impact were severe, the net impact calculated in the report from visitors to Scotland whose prime purpose was to see wildlife – £65 million – was similar to the estimate we derive later in this Section from other data.

The figures given in the report for the "Highlands and Islands" are not for the HIE area, and exclude Moray, Argyll and Bute and the Clyde islands.

5.2 Bird species

Watched like never before… the local economic benefits of spectacular bird species (Dickie *et al*, 2006).

Contractor: Ian Dickie, Julian Hughes and Aniol Esteban (RSPB)

Client: RSPB

Publication: 2006

Study Objectives:

- To summarise the existing reports on the economic benefits that are generated by the public accessing charismatic bird species.

Research method:

The report is a summary of a number of UK studies on the value of bird watching opportunities across Britain where a specific species has a high profile. Economic activity (i.e. watching) generally relates to the main breeding period.

- White Tailed Sea Eagle - based on interviews of 400 parties – 1,381 people;
- Osprey - based on enhanced estimates from visitor levels and then projected onto the conclusions of a 1996 study;
- Red Kites - methodology not known;
- Peregrine - rough numbers of visitors and no economic analysis;

- Capercaillie - extrapolates from visitor numbers and then applies spend from Osprey studies, noting that some of this is displaced.

Economic impact estimates were as follows. Some of the sites are important day trip destinations as well as attracting tourist visitors. The RSPB's methodology appears to us to tend to understate impact from sites that attract overnight stay tourist visitors (other than Loch Garten).

- Sea Eagles on Mull: £1.4 to 1.6m in visitor spending per year, and 36-42 FTE's supported;
- Osprey, Loch Garten: £1.7m attributable to the reserve;
- Red Kites: 3 FTE's from red kites on the Black Isle.

Table 16 - Visitors to Osprey sites in 2005 and estimated spend

Sites	**Estimated Visitor Numbers**	**Visitor Spending £**
Loch Garten, Highland	33,000	1,499,000
Loch of the Lowes, Tayside	25,000	188,000
Aberfoyle, Central	34,000	244,000
Tweed Valley, Borders (two sites)	10,000	72,000
Wigtown, Dumfries & Galloway	23,000	165,000
	125,500	2,190,000
Capercaillie		£90,000 based on visitor spend from osprey surveys

Loch Garten visitor numbers can vary considerably from year-to-year. For example, a successful breeding season and major publicity associated with the 50th anniversary of the ospreys returning to Scotland in 2004 resulted in 42,600 visitors.

5.3 Wildlife - Highlands and Islands

Economic impact of outdoor and environment related recreation in the Highlands and Islands: research report - wildlife (George Street Research and Jones Economics, 2003/4f).

Contractor: George Street Research and Jones Economics

Client: HIE, SNH and VisitScotland

Published: 2003/4

Survey base: 4,000 UK householders interviewed

Some 1.2 million trips were made by UK residents to the Highlands and Islands where individuals participated in wildlife activities;

- Equivalent to 7.5million days spent in the area;
- Created net annual expenditure of £84.5m in the Highlands and Islands [adjusted for displacement];
- Supports 2,276 FTEs in the area, including 1,651 direct FTEs.

These impacts appear to us to be over-estimates through biased sampling of visitors in the Highlands and Islands (see 2.3.1 above).

5.4 Other studies

- Figures supplied by VisitScotland from the UKTS show the volume and value of wildlife tourism from UK visits 2006-8 (three year average) as follows:

  Activity: Watching wildlife & birds

  Trips = 518,000
  Nights = 3,341,000
  Spend = £153 million

  Visitors may undertake several activities during their stay, and the expenditures include spend on accommodation, food, shopping, travel and to undertake the activity itself (if there are entry fees, licences etc)

  Activity: Conservation / Green Activities

  Trips = 83,000
  Nights = 403,000
  Spend = £18 million

  Not all of these visits will relate to the natural heritage.

  In Scotland, there are opportunities over the year for some 824 person weeks of volunteering on RSPB reserves, with accommodation provided. Allowing for some unfilled places, this might generate c£250,000 of impact, while promoting future impact through encouraging keen bird watchers to return to Scotland in future years.

  The Scottish Wildlife Trust and SNH also take volunteers, but it would seem unlikely that this type of volunteering would generate overnight spend impact in Scotland of more than £1 million over a year.

- Rowan Tree Consulting (2008). Wild Scotland members' survey Spring 2008.

  The results showed that the organisation's 70 members as at March 2008 generated over £9.3 million turnover each year, and that the average spend with the business per customer was £258. This excludes visitor spend on accommodation, which is an important source of income for some Wild Scotland members, such as estates. Wild Scotland members directly support 840 jobs (496 FTE's).

- A 2009 study for the Moray Firth Partnership by Aberdeen University on dolphin watching in the Moray Firth had yet to report at the time of our research for this study.

5.5 Conclusions from wildlife watching reports

The UKTS figures supplied by VisitScotland identify 6.2% of UK holiday trips (i.e. 518,000 trips) as including wildlife watching as an activity undertaken while in Scotland. This will include bird watching, cetacean watching, raptor watching, mammal watching and activities like guided walks. The Bournemouth University study identified 5.2% of all visitors as specialist wildlife watchers, motivated to come because of their primary interest in wildlife, which appears to us to be too high (see below). In our view their definition of committed wildlife watchers was too wide. In terms of commitment, casual or opportunist watchers are significantly in the majority. For example, according to the Scottish Visitor Attraction Monitor (Martinolli and Bereziat, 2009) the Scottish Seabird Centre attracted 284,000 visitors in 2008, but only 25% paid to go into the interpretive element of the attraction (Scottish Seabird Centre Marketing Manager, personal comment, 2009.)

In Scotland, wildlife tourism is a now a distinct sector within the tourism industry. Wild Scotland is a trade body representing businesses who are principally involved in showing wildlife to visitors on guided holidays, on half day or full day activities on foot or using vehicles or boats or at sites or attractions. NGOs, including the RSPB, NTS and SWT, have sites and nature reserves, some with entry fees, which are promoted as wildlife watching locations to visitors who then buy goods and services in the local area. Similarly visitors are attracted to National Nature Reserves and Forestry Commission Scotland forests to watch wildlife. Recently, television programmes like Springwatch, Coast and Countryfile have boosted numbers at some sites and have, it is suggested, motivated more independent, but mainly casual, watchers. There are also smaller numbers of independent specialist wildlife watching visitors who spend most of their time during their holiday in Scotland watching birds, animals like cetaceans, seals or deer, or studying wild flowers, butterflies or dragonflies.

As part or all of their holiday, some visitors will come to Scotland with the main purpose of enjoying a range of bio geographical landscape features from waterfalls to geology. Engaging with landscape features can be linked to wildlife watching but in many cases such visitors might be characterised alongside those who have a more general interest in enjoying the scenery.

Some visitors come as volunteers or paying guests on practical conservation holidays related to wildlife or habitat management.

Table 17 has reworked definitions and figures from the ICTHR Bournemouth University Study on wildlife tourism. This reworking is based on our own experience, figures from VisitScotland, and figures from destinations like Orkney, Shetland and the Outer Hebrides where wildlife watching is a designated activity in local visitor surveys.

Table 17 - Wildlife tourism

WILDLIFE WATCHING SUB ACTIVITIES	ACTIVITY TYPE	TRIP NUMBERS	VALUE OF TRIP ATTRIBUTABLE TO THE NATURAL HERITAGE
Wildlife Watching Primary Purpose	Visitors on guided wildlife watching holiday plus Independent visitors for whom wildlife watching is main purpose of holiday Likely to be members of RSPB, British Trust for Ornithology,	220,000 trips (1.8% of all trips) ICTHR STUDY 2010 5.2% of UK trips 630,000 UK trips 80,000 o/s trips Too high for primary purpose watchers and too low for all watchers	Entire holiday motivated by wildlife watching.

	Scottish Ornithology Club etc	
Wildlife watching Substantial but not exclusive	Guided Wildlife Trip on vehicle, boat, foot	410,000 trips for both these groups (3.4% of all trips)
	Interested in bird watching	
Wildlife Watching Substantial but not exclusive	Visit to NNR, SWT, RSPB reserve	
	Interested in bird watching	
Wildlife Watching Casual/passing	Occasional visit to reserve, would not pay for guided trip	290,000 trips
SUB TOTAL Provided by VisitScotland - - UKTS data - probably still too low		UKTS 2008 6.2% of UK trips 518,000 UK trips £153 million
TOTAL		7.6% of UK trips 920,000 trips Plus % of overseas

Notes:

1 Dedicated wildlife watchers are assumed to be approximately 30% of all those with an interest in wildlife.

2 The ICTHR Bournemouth University Study is based on 5.2% of UK domestic trips to Scotland being made by tourists whose entire trip is motivated by wildlife watching. Our view is that this is too high a figure for 'pure' wildlife tourists (we suggest 2-3%) whose expenditure could be attributed almost entirely to the natural heritage. The percentage of visitors to Scotland watching wildlife as part of their trip, however, is assumed to be higher, at an additional 5-6%, for whom varying percentages of their expenditure could be attributed to the natural heritage.

6 WALKING, MOUNTAIN AND SNOW SPORTS AND ADVENTURE TOURISM

This activity category spans short low level walking (e.g. from a forest car park) to extreme mountaineering, and includes skiing (which is a niche market for Scotland). Surveys of walking and investigations into the importance of walking to tourists' visits to Scotland vary in how "walking" as an activity is defined. Distance or length of time of walk can be the key criterion, but someone touring by car who stops for a short walk several times a day can walk as far in a day as someone taking a single walk long enough to be categorised as a "walker".

Since walking – broadly defined – is by far the main activity that tourists engage in, definitions are important, and it can be difficult to compare the results of one survey or study within those from another.

Also, day trippers can take similar walking routes to tourist visitors (especially close to centres of population), and people and car park counters need careful interpretation to distinguish day trippers from tourists, supplemented by good sampling for interviews and / or self completion questionnaires.

Overall, several studies reveal significant level of overlap, with some visitors participating in a number of different adventure tourism activities whilst on holiday in Scotland. Adventure sports studies tend to refer to group activity trips (holidays, courses etc) not included in other totals, and mountain biking/cycling may be just one part of the trip itinerary. Hence mountain biking as an adventure sport is only a part of a relatively small sector and, compared to total mountain biking, is not significant.

Likewise, the report by Progressive (2006, below) suggests that 20 % of walkers also undertake other adventure sports - mountain biking and watersports primarily. However of that 20% only a proportion are likely to be significantly motivated by natural heritage and of these a smaller proportion will be mountain biking, probably as part of a multi-activity longer trip. Whilst there may be a small measure of double counting, the flexible allocations of 95%, 40% and 20% weighted averages and the strong likelihood that some dedicated mountain bikers will also participate in some walking activity should provide sufficient offsetting to cancel double counting.

In this Section we have included those activities which have a significant connection with the natural heritage but are not covered within the field sport, wildlife watching, cycling or watersports categories. As well as walking and rambling these include:

1. Corporate activity events - these are specific events, a small part of business tourism, designed to encourage a more effective team dynamic through multi activity sessions. Some events will involve an overnight stay.

2. Endurance events – these are specific events involving, usually, a physical challenge within a natural heritage setting. Some are for charity.

3. Activity and Training Centres.

4. Scrambling and Rope Access Activities – These are offered both as part of activity centre programme and, increasingly, by specialised adventure sports companies, and include:

    - Gorge Walking/Canyoning - ascending or descending a mountain stream with scrambling and some swimming - often used for trust building and group co-operation.

- Abseiling - allows safe descent of steep rock sections and, although a climbing technique, it is promoted as an activity on its own.
- Coasteering - climbing, scrambling and swimming along a rocky coast.

5. Paragliding - a paraglider is a non-motorised, inflatable wing which is easy to launch from the ground either solo or in tandem.

6. Bushcraft and survival training – this activity is growing in popularity, from a small base, in part due to mainstream television programmes featuring celebrity presenters including Ray Mears and Bear Ghrylls.

7. Running and orienteering.

6.1 Walking and mountaineering - Highlands and Islands

Economic impact of outdoor and environment related recreation in the Highlands and Islands: research report - walking and mountaineering (George Street Research and Jones Economics, 2003/4d).

Contractor: George Street Research and Jones Economics

Client: HIE, SNH and VisitScotland

Published: 2003/4

The methodology used for the study indicated that some 5.2 million trips per annum were made by UK residents to the Highlands and Islands by individuals who participated in walking and mountaineering activities. This included all low level walking in addition to hill walking and climbing. 1.3 million of these trips were made by people resident in the HIE area. The total of 5.2 million trips comprised 1.2 trips lasting on average 8.6 days by 1.1 million overnight visitors and 18.5 day trips by 210,000 day trippers, giving rise to 1.3 and 3.9 million trips respectively.

These trips represented 15.3 million days in the Highlands and Islands, with annual expenditure (net of additionality and displacement) of £245.7 million and 6,203 FTEs generated in the area (inclusive of the multiplier). This annual expenditure includes net spend by the public sector and other organisations relating to walking and mountaineering (which is not normally included in impact analysis of nature based tourism).

In relation to the total number of tourist trips to the region, this headline figure seems high to us, and it would appear that many visitors for whom low level walking is a small part of their trip and not a major motivation are included. (see also 6.2 below).

The calculations were based on three sources:

(1) A UK Household Survey

3% of the individuals interviewed across the UK had been involved in some walking or mountaineering activity in the HIE area in the previous 12 months (December 2001-November 2002).

(2) 2003 Population estimates for the UK and HIE area

Based on the population data, it was estimated that 1,313,000 UK residents made trips to the HIE area during 2002 for walking/mountaineering purposes.

(3) A User Survey

437 interviews were conducted between February and September 2003 with 238 low level walkers and 193 high level walkers/ mountaineers.

- The survey showed an average daily spend for overnight visitors of £41 per person and £10 per person for day trippers. Hill walkers were found to spend more than low level walkers.
- Survey information was used to assess additionality, displacement for HIE residents, and extra spend induced by the activity.

Income and employment generation estimates included an allowance for welfare benefits lost by those who will have gained employment (not a normal adjustment in impact analysis).

57% of the users surveyed came from outwith Scotland, either domestic UK or overseas. This group were more likely to be walking long distance routes or hill walking than visitors from Scotland. Around 1 in 5 of users were described as “non working”.

The study found significant overlap between people participating in walking activities and other pursuits such as bird watching, outdoor culture and heritage and cycling.

The methodology employed by this study excluded economic impacts from overseas visitors. The study overall appears to us to over-estimate the contribution of walking, hill walking and mountaineering; and income directly supported is inflated by attributing spend from casual and local walkers.

6.2 Scotland’s walking proposition

From Munros to Ramblers: the prospects for Scotland’s walking proposition to 2015.

Contractor: Greenwood and Yeoman

Client: HIE, VisitScotland

Published: 2006

This review for VisitScotland reported that, in 2003, 400,000 UK residents came to Scotland specifically to walk, which generated £125 million in revenue. This contrasts with the figures, reviewed in 6.1, of 1.1 million overnight visitors coming to walk specifically in the Highlands and Islands alone. Visitors who walked as part of their visit spent £952 million through 3.2 million visits. 4% of UK trips to Scotland in 2003 were specifically to go walking, whereas 33% of holidays had a walking element to them.

6.3 Adventure - Highlands and Islands

Economic impact of outdoor and environment related recreation in the Highlands and Islands: research report - adventure (George Street Research and Jones Economics, 2003/4a).

Contractor: George Street Research and Jones Economics

Client: HIE, SNH and VisitScotland

Published: 2003/4

Research Method:

The staged programme of research comprised:

- Literature review
- Household survey
- Survey of development agencies
- Survey of users
- Survey of suppliers

The research methods deployed were as follows:

Table 18 - Research methods: adventure in HIE area

Target	No. of Respondents	Survey Method
Householders	4,000	Face to face
Users	200 plus	Self completion
Suppliers	15	Face to face and telephone

Geographical scope: Householders from throughout the UK, excluding those parts of Scotland north of the Caledonian Canal; customers at adventure centres in the Highlands and Islands; suppliers in Lochaber, Argyll, Ross and Cromarty, Inverness, Strathspey, Skye, and the Western Isles. The findings relate to the HIE area.

User definition: those surveyed included 119 hill-walkers, 71 canoeists and between 20 and 50 sailors, mountain-bikers, kayakers, gorge-walkers, rock-climbers and abseilers (amongst others). Some were involved in several activities. The survey was thought to have underestimated the number of tourists using adventure centres as part of a day trip from outside the area. To correct for this, in calculating volume and value, the numbers attending as day visitors from outwith the area were taken to be the same as watersports, and cycling, two of the most common activities at these centres (i.e. 6% of total adventure centre visitors). The impacts are given separately for day trip and overnight visitors.

Activity coverage:

The following activities were included in the adventure niche for the purposes of the research:

1. *Corporate Market* – corporate activity days organised to build a more effective team dynamic through team building exercises and training in various outdoor sports, ranging from abseiling to white-water rafting.
2. *Gorge Walking* – ascending or descending a mountain stream with scrambling and some swimming – often used for trust building and group co-operation.
3. *Rafting* – involves controlling a raft, steering the best course down rivers, often running whitewater rapids.
4. *Paragliding* – a paraglider is a non-motorised, foot-launched inflatable wing which is easy to launch from the ground. It has no rigid structure and the pilot is

suspended by lines, with the pilot clipped into a harness and oriented in a sitting position for maximum comfort.

5. *Abseiling* – is a basic climbing technique to allow safe descent of steep rock sections. Individuals attach themselves to the top of the abseil ropes through 'anchors' and let themselves down to the ground from a height.

Impacts

The economic impacts estimated for adventure tourism in the Highlands and Islands area can be summarised as follows:

- the total spent annually by UK visitors in the HIE area during 2002/2003 on trips where adventure activities were involved was £36.8m;
- expenditure wholly attributable to adventure activities (allowing for displacement and additionality) was £25.9m;
- when net public sector support is included, this gives a total annual net expenditure of £26.2m in the HIE area in 2002/2003;
- this altogether generates direct income of around £5.2m and a full-time equivalent of 471 jobs (468 from tourism).

Table 19 : Economic impact of adventure tourism in HIE area

	Overnight	Day Trips	Total
Gross expenditure £(m)	36.2	0.6	36.8
Net expenditure £(m)	25.7	0.2	25.9
Direct income £(m)	5.2	0.04	5.2
Direct employment (FTEs)	468	3	471
Income/1,000 trips £('000)	40.1	1.8	n.a.
Employment/1,000 trips (FTEs)	3.8	0.2	n.a.
Aggregate income £(m)	7.0	0.1	7.0
Aggregate employment (FTEs)	652	5	657

The methodology employed by the study did not enable the economic impacts from overseas visitors to be estimated by the authors, and the impacts estimated here therefore understate (to a probably small extent) the total impacts of this niche market within the HIE area.

6.4 Walking in Scotland

Investigating and enhancing the walking experience in Scotland (Progressive, 2006).

Contractor: Progressive

Client: VisitScotland SNH and FCS

Published: 2006

Respondents in the Progressive report described the scenery as "stunning" and "unbelievably beautiful", while the abundance of wildlife was mentioned. Walkers also valued the natural and wild nature of walks, especially the lack of built up areas or structures, suggesting the natural heritage as an important motivation.

Of the 1,000 walkers interviewed, each staying at least one night away from home, 26% came from Scotland, 40% the rest of the UK and 34% from overseas. 20% of those who said they were walking also said they were undertaking other outdoor activities, notably mountain biking / cycling and watersports during their holiday.

The report suggested that, for 39%, walking was the main reason for their trip, for another 40%, walking was one of the reasons for their trip, while for the remaining 21% it was a minor part of their trip.

11% of walks are reported as 'urban' in the report, and 10% of walkers interviewed were undertaking urban walks – although such walks in parks or along river corridors will relate to the natural heritage.

The report suggested that walking tourists in Scotland have five different main motivations. In our view, these categories can also be used to estimate the importance that can be given to natural heritage motivations.

- The committed explorer – 23%;
- The part time explorer – 18%;
- The committed wanderer – 7%;
- The part time wanderer – 33%;
- The mixed group – 19%.

Our own calculations of impact based on these proportions are provided at 6.10 below.

6.5 Fife Coastal Path

Coastal Path Usage Study (TNS and SQW, 2007).

Contractor: TNS and SQW

Client: Fife Coast and Countryside Trust

Published: 2007

Taking account of displacement and additionality, annual net expenditure associated with the Fife Coastal Path is estimated to be between £24 million (low case) and £29 million (high case). On the basis of this estimated net expenditure, a series of multipliers were applied to account for the wider knock-on effects to the economy. On this basis, the report estimated that the Fife Coastal Path supports between 800 and 900 FTE jobs in Fife.

The study results are based on 667 personal interviews and counts at 18 locations along the path, together with 104 self-completion questionnaires, 3 focus groups and 1,000 interviews through the *Scottish Opinion Survey.* Only 26% of path users were on a holiday or short break and, of these visitors, 55% lived in Scotland, 32% lived elsewhere in the UK and 13% were from overseas.

The total number of path visits was estimated to be between 480,000 (low case scenario) and 580,000 (high case scenario). Overall, 60% of path users spent something during their visit. The average spend per path user, including those who spent nothing was £26. Economic impact analysis followed a method described as the UK Sport methodology for assessing the economic impact of recreational activity.

More specifically, the UK Sport methodology makes two key assumptions on displacement and additionality. These are:

- **Displacement –** all expenditure made by residents within the Fife area would have been made in the area at some point in the future. Therefore the expenditure of residents and people living locally is entirely discounted from the net additional expenditure. As we discuss in Section 13.5, this will overstate displacement.

- **Additionality –** some people may use the Fife Coastal Path as part of a wider holiday, but unless visiting the path was the main reason for their holiday, then the expenditure from all other days of the holiday cannot be considered additional. If the path was only one of several reasons or of no importance to their trip, only their daily expenditure is attributed.

Net expenditure associated with the Fife Coastal Path was calculated to be between £24 million (low case) and £29 million (high case). 1991 STMS multipliers derived from Tayside were applied to account for the wider knock-on effects on the economy. From this, the report shows that the Fife Coastal Path created:

- Between £29 million and £32 million of new output in the Fife area.
- Between £8 million and £10 million of new income in the Fife area.
- Between 800 and 900 Full Time Equivalent (FTE) jobs for one year in the Fife area. This implies too low an average wage / salary per FTE.

At face value, this assessment seems to us to be quite generous, certainly in terms of tourism. The Fife Coastal Path runs though a great number of settlements and local use by residents is very evident. Fife beaches are popular with day trippers from elsewhere in Fife and from the rest of the central belt. The path also connects a number of popular tourism destinations in the East Neuk and St Andrews, but only some 4% of users were from the rest of the UK or overseas, and displacement within Scotland as a whole will be significant.

6.6 The Southern Upland Way

The Southern Upland Way: an underused resource for Southern Scotland? (Crichton Tourism Research Centre, 2005).

Contractor: Crichton Tourism Research Centre

Client: Southern Upland Partnership

Published: 2005

Whole way walkers took an average of 14.6 days to complete the Southern Upland Way and spent an average of £40.74 per person per day, resulting in an average trip cost of £594.80 (excluding travel to and from the route). The average daily spend was similar to that found for whole way walkers on the West Highland Way and Wainwright's Coast to Coast. Data were generated from a total of 67 long distance walking groups, representing 141 individuals along the route of the Southern Upland Way.

Sectional whole way walkers spent an average of 6.6 days on the Southern Upland Way, spending £37.66 per person per day and with an average trip cost of £248.56 (excluding travel to and from the route). Several days walkers spent an average of 5.5 days on the route, spending an average £45.31 per person per day. Combining all long distance walkers, the mean value of the Southern Upland Way as a long distance route was estimated to be in the region of £423,087 in 2004. The economic calculation for this was based on data provided by the long distance walkers, rather than from all walkers. Whilst those using the route on a more casual basis are likely to spend money in the course of their day, it was not considered appropriate to attribute this spend directly to the Southern Upland Way.

Most long distance walkers using the route were from England or mainland Europe. The majority of other users were on a short walk close to home and contributed little towards overall economic benefit. The scenery/landscape and weather were considered by both the Long Distance Walkers and other Southern Upland Way users to be particularly satisfying elements of their journey. Peacefulness/solitude, wildlife/nature and good signage/waymarking were also amongst the most frequently cited elements of journey satisfaction.

As a comparison to the Southern Upland Way, 125 questionnaires were given to users of the West Highland Way in 2004 as part of the study. 52 questionnaires were returned (41.6% return rate) representing 172 people. Scenery was a key motivator for way walkers. In the absence of any official figures, it was estimated by one service provider that 18,000 walkers walked the entire length of the way generating £5.8 million in expenditure. For 2004, the study records the official web site for the West Highland Way as suggesting up to 50,000 people used parts of the way. Given its location, some of these users would be tourists.

On the Great Glen Way, the average walker is reported by British Waterways (not part of the Southern Upland Way study) as spending approximately £55 per day locally for overnight visits and £14 per day for day visits. This is equivalent to a total visitor spend of approximately £1.27 million (3,000 whole route walkers x £55 x 6 nights + 20,000 day walkers x £14).

6.7 Other reports

- A Walking Strategy for Scotland Consultation Document (Scottish Executive, 2003).

  VisitScotland estimated that the walking market generated over 1 million trips annually, with visitors staying for a total of over 9 million bednights and spending over £400 million.

6.8 Skiing and snow sports

Online research in 2006 with 2,137 consumers from the Ski Scotland Snow Alert database (Ski Scotland Online Research, 2006) showed that, unsurprisingly, the availability of snow is the main motivator for skiers/snowboarders in their decision to take a trip in Scotland. Were there to be no snow they would either not ski or ski elsewhere. This suggests it is questionable whether expenditure from skiers and snow boarders should be attributed to the natural heritage. A possible exception could be the small numbers of ski mountaineers and ski tourers who do not rely on mechanical uplift and are more like walkers in their attitudes to the natural heritage.

No comprehensive economic impact reports on snow sports have been produced for many years, and impacts in the average year will now be much lower than twenty years ago when there was considerable research on skier visit patterns and expenditures through surveys of the visitors to ski resorts.

The balance between overnight stays and day trips has moved towards the latter because of fewer pre-booked holidays and long weekends due to the uncertainty of snow cover, and overall impacts from Scottish skiing will now be lower per skier day than twenty years ago.

The five Scottish ski centres can provide skiing for over 20,000 people on any one day (the Scottish Government NPPG12 – Skiing Developments, 1997), but total skier days for recent years have been very low. In 2008/09, for example, there were a total of 160,000 skier days in Scotland according to data from the ski centres.

Nevertheless, skiing remains important to Scotland's winter tourism, and there can still be good skiing seasons – e.g. the current 2009/10 winter, with twice as many skier days expected as in 2008/09 (which was fairly typical of recent years).

6.8.1 Snowsports – Highlands and Islands

Economic impact of outdoor and environmental related recreation in the Highlands and Islands – snowsports (George Street Research and Jones Economics, 2003/4c).

Contractor: George Street Research and Jones Economics

Clients: HIE, SNH & VisitScotland

Published: 2003/4

As with the other George Street reports summarised above, data were obtained through an omnibus household survey, users survey and suppliers survey. Overseas visitors were not covered, but they represent a very small proportion of Scotland's skiing market.

The study estimated that, in 2002/03, 580,000 trips were made by UK residents to the HIE area for snowsports purposes, equivalent to 825,000 days (although the total number of skier days in Scotland in 2002/03 was 152,681 according to data from the ski centres quoted in the report!). This translated into a net annual expenditure of £28.8m for 2002/2003 and the equivalent of 538 full time jobs. A further 210 indirect and induced jobs were estimated to be supported by snowsports tourism. Although Glenshee is not within the Highlands and Islands Enterprise area, it appears that the report includes its impacts.

Table 20 - Summary of economic impacts of snowsports in HIE area

	Overnight	**Day Trips**	**Total**
Gross expenditure £(m)	22.7	10.7	33.4
Net expenditure £(m)	19.1	9.7	28.8
Direct income £(m)	3.9	2.0	6.0
Direct employment (FTEs)	354	184	538
Income/1,000 trips £('000)	43	7	n.a
Employment/1,000 trips (FTEs)	4	0.7	n.a
Aggregate income £(m)	5.3	2.4	7.7
Aggregate employment (FTEs)	497	251	748

Snowsports in the Highlands and Islands were estimated to have attracted 176,000 skier days by UK residents during 2003. The majority were downhill skiers, with some snow boarders. Limited numbers come to the area to telemark, snowblade or cross-country ski. The Scottish ski centres are regarded as catering best for younger participants, though in terms of volume most visitors are aged 25-44, more upmarket ABC1 types and male. Participants in snowsports in Scotland originate almost exclusively from the UK, with the majority from Scotland (75%).

In recent years, there had been growth in snowboarding and blading, although skiing was making something of a comeback.

Although taking part in snowsports was the sole or main reason for coming to the area for many, most also appear to have taken part in other activities while on their trip; the highest proportions hill-walked, but significant numbers of others cycled or took advantage of outdoor culture and wildlife opportunities.

The difference between George Street's estimate for snowsports participants attracted to the HIE area (825,000 days) and the number of skier days achieved by the five resorts (152,681) demonstrates a weakness in George Street's study methodology and it appears to us that their other reports for the HIE area (summarised above) equally lack statistical robustness.

6.9 Conclusions from walking, mountain and snow sports and adventure reports

Realistically, only those on a dedicated hill walking trip or a long distance trek will be walking daily during their stay. Most others who walk while on their trip to Scotland will walk as part of their trip and, for some, this may be just a single short walk.

As for many outdoor activities, motivations vary. Many dedicated walkers and mountaineers walk or climb for the physical challenge or for health and well being rather than being principally motivated by the natural heritage, even though they are walking out of doors.

Walking is clearly the most popular nature based activity for UK residents holidaying in Scotland. VisitScotland (2009) identified 47% of total UK visitor trips (5.7 million trips out of 12.15 million) involving some form of moderate walking or more while on holiday in Scotland. For the purposes of this Section, walking is deemed to include walks of more than one mile, rambling, hiking, and mountain sports like hill walking, mountaineering and climbing. It would be too simplistic, however, to take 47% of the total UK visitor £1,986 million spend (£933 million) and credit that sum to walking.

VisitScotland (2009) records 5.7million UK resident trips that included walking and 2.48 million trips by overseas visitors. Of the 1,000 walkers interviewed by Progressive, all of whom stayed at least one night away from home, 26% came from Scotland, 40% from the rest of the UK and 34% from overseas. Using this ratio, i.e. 60/40 Rest of UK/Scotland, the 5.7million splits into 3.4m/2.3m trips. Visit Britain (2009) records a figure of 41% of overseas visitors walking in the Scottish countryside. Given no clear definition of walking, this is considered likely to include an element of short strolls. We would suggest that the Progressive (2006) figure of 34% is also applicable to the proportion of overseas visitors who went walking (on walks of at least 1 mile), i.e. 0.84 million trips, whilst in Scotland. NOF System 3 (2000) also identifies 0.8 million overseas visitors walking or climbing. The Progressive report recorded that 20% (5.7 + 0.84 x 20% = 1.308million trips) of those who said they were walking also said they were undertaking other outdoor activities, notably mountain biking / cycling and watersports during their holiday.

The Progressive survey found that, for 39% of interviewees, walking was the main reason for their trip, for another 40% walking was one of the reasons for their trip, while for the remaining 21%, it was a minor part of their trip. Applying these percentages to the figure of 5.7 million trips gives figures of 2.22, 2.22 and 1.2 million trips respectively.

The Progressive report differentiated the five following types of main motivations of walking tourists in Scotland:

- The committed explorer – 23%
  (Our view is that this group is likely to include dedicated hill walkers, mountaineers, climbers and off piste skiers whose central motivation is their activity. This group also includes Long Distance Way walkers who set out to walk a route from end to end)

- The part time explorer – 18%
  (Our view is that this group is likely to include 'holiday hill walkers' for whom walking comprises at least 50% of their trip)

- The committed wanderer – 7%
  (Our view is that this group is likely to include dedicated low level walkers for whom walking is the dominant purpose of their trip and for whom the natural heritage is a prime motivation)

- The part time wanderer – 33%
  (Our view is that this group is likely to include walkers for whom walking is as much about healthy exercise and social interaction as it is about the natural heritage)

- The mixed group – 19%
  (Our view is that this group is likely to include people who undertake a range of walking activities dependent on circumstances, e.g. short walks with family, longer hill walks alone or in small groups)

Table 21 - Value of walking

WALKING SPORTS SUB ACTIVITIES	**Sub sector size**	**% of 5.7m UK walking trips millions**	**Trip Number use 60/40 split for UK/ Scotland values**	**% of 0.84m overseas trips millions**
Committed explorer	23%	1.31	0.786 0.524	0.19
Part time explorer	18%	1.03	0.618 0.412	0.15
Committed wanderer	7%	0.34	0.204 0.136	0.06
Part time wanderer	33%	1.88	1.128 0.752	0.28
Mixed group	19%	1.08	0.648 0.432	0.16
TOTAL	100%	5.7m	5.7m	0.84m

Total overseas trips in 2008 were 2.48 million. Approximately a third of overseas visitors are considered likely to walk – i.e. walking would be part of 843,000 trips.

Visit Scotland (2009) provides a figure of 4% or 486,000 UK visitor trips undertaking ‘adventure activities’, which could also include some mountain biking, watersports and possibly snow sports – raising the question of double counting.

For many, adventure sports are rarely the sole purpose of their trip, unless it is an activity holiday, a sea kayak trip on the West Coast of Scotland, etc. Hence, only a portion of trip expenditure should be allocated to adventure sports, although, the cost of that experience could be quite high. Once again, the primary purpose of undertaking an adventure sport is usually the challenge. The challenge may be provided by the natural heritage – cliffs, waves, or white water – but the setting is not necessarily the key motivator, as an abseil or jump could be off a bridge.

Online research, Adventure Sports Online Research (2006), with 855 respondents from the VisitScotland Adventure Sports database, and contacts sourced from competitions (Mountain Bike World Cup / Adventure Online Games), showed the following motivations for adventure sports participants.

- It’s fun (79%)
- I enjoy the scenery while doing it (77%)
- It improves my fitness (73%)
- I enjoy the challenge (72%)
- It’s a good social activity to enjoy with groups & friends (63%)

Motivations suggest that natural heritage is one of five principal motivations, and 20% of the value of expenditure by adventure sports participants not specifically on an adventure holiday could thus be attributed to the natural heritage.

7 CYCLING

Road and casual off-road cycling (possibly on hired mountain bikes) is a niche activity undertaken by general interest tourists, most of whom will primarily be exploring Scotland's countryside on their bikes while obtaining the benefits from exercise. The economic contribution of this group will have the greatest correlation with natural heritage values.

A relatively small proportion (perhaps 1 in 10) will spend their entire holiday cycling, with most choosing to cycle as part of a wider range of holiday activities. For example the walking study referred to in Section 6.4 also noted that 20% of walkers (equivalent to 1.41 million trips) were also carrying out other outdoor activities, notably mountain biking / cycling and watersports. Motivations for cycling as part of a tourism trip range from thrill seeking to health to social interaction and fun, making segmentation complicated.

Mountain biking in areas where testing routes have been set up (often short and site based) has grown as an activity (or competitive sport) over the last decade and tends to attract a different type of visitor. Market research suggests a relatively slow growth in cycle tourism In Scotland, and the extent to which expenditure associated with mountain biking is additional or is displacing road touring is unclear.

7.1 Mountain biking

The economic value of mountain biking in Scotland (EKOS Ltd and TRC, 2009).

Contractor: EKOS and TRC

Client: Scottish Enterprise

Published: 2009

The current economic impact of the mountain biking tourism market in Scotland was estimated at expenditure of £119m, employment of 3,470 FTEs and GVA of £68m. However, this includes all of those who engage with mountain biking (and all of their trip expenditure) irrespective of the main motivation for their trip.

Further analysis aimed at narrowing the focus to those for whom it was the main reason and/or a key part of their trip provides an estimate of £46.5 million expenditure – generating 1,360 FTEs and £26.6 million GVA (the latter low in our estimation in relation to FTEs).

Analysis shows that overnight expenditure accounts for 86% of total expenditure. 84% of trips by overnight visitors from outwith Scotland are to Southern Scotland.

7.2 7 Stanes

7 Stanes phase 2 evaluation (EKOS and TRC, 2007).

Contractor: EKOS and Tourism Resources Company

Client: Forestry Commission Scotland

Published: 2007

This evaluation assessed the ultimate impact of the 7 Stanes mountain bike trail project on the South of Scotland and Scottish economies. The analysis shows that the impacts from the project (including Phases 1 and 2) were:

- just under 400,000 visitors (394,626) – comparable with the top twenty most popular visitor attractions in Scotland, with similar visitor numbers to Stirling Castle;

- a large non-local market at 80% of participants;

- net additional impacts of:
  - £9.29m expenditure, 204.6 FTEs and £3.72m GVA in the South of Scotland
  - £7.58m expenditure, 227.5 FTEs and £4.14m GVA in Scotland;

As above, these GVA figures appear too low to us in relation to FTEs (see Section 13.5 and 13.6).

7.3 Mountain Bike World Cup

Mountain Bike World Cup 2002 - Fort William: economic impact study (Taylor, 2003).

Contractor: John Taylor – Research manager SportScotland

Client: SportScotland

Published: 2003

This research report (No 88) presents the findings of an economic impact study of the Mountain Bike World Cup held at the Nevis Range mountain bike course near Fort William, on 1-2 June 2002. The purpose of the report was to provide financial information about the cost of hosting the Mountain Bike World Cup and to establish the impact of the event on the economy of the local area.

The event management estimated that 7,778 people in total attended the event on the Saturday and the Sunday. It was estimated that 896 of these visitors were local residents (11.5%), 1,453 visitors were day visitors from home from outside the local area (18.7%), and 5,429 were staying away from home while at the event (69.8%). Expenditure by visitors to the Mountain Bike World Cup was calculated using the estimated total number of day visitors from home.

Expenditure on accommodation by visitors staying away from home was £167,000, and daily expenditure by visitors staying away from home was £333,000. In total, expenditure by visitors to the local area as a result of the Mountain Bike World Cup was estimated at £500,000, with expenditure by day visitors from home adding a further £16,000.

HIE Lochaber Event Evaluations

Contractor: The Market Specialists

Client: HIE

Published: 2007

The study included the 2006 Mountain Bike World Cup held 26-28 May at Nevis Range.

The key findings were:

Participants	502
Spectators and others	7,238
Overnight stay visitors	67%
Total off-site spending	£615,324
Average spend per person trip (day visitors)	£10.98
Average spend per person trip (stay over)	£109.00

Net job creation – allowing for displacement and the multiplier – was 21.2 FTEs.

Attendance and impact were comparable to the 2002 study summarised above.

7.4 Cycling and mountain biking

Cycling and mountain biking in Scotland (Scott Porter Research & Marketing Ltd, 2005).

Contractor: Scott Porter Research and Marketing Ltd

Client: VisitScotland

Published: 2005

The cycling and mountain biking research was carried out May-July 2005 with UK consumers with an interest in cycling during their holiday and the cycling industry (retailers, tour operators, organisations). The main aim of the study was to gain a better understanding of the importance of the cycling and mountain biking market to Scotland.

In the initial qualitative stage, consumers (specialist and leisure cyclists) and representatives of the cycling industry participated in interviews about cycling whilst on holiday in Scotland (49 in-depth interviews). In the second stage, a quantitative exercise was conducted (600 telephone interviews) amongst specialist cyclists and leisure cyclists.

The study identified seven subgroups within the leisure category of cyclists and four within the specialist category.

7.5 Conclusions from cycling reports

It could be argued that, like walking, visitors who cycle do so for many different reasons. Specialist downhill cyclists are principally motivated by the physical challenges, and touring cyclists by getting from one place to another. Thus, less of their expenditure might reasonably be allocated to a natural heritage motivation than say a family group using a cycle path. Those most motivated by the natural heritage are likely to be the more casual riders who use their cycles as an alternative to walking and enjoy a different and quicker way of seeing and enjoying more of the landscape. Consequently a higher proportion of their expenditure could be related to the presence of natural heritage features. Mountain bikes tend to be used off road and hence users have a closer connection with the natural heritage.

For these motivational reasons, Greenwood and Yeoman (2006b) consider cycle tourism as notoriously difficult to define and measure. However, to give some scale to the cycling market they cite VisitScotland research from 2004 showing that cycling as a main activity or representing part of a visit was undertaken on 1 million UK resident trips to Scotland in 2003 (8% of all trips) which generated £219 million in revenue. The contribution from holidays where cycling was the main purpose of the holiday comprised £20 million expenditure and 100,000 trips (or 1% of all trips to Scotland), and where it was part of a holiday trip comprised £199 million expenditure and 900,000 trips.

In 2003, of the UK visitors for whom cycling was the main purpose of their holiday trip, 32% were from Scotland and 63% from the rest of the UK. Where cycling represented part of the holiday trip, the market share of visits was split 58% Scottish residents and 39% rest of the UK.

However, the VisitScotland Factsheet (2009) identifies only 3% of UK holiday trips as including cycling as an activity undertaken while in Scotland in 2008. This is equivalent to cycling being involved in 364,000 holiday trips. Even a simplistic calculation taking 3% of total UK visitor spend (£1,986 million), i.e. £59.6 million, and allocating that sum to cycling gives a figure much lower than the Greenwood & Yeoman figure for 2003. The UK Tourism Survey three year average 2006-2008 supplied by VisitScotland shows an even lower figure of 284,000 cycling trips. VisitScotland (2009) also gives a figure of 4% or 486,000 UK visitor trips undertaking ‘adventure activities’, which could include mountain biking.

The growth in mountain bike activity is reflected in the EKOS and TRC (2009) study which identified 1.328 million visits (0.9 m in South Scotland). This study estimated the current economic impact of the mountain biking tourism market in Scotland as expenditure of £119m, and generated employment of 3,470 FTEs and GVA of £68m. <u>However, this includes all of those that engage with mountain biking (and all of their trip expenditure)</u> irrespective of the main motivation for their trip or whether they are day trippers or overnight visitors. Further analysis aimed at narrowing the focus to those for whom it is their main reason and/or a key part of their trip provides an estimate of £46.5 million expenditure; 1,360 FTEs; and £26.6 million GVA. By way of contrast, the UK Tourism Survey three year average 2006-2008 supplied by VisitScotland shows 134,000 trips in Scotland involving mountain biking, with an estimated visitor spend of £39 million.

Of the £119 million of overall mountain bike expenditure, 86% is estimated to be from overnight trips, i.e. £102 million from mountain bike tourism (as opposed to day trips), including both those resident in Scotland and from the rest of the UK. Southern Scotland is the destination for 68% of visits (0.9m), and the 7 Stanes evaluation provides a proportion of 80% for non local riders – suggesting 0.722m trips, with 84% coming from outwith Scotland (0.606m). We believe that other mountain bike centres further north in Scotland are used more extensively by local and Scottish based riders, and the ratios for these are more likely to be 25% local day trip, 50% Scottish based and 25% rest of UK based.

In our view, the VisitScotland (2009) and the UKTS figures are an underestimate and are more focused on cycling as a main trip activity, whereas the 2003 figures were perhaps an overestimate in that all cycling was included, even a short cycle as part of a longer trip. The reasons for this could be that cyclists are under-represented in samples, especially mountain bikers who tend to be less available than the average person for survey interview. The weather influences cycling and although cycles can be carried over long distances by car, smaller vehicles make this less appealing.

Cycles are becoming more available for hire at many destinations. Transportation of cycles by air is very expensive and there is limited provision for cycles on public transport. Overseas visitors are not included in these figures, and for the transport reasons outlined above many overseas visitors will hire cycles – although vehicles with German and Dutch plates can frequently be seen with a cycle attached. We have allocated 3% of all overseas tourism expenditure in Scotland (19.2m) to cycling.

In linking cycling to the natural heritage, Scott Porter Research and Marketing Ltd's 2005 cycling and mountain biking study showed that only market segments described as "Outdoor aspirers" (11% of the market) and to a lesser extent "Fairweather breakers" (19% of the market) could be said to be highly motivated by natural heritage and landscape. The other 70% of cyclists it is assumed are motivated by a wide range of factors.

Table22 - Value of cycling

CYCLING SUB ACTIVITIES	**TRIPS million**	**VALUE £ million**	**Comment**
VisitScotland Total Cycling 2003	1.00	219	
VisitScotland 2008	0.364	*60 (est)*	Simplistic estimate
VisitScotland 2008 Adventure tourism	0.486		Not all mtn biking as it includes other activities
UKTS 2006 – 2008 Net Av	0.284		
Mountain Bike element	*0.134*	*39*	
Other Cycling element (a)	*0168*	*49 (est)*	
Mountain Bike Tourism 2009 (b)	1.328 *0.996 tourist trips (86%)*	102 (119)	Includes day trips so total of 119 is reduced by 14%
Overseas (c)	3% of total trips	19.2	

Table 23 – Value of cycling (our interpretation)

CYCLING OUR INTERPRETATION	**Size of segment**	**Total spend £ million (2008 prices)**	**Attribution to the natural heritage £ million (2008 prices)**
Estimate of UK and overseas visitor expenditure combined (a +b + c)	100%	170.2	84.5
Prime Purpose (allocate 95% of spend)	30%	51.1	48.5
Important Purpose (allocate 40% of spend)	35%	59.6	23.8
One of Several Purposes (allocate 20% of spend)	35%	59.6	11.9

8 HORSE RIDING

8.1 Equestrian sports

Riding through hiring horses or ponies will, in many parts of Scotland, be more of a local activity than one pursued by tourists. Events such as Burgie Horse Trials attract visitors from a wide area, however. The Scottish Equestrian Association (SEA) describes equine tourism as taking part in or observing horse based activities such as pony trekking, trail riding, hacking, horse trials/shows, racing and carriage driving. Participants, from beginners to experienced riders, may take part in activities offered by riding and trekking centres or use their own horses for competitive sport or leisure riding, often arranging B & B for both rider and horse.

We have been unable to find any recent and relevant reports on the value of equine tourism to Scotland. In a submission by the Scottish Equestrian Association (SEA) to the Royal Society of Edinburgh (2007) inquiry into the future of Scotland's hill and island areas, the SEA interprets data from a 2006 survey as showing 7% of the Scottish population participated in equestrian activity (based on riding at least once in the previous 12 months). SEA infer that approximately 200,000 people ride, drive or vault (gymnastics on horseback) each week and there are around 100,000 horses in Scotland, including those used for leisure pursuits and competition, and breeding and young stock. The SEA quotes that, in 2005, 86% of riders did so for pleasure rather than competitive reasons, emphasising the important role the countryside plays in the enjoyment of their sport. The SEA identified 251 establishments registered under the Riding Establishments Act, and of these 35% (or 90) are recognised by one of three standard setting trade bodies. We cannot verify these figures as we have been unable to gain access to the original survey.

A report of research on the horse industry in Great Britain carried out by the Henley Centre (2004) noted that equestrian activity and hence equestrian tourism values can be difficult to measure accurately due to the complexity of arrangements relating to many establishments carrying out both professional functions like breeding and livery and leisure functions like offering visitor riding.

We believe that annual numbers entirely motivated by a riding holiday are small, and that for the large majority of riders, riding is undertaken only as part of a general holiday trip. Whilst the natural environment will contribute to the enjoyment of riding, there is no evidence that natural heritage is a prime driver.

8.2 Equestrian activities: Highlands and Islands

Economic impact of outdoor and environment related recreation in the Highlands and Islands: research report - equestrian (George Street Research and Jones Economics, 2003/4b).

Contractor: George Street Research and Jones Economics

Client: HIE, SNH and VisitScotland

Published: 2003/04

This report identified the following four segments.

1. **Pony Trekking** – this type of riding probably accounts for 90-95% of the tourism equestrian market as a whole.

2. **Casual Riding Holidays –** this relates mainly to beginners and may involve hour-long to half-day rides. The typical activity is pony trekking, which is not necessarily central to the holiday experience.

3. **Trail Riding –** this activity is for the experienced rider – travelling from one destination to another and staying in different accommodation.

4. **Specialist Riding** – this encompasses a variety of courses for adults, ranging from learning to ride from scratch to perfecting the dressage technique.

According to the report, some 207,000 trips were made by UK residents to the Highlands and Islands during which individuals participated in equestrian activities, which:

- Resulted in 730,000 days spent in the area;
- Created net annual expenditure of £15.3m in the Highlands and Islands;
- Supported 393 FTEs in the area, including 282 direct FTEs.

We believe that only a small proportion of these visits will have primarily been for riding.

8.3 Conclusions from equestrian reports

There is insufficient information to assess the tourism value of equestrian tourism with confidence. Research suggests that businesses offering horse riding and pony trekking in Scotland rely on local trade to supplement tourism income. The relatively small number of equestrian businesses that target tourists suggest that horse riding makes a minor contribution to the tourism economy.

9 WATERSPORTS

Some watersports can be regarded as activity in the natural heritage, and the coastline can be part of the attraction (e.g. for sea kayaking). Cruising from port to port in a yacht, however, can be considered the offshore equivalent of onshore motorised tourism (see Section 11). Indeed, a sailing boat crew might see less of the countryside during a day's sailing than the occupants of a car or touring coach.

9.1 Sailing in the Clyde estuary

Sailing in the Clyde estuary – the potential for future development (Mackenzie Wilson, 2006).

Contractor: Mackenzie Wilson Partnership

Client: Scottish Enterprise and HIE

Published: 2006

The report addressed supply and demand, as well as the impact of sailing and its related support industries on local and national economies.

The report notes that improved roads infrastructure, low cost airlines and lower berthing rates than for similar facilities on the south coast of England are making Scotland an increasingly popular destination for visiting boats, as well as owners opting for longer stays or residency at a Scottish marina. This additional business helps to maintain jobs, extend seasonal employment and protect long-term employment prospects in Scottish boatyards and marinas.

As part of this study, a Visiting Boat Owners survey carried out in 2005 showed that boat owners with English addresses now represent around 30% of boats permanently based in marinas on the Clyde, and at the time it was considered this figure would rise as south coast mooring became more expensive; a situation that may have changed with the economic downturn.

Annually, over 1,500 boats travelling through British Waterways' Scottish waterways, and around 20% of boats using the Caledonian Canal are from Northern Europe, with 2% from North America.

The report considers that, although the sailing product in Scotland is extremely good, Scotland's 200 marine related businesses only represent 4% of total marine businesses in the UK. Hence, the authors consider that the 14% of overall tourism spend associated with the marine leisure sector in Scotland derived from UKTS figures at the time was too high, and that 9% was more likely.

They consider that using the 9% would give an annual visitor spend range between £223 million and £272 million, (i.e. c£250 million) which would support between 6,390 and 7,830 jobs in Scotland. The report goes on to attribute £250 million as the economic value of the marine leisure industry in Scotland, defined as spend of resident boats on berths and moorings along with visiting boats and boat sales, diving, other small boats, leisure fishing, marina/ harbour maintenance etc. The terms tourism and leisure appear to be used interchangeably at times in the report, which creates uncertainty.

According to the report, in previous research undertaken for Sail Scotland in 2001 it was suggested that impacts were split in thirds fairly evenly between the Clyde, the West Highlands and the rest of Scotland, i.e. approximately £80 million visitor spend annually in each of these areas.

Calculation of the economic impact of sailing in the Clyde Estuary used information from three surveys on berth holders, visiting leisure boats, and hotels and accommodation close to marinas. 409 berth holders responded and of these 17% were English and 2% came from overseas, with the rest from Scotland. 118 visiting boats responded, and of these, 31% came from England and 9% from Ireland.

The report considers, in total, that expenditure associated with sailing in the Clyde area is £28m annually. Of this, £16.4m is generated by the permanent berth holders and £7.2m by the 2,000 boats using moorings in the Estuary.

Including indirect benefits, within the Clyde Estuary a total impact of £40.7m per year is estimated. This figure is estimated in the report to support just under 500 jobs within the Clyde area and GVA of £12.2m.

Table 24 : Impact of sailing in the Clyde estuary

	Direct	**Indirect**	**Total**
Expenditure	£28.1m	£12.6m	£40.7m
Employment	375	124	499
GVA	£8.4m	£3.8m	£12.2m
Output generated by visitors	£16.8m	£7.6m	£24.4m (60%)

Extrapolating to generate a Scottish estimate of sailing alone (assuming the Clyde is 33% of the Scottish total), direct sailing tourism expenditure might be expected to be £51 million. The figure from the 2009 report in 9.3 below is £27 million. Comparison between the two figures suggests, to account for this difference, that expenditure per visitor further up the West Coast and elsewhere in Scotland must be only one third of what is spent in the Clyde. Given the greater range of spending opportunities that exist around the Clyde to support local sailing business this seems plausible, and supports the 2009 figure in 9.3.

Respondents to the survey of visiting leisure boats were asked to select from 14 reasons for sailing in the Clyde Estuary – multiple responses were allowed. 99 of the respondents gave opinions on this, with more than 80% of respondents selecting scenery and 40% wildlife.

9.2 Watersports - Highlands and Islands

Economic impact of outdoor and environment related recreation in the Highlands and Islands: research report - watersports (George Street Research and Jones Economics, 2003/4e).

Contractor: George Street Research and Jones Economics

Client: HIE, SNH and VisitScotland

Published: 2003/4

Watersports are defined in this report as:

- Sea, loch or river canoeing or kayaking;
- Sailing and yachting;
- Diving;
- Wind surfing;
- Surfing;
- Water-skiing.

The methodology for this study involved surveying 229 people, which included 39% who came to the area from outwith Scotland or overseas. As indicated by the sample below, scuba divers were over-represented (at least relative to sailors). The sample was:

- Canoeists/kayakers (28), of whom a quarter had also been sailing or yachting, a fifth (21%) windsurfing or surfing and 11% had taken part in other water sports;
- Windsurfers/surfers (19), of whom a third had participated in scuba diving (32%), a similar proportion (32%) in canoeing or kayaking and 42% had done some sailing or yachting;
- Scuba divers (128), of whom 13% also participated in sailing/yachting;
- Sailors/yachters (86), of whom 19% had participated in diving.

Based on a UK household survey, the report estimated that some 165,000 UK residents made trips to the Highlands and Islands in 2002 to participate in watersports, of whom 151,000 were not resident in Scotland. Daily spend figures, per person, of £71 for overnight and £160 for day visitors are, in our opinion high, but could be explained by the cost of scuba divers, for example, filling tanks and hiring boats and dive masters. The day trippers sample was very small and probably not representative.

This direct expenditure was added to indirect, induced, marginal and public sector spending to give impact estimates from watersports of:

- 5,365 days spent in the area;
- Net annual expenditure of £85.9m in the Highlands and Islands;
- 2,162 FTEs supported in the area, including1,574 direct FTEs.

The total visitor spend of £85.9 million in the Highlands and Islands may bear some relationship to the figure of £250 million for all Scottish marine boat related recreation in 9.1, albeit that it was derived using different methodologies. But, overall, our conclusion is that the figures in this report significantly over-value watersports tourism's economic contribution to the Highlands and Islands.

9.3 Sailing tourism - Scottish level

Contractors: Tourism Resources Company Management Consultancy and Research Services, EKOS, British Marine Federation

Client: Scottish Enterprise

Published: February 2010

The report provides the following summary of the economic impact of the sector:

Table 25 - Impacts of sailing tourism at the Scottish level

Activity	Total activity by all boat owners	Tourist (activity by boat owners resident outside Scotland only)
Expenditure	£101.3 m	£27 m
Employment (FTEs)	2732	724
GVA	£53 m	£14 m

STMS ratios were used to estimate FTEs, and GVA was estimated on the basis of GVA per employee figures from the 2007 Scottish Business Statistics. Since this source only provides information on employment, not FTEs, the GVA estimates given in the report are too low.

The study considers that all of the £101.3m is technically tourism as the spend relates to time spent away from the home port. 56% of visiting boat nights were by boats from Scotland, 29% from elsewhere in the UK, and 15% from overseas.

The average expenditure is £130 per boat night (including fuel, repairs, food etc). This is based on average expenditure of £39.68 per person and an average number of people of 3.3 per boat. Boat parties staying overnight away from their home port tend to sleep on the boat. The growth assumption for sailing over the next 5 years is 17%, and 29% for the next 10 years.

When asked about the best aspects of sailing in Scotland in a consumer survey, 5% of respondents owning a boat berthed at a Scottish home port said “wildlife”, 37% said scenery, and 25% said “sailing waters”. 2% of respondents with visiting craft said “wildlife” 36% said scenery, and 19% “sailing waters”, whilst 8% of charter customers said “wildlife”, 42% said “scenery” and 24% said “sailing waters”.

9.4 Other studies

In addition to the watersports studies reviewed above, many local area studies have been carried out. For example:

- An Assessment of the Economic Impact of Water-Related Recreation and Tourism in the Spey Catchment 2003, Glasgow Caledonian University and University of Edinburgh, 2004.

  This assessment (already noted in the section on Fieldsports) found that anglers contributed £10.9m to the local economy, supporting 367 jobs. After allowing for substitution of activity within the study area the direct impact of water-sports was found to be £1.1m. Indirect and Induced effects were estimated to give a total annual output in Moray, Badenoch and Strathspey of £1.7m, household income of £0.8m, and 48 jobs.

- A Review of Marine and Coastal Recreation in Scotland 2007 (Land Use Consultants, 2007).

  This report includes a chapter on the economic value of marine and coastal recreation.

The methodology resulted in small sample sizes, and its Scottish focus resulted in an under representation of visitors from the rest of the UK and overseas and an over-representation of day visitors.

The survey identified a significant level of spending associated with Scottish marine and coastal recreation. Table 7 in the report showed that the average amount spent by each of the 571 respondents was around £724 per annum, totalling some £413,000. The highest average expenditures were for sea angling (£1,375), sailing (£924) and shoreline angling (£860). Kayaking and canoeing, sub-aqua and snorkelling, windsurfing, land yachting and speed boating each had an average spend of between £550 and £650.

SNH requested this report be discounted specifically because the angling results were very skewed, and not accurate, putting the accuracy of the other results into some doubt.

- Other watersports (categories as identified in VisitScotland's *Scottish Adventure Guide*)

No research on the contribution of paddle sports at the Scottish level has been carried out. The Spey catchment study (see above), once angling has been removed, gave a figure of £1.1 million for paddle sports (including rafting). In the absence of evidence, informed opinion would suggest a similar figure might be applied to a popular river such as the Tay. Other rivers, less regularly used for paddle sports, like the Dee, the Orchy, the Awe, the Tweed, the Findhorn, the Leny, the Lochy and several others together might contribute a further £1m. The less well known rivers are likely to have a small percentage attributable to overnight tourists from outside Scotland or overseas.

Informed opinion suggests that sea kayaking, particularly on the west coast, and surf kayaking could be worth a further £0.5 million. Average paddlers in the Great Glen (2,500 per annum) spend approx £97 per day locally on overnight visits, or approximately £730K per annum (Source British Waterways).

Surfing in Scotland is a localised activity, principally in East Lothian, Caithness, Machrihanish and the Western Isles, and the number of surfers from outwith Scotland is likely to be small. International championship events attracting UK and overseas participants and spectators, such as the recent Thurso stage of the international 'Cold Water Classic' surfing competition sponsored by sportswear company O'Neill, occasionally take place in Scottish locations and will generate additional 'new' expenditure, although travel will be a significant part of visitors' expenditure.

Sub aqua diving is concentrated on Scapa Flow, St Abbs Head and a number of sites in the Clyde and the Forth. With the exception of visitors to Scapa Flow (diving to see wrecks), most divers are resident in Scotland and diving on day trips from home.

There are a range of other non motorised water sports including wind surfing, river bugging, canyoning, coasteering, body boarding and kite surfing pursued by a small minority of enthusiasts, mainly resident in Scotland, although these pursuits provide some tourism benefits, especially where the activity is offered as part of an adventure holiday.

9.5 Conclusions from watersports reports

The available reports noted above are focused on coastal sailing. Experience suggests that sailing brings the greatest overall economic return relative to other watersports. The figure of £27 million of expenditure from sailing tourism, identified in the recent report for Scottish Enterprise, is considered a realistic figure.

If expenditure from Scottish based leisure sailors on overnight trips was taken into account the figure allocated for sailing tourism could be greater. However, only a proportion, perhaps 40%, of all sailing visitors' expenditure could be allocated to the natural heritage as, although it is important, it is not considered as generally a primary motivation.

A further £10 million is suggested, as an informed estimate, for the tourism value of other water based activities like paddle sports, surfing and sub aqua. A majority of water based activity in Scotland is attributable to people resident in Scotland undertaking day trips.

Whilst natural heritage motivations may vary, for example competitive white water kayaking or diving on wrecks and man made structures, a key requirement for all watersports, involving part or total immersion, has to be clean water. Hence, it could be argued that almost all trip value should be allocated to the natural heritage. The walking study, however, noted that 20% of walkers (equivalent to 1.41 million trips) also engaged in other outdoor activities, notably mountain biking / cycling and watersports. Taking this evidence into account, the trip value attributable to the natural heritage would be reduced for a proportion of non-sailing watersports participants.

Table 26 - Value of watersports

WATER SPORTS SUB ACTIVITIES	
Off shore sailing	
- excluding Scotland residents	£27m
- including Scotland residents	£61.4m
Others:	£10m
Paddle sports	
Surfing	
Sub aqua	

10 NATURE-RELATED SITES AND FACILITIES

10.1 Local path networks

What paths do for Scottish society: an economic and social impact study of local path networks (Sport Industry Research Centre, 2008).

Contractor: Sport Industry Research Centre

Client: SNH

Publication: 2008

Study Objectives:

- To provide a literature review of relevant economic appraisals and the non-market benefits of path networks;
- To develop a methodology to assess the economic impact of path networks in Scotland;
- To test the methodology at four case study path networks; and
- To assess the extent of non-market benefits derived from the presence of a local path network.

Methodology:

Four case study path networks were selected: Inverness, Edinburgh, Peebles and Abriachan, and an economic impact assessment was developed for each. The study gathered 1,450 questionnaires from path users at pilot sites, although only 12% were visitors to the area; 135 businesses were contacted but only 27 responded. The low percentage of visitor questionnaire returns meant that most data were not statistically useable.

Impact:

Table 26 - Economic impact of local path networks

£ per 1,000 users	Summer £	Autumn £	Winter £	Mean Average £
Inverness	2,820	9,380	3,570	5,257
Edinburgh	1,040	1,870	250	1,053
Abriachan	9,110	4,660	Unknown	6,885
Peebles	3,510	Unknown	2,140	2,825

Abriachan had visitor counters and the economic impact from the path network at Abriachan was calculated at £190,226.

The impacts per 1,000 users were low for all sites, which does not surprise us as spending opportunities on or close to countryside paths tend to be limited.

Because there is no reliable visitor number data for the path networks in Inverness, Edinburgh and Peebles, it is not possible to express economic impact in the traditional way of an amount of money per annum. However, it is possible to calculate and express the economic impact in £ per 1,000 visitors, and as an estimated number of visitors required to generate £1,000 of economic impact. These figures could be aggregated into overall economic impact at a later date, should robust visitor numbers become available. Because the Abriachan Forest Trust had installed electronic counters at the car park in Abriachan Forest and were willing to supply the visitor number data for 2006, it was possible to estimate an annual economic impact for the entire path network at Abriachan (as shown above).

10.2 Forest recreation activities

Valuing forest recreation activities (Christie *et al*, 2006).

Contractor: Aberystwyth University (Christie *et al*)

Client: FC

Publication 2006

Study Objectives:

- To estimate the local economic (income and employment) impacts of forest recreation;
- To estimate changes in forest visitors' welfare associated with improvements to the recreational facilities provided in forests;
- To examine how recreational values vary across different forest users and uses.

Methodology:

Four forest-based recreation activities were investigated:

- *Cycling* – defined as incorporating all types and abilities of cycling within forests, ranging across short family rides, cross-country rides, single-track mountain biking, downhill, four-cross and dirt-jumps;
- *Horse-riding* – defined to include all types of riding that take place in the forest, from leisure riding to endurance riding;
- *Nature-watching* – defined to include all nature-watching activities, including guided walks, viewing centres, and nature trails;
- *General forest visitors* – defined as a catch-all group, including walkers / hikers, 'play', and day trippers, as well as people who visit forests for multi-activities.

Data was collected through on-site interviews, administered over a five-month period between May and September 2005. Interviewing took place at seven forests located throughout Great Britain: Glentress, Dyfnant, Cwm Carn, Thetford, New Forest, Rothiemurchus and Whinlatter (i.e. two in Scotland). A total of 1,568 interviews were carried out. An assumption of a FTE post being created for each £34,000 spend in the local economy was used (which we consider reasonable).

Table 28 - Number of visitors per annum at forest sites

Forest	Estimated number of visitors (per annum)
Glentress, Scottish Borders	190,000 66% cyclists
Rothiemurchus, Highland	250,000 66% general visitors 20% nature walkers 14 % cycling

Table 29 - Mean spend per trip at forest sites

Activity	Mean spend per trip £
Cycling	23
Horse Riding	136
Nature Watching	28
General Visitors	32
All Visitors	37

Table 30 - Economic impacts at forest sites

Forest	Annual number of FTE jobs created	Annual Local Expenditure	Annual Local Income Generated
Glentress	59.4	£2.0m	£3.3m
Rothiemurchus	204.8	£7.0m	£11.5m

The study surveyed local businesses to break down the proportion of their income spent in local regions to estimate indirect impact.

For example, the figures suggest that for each additional cyclist attracted to Glentress forest on a day visit an additional £15.72 can be expected to enter into the local economy in the form of direct, indirect and induced income.

The income generated appears high to us in relation to local expenditure and job creation.

10.3 Forests

All Forests Visitor Monitoring, Survey of visitors to FCS forests, June 2004 to June 2007 (TNS, 2008a).

Contractor: TNS

Client: Forestry Commission Scotland

Publication: 2008

Study Objectives:

- To measure the volume of visitors across FCS forests;
- To obtain information on visitor profiles.

Methodology:

Five forest districts were surveyed in each of three years. All of Scotland was covered and 2,694 face to face interviews were undertaken.

The report estimated that FCS forests are visited in a year by an average of 8.4 million people. By applying the proportion (27%) who stated that the forest was the 'only reason' or very important for their visit to the estimated total number of visits, it may be estimated that the choice of destination for at least 2.3 million visits was directly influenced by the presence of a forest.

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Table 31 - Estimates of total annual visits to FCS forests surveyed

Forest District	Visits over each 12 month survey period	% of overnight visitors	Spend per Forest District (Average expenditure on a day visit)
Dornoch	119,000	14% (16.6K)	£19
Inverness	639,000	17% (108K)	£21
Fort Augustus	268,000	37% (99K)	£35
Lochaber	559,000	51%(285K)	£30
Lorne	297,000	46%(136K)	£34
West Argyll	292,000	31%(90K)	£13
Moray	360,000	6% (21.6K)	£25
Aberdeenshire:			
Buchan	694,000	5% (74.15K)	£6
Kincardine	789,000		
Tay	717,000	30%(215K)	£23
Cowal & Trossachs	471,000	34% (160K)	£28
Scottish Lowlands	938,000	2% (18.76K)	£6
Scottish Borders	821,000	17%(140K)	£27
Ae	413,000	20% (83K)	£19
Galloway	812,000	10% (81.2K)	£4
Total	**8.2 million**	1.53 million	
Non allocated visitors	200,000		

All forest visitors were asked to specify how much money they had or would personally spend on a number of items that day and, if they were on an overnight trip, how much they had spent on their accommodation the previous night. Categories included food and drink, admission fees, transport, equipment and non routine shopping.

Amongst all respondents (day trippers and visitors on trips away from home), 48% spent nothing, while 30% spent £20 or less in total. The average spend per person across all visitors (i.e. including those who spent nothing) was £17. 12% of all forest visitors had paid for overnight accommodation during the previous 24 hours (or would do so on the day of interview), with an average spend amongst those who had spent anything (i.e. excluding those who spent nothing) of £46.

The report concludes with an estimate of total spend by people who visited due to the existence of a forest and facilities of £38.9 million. This is based on a total of 2.3 million visits taken due to forests and facilities multiplied by the average spend of £17 per day.

10.4 Canals

Canals are man-made features, but so, it could be argued, are heather moors, long-distance routes, ski slopes and much of Scotland's woodland. To others, canals are green corridors. The Caledonian Canal, in particular, links a set of natural lochs and opens up a natural heritage setting for a wide range of tourism activities.

Scotland's canals: the economic effects of Millennium Link & Highland canals investment

Contractor: Roger Tym and Partners

Client: British Waterways and Scottish Enterprise

Published: 2009

Study Objectives:

- To identify the economic effects of investment in the canal network of Scotland.

Methodology:

- An assessment of the economic impacts generated by the reopening of the Lowland Canals (widely known as the Millennium Link) and subsequent investment;
- An examination of economic activity in the vicinity of the Caledonian and Crinan Canals;
- A broad assessment of the canal network's contribution to the Scottish Government's National Outcomes and Strategic Objectives; and
- An analysis of house price change along the Canal network.

The Millennium Link

The study used a standard ratio of £25,000 visitor spend to 1 FTE generated from the Scottish Tourism Multiplier Study 1992, updated to 1996 prices. The rationale for using 1996 prices appears to have been to facilitate comparisons with projections made before the work on the Link was undertaken.

A forecast of economic outputs to 2015 was prepared based on development applications and related discussions. These were aggregated by Local Authority and there is no reference date given for values.

There is no mention of what this projected figure is based upon and what multiplier is used for the FTE's

Table 32 - The Millennium Link: economic outputs

Output	Achieved (April 1999 – Dec 2008)	Original target (1999)	Projected final Outputs (2015)
Investment	£322 million	£100 million	£1.8 billion
Employment	3,017 FTE	3,420 FTE	12,702FTE
Employment (tourist/visitor related)	1,835 FTE		

There were 18.6 million towpath visits in 2008 (including approximately 12.4 million visits which can reasonably be attributed to investment in re-opening the Millennium Link and associated towpaths). These figures have to be viewed very critically as they are taken from a very dispersed number of locations with a wide variety of local counting issues

According to a previous British Waterways visitor survey, the average spend for functional visits was £3.70 in 2005 (based on 2002 prices). This figure was used to calculate the local economic impact of increasing towpath usage.

Overall additional expenditure was estimated at £45.9 million.

The Millennium Link directly employed 41 FTEs

Tourism Jobs from the Millennium Link (original forecast to end 2008):

- 46 FTEs in boating related companies;
- 41FTEs in "canal bank" jobs looking after boats / moorings / locks on Lowland Canals;
- 61 FTEs at Falkirk Wheel;
- FTEs on boat maintenance;
- 1,835 indirect jobs created through footpath usage along the Millennium Link up to Dec 2008. This is a straight division of overall additional expenditure of £45.9m using a ratio of £25,000 per FTE.

<u>Highland Canals – Economic Outputs</u>

Table 33 - Impacts associated with investment in the Highland canals

Outputs	Dec 2008	Projected additional outputs
Investment	£20 million	£20.9 million
Employment	331 FTE	24 FTE

There were 4.8 million towpath visits on the Caledonian Canal in 2008. The Crinan Canal had 504,000.

The Caledonian Canal employs 37 full-time staff, plus 28 seasonal workers. The Crinan Canal employs 13 full time staff and 17 seasonal workers. Commercial boat operators employ 79 and 5 FTEs in boat and related businesses along the Caledonian and Crinan Canals respectively.

Average spend per visitor of £3.70 was used to calculate the impact of increases in towpath usage on the local economy. Using the mid-point of a range of standard employment ratios the number of jobs supported by towpath usage (at Dec 2008) was estimated at 115 FTEs for the Caledonian Canal and 18 FTEs for the Crinan Canal.

Table 34 - Canal Bank Employment 2008 (FTEs)

Employer	Caledonian Canal	Crinan Canal
British Waterways Scotland	46	19
Boat Businesses	79	5
Boat Maintenance	4	1
Employment from towpath users' expenditure	115	18
Total Canal Bank FTEs	244	43

When average visitor spend per visit is as low as assumed in this study (£3.70), it is questionable whether there would be any significant net impact from the visits per se once displacement is allowed for – i.e. after subtracting expenditure that visitors would have made had they not visited the canals.

Where usage is by overnight stay visitors, however, there could be more significant impact over 24 hours if the canal visit was important in their decision to spend time in the area; or, through their enjoyment of the experience, they are encouraged to return to the area in the future. Such impacts, nevertheless, will be higher locally than within Scotland, as comparable experiences are available elsewhere.

10.5 Cruise tourism

Scottish Cruise Tourism Study (TTC International and Roger Tym & Partners, 2006).

Contractor: TTC International and Roger Tym & Partners

Client: VisitScotland and Scottish Enterprise

Published: 2006

Only a 12 page summary could be assessed as the full report could not be obtained.

Study Objective:

- To assess the market and economic impact of cruise tourism to Scotland in order to enable VisitScotland and its partners to consider an appropriate strategy for developing Scotland as a cruise destination.

Methodology:

The source material used in the economic impact assessment was as follows:

- Responses to questionnaires sent to all ports in Scotland;
- Published data sources referred to elsewhere in this report;
- Other research documentation on cruise tourism in Scotland, elsewhere in the UK, and in Ireland.

Impacts:

The total net employment of the whole sector was estimated at 812 FTE. The total value was given as £30.439 million. The GVA per annum was given as £23 million.

10.6 National Nature Reserves

National Nature Reserve baseline visitor survey (NFO Transport and Tourism, 2006).

Contractor: NFO Transport and Tourism

Client: SNH

Publication 2006

Visitors to 23 NNRs were surveyed during September 2002 to August 2003, with a baseline face to face survey of 1,693 visitors at 21 sites (ranging from 21 visitors per site to 229). 2,527 self completion questionnaires were returned. 14 of the NNRs were in the Highlands and Islands.

Table 35- Type of trip to NNR

Description	**Total %**
Short trip of less than 3 hours from home	22
Day out of more than 3 hours from home	16
On holiday in the area	49
Visiting friends on relatives on holiday in area	5
Passing through area to/from holiday destination	3
Other	4
Don't know/not stated	<1

Table 36 - Time spent at NNR

Type of trip	Short day trip	Day trip	Holiday	Overall Average
Average:	*2hrs 7mins*	*3hrs 16mins*	*2hrs 54mins*	*2hrs 49mins*
Number	948	679	2,406	

The survey suggests that the average expenditure per person was £34.52, including those who spent nothing. The respondents who stayed overnight in the area in the NNR paid an average of £24.54 for their accommodation.

Table 37 - Visitor numbers to NNRs

NNR	Figure used to calculate total visitor nos. (Sept 2006)	% of Total
Top 17 NNRs	625,000	85.1%
Middle 17	93,900	12.8%
Lowest 19	15,930	2.1%
Total	734,830	100%

This report does not make the expenditure at NNRs very clear. There is no analysis of displacement or additionality in the wider economy. Most visitors to NNRs have little opportunity to spend money and it is difficult to attribute expenditure to the presence of the NNR. Also, there will be overlap between the visitor numbers and impacts above and visitors and impacts from other natural heritage related activities assessed in this report.

10.7 Other studies

These include:

- Leisure landscapes: understanding the role of forests and woodlands in the tourism sector, Annual Report and Accounts 2003-2004, pp 54-65, The Stationery Office, Edinburgh.

  The report covered three areas in the UK, including the Great Glen. It was largely an internal document to inform the forest industry. The project sought to understand how tourism providers perceive and use forests and woodlands and to explore the issues they saw as being important to enable the forestry sector to support and benefit from the work of the tourism sector.

- Forest Visitor Survey 2008, Economics and Statistics, Forestry Commission.

- The social and environmental benefits of forestry in Britain. K.G. Willis, G. Garrod, R. Scarpa, N. Powe, A. Lovett, I.J. Bateman, N. Hanley and D.C. MacMillan (2003). Report to Forestry Commission from Centre for Research. In: *Environmental Appraisal and Management*. University of Newcastle, Newcastle.

- Socio-economic impacts of community local access networks (Hecla Consulting, 2007).

  Contractor: Hecla Consulting

  Client: The Paths for All Partnership & Highlands and Islands Enterprise

  Publication: 2007

  This was a socio-economic evaluation of five path networks located within the Highlands and Islands. The five path networks were at Culag (Lochinver), Alness, Islay, Nethy Bridge and on Raasay. Fieldwork research and consultations took place between October and December 2006. 50 individuals were involved in the community fieldwork consultations, and only 64 questionnaires were completed by users on the five networks. Little useful economic analysis could be derived from this study.

- Jarman D. 2005. The View from the Road investing in the ‘shop window’ for Scotland’s landscape asset. *Scottish Natural Heritage Commissioned Report No.293.* Little useful economic analysis could be derived from this study.

10.8 Conclusions from reports on nature related sites and facilities

Most of these sites are locations where activities like walking, cycling, wildlife watching and watersports take place, and as such their impacts are covered in previous Sections. 18.6% of visitors to FCS’s forests managed for recreation are tourists in the sense of staying overnight away from home.

11 LANDSCAPES AND SCENERY

11.1 Motivation and activities undertaken - regional surveys

The reasoning behind the emphasis on the natural environment in the marketing of Scotland as a tourist destination is supported by the results of visitor surveys which have taken place in recent years. Landscapes and scenery play an important part in Scotland's tourism and can provide one of the strongest motivations for people to visit Scotland. For example, in the Highland Visitor Survey (George Street Research, 2003) visitors were asked the main reasons that made them choose to visit the Highlands. The factors most frequently identified were the views and unspoilt scenery. This was identified by 21% of visitors and was the reason most mentioned as a reason to visit. For visitors from overseas the scenery was identified as one of the main reasons for their visit by 27% of the sample, more than double any other factor (other than having never been before, which was mentioned by 17%). Some of the other reasons to visit the Highlands which were noted also have strong links to the natural environment and to the general landscape and scenery:

Table 38 - Main reasons for visiting the Highlands (%)

	UK visitors (not Scotland)	Overseas visitors	Total visitors
Scenery/views/unspoilt	21	27	21
Been before/knew area	22	10	18
Peace and quiet/tranquillity	14	7	12
Mountains/hills	7	10	8
Walks/hillwalking	7	6	7
Wildlife/flora/fauna	5	11	6
Lochs/Loch Ness	4	6	4
Heard/read about it/seen pictures	4	10	4

The reasons people identified for their visit to the Highlands can be compared to the activities they said they took part in while they were on holiday. Some of these were:

Table 39 - Activities taken part in while visiting the Highlands (%)

	UK visitors (not Scotland)	Overseas visitors	Total visitors
Low level walking (2-8 miles)	50	49	46
Hill walking	22	28	21
Low level walking (8+ miles)	11	16	11
Cycling/mountain biking (off road)	5	3	4
Cycling (on road)	4	5	4
Game fishing	3	1	3
General sightseeing	90	96	87
Bird watching	22	12	17
Visit woodland/forest	21	21	18
Watching land-based wildlife	18	13	14
Watching marine wildlife	18	14	13

As can be seen, although only 7% in total identified walking as a main reason for their visit, a much higher proportion actually went walking while on holiday. Similarly, while only 6% in total identified the wildlife as a main reason to visit the Highlands, many more did actually view wildlife during their visit.

Recent visitor surveys in Orkney (AB Associates, 2010) and Shetland (AB Associates Ltd & Macpherson Research, 2006) also show the importance of the landscape in inspiring visits to Scotland. Both surveys asked visitors what was the main inspiration for their trip to the islands, and the results for holiday visitors (i.e. excluding those who visited for work or to visit friends and family) were:

Table 40 - Holiday visitors to Shetland: Inspiration to visit

Inspiration	%
General interest/holiday/just visiting	28
Sights/landscape/remoteness	8
Birds/wildlife	4

Table 41 - Holiday visitors to Orkney: Inspiration to visit

Inspiration	%
Birds/wildlife/nature/flora	17
Peace and quiet/remoteness	10
Scenery/landscape	10

Both visitor surveys also sought information on the main activity undertaken while on holiday and other activities undertaken:

Table 42 - Main activity and activities undertaken by visitors to Orkney and Shetland

	Orkney		Shetland	
	Main	Undertaken	Main	Undertaken
No main activity/no response	37	23	54	16
General sightseeing/touring	32	52	13	45
Walking	12	70	14	80
Bird watching	2	23	3	37
Marine wildlife watching/Boat trips	0	16	1	19
Other nature watching (flora/fauna)	1	14	0	27

As can be seen, many visitors found it difficult to give their main activity while on holiday, but there is a clear disparity between the inspiration for a visit and the main activity undertaken. For example, while 17% of visitors said that the birds and wildlife in Orkney inspired their visit, few identified that as their main activity.

In the Outer Hebrides a survey of TIC users has been undertaken for a number of years. The survey for 2008 (Macpherson Research, 2009) summarises the activities that visitors have undertaken and the pattern for selected activities since 2000 as follows:

Table 43 - Activities undertaken on holiday in the Western Isles (%)

	Year					
	2000	2002	2004	2006	2007	2008
Sightseeing	86.0	87.0	85.5	81.6	87.6	82.7
Beaches/seashore	69.8	73.1	70.3	71.1	77.3	71.2
Photography	58.6	56.3	54.5	51.8	58.2	51.2
Hillwalking	54.3	54.8	54.5	49.4	53.3	44.2
Birdwatching	39.2	46.4	42.9	39.8	43.7	43.8
Flora/fauna	37.5	44.1	37.6	36.2	41.8	41.9

This shows a fairly steady pattern where general sightseeing and enjoyment of the beaches and seashore are the main activities engaged in by visitors, although sizeable numbers will also engage in specific activities associated with the natural environment.

The regional market analysis produced for the Argyll, Loch Lomond and Forth Valley Tourism Partnership (2006) presents a picture of the visitors to the area. The main motivator for visitors to Argyll is identified as the scenery (40%), while of visitors to Loch Lomond and the Trossachs 17% come to see the beautiful countryside and lochs. 80% of visitors to Argyll and 69% of visitors to Loch Lomond and the Trossachs undertook general sightseeing.

11.2 Motivation and activities undertaken - national surveys

Harris Interactive (2008) found that the scenery is the top reason for choosing Scotland as a holiday destination for both UK and International visitors - 66% rated it as very important and 24% as important in influencing their decision to visit. For nature and wildlife, 35% rated it a very important and 30% an important factor, while the opportunity for outdoor activities was regarded as a very important factor by 28% of visitors and important by 30%. The activities undertaken by visitors were found to be:

Table 44 - Activities participated in whilst in Scotland (%)

	UK visitors	International visitors
General sightseeing	91	92
Short walks (less than 2 miles)	81	84
Explored Scottish scenery	73	82
Toured around the country	63	83
Watched for wildlife (birds, dolphins, otters etc)	56	n/a

This picture is somewhat different from that given in VisitScotland's factsheet (2009), which sets out the 3 year average for a number of the activities undertaken by UK visitors to Scotland. The relevant figures are:

Table 45 - UK visitor activities undertaken in Scotland

	UK holiday trips %
Hiking, hillwalking etc	47
Touring/sightseeing	13
Wildlife watching and zoo parks	9
Adventure sports	4
Fishing	4
Golf	3
Cycling	3

This suggests a much lower figure for the percentage of visitors from the UK who identify touring and sightseeing as an activity they did while on holiday, with many more taking part in some form of walking. This is likely to be because, when asked about their activities while on holiday, most visitors did not regard sightseeing as a distinct activity - indeed the 13% figure might be the number of people on a specific touring holiday who are not taking part in other outdoor activities. Explanations for this might also include the fact that, unlike the various regional surveys, the VisitScotland figures include visitors to cities such as Edinburgh or Glasgow, where scenery would be a less important motivation. However, it is important to note that even for visitors to cities the Scottish countryside can be important. For example, the Glasgow Visitor Survey (LJ Research & Halo Research, 2008) suggests that 14% of visitors to the city went on an excursion out of the city during their visit (including 35% of visitors from overseas). TNS's visitor survey in Edinburgh (2008b) shows that UK visitors spent 67% of the nights in their trip in the city, European visitors 60% and visitors from further afield 21%.

11.3 Car touring

In terms of car use, whilst 67% of tourism trips to Scotland from the UK are made by car (VisitScotland, 2009), there is a wide difference in transport used in Scotland between types of visitor. For example, the Highland visitor survey (George Street Research, 2003) shows 66% of visitors using their own car during their trip. This varies between 85% of Scottish visitors (excluding Highland residents) to 27% of overseas visitors. However, 46% of overseas visitors used a rental car and the combined car (and motor home) use was 85%.

It is evident that many of the visitor attractions which are located in more rural areas, in particular the areas of natural beauty, can be accessed almost exclusively by car or private coach. Connell and Page (2007) in their paper on the spatial patterns of car-based tourist travel in Loch Lomond and Trossachs National Park, note that car transport is a vital element in wider tourism, yet there is a surprising lack of research on the role of the car in overall tourism travel patterns, behaviour and motivations where the visual characteristics of the countryside and landscape are enjoyed by car-users.

11.4 Conclusions

The regional and national evidence would support a view that:

- The scenery and landscape plays a major part in attracting visitors to Scotland;
- A high proportion of both UK and international visitors tour Scotland and/or go sightseeing to view the scenery;

- More visitors enjoy the landscape than take part in any individual activity using the natural environment.

However, the evidence is not clear about how many visitors take a touring holiday to enjoy the landscapes and scenery of Scotland without also engaging in some of the individual pursuits. Even if the scenery is the main motivation for the trip and general sightseeing is the main activity undertaken, it is possible, and even likely, that the visitor will, during their holiday, also take part in activities such as walking or watching wildlife. Visitors are driven by a complex combination of many motivations and desires. For example, a visitor might want to tour the Highlands to take in the scenery, but they might also want to see a Golden Eagle, to take in the peace and solitude of a distant island, to walk in the hills or to go on a boat trip where they might see dolphins.

These factors have meant there is great difficulty in meaningfully estimating the additional economic contribution Scottish landscapes and scenery make to motorised tourism.

12 THE NATURAL HERITAGE IN SCOTLAND'S TOURISM MARKETING

12.1 Context

The natural heritage has always played a central role in Scottish tourism, going back to Walter Scott and Queen Victoria. Gold and Gold (1995) contended that the dominant historical use, extending to the present day, of Highland imagery, with substantial natural heritage elements, has subsumed much of the potential diverse imagery from the rest of Scotland and now defines much of the Scottish tourism brand.

A discussion paper on Scotland's landscapes produced by Scottish Natural Heritage (2003) states that tourism and many of Scotland's traditional products use Scotland's landscapes as a critical part in their marketing. Scotland is famed for its distinct and diverse range of landscapes. Many of these have long been celebrated and recorded in successive schools of painting, and in literature, music and song.

Landscapes are in the media spotlight. Advertising, television and films are making increasing use of the unspoiled character of Scotland's landscapes as a backdrop. Investing in attractive settings is important as attractive landscapes are part of the image used to sell Scotland as a desirable investment location abroad.

Primetime television slots occupied by Spring and Autumn Watch, together with programmes like Coast, Countryfile and the Adventure Show draw heavily on nature based images and influence visitors. Following the recent Shetland Diaries presented by film maker Simon King, VisitScotland reported that internet traffic on its Shetland page was up by 800% just after the first broadcast, and Promote Shetland had a four fold increase in traffic on www.shetland.org (Press and Journal, 2010).

12.2 The VisitScotland brand

VisitScotland (2001/2002) has carried out extensive brand research to find out why people visit Scotland and what the country represents as a brand. As a result it has distilled the brand into three values:

- Enduring - The buildings and architecture, history, culture and tradition;
- Dramatic - Dramatic scenery, beautiful light and the drama of the changing weather;
- Human - The Scots are seen as down to earth, innovative, solid and dependable, and full of integrity and pride.

These values have been adopted as the foundations for all VisitScotland's marketing.

12.3 Domestic marketing

VisitScotland's marketing in the UK is based around three main seasonal campaigns:

- Perfect Day, for the main season from late March to August. The Perfect Day campaign for 2010 was launched on 17th March and is designed to showcase aspects of Scotland that contribute towards a 'Perfect' holiday experience. Scotland's islands and coasts are the key focus of the campaign, with a wide variety of things to see and do featured, mostly involving the natural heritage. These include island hopping, coastal cuisine, sea kayaking, sailing, coastal walks and relaxing on some of the world's most stunning beaches. Scotland's natural heritage, wildlife and festivals are also highlights of the campaign alongside celebrations such as the world famous Edinburgh summer festivals, Perth 800 and the 150th anniversary of the birth of Peter Pan author, J M Barrie.

- Capture an Autumn Moment for the shoulder months of September and October. The 2009 campaign was based around an Autumn Senses cinema and TV advert and focused on key autumnal things to see and do.

- Winter White for the low season from November to March. For 2009/10 it included sub programmes on the Snowdrop Festival and a promotion of National Nature Reserves in partnership with SNH.

Domestic marketing is focused on the six groups identified as the most likely to holiday in Scotland:

- Affluent active devotees - Well-travelled, mature experience seekers from Scotland and Northern England, the highest spenders of all because they can afford the finer things in life – quality hotels, great food and drink – and they actively participate in activities, including golf. They are Scotland aficionados, and they can visit at relatively short notice or plan a longer holiday, often mixing new experiences with beloved haunts.

- Affluent southern explorers - High-achievers from London and the south, average age 49, who take several longer breaks, when they can engage with people and culture, getting outdoors and off the beaten track. They already have Scottish connections through experience, friends or family, and they come back because it fulfils both emotional and practical needs.

- Mature devotees - Older couples from Scotland and Northern England of relatively low affluence, who are committed to holidaying in Scotland – they spend more nights in Scotland than any other group. Traditional in outlook, they live happily without the internet[•]. They will often tour with a caravan or arrange accommodation direct in a place they love.

- Younger domestic explorers - Couples or young families from Northern England, aged 25-45, strong advocates of UK holidays, but with limited disposable incomes. They like to tour, watch wildlife and have cultural experiences, such as visiting museums. They will return to Scotland because it allows them to be active and it is close-by while still affording new experiences.

- Busy city-dwellers (Ireland) - Successful professionals with a 'work hard, play hard' attitude. They keep the same pace on holiday, mixing outdoor pursuits with lapping up city culture. Scotland is high on their list, as there's lots to do and explore, great events and they can catch up with friends or family.

- Well-travelled empty nesters (Ireland) - Older, successful couples and singles, living in the suburbs and happy to spend on life's little luxuries. They've bagged destinations overseas, but also have their haunts in the UK. Scotland is a familiar and convenient break for some, while those yet to visit are attracted by the wealth of activities and culture.

All of the target market segments identified have a close affinity with the natural environment.

[•] This is an increasingly out of date characteristic.

12.4 International marketing

International marketing includes a European touring campaign which runs all year round, promoting car touring, golf and short breaks that combine city and countryside. Car touring is also a dominant product for long haul visitors. Much international marketing is carried out in partnership with VisitBritain, but VisitScotland also works with the international tourist trade and issues a monthly e-newsletter in nine languages to almost a million people worldwide who have ‘opted in’ to receiving holiday ideas.

12.5 Online marketing

Online marketing reaches both the domestic and the international market, largely through www.visitscotland.com and a suite of international gateway sites, such as www.cometoScotland.com, and www.cometoScotland.com.au. All of these rely extensively on images of Scotland’s natural environment to inspire the potential visitor. For example the slideshow on the visitscotland.com homepage uses seven images, all featuring Scotland’s natural environment. The slideshow used on the cometoScotland home pages features 20 images of which 14 involve the natural environment, either directly or as the background to a castle or other attraction.

There are also a range of associated niche and specialist sites. These include many with close connections with the natural environment such as walking, wildlife, adventure, fishing, riding, cycling and food.

VisitScotland also makes extensive use of email in its marketing. Keeping in touch with potential visitors is a key part of the marketing strategy, with repeat visits encouraged through a programme of postal mailers and e-newsletters with tailored holiday ideas. Overseas, close to a million e-newsletters are issued monthly in nine languages, with market-specific information and travel offers. These are used to drive traffic to the various VisitScotland websites.

12.6 Return on investment

It is understood that VisitScotland currently aims for an average return of at least 23:1 from overseas marketing and 30:1 on UK marketing; i.e. for every £1 spent VisitScotland considers it achieves incremental tourism revenues of £23 or £30 respectively. Annual spend on marketing is some £45 million, with examples of the return made from specific campaigns claimed as:

- Winter White - £64 million in 2008/09;
- Perfect Day - £24 million in 2009;
- European Touring campaign - £50 million from France and Germany;
- Relationship marketing - £25 million;
- Celebrate Scotland - £19 million (Homecoming).

Overall, if a return on investment of 25:1 were achieved, then VisitScotland marketing would generate £1,125 million of visitor spend, from the overall total of £2,626 million holiday visitor expenditure (see 13.2 below).

12.7 Analysis of the natural heritage content of Scotland's tourism marketing

Table 46 - Summary of the natural heritage content of national tourism marketing

CAMPAIGN NAME	YEAR AND SPEND	NATURAL HERITAGE ASSET/ACTIVITY	IMAGERY
Domestic Campaigns			
Winter White themes • Hear • Smell • Touch • Taste • See • Live	2009/10	***White Sights*** 7 nature images out of 25 Waterfall Snowdrop festival Stars Beaches x 2 Coast Hills ***White Experience*** 4 nature images out of 6 Wildlife (deer, geese, seals) Outdoors (mountaineering, rock/ice climb, ski pistes, sledging. surfing, ice skating, snowballs) Explore Ecofriendly ***White Excites*** 2 nature images out of 2 Skier White cottage in landscape	33 second television commercial with 27 seconds showing natural imagery
Capture an Autumn Moment Historically this campaign for the last 13 years has been Autumn Gold.	2009 £1.4M	Described as "*A postal mailing landing on doorsteps mid September featuring stunning Autumnal prints of Scotland, plus lots of information about things to see and do.*"	
Autumn Gold Archive	1995 – 2007	Autumn Colours	
Perfect Day	2009 March August	Adventure Perfect Walking By the Sea Wildlife Perfect mountain biking	Journey from London via Glasgow to Outer Hebrides – Cinema Advert

Scotland's NNR Magical Places Amazing wildlife	2009 2010	Described as *"The first joint activity with SNH will be in January as part of the Winter White campaign to raise awareness of how beautiful, special and importantly how accessible National Nature Reserves (NNRs) are in Scotland. There is a common misunderstanding that NNRs are managed only for the benefit of wildlife and this can sometimes cause uncertainty about their accessibility for visitors."*
Highland Spring Archive	2007	While in previous years adverts have promoted Scotland's stunning scenery, the key message for this campaign was to 'Do more with Scotland's natural assets', the idea that Scotland is about much more than beautiful views. Come July, London underground commuters saw adverts showcasing just some of the unique experiences Scotland has on offer, from a boat trip to a visit to Castle Stalker, to playing on the beaches of East Lothian.
The Spring Collection Archive 2007	2007	The Spring campaign for 2007 expanded on the Winter White campaign. It collates tangible things to 'see and do' around Scotland during spring and early summer. The creative hook focuses on four key colours: pink, yellow, green and blue and includes wildlife and activities.
TV and Cinema Campaigns	2002 - 2010	The successful Senses adverts have been running since 2002. There are three executions: Spring, Autumn and Winter. As a natural progression from the Senses adverts, City Freedom and City Active adverts were filmed which demonstrate the accessibility of the great outdoors on a Scottish city break. The City Freedom advert was based in Inverness and features a couple visiting Loch Ness and Urquhart Castle, spotting dolphins on a wildlife watching trip and enjoying seafood in a restaurant. It has a romantic and laid back feel. The City Active advertisement features a group of friends based in Edinburgh enjoying Gullane beach in East Lothian, white water rafting on the Tay and mountain biking at Glentress in the Scottish Borders. In addition to these advertisements, there is an Adventure advertisement which shows various outdoor activities such as ice climbing, mountain biking, kite surfing and white water rafting, demonstrating that as well as being tranquil and serene, Scotland can be a bit wild.
Sailing	Current website	Images of beaches and seascapes
Horse Riding	Current website	Images of trekking in hills
Adventure Sports	Current website	Image of off piste skiing in mountain setting
Fishing	Current website	Images of fishing on wild rivers with mountain backdrop

Cycling	Current website	Images of cycling in hills, islands and forests	
Wildlife	Current website	Images of eagle, pine marten and puffin	
Accessible adventure	The aim of this campaign has been to generate additional reasons to visit and change visitor perceptions of Scotland by 'surprising' them about opportunities they may not have known Scotland could offer, including wildlife watching.		

International Campaigns

Welcome to our life Pan European	Feb to June 2010	Celtic January Romantic February Monster March Adventurous April Whisky May Delicious June Island-Hopping July Festival Fever August Majestic September Golden October Cosy November Festive December	The seasonal calendar web site has been updated for this campaign, providing a colourful and inspiring guide to what's growing, what's ripe, what's nesting, what's blooming in the Scottish countryside, in addition to what events and festivals are happening
Touring+ Campaign 2010 Long Haul Markets USA, Canada, Australia and New Zealand	1 Feb - 30 April 2010	The 2010 marketing programme was to build on the core themes developed during Homecoming Scotland 2009: Whisky, Golf, Burns, Ancestry and Scotland's varied and rich Culture. Focus on 'ancestral' and 'heart Scots' themes, with natural heritage implicit.	
Archive Campaigns US Spring Car Touring	Jan – April 2008	Rural and city focus with rich information provision, promoting specific touring opportunities right across the country, in particular via VisitScotland's new, content-rich website www.cometoscotland.com and downloadable touring maps.	

Events

Homecoming 2009	2009 marked the 250th anniversary of the birth of Scotland's national poet and international cultural icon, Robert Burns. 2009 was a celebration of not only Robert Burns but some of Scotland's great contributions to the world: Burns, Golf, Whisky, Great Minds and Innovation, as well as Scotland's rich culture and heritage which lives on at home and through the many people of Scots descent who live outwith our shores. The core theme was Homecoming and was guided by its pillars; Golf, Whisky, Ancestry, Burns, and Great Minds and Innovation.

Area print brochures

14 tourism regions	These brochures change annually. With the exception of brochures covering Edinburgh and Glasgow, the other 12 normally carry a nature based image sometimes linked to an activity or heritage site.

13 PAN-SCOTLAND ANALYSIS

13.1 Reasons for visiting Scotland

No single report provides the current value of economic output/activity generated by nature based tourism activities or quantifies the level of jobs in the nature based tourism industry. The nearest we found was the ERM report (2004) which gave a figure of 69,011 FTES and £1.616 billion GVA equivalent associated with activities based on the quality of the natural heritage. This estimate was based on the finding from the 1999 Tourism Attitudes Survey (System 3, 2000) that 49% of decisions to holiday in Scotland were influenced by the natural heritage. When asked to name the main attraction which influenced the decision to holiday in Scotland the responses included:

Table 47 - Influences on decisions to holiday in Scotland

Motivating factor	Percentage of responses
Landscape / countryside / rugged scenery	30%
Mountains / hills	10%
Lochs and rivers	4%
Nature and wildlife	3%
Coast and seaside	2%
Total	**49%**

Although these specific aspects of the Scottish countryside and scenery were mentioned in the survey responses, they do not necessarily give a full picture of the influence of the natural environment. For example, a number of other responses either do or could relate to the natural heritage. These include:

- Been before/wanted to return/born here 15%
- Wanted to see certain area 13%
- Just wanted to see Scotland 9%
- Hiking/walking 6%
- Peace and quiet/relaxed 5%
- Sporting activity e.g golf, cycling, sailing 4%
- Not busy/isolated space 2%
- Recommended by friends 2%

We have used three different approaches below to review these figures against baseline figures for the overall volume and value of tourism in Scotland.

The VisitScotland factsheet (2009) uses the United Kingdom Tourism Survey and the International Passenger Survey to measure the volume and value of tourism trips taken to Scotland in 2008. These surveys cover trips away from home lasting one night or more, and thus exclude day trips. Tourism is measured in terms of volume (trips taken, nights away), value (expenditure on trips), employment (excluding the self employed) and contribution to the economy (GVA). This information can be supplemented by the more detailed analysis from the UKTS (2009).

Another broad approach we applied was to subtract city based tourism in Edinburgh and Glasgow from the overall value of Scottish tourism in 2008 to give some indication of the volume and value of rural tourism.

Finally we used an approach based on the Visitor Experience survey (Harris, 2008). This survey has some similarities with the tourism attitude survey mentioned above (System 3, 2000) and gathered general views and opinions from a cross section of visitors to Scotland, providing a snapshot of the tourist experience. A total of 1,257 visitors were recruited whilst on holiday in Scotland and a comprehensive telephone interview was then conducted with 650 of them on their return home. The survey focused on visitors from England and Wales; Scotland; USA; Spain; Netherlands; and Sweden.

13.2 Total volume and value of tourism

VisitScotland (2009) gives the following figures for holiday visits to Scotland in 2008 (i.e. excluding business trips, visits to friends and family that are not holidays and visits for other purposes such as study). Figures for employment and GVA relate to all tourism, so the proportions that relate to holiday visits is used.

Table 48 - Impacts of holiday tourism in Scotland

Total spend by UK holiday visitors	£1,986,000,000
Total spend by overseas visitors	£640,000,000
Total holiday visitor spend	£2,626,000,000
Total tourism related employment (64.6% of total)•	140,957
Total GVA (64.6% of total)	£2,609,840,000

Applying ERM's 49% proportion for natural heritage-related visits to the reported 2008 GVA would give an updated estimate of £1.287 million for tourism spend, 69,069 tourism related jobs and £1.322 billion GVA equivalent. However, as the 49% does not include some activities which would be regarded as nature related, this would be a conservative estimate.

13.3 Tourism outside Edinburgh and Glasgow

The rationale for taking the value of tourism outside Edinburgh and Glasgow as approximating the value of rural tourism is that, while there is some crossover with people visiting the countryside while on holiday in the city or having more than one base for their holiday, Edinburgh and Glasgow are the main city break destinations in Scotland. Such crossover might be balanced by visitors on a city or urban break to other parts of Scotland.

The total number of holiday trips to Scotland in 2008 was 9.45 million (VisitScotland, 2009). Edinburgh had 1.44 million holiday visitors from the UK (UKTS, 2009) and 709,000 from overseas (IPS, 2009). Glasgow had 930,000 holiday visitors from the UK (UKTS, 2009) and 296,000 from overseas (IPS, 2009). Subtracting these gives 6.075 million holiday visitors to Scotland outside Edinburgh and Glasgow, 64.3% of the overall total.

Figures for UK holiday spend in Edinburgh and Glasgow are available from UKTS (2009) - £375 million and £230 million respectively. For spend by overseas holiday visitors it has been necessary to take the appropriate percentage of overall overseas visitor spend in each city.

• As noted earlier in our report, this tourism-related employment figure applies to specified sectors of the economy and is not an FTE estimate from visitor spend, which would be much lower.

Table 49 - Value of tourism outside Edinburgh and Glasgow

	£ Millions
Total visitor holiday spend in Scotland	2,626
Less Edinburgh UK holiday spend	375
Less Edinburgh overseas holiday spend	225
Less Glasgow UK holiday spend	230
Less Glasgow overseas holiday spend	98
Total holiday spend in Scotland outside Edinburgh and Glasgow	**1,699**

Since some visitors, especially those from overseas with a higher per capita spend on a city break, will take trips into the surrounding countryside and experience natural heritage, these figures should be treated with caution. Should these trips be day visits, most of their economic contribution will, most likely, remain within the city. This relatively simple analysis appears to be in line with the ERM estimate established in 2004.

13.4 Value of nature based tourism from the Visitor Experience survey

Various results from the Visitor Experience survey (Harris Interactive, 2008) can be applied to figures on all tourism in Scotland to derive the overall impacts of nature based tourism:

Table 50 - Overall impacts of nature based tourism

	Important or very important %	Visitor spend £m	Tourism related employment '000	GVA £m
Scenery as a motivator	90	2,363.4	196.4	3,636.0
Explored Scottish scenery as activity - UK	73	1449.8		
Explored Scottish scenery as activity - international	82	531.2		
Explored Scottish scenery as activity - combined	75	1,981.0	163.7	3,030

The figures based on the visitors who identified Scotland's scenery as a motivator for their visit produce a higher set of impacts than figures based on visitors who actually explored Scotland's scenery. This is not surprising - even those who only visit a city might well come because of the general inspiration from their knowledge of Scotland's scenery (which they will pass through en-route unless flying).

A similar process can be applied to derive figures relating to nature based activities:

Table 51 - Impacts of nature based activities

	Important or very important %	Visitor spend £m	Tourism related employment '000	GVA £m
Outdoor activities as a motivator	58	1,523.1	126.6	2,343.2

Taking all these figures together would suggest the following (with the caveat above on tourism-related employment):

	Visitor spend £m	Tourism related employment '000	GVA £m
Total impacts of tourism inspired by nature	2,363.4	196.4	3,636.0
Impacts of tourism based on nature	1,981.0	163.7	3,030.0
Impacts of nature based activity tourism	1,523.1	126.6	2,343.2
Impacts of passive nature based tourism	457.9	37.1	1,686.8

The figures derived from the Visitor Experience Survey are very high in comparison with those suggested in the ERM report (2004), and are based on a relatively small sample of visitors. On the other hand, Harris Interactive points out that the scenery and the number of things to see and do are factors that have consistently been the most important reasons for choosing Scotland as a holiday destination over a number of years. The scenery and the landscapes, the wildlife they support, and the activities they enable and encourage are deeply embedded in the image of Scotland which attracts visitors to the country and perhaps we should not be surprised if they generate a high proportion of current tourism impacts.

13.5 Best estimates of the contribution of nature based tourism to tourism in Scotland

Estimating the aggregate value of the different activities based on the natural environment involved amalgamating elements from the surveys and reports reviewed in previous sections of this report. This was not straightforward, however, as the reports used differing methodologies and assumptions, and figures needed to be reworked to achieve consistent results – using consistent multipliers where appropriate, consistent ratios between visitor expenditure and employment, etc. Double counting was minimised through our choice of weighted averages in calculating activity totals and, additionally, by balancing additions and losses between nature based activities as many people indulge in several different activities during their holiday trip.

Displacement of spending by tourists from Scotland also needs to be allowed for as some, but not all, of their overnight stay and day spending would otherwise have been spent in Scotland had they not made the trips.

The indicative analysis in Table 51 below gives our best estimates, on the basis of the reports we have appraised, of the proportions of spending by tourist visitors to Scotland that can be attributed to the different aspects of the country's natural heritage. There is less confidence in the estimates for some of these individual activities than for nature based tourism as a whole.

The total of which this contribution is a part is (broadly) all tourism spending in Scotland in 2008 – as measured by the United Kingdom Tourism Survey (UKTS) and the International Passenger Survey (IPS) – less (a) business tourism and non-holiday visits to friends and relatives, and (b) visits to Glasgow and Edinburgh.

As noted above, visits to Glasgow and Edinburgh will include day trips into the countryside, but it is assumed (broadly) that these will be balanced by time spent in cities and towns elsewhere in Scotland by other holiday visitors to Scotland. It should also be appreciated that there are opportunities within Glasgow and Edinburgh to enjoy Scotland's natural heritage and that the journeys to these visitor destinations through Scotland's countryside will be part of their appeal for some visitors.

A proportion of visits to Glasgow and Edinburgh will be on business or non-holiday visits to friends and relatives, and using a base of holiday visitors avoids double counting excluded categories (a).

95% of the expenditure by visitors in Scotland primarily for a particular nature-related purpose is assigned in the table to the natural heritage, whilst a smaller proportion of the spending of those who will also have had other motivations is attributed to their interest. 95% rather than 100% of a keen birdwatcher's spending, for example, might be allocated to the natural heritage because there might be another reason (or reasons) for their visit in a particular year that is not natural heritage related. Also, when people are asked in surveys about their motivations for a visit, the results tend to be applied to the whole of their visiting party. A member of a couple not as exclusively keen as the other on birdwatching might be attracted to Scotland partly for other reasons, while a family will need to consider the appeal of the area of Scotland they intend to visit to their children.

In the table, attributions to the different nature-based activities are either 95%, 40% or 20%. These are weighted averages within the following ranges: 95% = 90 - 100%; 40% = 30 - 89%; 20% = 1 - 29%. Where 40% of a walker's expenditure is allocated to countryside walking as a purpose for visiting Scotland, it is likely that the other 60% of their motivation will include a proportion (possibly a high proportion) relating to other aspects of the natural heritage – scenery, the wildlife, etc. This extra percentage is not allocated to the walker's expenditure in the table, however, as this would double-count impacts given in the table for other natural heritage aspects. In summary:

- 95% range – the trip is motivated by the opportunity to undertake a mainly single activity, primarily based on the natural heritage, for a dominant portion of the time spent in Scotland
- 40% range – the trip is motivated by a range of factors, including natural heritage and mainly involves less than half of the trip engaging with nature based activities
- 20% range – the trip is motivated by a range of factors and engagement, and the natural heritage component may be merely scenic or opportunities such as a short walk on the beach

Expenditure figures by category of nature-based activity are drawn either from reports or are apportioned through our judgement as percentages of total holiday tourist spending. Figures are updated to 2008 prices, as appropriate, through the Consumer Price Index (CPI), as follows:

1991	0.708	(STMS Base Year)
2000	0.858	
2001	0.868	
2002	0.879	
2003	0.891	
2004	0.903	
2005	0.922	
2006	0.943	
2007	0.965	
2008	-	
2009	1.021	

Visitor expenditure in Scotland (at 2008 prices) is converted into FTEs (inclusive of the multiplier) through using a ratio of £35,000 spending : 1 FTE. This is considered an appropriate average taking into account the main sectors of spend by visitors (accommodation, catering, visitor attractions, activity providers, etc). Although multipliers for visitor spending will differ in practice depending on main activities, region within Scotland, type of accommodation used, etc, we found no evidence in the reports that we assessed for making systematic adjustments to this broad ratio for particular types of visitor. Transport costs to their holiday destination is not included as visitor spending (a normal convention in tourism impact analysis). Such expenditure generates relatively small employment impact per £.

The first set of estimates in the table relate to "economic contribution" and include all attributable holiday tourist spending in Scotland. The second set relates to "economic impact", and attribute only 50% of the spending of Scottish residents on holiday in Scotland as net impact – i.e. it is assumed (broadly) that the other 50% would otherwise have been spent during the year on other purchases within Scotland (i.e. it will have been displaced).

The assumption that 50% of spending by Scottish residents would be non-displaced relates (i) to the alternative holidays that some would have made outwith Scotland had they not holidayed in Scotland (i.e. had Scotland not had the natural heritage and other aspects of interest to these people), and (ii) to the relatively high impact within Scotland that a typical tourist's expenditure in rural Scotland generates – compared, for example, with spending in major stores in cities. Displacement will be higher for those for whom nature is only part of their reason for visiting Scotland; and the 50% displacement adjustment is an average of the different types of visitor.

Point (ii) has been illustrated in much empirical analysis – i.e. the value added in Scotland from a walker staying in a guest house in Skye per £ spent is relatively high. The argument is that those visitors who are non-displaced will on average generate less value added per £ spent.

In excluding all business tourism, the analysis undervalues the importance of the natural heritage to Scotland's tourism in as far as a proportion of business trips either relate directly to the country's natural heritage or to its tourism industry (Scotland's principal industry), which in turn is highly dependent – as illustrated in this report – on its natural heritage.

Excluding business tourism and non-holiday VFR, and adjusting the "economic contribution" figures for visits from within Scotland, are not possible with precision as the UKTS and IPS data available to us (via VisitScotland) and the information from the impact studies that we have assessed in this report do not provide sufficient evidence.

Similarly, it is not possible to split all information provided in impact reports on particular activities into overnight stay expenditures and day trip expenditures without a degree of estimation. Our estimated disaggregations were, however, informed in many cases by information in other reports or by UKTS / IPS figures.

The proportions of visitor expenditure (and hence FTEs) in Scotland that we have assigned to the natural heritage are applied to 2008 totals, but are not as precise as to apply solely to that year. Tourism in Scotland in 2008 was relatively low compared both with the previous year (2007) and to 2009 (through "staycations" due to the recession and the depreciation of sterling). Thus, the same proportions could be applied to 2007, 2009 or 2010 totals.

Relatively high spending in 2008 by overseas visitors to Scotland (an average of £64 per day) and by non-Scottish UK visitors (an average of c£75 per day) compares with average spending by Scottish tourists in Scotland of £48 (rounded to £50 to allow for lower average VFR spend) per day.

Evidence from the UKTS and reports on nature-based holiday visits that include visitor surveys suggest that the average nature-based holiday visitor from overseas or the rest of the UK will spend less per night than these overall averages, which will mainly be due to staying in rural Scotland where overnight stays tend to be less expensive than in cities and large towns, and where there are fewer retail spending opportunities, less evening entertainment, etc. Thus we have assumed that the average nature-based holiday visitor in Scotland (including Scottish residents) spends an average of £55 per day.

As an example, committed overnight stay walkers tend to spend less per day than the average visitor – while walking, their expenditure will be minimal; they often camp or stay in budget accommodation close to a walking route; they might be in a remote part of Scotland without spending opportunities; they might be members of an organised group that shares costs; and they are often cost-conscious (e.g. being students, retired, or wishing to eke out their holiday spending over the year). These visitors, however, tend to take relatively long trips for walking – especially people from England visiting the north of Scotland – and this will tend to bring their average spend per trip (as distinct from per day) up to the average for non Scottish visitors to Scotland.

For overseas and rest of the UK visitors on holidays in Scotland combined, an average spend per 24 hours of £70 is assumed, while for rural holidays, an average 24 hours spend of £60 is assumed. Where cells in the table are based on a percentage of all holiday visitors to Scotland, the base will include holiday visitors to Glasgow and Edinburgh.

Scenery as a motivation is a residual feature of Scotland's natural heritage in the analysis to the extent that visitors whose prime motivation in taking a holiday in Scotland might have been wildlife, walking, etc will often tend to have been drawn to Scotland (rather than another destination) because of its outstanding scenery. Thus, the overall value of scenery in Scotland's tourism appeal is under-represented in the table.

The control totals for holiday tourism expenditures in Scotland in 2008 are as follows (see 13.2 and 13.3 above):

	£million	Visitor Nights (millions)
Total Holiday Visitor Spend	2,626	40.40
comprising		
Total Spend by UK Visitors	1,986	30.55
Total Spend by Overseas Visitors	640	9.85
Total Holiday Visitor Spend excluding Edinburgh and Glasgow Visitors	1,699	28.32
comprising		
Total Spend by UK Visitors	1,381	23.02
Total Spend by Overseas Visitors	317	5.28

The visitor nights above were calculated by assuming an average of £65 expenditure per visitor night. The average spend of all international visitors was £63.90 per night (including business and VFR visitors) and £63.60 per night for all UK visitors.

Other assumptions:

Assumptions for spend by activity/interest not already identified above can be summarised as follows.

The trip or expenditure totals to which the percentage attributions were applied are taken from the survey figures in the different Sections of this report, except the following, which were estimated based on our wider knowledge of tourism in Scotland as well as the material in the reports assessed for this study:
i). Snow sports
ii). Horse riding
iii). Adventure activities (40% and 20% attributions)
iv). Other specialist interests
v). Scenery

The adjustments from gross (contribution) to net (impact) in Table 52 are for visitor spending and relate to 50% of the Scottish visitor proportions of spend given in the assumptions.

Most sea anglers are people living in Scotland on day trips, the exception being Dumfries and Galloway which attracts day visitors from the north of England. Sea angling tourism participation is difficult to establish as accurate figures distinguishing between freshwater and sea angling are not collected. Some anglers may do both and double counting with freshwater fishing participation needs to be avoided. The overall findings of the sea angling report seem to suggest that, relative to day trips, levels of sea angling tourism are low, particularly where sea angling is a prime trip motivation, with more participating in a casual way as part of a wider trip.

For overseas cycling visitors, 3% was used as this figure was supplied by VisitScotland as the percentage of visitors who claim to cycle as part of their trip to Scotland. A small proportion of these will have cycling as the main motivation for their trip.

Table 52 – Estimated Impacts by activity / interest[1]

Activity/Interest	Assumed Spend Related to Aspects of the Natural Heritage (£ million)			Contribution		Impact	
	Prime Purpose (95%)	**Important Purpose (ave 40%)**	**One of Several Purposes (ave 20%)**	**Economic Contribution (£m)**	**Employment Contribution (FTEs)**	**Economic Impact (£m)**	**Employment Impact (FTEs)**
Wildlife Watching	67.9	54.1	16.0	138.0	3,943	117.3	3,351
Field Sports	138.3	-	9.0	147.3	4,209	136.3	3,893
Walking/Mountaineering	270.8	132.0	224.4	627.2	17,920	533.1	15,231
Snow Sports	1.9	0.3	0.1	2.3	66	2.1	60
Cycling	48.5	23.8	11.9	84.2	2,406	71.6	2,045
Water Sports	7.6	24.0	0.4	32.0	914	25.6	731
Horse Riding	0.6	0.5	0.9	2.0	57	1.7	49
Adventure Activities (where not included elsewhere)	54.7	2.3	2.3	59.3	1,694	50.4	1,440
Conservation Work	8.6	-	-	8.6	246	7.7	220
Other Specialist Interests (e.g. geology, botany)	1.4	1.1	0.3	2.8	80	2.4	69
Scenery	237.5	140.0	102.0	479.5	13,700	419.6	11,989
Totals	**837.8**	**378.1**	**367.3**	**1,583.2**	**45,235**	**1,367.8**	**39,078**

[1] The figures in Table 52 are indicative and further analysis (particularly supply-side) would improve their accuracy. The 95%, 40%, 20% framework is innovative and thought to be useful for analysing nature-based tourism.

Overall Impacts:

Table 52 gives the following overall impact estimates from nature-based tourism in Scotland (rounded):

Total Visitor Spend attributable to nature-based tourism: £1.6 billion
Associated FTEs: 45,000
Associated Income from Employment: £0.9 billion

Total Visitor Spend attributable to nature-based tourism net of displacement: £1.4 billion
Associated FTEs: 39,000
Associated Income from Employment: £0.8 billion

14 RECOMMENDATIONS FOR FURTHER RESEARCH AND ANALYSIS

14.1 Improve data collection and analysis

Existing tourism surveys and data collection methods do not provide a measure of the proportion of visitors who come to Scotland motivated principally by its nature – although there are many reports and surveys (as this report shows) that highlight the importance of the natural heritage to Scottish tourism. This study has utilised existing data to their full extent. New data is required for more accurate assessments. VisitScotland is planning a major national visitor survey in 2010, subject to agreement on European funding.

Furthermore as this study shows, many nature based tourism activities, such as watersports, require technical equipment and training, but an appropriate proportion of this related expenditure is not normally attributed to the natural heritage. For example, the Outdoor Industries Association (OIA) canvassed the opinions of around 3,500 outdoor consumers across the UK. Their research revealed that despite the economic downturn, 54% of core consumers do not intend to reduce their spending on outdoor products and only 13% will cut back (33% are undecided) (OIA ,2009).

Recommendation 1:

There is a need to improve data that would enable more exact analysis of:

- the importance of the natural heritage (and different aspects of this) in encouraging visitors to holiday in Scotland;
- the wider economic contribution to Scotland's economy of nature based tourism potentially including benefits from improved health and wellbeing, as well as expenditures on special vehicles, boats, technical equipment, outdoor clothing, books, tuition in outdoor pursuits, etc.

14.2 Establish norms and consistent methodologies

There is great inconsistency in how economic impacts were addressed in the different studies that we assessed for this report. Some norms, ratios and assumptions appear broadly correct, but others are clearly wrong. In some cases, this will have been due to the inexperience of researchers, failure to apply reality checks to findings, and/or non-economists attempting economic analysis.

Recommendation 2:

There is a need to establish:

- common research methodologies, especially amongst public agencies;
- norms for economic impact ratios – including ratios for visitor expenditure to employment generated, GVA to employment generated, differing ratios for Scotland and regions within Scotland, etc.

14.3 Improve the estimation of net employment impact

Having used appropriate ratios to convert visitor expenditure into FTEs, it is important to allow for the additionality of an activity and the displacement that might arise within the geographical area of impact being considered. Guidance to researchers is required in this – partly to avoid pressure from clients to exaggerate net impacts.

As discussed in this report, displacement of expenditure by people normally resident in an area who take part in an activity is not simply 100%. Often, it will be closer to 50% than to 100%. Activities e.g. skiing and supplementary purchases during their trip will displace discretionary spending from their annual income rather than spending on "essentials." Much of this discretionary income would otherwise be spent on holidays or day trips outwith the area/Scotland, internet purchases, etc or be saved for future purchases. Supermarket shopping locally, etc creates far less local value added (or value added in Scotland) than relatively labour-intensive activity provision. As noted on Page 7, displacement is normally higher for day trippers than overnight stay Scottish residents in Scotland (e.g. a nature watching day trip might displace a day trip to a castle). Nevertheless, all day trip expenditure by Scottish residents in Scotland for nature-related activities over a year will be less than 100% displaced for the reasons given above.

Data on employment in sectors and sub-sectors that most closely equate to tourism should not be used to measure tourism-related employment in preference to visitor expenditure : FTE employment ratios.

Recommendation 3:

There is a need to improve the quality of estimates of the employment and associated income from tourism and sub-sectors of tourism (including nature-based tourism) – both for Scotland as a whole and for areas within Scotland.

14.4 Establish impacts for particular types of locations

Our research suggests that places most associated with nature based tourist activities include forests, the coast, lochs and rivers, mountains and other spectacular scenery. Often these places are designated as National Park, National Scenic Area, regional park or similarly protected area at a local or regional level.

In order to maintain and enhance the value of these designated places for tourism it is important to understand their economic contribution. Many of these areas qualify for agricultural and land use support, with incentives and payments linked to maintaining rural 'public goods' such as scenery, biodiversity and wildness in good condition.

Such areas were identified in the System Three Tourism Attitudes Survey 1999, where 49% of visitors mentioned specific aspects of the natural heritage as the main attractions influencing their decision to visit Scotland.

Table 53 - Main locations influencing visitors' decision to visit Scotland

Natural Heritage locations	Main attraction
Landscape/countryside/rugged scenery	30%
Mountains/hills	10%
Lochs and rivers	4%
Nature and wildlife	3%
Coast and seaside	2%
Total	49%

Recommendation 4:

It would be desirable to assess nature based tourism values for different types of location. It would be too challenging to attempt this at habitat level, but estimating values for National Parks, NSAs, etc would assist in management planning.

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2009 Still to report	Dolphins – Moray Firth	Aberdeen University for Moray Firth Partnership

Appendix A: Categories of Natural Heritage Activity

1. Fieldsports Activities

Table A1

Fieldsports sub activities	Activity type	Location	Participation requirements
Sea Angling	Solitary Small group	Coastline, Piers, Boats	Technical equipment Limited skill
Freshwater Angling	Solitary Small group	Rivers, lochs and canals	Technical equipment Limited skill Permits
Sport Shooting	Solitary Small group Larger group (grouse, pheasant)	Countryside, moorland	Technical equipment Firearm certification Ammunition Shooting skills Permissions Support services
Wildfowling	Solitary Small group	Coastline	Technical equipment Firearm certification Permits Shooting skills
Deer Stalking	Solitary	Hills (Red) Forests (Roe)	Technical equipment Firearm certification Shooting skills Support services
Falconry	Solitary Small group	Countryside	Technical equipment High skills and commitment

Fieldsports Motivations

None of the studies reviewed explored the question: why do people participate in fieldsports? The implied answer is that they enjoy the recreation and sport afforded by shooting and fishing. For tourist visitors the quality of the environment in which they fish or shoot will be an important factor in their overall enjoyment of the fieldsports experience.

2. Wildlife Watching Activities

Table A2

Wildlife watching sub activities	Activity type	Location	Participation requirements
Bird watching	Solitary Small group	Countryside and coastline	Minimal equipment and skill
Cetacean watching	Solitary Small group	Shore watching at key sites Boat based	Minimal equipment and skill Cost of boat trip
Mammal	Solitary	Mainly based on	Minimal equipment and

watching	Small group	badgers, squirrels, martens, otters and deer	skill Hides provide best opportunities
Field studies	Small group Guided course	A number of field study centres	Cost of participating in a course
Geo tourism	Solitary Small group	Countryside and coast	Minimal equipment and skill but benefits from knowledgeable interpretation

Wildlife Watching Segments

1. Dedicated – experienced and knowledgeable – organise themselves
2. Passing interest – relatively inexperienced
3. Casual interest – some experience but value guidance/direction/interpretation
4. Charismatic place or species interest

3. Walking, mountain sports and snow sports activities

Table A3

Fieldsports sub activities	Activity type	Location	Participation requirements
Walking	Solitary Small group Large group	Any where	No equipment Minimal skills
Snow sports includes (snowboarding, downhill, cross country and telemarkskiing, blading).	Large groups focused on ski centres	Five Scottish ski centres Cross country and ski mountaineering on hills and tracks in deeper countryside	Technical equipment Uplift equipment and support services Medium skill
Mountaineering	Solitary Small group	Hills – mainly west and north	Technical equipment High skill Fitness
Climbing and bouldering	Solitary Small group	Hills but often close to cities in quarries	Technical equipment High skill
Long Distance Way Walking	Solitary Small group	Designated LDRs Other coastal paths and ways	Technical equipment Minimal skills Fitness

Walking segments

Progressive (2005) in their report The walker's view of walking in Scotland commissioned by SNH, SE, HIE and FCS provides the following information – Four groups make up walking tourists in Scotland

- The committed explorer – 23%
- The part time explorer – 18%
- The committed wanderer – 7%
- The part time wanderer – 33%

- (Mixed – 19%)

The types of walks that people undertook or planned were

- Hill and mountain 56%
- Forest and woodland 54%
- Loch and riverside 35%
- Countryside 24%
- Urban 11%
- Other 1%

Walking motivations

Respondents in the Progressive (2005) report described the scenery as "stunning" and "unbelievably beautiful", while the abundance of wildlife was also mentioned. It was felt that Scotland offers walking areas which are at the same time accessible, and wild and remote. Access to the countryside and ease of getting to the start of walks were both assessed as excellent. Walkers also valued the natural and wild nature of walks, especially the lack of built up areas or structures, adding a sense of adventure to walking in Scotland.

Snow sports motivations

Online research in 2006 with 2,137 consumers from the Ski Scotland Snow Alert database showed that unsurprisingly the availability of snow is the main motivator for skiers/snowboarders in their decision to take a trip in Scotland.

4. Adventure activities

Table A4

Adventure sub activities	Activity type	Location	Participation requirements
Corporate activities	Small groups	Any where	Equipment Minimal skill
Gorge walking	Small groups	Gorges and steep river channels	Technical Equipment Medium skill
Paragliding	Solitary	Hillsides and moorland	High technical equipment High skill level
Abseiling	Small groups	Cliffs	Technical equipment Medium skill level
Conservation work	Small groups	Mainly woodland	Basic equipment Medium skill level
Bush craft	Small groups	Woodland	Basic equipment Medium skill level

Adventure Sports segments

The 2003/2004 George Street Research and Jones Economics report noted that a significant proportion of adventure tourists surveyed undertook a number of different types of adventure tourism activity within the HIE area. This reveals a high level of overlap with participation in a number of different adventure tourism activities.

6. **Corporate Market -** corporate activity days are organised to build a more effective team dynamic through team building exercises and training in various outdoor sports ranging from abseiling to white-water rafting.
7. **Gorge Walking -** ascending or descending a mountain stream with scrambling and some swimming - often used for trust building and group co-operation.
8. **Rafting** - involves controlling a raft, steering the best course down rivers, often running whitewater rapids.
9. **Paragliding** - a paraglider is a non-motorised, foot-launched inflatable wing which is easy to launch from the ground.
10. **Abseiling** - is a basic climbing technique to allow safe descent of steep rock sections.

Adventure Sports motivations

Online research in 2006 with 855 respondents from the VisitScotland Adventure Sports database, and contacts sourced from competitions (Mountain Bike World Cup / Adventure Online Games) showed the following motivations.

- It's fun (79%)
- I enjoy the scenery while doing it (77%)
- It improves my fitness (73%)
- I enjoy the challenge (72%)
- It's a good social activity to enjoy with groups & friends (63%)

5. Cycling activities

Table A5

Cycling sub activities	Activity type	Location	Participation requirements
Road cycling	Solitary Small group. There's a big road race in Perthshire once a year – http://www.etapecaledonia.co.uk	Country roads and purpose built bike tracks e.g. the sustrans routes are long distance bike routes – a lot of people cycle up the A9 on the specific off road path	Medium levels of equipment and skills
Cross Country Mountain biking	Solitary Small group Large events	Forests and hill track	Medium levels of equipment and skills Own or hire equipment
Downhill mountain biking	Solitary Small group Large events	Dedicated courses in forest sites and Nevis Range.	Very technical equipment High skill Fitness

Visit Scotland in 2008 reports 3% of UK visitors participating in cycling.

Cycling Segments

Scott Porter's 2005 report Cycling and mountain biking in Scotland for VisitScotland identified two categories of cyclist.

- the leisure cyclists (cycling is just one activity while on holiday) – 7 segments including
    - 'Fairweather Breakers' (19% of the market)
    - 'Outdoor Aspirers' (11% of the market)
    - 'Recreationalists' (34% of the market)
- the specialist cyclists (their whole holiday revolves around cycling) – 4 segment including
    - 'Fanatics' (41% of the market),
    - 'Upgraders' (27%),

Cycling Motivations

In terms of overall requirements, key commonalities were observed across all the segments. Level 1 priorities focus on the environment/scenery of the destination, the accommodation and the routes/trails available. Level 2 priorities incorporate the provision of other activities such as sightseeing, indoor and (to a lesser extent for the leisure segments) outdoor activities and the manageability of the weather.

6. Equestrian sports activities

Table A6

Equestrian sub activities	Activity type	Location	Participation requirements
Horse Riding	Solitary Small group Large events	Countryside and coast settings	Some technical equipment Medium skill
Pony trekking	Small groups	Tracks through countryside settings	Minimal equipment and minimal skill
Riding to hounds	Group event	Hunt pack locations	Some technical equipment and good skills levels

Equestrian Segments

The George Street Research and Jones Economics 2003/2004 report for HIE identified the following four segments.

1. **Casual Riding Holidays –** this is about riding for beginners and may involve hour-long to half-day rides. It would normally take the form of pony trekking, *but is not central* to the holiday experience.

2. **Pony Trekking** – this type of equestrian tourism probably accounts for 90 – 95% of the equestrian market as a whole.
3. **Trail Riding –** this activity is for the experienced rider; travelling distance is increased as the ride is conducted at a very brisk pace.
   "It takes the form of circular rides returning back to the initial starting point, or distance rides where the group rides from one destination to the other staying in different accommodation."
4. **Specialist Riding** – this sector looks at holidays involving a variety of courses for adults ranging from learning to ride from scratch to perfecting the dressage technique.

Equestrian Motivations

According to a 2004 Henley centre report for DEFRA on the horse industry in Great Britain, the horse industry is fragmented and some stakeholders questioned the notion of it being an 'industry' at all. This suggests a wide range of motivations.

The report noted discord between 'modernisers' and 'traditionalists', friction over the prioritisation of needs between the 'happy hackers' and the 'elitist sports', and discontent at the 'grass roots' level with regard to the 'representativeness' of some of the national industry bodies.

7. Water sports activities

Table A7

Water sports sub activities	Activity type	Location	Participation requirements
Paddle sports	Small groups	Sea coast, rivers large lochs	Technical equipment and medium to high skill
Surfing	Small groups Events	Sea coast – key locations	Technical equipment and medium to high skill
Sail sports	Solitary Small groups	Sea coast and some inland waters	High level of technical equipment and skill
Kite sports	Solitary Small groups	Sandy beaches	High level of technical equipment and skill
Diving	Small groups	Mainly sea coast – key locations	High level of technical equipment and skill

Water Sport Segments

Landuse Consultants' 2007 review of marine and coastal recreation for SNH indicated that the majority of recreation visits to the coast were day trips (87.5%), with much smaller proportions undertaking short breaks / weekends (9.1%) and longer holidays (3.5%). These proportions are relatively consistent across the specialist recreation activities covered by the survey, though a higher proportion of some activities are undertaken on weekend or short break trips (e.g. angling or sub-aqua / snorkelling) or on longer holidays (e.g. sailing or cycling). These findings are consistent with the SRS, which found that 89% of people visiting the outdoors were on day trips compared with 11% who were staying away from home.

Water Sport Motivations

The marine and coastal recreation review highlighted the importance of the natural heritage in supporting marine and coastal recreation in Scotland. The quality of the environment was the most important factor guiding the choice of location for informal recreation and was the most frequent 'attractor' in decisions to visit the coast. For specialist recreation, activity specific factors, proximity to home and ease of access were the most important factors overall, though the quality of the environment was the next most important issue.

8. Outdoor Cultural Activities (*not covered in our analysis*)

Table A8

Outdoor cultural sub activities	Activity type	Location	Participation requirements
Outdoor culture and Heritage niche	Defined as visits to a castle, monument or church, an archaeological site, and other outdoor cultural events Solitary or in small family or social groups	Castle, monument or church, an archaeological site, and other outdoor cultural sites	Minimal equipment and skill
Arts and crafts	Solitary or in small family or social groups	Countryside locations	Equipment and medium skill
Photography	Solitary or in small family or social groups	Countryside locations	Equipment and medium skill
Food and drink		Countryside locations	Minimal equipment and skill

Outdoor events (*not comprehensively covered in our analysis*)

Table A9

Events sub activities	Activity type	Location	Participation requirements
Mtn Bike racing	Organised event	Small number of courses in rural areas	High levels of skill and equipment
Adventure racing	Organised event	Range of locations often including mountain areas and coastal sites	High levels of skill and equipment
Orienteering	Organised event	Growing range of mapped sites – mainly forest locations	Medium levels of skill and equipment
Outdoor festival, theatre or music event	Organised event	Limited to sites with appropriate facilities and infrastructures	No skills or special equipment required

Appendix B – Methodological Notes

1. *Field Sports*

95% : Sporting Shooting : £70.0m (x 0.95)
95% : Game Angling : £75.6m (x 0.95)
20% : Sea Angling : £44.9m (x 0.2)
Scottish visitors = 15% of all spend

2. *Wildlife Watching*

95% : 220,000 trips x 6.5 nights x £50 (x 0.95)
40% : 410,000 x 6 x £55 (x 0.4)
20% : 290,000 x 5 x £55 (x 0.2)
Scottish visitors = 30% of all spend

3. *Walking/Mountaineering*

The 95% Walking/Mountaineering estimate is half of the figure derived in Section 6 above because this was considered too high. This adjustment is partly to exclude urban walking.

95% : 1.9m trips x 6 x £50 x 50% (discounted) (x 0.95)
40% : 1.2m x 5 x £55 (x 0.4)
20% : 3.4m x 6 x £55 (x 0.2)
Scottish visitors = 30% of all spend

4. *Snow Sports*

40,000 overnight stays estimated
95% : 25,000 nights x £80 (x 0.95)
40% : 10,000 x £80 (x 0.4)
20% : 5,000 x £80 (x 0,2)
Scottish visitors = 20% of all spend

5. *Adventure Activities*

95% : £57.6m (x 0.95)
40% : £5.8m (x 0.4)
20% : £11.6m (x 0.2)
Scottish visitors = 30% of all spend

6. *Cycling*

95% : £51.1m (x 0.95)
40% : £59.9m (x 0.4)
20% : £59.9m (x 0.2)
Scottish cycling visitors = 30% of all spend

7. *Horse Riding*

95% = £650,000 (x 0.95)
40% = £1,250,000 (x 0.4)
20% = £4,500,000 (x 0.2)

8. *Water sports*

Scottish visitors = 30% of all spend *Water Sports*
Sailing
40% : £60.1m (x 0.4)

Other Water Sports Scottish visitors = 40% of all spend
95% : £8m (x 0.95)
20% : £2m (x 0.2)

9. *Conservation Work*

95% : £9m (x 0.95)
Scottish visitors = 20% of all spend

10. *Other Specialist Interest*

95% = £1.5m (x 0.95)
40% = £2.75m (x 0.4)
20% = £1.5m (x 0.2)
Scotland = 30% of all spend

11. *Scenery*

Total Spend (£1.1bn) = Rural Scotland Spend (£1.7billion) - Prime Purpose Spend (£0.6 billion)
95% : £250,000 (x 0.95)
40% : £350,000 (x 0.4)
20% : £510,000 (x 0.2)
Scottish visitors = 25% of all spend

12. *FTE – Full time employment*

£35,000 per FTE is an approximate up-to-date average for Scotland for the sectors of spend by nature-based visitors based on empirical evidence (company accounts, etc). This is similar to an inflation adjusted STMS-based estimate that other consultants have recently used for visitor spending in Scotland (e.g. EKOS in their evaluation of Homecoming 2009). Ratios given in this report from other consultants might be inaccurate, or not at 2008 prices, or not for Scotland as a whole.

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