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The Economic Impact of Outdoor Recreation in the UK: The Evidence

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Forewords

As the UK emerges from the aftermath of the global financial crisis, and as budgets continue to be squeezed, it is important and right that we question the value of investments in sport and recreation, as well as in schools, hospitals and roads. As a self-confessed Gore-tex clad mountain lover, the value of 'The Great Outdoors' seems at the same time paradoxically self-evident yet intangible. And I am not alone in my fondness for nature: over half the population visit the natural environment at least once a week.

This report is therefore both incredibly salient and important. It is possibly the first to establish a value of the UK outdoor economy, and collates a large and disparate literature on this topic. It makes a fascinating and convincing read. However, there is much more that can be done if we wish to establish the full extent of the value we put on the natural environment. Therefore I hope this report will be a catalyst for more research into this field; research that can borrow from some of the cutting-edge techniques of economic valuation developed in the areas of environmental and health economics, for example.

Professor Graham Cookson

*Professor of Economic and Public Policy
University of Surrey*

From the perspective of an outdoor enthusiast, higher education teacher of outdoor education, researcher and journal/book author I have read this report with great interest. I believe it to be an important and timely contribution to our understanding of the 'current state of play' with regard to the value of the UK outdoor economy. As far as I am aware this is the first time a collation of such wide ranging and disparate data has been attempted and brought together into one comprehensive report, allowing us to gain some valuable insights into this important and seemingly growing part of our economy.

It is heartening to see evidence supporting the outdoors as a key contributor in the UK to participation in sport and recreation; in the tourism and the visitor economy; as a provider of employment through training and volunteering opportunities; as a contributor to the manufacture and retail industry in the UK; and, most crucially in my opinion, as an asset to the individual health and wellbeing of participants which has financial implications for the National Health Service. This analysis should form an important milestone in a slow but perceptible surge towards a societal return to regular use of the outdoors and nature to recreate ourselves and balance out the stresses of urban living.

Tim Stott

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Glossary of key terms

Direct impact is the result of the money initially spent in a region by the individuals concerned.

Full Time Equivalent (FTE) is a unit to measure employed persons, volunteers or students in a way that makes them comparable although they contribute a different number of hours per week.

Gross Domestic Product (GDP) is the market value of all officially recognised final goods and services produced within a country in a year, or other given period of time. It is equal to all private and public consumption, government outlays, investments and exports minus the value of imports.

Gross Value Added (GVA) is a measure of the value of goods and services produced in an area, industry or sector of an economy. GVA is linked to GDP. The relationship between GVA and GDP is as follows: $GVA + \text{taxes on products} - \text{subsidies on products} = GDP$.

Indirect impact is the result of business-to-business transactions arising from direct impacts. Businesses initially benefiting from the direct impacts will subsequently increase spending at other local businesses.

Induced effects are the results of increased personal income caused by the direct and indirect impacts. Businesses experiencing increased revenue from the direct and indirect impacts will subsequently increase payroll expenditures by hiring more employees, increasing payroll hours, raising salaries. As a result households will increase spending at local businesses.

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Introduction

The Sport and Recreation Alliance

The Sport and Recreation Alliance is the umbrella body for sport and recreation. The Alliance represents over 300 governing and representative bodies, speaking up on behalf of members and providing services to ensure the sector thrives.

Members of the Sport and Recreation Alliance are grouped into divisions based on the nature of their activity. Representatives within two of these divisions – ‘Outdoor Pursuits’ and ‘Water Recreation’ – also meet regularly as part of the Alliance’s Access Working Group, which aims to promote access to the natural environment and to champion the contribution of outdoor recreation.

Within the forum of the Access Working Group members of the Sport and Recreation Alliance identified a need to collate evidence of the economic impact of outdoor recreation and communicate it more effectively. This document seeks to meet that need.

Research aims

This document is intended as a concise synthesis of existing information, research and evidence relating to the economic impact of outdoor recreation. It aims to stimulate future debate and encourage further investment in the sector and as such it is hoped that it will be a valuable asset to members of the Sport and Recreation Alliance as well as those with a professional interest in outdoor recreation.

What is outdoor recreation?

Defining the outdoors is challenging, complex and problematic in terms of outlining clear boundaries of a sphere of public life, a professional industry and realm of economic value. As such the definition and conceptualisation of outdoor recreation is always evolving.

In 2005 a report informing Natural England’s outdoor recreation strategy highlighted that a concise definition of outdoor recreation is difficult to establish as it includes many different activities. This document stated that outdoor recreation can be broadly defined as including the following categories of activities:¹

<i>Category</i>	<i>Examples</i>
Being outdoors	Watching wildlife, picnicking
Creative activities	Art, photography
Health or relaxation	Jogging, walking the dog
Utility journeys	Greenways, safe routes to school
Informal games and play	Kite flying, sledging
High adrenaline non-competitive activities	Canoeing, mountain biking
Commercially-run activities	Pigeon racing, shooting
Studying the environment	Geological surveys, field studies
Educational activities	School trips, expeditions
Conservation volunteering	Picking up litter
Sustainable journeys to the outdoors	Walking, cycling

¹ Henley Centre, (2005) p. 8

The term ‘outdoor recreation’ can therefore cover a wide range of activities and can be perceived as anything from “rock-climbing, equestrian sports or adventure racing...to more leisurely activities such as bird watching, dragon boat racing, or a walk along a marked path.”² It includes an extremely broad range of leisure pursuits including camping, hunting and fishing.³ The activity may be highly strenuous and physically demanding, or may be primarily a cerebral undertaking, a relaxation exercise or a combination of all three factors. Similarly it may represent a lifetime of interest and involvement, a single, isolated experience or it may be somewhere in between. That the wide ranging activities may be planned and pursued intentionally, or may form an incidental type of engagement whereby participation is a means to an end – such as walking or cycling to work – as opposed to using public transport, complicates the issue further.

Outdoor recreation is hard to conceptualise as the potential range of locations is considerable in scope, size and location; from somewhere close to home – such as a local park or green space – to further afield, such as walking day trips or weekends away to a variety of places, including National Parks or the seaside. The concept of outdoor recreation can therefore be all things to all people, and generally speaking the definition is dependent upon individual perceptions and wider societal and cultural understanding.⁴

For the purpose of this study it isn’t appropriate to use a traditional definition of outdoor recreation.⁵ Within our research we take outdoor recreation to mean physical activities which take place in the natural environment. Our definition of the natural environment does not include outdoor pitches, which can be considered purpose-built, and as such our definition does not incorporate sports such as football, rugby or golf. We recognise that some of the activities included within our definition can take place in purpose-built settings, for example canoeing, skiing and climbing. However we consider these as having their roots in the great outdoors and predominantly reliant on the natural environment – therefore in keeping with our definition. Activities that we have included within our definition can be categorised according to the natural environment in which they take place:

UNDERGROUND <i>eg caving and potholing</i>	IN WATER <i>eg outdoor swimming, scuba diving</i>	ON WATER <i>eg angling, canoeing, water- skiing</i>
ON LAND <i>eg walking, horse-riding, off- road cycling</i>	HIGH UP <i>eg mountain climbing, high ropes</i>	IN THE AIR <i>eg gliding, sky diving</i>

² T. Dickenson, T. Gray, (2012) p. xvii

³ D. McLean, A. Hurd, (2011)

⁴ D. McLean, A. Hurd, (2011)

⁵ The English Oxford Dictionary defines outdoor recreation as “any activity which takes place in or into the open air; outside a building or shelter; or any area outside buildings or shelter, typically that is far away from human habitation.”

Methodology

The outdoor recreation economy penetrates many aspects of life in the UK and in doing so cuts across a plethora of sectors and interest groups. As such the breadth and diversity of the subject area posed a challenge for the collation of data and evidence. In recognition of the challenges, this document has been subject to academic scrutiny and review by stakeholders.

The aim of this project was not to generate new data but instead to consider research already undertaken and available in the public domain. However most of the reports which are currently readily available and relevant to the project do not draw on official economic data. Information relating to this expansive topic is widespread in terms of location and often hidden inside wider surveys conducted for other purposes such as monitoring overall participation or understanding individuals' engagement with specific environments in a distinct geographic location.

Furthermore existing reports cover a range of different occurrences centred on the natural environment including sport, outdoor pursuits, tourism, and destination themes. Existing studies consider varying periods of time, have employed a host of methodologies and apply different standards and definitions of terms. For example some researchers only include the direct economic effects of a pursuit whereas others consider the sum of the direct, indirect and induced effects as the total economic impact or contribution. The methodologies within the reports and surveys used are not without their own limitations.

Throughout this document figures are presented which refer to the proportion of a population and the number of people to which this refers; these figures reflect assumptions made by the original research in relation to the size and demographic of the population. Similarly the figures outlined within this document are not without considerable overlap. Coastal paths, for example, often run through areas of National Park, for which data is inclusive of much more than the purely recreational activities we are concerned with. Therefore, differing methodologies aside, it would not be suitable to simply summate the figures outlined in official reports relating to the value of coastal paths and those relating to National Parks to provide one economic impact of 'the outdoors'. This is true for all of the reports and research we have considered.

Throughout the research a range of terminology has been used, including 'engagement with the natural environment', 'outdoor activity', and 'outdoor pursuits'. These terms are used interchangeably and do not have universal definitions attached. Where possible, allowance has been made for these variations to ensure as consistent an approach as possible.

In keeping with the coverage of the Sport and Recreation Alliance's members, the scope of this project includes all parts of the United Kingdom. However, inconsistencies in research approaches were exacerbated by the impact of devolution. Every effort has been made to highlight the differing approaches used in England, Scotland, Wales and Northern Ireland where necessary.

Limitations

This report is a synthesis of existing evidence, and as such gaps within this literature review reflect a lacking evidence base. For example we are aware that data on participation does not precisely reflect our definition. However, to produce this review we are reliant on other studies and are bound by their definitions.

In many of the studies described in this report analysts use gross expenditure figures to

calculate the equivalent benefit to the regional economy in terms of increases in household income and regional employment. In some cases induced effects are included (the analysts typically use a 'multiplier' factor). It is important to note the difference between income and jobs *supported* in the normal economy and the number that might be lost should an activity cease to happen. Because of this complexity it is highly recommended that readers consult the methodology used as well as the end statistics. In general it is not advisable to compare figures between studies, or sum values, unless the same methods have been used. Even then differences in the dates of studies will make interpretation hazardous.

There are also challenges associated with placing an economic value on the natural environment. Critics suggest that this approach is misguided as it overlooks the value of the natural environment for its own sake, citing its intrinsic value and contribution to our national heritage. In short they believe that the natural world should not be reduced to a column of figures. Critics also propose that this approach should be used with caution as it offsets the true reason that the natural environment is valuable and frames it as something completely different. However, given that policymakers are more likely to engage with what can be measured, there is a necessity for the environment to be integrated into the economy. In addition we understand that it can be challenging to incorporate the benefits of physical activity within outdoor recreation as this activity may not necessarily take place in the natural environment. We therefore accept that such a wide-ranging review will open further questions for future research.

We also recognise that the value of green space and the activities which take place outdoors are not the same thing, and that the combination and conflation of the two can be confusing. You could have many, if not all, of the benefits of outdoor activities, without having a very good 'outdoors'. Again, these are complex methodological and philosophical issues and ones to consider in future primary data collection studies in this field. Furthermore we recognise that time constraints and the diversity of resources has prevented us from indexing all financial values to the same year and acknowledge this limitation. That said, we still consider the synthesis and critical analysis around the review to be a valuable and benchmark piece of work for future primary economic impact assessment work in this area.

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1. Participation in outdoor recreation

The starting point for our research is to consider the number of people who actively participate in outdoor recreation across the country. Building this UK-wide picture is challenging as each nation defines outdoor recreation differently and records participation according to differing requirements and priorities. Moreover the report considers the UK as a whole but it should be noted that there are different frameworks governing access to the natural environment in England, Scotland, Wales and Northern Ireland. The issue is complicated further by the fact that more than one survey is used to record participation in outdoor recreation in each of these nations.

With this in mind we have considered participation on a nation by nation basis and included information from all the significant surveys that we are aware of. We have included additional information on participation where it is available. In each survey the veracity of the data provided and the conclusions are dependent on the accuracy of the information received. It is worth bearing in mind that there are varying margins of error within each survey and that the actual number of people participating in activities will vary from the estimates presented. Many of the key findings outlined are based on a grossing-up approach. This means that a representative sample is scaled up in line with population size.

1.1. England

In England there are two national surveys which can be used to indicate the level of participation in outdoor recreation. These are the **Active People Survey (APS)**, conducted on behalf of Sport England, and the **Monitor of Engagement with the Natural Environment (MENE)**, conducted on behalf of Natural England. Each survey is conducted differently and the methodologies are outlined below.

The Active People Survey

The **APS** is the largest survey of sport and activity ever carried out in Europe. It is commissioned by Sport England to TNS-BMRB in order to monitor who's participating in sport and active recreation, where and how. The **APS** presents a snapshot of participation. While it is an accurate reflection of overall "regular, sustained participation" it does not reveal how the behaviour of individuals varies over time. Instead the **APS** provides a measure of the average participation rate of a particular activity, not its total number of participants.

The **APS** consists of a bespoke telephone questionnaire with a sample size of at least 157,000 adults. Initially the survey used landline telephone interviews using random digit dialing with adults aged 16 and over. This was extended to those aged 14 and over in July 2012 to be more inclusive. Calls are made throughout the year and at different times across each day to increase the chance of making contact with a broader demographic. In 2005-06 1,000 interviews were conducted per local authority and in total 363,724 interviews were achieved. This decreased to a minimum of 500 interviews per district and single tier local authority from 2007-08 onwards as 500 was determined as a suitable sample size to provide statistically reliable measures. For a full copy of the **APS** questionnaire see: <http://www.sportengland.org/research/about-our-research/active-people-survey/>

The **APS** comes under scrutiny as it is suggested that the most ‘active people’ are more likely to be out of the house when landline calls are made – so it has been supposed that the **APS** may not provide a true picture of participation numbers. However up to 40 call back attempts are made at different times and on different days of the week to minimise this impact. Furthermore results are weighted to minimise the effects of a non-response bias and to ensure that they are representative of the English population. Not everyone has a landline and fewer people in the group with which policymakers are most concerned (14-25) are likely to. In light of this Sport England and TNS-BMRB have altered their methodology and are carrying out online and mobile phone data collection pilots in order to be more inclusive. Though these are not being carried out as of yet, and therefore are not incorporated in the figures below, it looks as though data through a mix of methods – ie landline and mobile phone calls – will be used in the future. For more information on the **APS** methodology see:

http://sportengland.org/media/112875/active-people-survey-6_technical-report_final.pdf

The most current figures from the seventh **APS** which relate specifically to outdoor recreation – that have been produced especially for this project – are outlined below. These figures provide the evidence for the claim that outdoor recreation may be considered England’s favourite pastime. They provide the monthly participation data defined as at least one session of any duration at any intensity over the last 28 days from October 2012-October 2013.

The seventh survey consisted of landline calls to 165,000 adults aged 14 and over. They reflect governing body and club statistics, but they do not cover all activities within our definition of outdoor recreation. Due to the methodology it is likely that the participation figures from the **APS** leave many activities underrepresented. Therefore where possible we have included individual activity participation figures in 1.5. Additional data. Similarly the average monthly participation figures do not give the whole story – for example peaks and troughs in participation throughout the year, which are likely to be substantial for some activities, are not represented in the data. It should be noted that the **APS** data do not allow identification of the place visited while the activity was being undertaken. Nonetheless the **APS** data provide a useful starting point for estimating participation in outdoor recreation in England.⁶

⁶ Sport England, (2014) Active People Survey 7

Table 1: average monthly⁷ participation in sport and recreation in England, October 2012-October 2013 (Source: Sport England, 2014, *Active People Survey 7*)

Activity	Number of people (14+) participating monthly ⁸	Percentage of the adult population (14+)
Outdoor Recreation Group ⁹	25,703,100	59.3
Outdoor Recreation Group (excluding walking)	7,707,500	17.8
Coarse fishing	632,800	1.4
Game fishing	155,800	0.4
Sea fishing	245,900	0.6
Running	2,791,500	6.3
Canoeing	133,300	0.3
Cycling	3,524,400	8.1
BMX	54,000	0.1
Cyclo-Cross	27,300	0.1
Mountain biking	736,900	1.7
Recreational cycling	2,159,800	5.0
Pony trekking	35,300	0.1
Other horse riding	301,700	0.7
Outdoor climbing/treking	191,200	0.4
Orienteering	11,800	0.0
Water-based rowing	47,500	0.1
Windsurfing	19,400	0.0
Cruising sailing	47,600	0.1
Alpine skiing	95,900	0.2
Freestyle skiing	22,300	0.1
Nordic skiing	17,400	0.0
Snowboarding	29,100	0.1
Outdoor swimming	826,700	1.9
Recreational walking	23,313,500	53.8

The Monitor of Engagement with the Natural Environment¹⁰

MENE collects information about visits to the natural environment. This includes the type of destination, the duration of the visit, mode of transport, distance travelled, expenditure, main activities and motivations and barriers to visiting. The survey also collects information about other ways that people engage with the natural environment, such as watching wildlife and volunteering. **MENE** is commissioned and funded by Natural England with support from Defra and the Forestry Commission and began in 2009. Four years' data have been published as annual reports and the fifth will be published autumn 2014. The survey obtains data on visits ranging in duration from just a few minutes upwards. It does not cover 'holidays' but does include visits or excursions taken from a holiday base.

The main focus of **MENE** is on time spent in the natural environment for leisure purposes. The survey collects details of visits to the natural environment for days out to the coast and

⁷ At least 1 session, any duration, any intensity in last 28 days

⁸ At least 1 session, any duration, any intensity in last 28 days

⁹ The activities listed under the outdoor recreation group represent those from within the group that can be reported individually. It is not an extensive list of what is included in the APS.

¹⁰ Natural England commissioned report, NECR122, (2013)

countryside, and more routine trips taken close to home for purposes such as dog walking or exercise – including those taken in urban green spaces. Respondents are informed that routine shopping trips and time spent in the garden are not included in the definition of a visit.¹¹ **MENE** also considers activities which we would not include in our own definition of outdoor recreation, such as appreciating scenery from a vehicle. The **APS** on the other hand is far less inclusive. Therefore participation is likely to be within the range of the figures presented from the **APS** and those from **MENE**.

The **MENE** survey uses a form of quota sampling as the basis for contacting members of the public. Using the **2001 Census** and the Royal Mail's **Postal Address File**, Great Britain (south of the Caledonian Canal) was divided into 600 areas of equal population. From these 600 areas a master sampling frame of 300 sampling points was selected to reflect the country's geographical and socio-economic profile. Each of the areas were further subdivided into 12 sub-samples of 25 points each. Each point in itself being representative of the geographical and set socio-economic profiles.

A series of questions is carried out on a weekly basis in a consumer omnibus household survey.¹² Individuals are contacted randomly and the survey takes place in their homes. A weekly target of 2000 interviews is set and the survey data is weighted to ensure that the sample is representative of the UK population in terms of the standard demographic characteristics. The **MENE** survey is included within a half sample of the English element of the survey. Every week around 800 interviews are undertaken across at least 100 sample points. The half sample is obtained by automatically asking the questions of every other respondent included in an interviewing shift. Within each sample point only one interview is undertaken per household and a minimum of six households is left between each interview. This ensures that interviewing is not clustered around small areas with similar demographic and lifestyle characteristics. To ensure a balanced sample of adults a quota is set by gender (male, female housewife, female non-housewife). A further quota is set within the female housewife demographic, presence of children and working status and within the male quota, working status. In each weekly wave a target of surveys is set, and the survey data is weighted to ensure it is representative of the English population.

Undertaking interviews on a weekly basis increases the likelihood of accurate participant recall. In each weekly wave, at least 1,600 interviews are undertaken in England. Every year since its establishment at least 45,000 interviews have been undertaken per annum. The quota sampling method used by the survey attempts to ensure that the results are representative of the English adult population, aged 16 and over.

The key findings from the most recent survey relating to participation (2013) are as follows:

- 48% of the English adult population strongly agreed that having open green spaces close to where they live is important
- 40% strongly agreed that spending time out of doors was an important part of their life
- 33% strongly agreed that they were concerned about damage to the natural environment
- 91% of the adult population visit the natural environment at least once a year
- 75% of the adult population visit the natural environment at least once a month and therefore could be considered regular visitors

¹¹ Natural England commissioned report, NECR123, (2013)

¹² Natural England commissioned report, NECR122, (2013)

- 55% of the adult population visit the natural environment at least once a week and therefore could be considered frequent visitors.

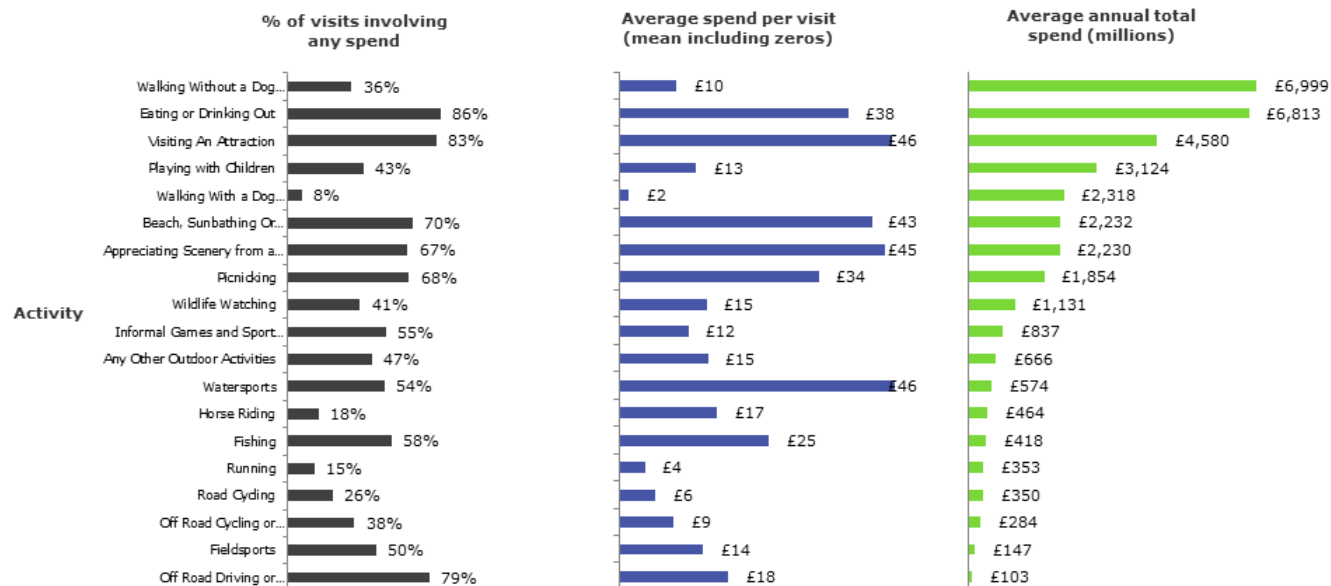
Further findings relating to the impact of this participation are summarised as follows:

- the English adult population participated in an estimated 2.85 billion visits to the natural environment between March 2012-February 2013
- those visits were taken by 42.4 million adults resident in England
- the average number of visits per adult within the year 2012/13 was 67
- walking remained the popular activity, undertaken on 76% of all visits, or approximately 2.2 billion visits overall. Half of all visits were taken with a dog while walking without a dog features in around 769 million visits
- almost the same proportion of females as males will engage recreationally informally in outdoor recreation. This is not the case for traditional sport where more males engage
- the mean duration of a visit was two hours seven minutes
- total spend was estimated to be £21 billion
- spend was incurred in just over a quarter (27%) of visits
- the average spend per trip which included some form of spending was £27
 - just over half (54%) of spending was attributed to food and drink, 14% was spent on petrol and diesel, 9% on admission fees, 6% on gifts/souvenirs, 4% on hire/purchase of equipment, and 13% on 'other' goods
- when all visits are considered, including those where there was no expenditure, the average spend per person per visit during 2012/13 was £7.40.

Recently Natural England has analysed existing data in more detail in order to provide a better understanding of how money is spent during visits to the natural environment.¹³ The report considers data from **MENE** gathered between March 2009-February 2013, during which the total average spend per year was estimated to be £20 billion. Graph 1, below, outlines expenditure according to activities.

¹³ Natural England, (2014)

Graph 1: visit expenditure by activities undertaken on visit (*MENE* data from March 2009-February 2013)



The analysis also estimates that the total value of outdoor recreational visits to England is £32 billion when *MENE* figures are combined with data on overnight visitor spending and international tourism spending and the effects of double counting are accounted for.¹⁴ The number of overnight trips including outdoor recreation and the associated spend, according to our definition, in Great Britain and England is presented in tables 3.1 and 3.2 respectively.

1.2. Scotland

The **Scottish Recreation Survey (ScRS)** is an ongoing monitoring study commissioned jointly by Scottish Natural Heritage and The Forestry Commission Scotland.¹⁵ It aims to survey participation in walking and other outdoor recreational activities by Scottish adults. The **ScRS** proposes that within the survey 'outdoors' is used to describe mountains, moorland, farmland (enclosed and unenclosed), forests, woods, rivers, lochs and reservoirs, beaches and the coast and open spaces in towns and cities. 'Informal recreation' or 'recreation' is taken to be any non-motorised activity carried out for pleasure or sport, and includes activities granted a statutory right of access under Part 1 of the Land Reform (Scotland) Act 2003.

On a monthly basis, TNS BMRB use a consumer omnibus survey in Scotland – the **Scottish Opinion Survey**. Interviews are conducted in-home using Computer Assisted Personal Interviewing with a representative sample of Scotland's adult population, aged 16 and over. Interviews are undertaken in 50 sampling points throughout the country with quota targets set on the basis of gender, age-group, social class and working status. At the analysis stage, the survey data is weighted to ensure that the sample profile matches that of the Scottish adult population. Around 1,000 adults are interviewed each month as part of this survey. As a result, across the 12 months of the most recent survey, a total of 11,796 respondents were interviewed. A set of questions was agreed with Scottish Natural Heritage and the Forestry

¹⁴ There is some degree of double counting between the surveys as *MENE* includes expenditure on excursions to the natural environment taken by residents of England during holidays in England. This expenditure (estimated at around £3 billion) is also within the scope of the GBTS survey so is excluded when the total estimate is calculated.

¹⁵ V. Wilson, D. Stewart, (2013)

Commission staff and these were classified into different categories. A core set of questions was asked every month while other questions were included on the basis of either every second month or every third month.

Key findings:

- 79% of the Scottish adult population made at least one visit to the outdoors for leisure or recreation
- 57% of the adult population visit the natural environment at least once a month and therefore could be considered regular visitors
- 42% of the adult population visit the natural environment at least once a week and therefore could be considered frequent visitors
- the Scottish adult population participated in an estimated 297 million visits to the outdoors over the 12 month period of the survey
- the total spend associated with visits to the outdoors was estimated to be £2.6 billion
- the mean duration of a visit was 2 hours 11 minutes
- spending was incurred on 30% of visits. Of those trips the average spend per trip was £31 which makes a contribution to the economy from both direct and indirect expenditure associated with the trip
- if trips which incurred spend, 23% was spent on food and drink and 8% was spent on fuel
- the average spend per total visits among those engaging in the natural environment was £8.75.

1.3. Wales

The Active Adults Survey

The **Active Adults Survey (AAS)** is a biennial household survey commissioned by the Sports Council for Wales to measure levels of sports participation, club membership, volunteering and other sporting matters amongst adults in Wales.¹⁶ Details are only available for the 2008-09 Survey. The **AAS** is the main source of data in Wales on incidence of sports participation, sports club membership and other sport-related matters amongst adults, aged 16 and over, in Wales. Within the survey outdoor pursuits are defined similarly to our own.¹⁷

Fieldwork was conducted over a 12-month period between March 2008-February 2009. The survey results are based on 22,176 interviews with adults across Wales. Households were selected at random to participate in the research using the **Postcode Address File** compiled by the Royal Mail. The selection is clustered by output area (selected at random) to minimise costs while ensuring the survey is robust. On contact with a selected household, one adult is selected at random. Households were contacted up to six times in order to complete an interview. Interviews were conducted in the respondent's home. Responses were weighted to ensure that the sample matches the demographic of the adult population in Wales. Over 1,000 interviews were conducted in each local authority.

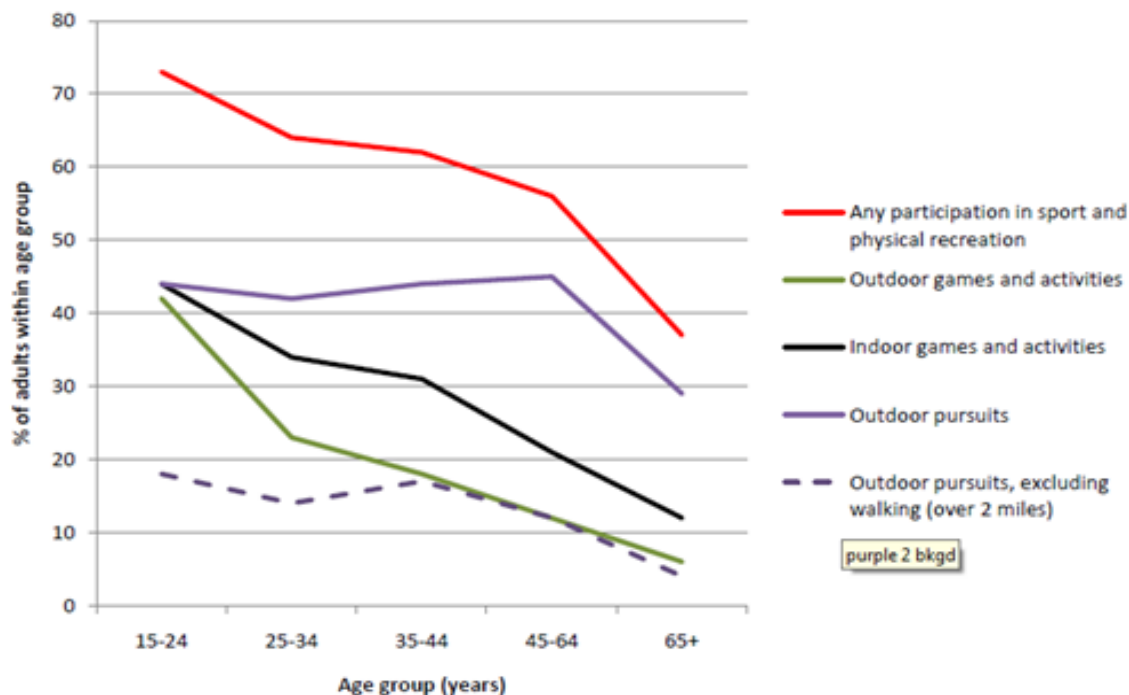
¹⁶ The Sport Council for Wales, (2010)

¹⁷ BMX, canoeing, car rallying, caving, outdoor climbing, cycling, fishing/angling, game shooting, hang gliding, horse riding/jumping, karting/motor racing, kayaking, lifesaving/surf lifesaving, moto cross/scrambling, mountain biking, mountaineering/rock climbing, orienteering, rambling/hill and fell walking, rollerblading/in-line skating, rowing, sailing, skateboarding (outdoor), skiing, snowboarding, sub aqua, surfing, walking (over two miles), water skiing, wind surfing or boardsurfing, yachting, other.

Key findings from the most recent survey:

- while participation in outdoor games and activities, and indoor games and activities decreases sharply beyond the 15-24 year old age group the participation rate for outdoor pursuits remains above 40% for all age groups other than 65+
- walking was the most prevalent activity for both males and females to have participated in the previous four weeks. An estimated 33.75% of the population had been on a walk of over two miles
 - 32.7% male
 - 34.8% female. This is the only activity for which female participation is higher than males.

Graph 2: Welsh participation according to activity type and age 'in the last four weeks'
(Source: The Sport Council For Wales, 2009, *The Active Adult Survey 2008-09*)



The Welsh Outdoor Recreation Survey

The ***Welsh Outdoor Recreation Survey (WORS)*** seeks to establish how the Welsh adult population engages in outdoor recreation, inclusive of: walking, road cycling, off-road cycling or mountain biking, horse riding, fishing, rock climbing or caving, motorised watersports, other watersports, swimming outdoors, snowsports, field sports (shooting/hunting), air sports (hang gliding/ballooning), wildlife watching, running, sightseeing or visiting an attraction, off-road driving or motorcycling, picnicking (as a significant part of the activity), visiting children's playgrounds/taking children to play areas outdoors, informal games (eg frisbee or golf), other outdoor activities.¹⁸

¹⁸ Countryside Council for Wales and Forestry Commission Wales commissioned report, (2012)

Fieldwork for the 2011 survey was undertaken between January 2011-January 2012 and 6,393 telephone interviews were completed. The **WORS** survey is conducted via telephone using Computer Assisted Personal Interviewing. 1,000 interviews are undertaken per spatial planning area. The results are weighted to ensure that they are representative of Wales as a whole. The **WORS** does not collect information relating to expenditure.

Key findings:

- 95% of the Welsh population made at least one visit to the outdoors for leisure or recreation from January 2011-January 2012
- 79.5% of the population visit the natural environment at least once a week and therefore could be considered frequent visitors
- The mean duration of a visit was two hours six minutes
- 60% of the population stated that they would like to visit the outdoors more often in both 2008 and 2011.

1.4. Northern Ireland

Unlike other nations within the UK, Northern Ireland does not have a survey offering an estimate of participation in outdoor recreation. However, Sport Northern Ireland (Sport NI) is considering the need for such a survey in the future. Although it is very hard to estimate participation in outdoor recreation in Northern Ireland due to the data available, we have attempted to establish a best estimate for some activities.¹⁹ It should be noted that the research on which the estimate is based does not include walking, horse riding, or cycling. It is worth bearing in mind that in England the activities omitted from the Northern Ireland study are among the most popular outdoor recreation activities.

In August 2008 Sport NI and the Northern Ireland Tourist Board commissioned the Countryside Access and Activities Network to undertake a research project to assess the trends in 23 outdoor recreation activities during the last 13 years.²⁰ The research aimed to help with the preparation of a new outdoor recreation strategy for Northern Ireland.

Data was collected from a wide range of organisations including: national governing bodies, local councils, outdoor education centres including Tollymore Mountain Centre, Northern Ireland's National Outdoor Centre, commercial outdoor activity providers, statutory authorities including Forest Service, Northern Ireland Water, Northern Ireland Environment Agency, and other stakeholders including the National Trust and private estates. Data was collected using a variety of techniques including phone calls, email correspondence and one-to-one meetings. In addition, a range of templates specifying the data required was issued to the relevant representatives for completion. The information detailed within the templates included venues, facilities, events, participation, trends and factors affecting future development.

Types of data being compared and methods for collation varied both within and between groups. Difficulties in obtaining accurate statistical data on participation levels, common to this sort of research, were also experienced. Researchers found that generally speaking the larger

¹⁹ The research considered many activities relevant to our remit including land based activities such as adventure racing, caving, fell running, field archery, kite buggying, mountain biking, mountain boarding, orienteering and rock climbing. Water based activities such as canoeing, kite surfing, rowing, sailing, power boating and motor cruising, scuba diving, surfing, water skiing and wake boarding. It also considered engagement in air based activities such as aeromodelling, microlight flying, paragliding and hang gliding. However, no information was submitted for diving, water skiing or wake boarding.

²⁰ Sport NI and the Northern Ireland Tourist Board commissioned research, (2009)

the participation, the harder it is to measure engagement. Moreover, some of the earlier data collected were for the whole of Ireland, whereas the later 2008 work was just concerned with Northern Ireland. Based on the research described, participation in outdoor recreation in Northern Ireland, not inclusive of walking, horse-riding, or cycling, for 2008 was estimated to be 44,189.

1.5. Additional sources of participation data

Additional participation data included in this section differs from information previously outlined as a result of the aims and methodologies of each piece of research. The differing estimates also highlight the difficulties in recording participation data for activities. This section does not reflect an attempt to examine each individual activity within our definition of outdoor recreation in turn, but instead explores additional studies where they have been made available to us.

Climbing

The British Mountaineering Council (BMC) produces a report on an annual basis²¹ which looks at changes in membership. Membership of the BMC has grown in recent years, from a total of about 25,000 in 1990 to over 75,000 currently. The number of individual members has doubled in recent years from 25,000 in 2000 to over 50,000 in 2014. For a graph showing long-term growth in BMC membership since 2000 see the BMC **Annual Report 2012**.²²

Horse Riding

The British Equestrian Trade Association **National Equestrian Survey 2005-06**, part-funded by Defra, was market research undertaken for the equestrian industry in Great Britain and was the only independent study of its kind.²³ The research was conducted by Swift Research with the objective of determining the number of horses and riders in Great Britain. Furthermore it established an estimated spend within equestrianism. The British Equestrian Trade Association **National Equestrian Survey** research was undertaken again in 2011, this time conducted by Sportwise, in order to assess changes in consumption.²⁴

The broad scope of the research demanded a variety of research methodologies. A nationally representative sample of GB consumers was conducted via an omnibus survey to measure national levels of horse riding/ownership, followed by 1,000 telephone interviews with horse owners and riders. A further 200 interviews with equestrian professionals within the sector were conducted. The intention was to assess professional and casual riders' spending in relation to horse feeds and bedding, clothing, footwear and saddlery, horse ownership and associated care costs, and riding lessons.

Key findings:

- an estimated 3.5 million people in Britain had ridden during 2010-11, which is 19% less than in 2005-06
- an estimated 1.6 million people rode at least once a month during the year 2010-11
- there was an increased interest in riding for pleasure, schooling, riding lessons, competitions and hunting from 2005-6 to 2010-11

²¹ British Mountaineering Council, (2013)

²² British Mountaineering Council, (2013) p.6

²³ British Equestrian Trade Association commissioned research, (2006)

²⁴ British Equestrian Trade Association press release, (2011)

- it was estimated that direct expenditure for the upkeep and care of horses was £2.8 billion, equating to £3,105 per horse, per annum
- the gross output of the equestrian sector is valued at £3.8 billion a year. This is lower than it had been previously but the researchers propose that this reflects the shrinking consumer market caused by the economic downturn.

Shooting

Public and Corporate Economic Consultants (PACEC) was commissioned to research the impact of shooting in the United Kingdom in 2004.²⁵ A survey which ensured statistically robust estimates of activities and impacts across different geographical areas and quarry types was conducted. Over 10,000 questionnaires were mailed using a stratified random sample frame provided by 20 different groups based on the databases of stakeholders. In addition questionnaires were sent out to shotgun certificate holders (via the Association of Chief Police Officers). Over 2,000 completed questionnaires were returned to PACEC. The researchers estimated that there are around 480,000 participants involved in shooting sports.

Snowsports

In an analysis of the snowsports market, Ski Club Great Britain researched the habits, intentions and attitudes of people in the UK who go on snowsport holidays to ski, snowboard, cross-country ski or snow shoe. The unique analysis is the largest piece of consumer research available in the snowsports field.²⁶

To undertake the analysis 11 selected organisations invited their customers and prospective customers to complete a comprehensive online survey. Recruitment was undertaken using email, Facebook and links on the participating organisations' websites. Organisations that took part included the Ski Club of Great Britain (using their database), tour operators, an airline, an accommodation provider and an events company. This select group of organisations means that the sample would have been self-selecting.

The total number of people who completed the survey exceeded 21,000. In order to avoid bias data was re-sampled where deemed necessary. For example, if a particular destination or mode of travel was over-represented due to the responses from a particular participant, an organisations data would be re-sampled to avoid any bias. However, certain groups are underrepresented in the research since the sample didn't include those student groups travelling with specific tour operators or school groups. This means that under 21s are likely to be under-represented in overall market terms.

Key findings:

- the majority of the responders to the survey (75%) were over 40 years old. This may in part be due to financial capability
- overall more men than women ski. Some 60% of the people who go on skiing holidays are men as opposed to 40% women
 - the averages for gender participation do not represent the market as participation is dependent on age
 - 21-29 group 48% of participation is female, 52% is male

²⁵ PACEC, (2006)

²⁶ Ski Club Great Britain, (2013)

- 50-59 group 35% of participation is female, 65% is male.

Water Recreation

The **Water Sports Participation Survey (WSPS)** is a partnerships survey which has been continuously conducted by Arkenford since 2002 in association with interested bodies and NGBs. The **WSPS** attempts to estimate the numbers of the UK adult population taking part in water sports.²⁷ It groups activities according to any boating activity²⁸ and any water sports activity.²⁹ To assess trends in water sports according to the **WSPS** each survey can be accessed individually online.

The results are derived from a nationally representative face-to-face omnibus survey of around 12,000 adult respondents aged 16 and over across the United Kingdom, collected across the course of a year. In addition to the omnibus survey a bespoke online survey was introduced in 2012 to ask more detailed questions of a representative sample of water sports participants. In 2013, 2,642 participants took part in the survey though the sample itself would have been self-selecting. The findings from 2013 are based on a UK adult population of 49,044,000 and an unweighted base of 12,704.

Key findings:

- the best estimate for participation was 14.1 million adults, but this could range between 13.8 million and 14.4 million due to confidence levels
- the participation rate for 'any boating activity' was 7.1% of the population, equating to 3.5 million adults
- canoeing/kayaking participation was at an all-time high with a participation rate of 3%, equating to 1.5 million adults. This represents the largest participation among the activities that constitute "any boating activity"
- there was an increase in 'casual' participants in boating activities but a decrease in the more regular participants. Those participating less than six times now make up 82% of participants (the highest figure in the study period) – 73% of these casual participants did each activity fewer than two times in the year, ie likely to be trying one or two different activities once or twice
- the increased participation rates from 2012-13 could be reflective of the summer weather in the UK for that year.

²⁷ Arkenford, (2014)

²⁸ Any boating activity includes small sail boat racing, small sail boat activities, yacht racing, yacht cruising, power boating, general motor boating, canal boating, canoeing, rowing, windsurfing, water skiing, and using personal watercraft.

²⁹ Any water sports activity includes surfboarding/body boarding/paddle boarding, rafting, kitesurfing, angling, cliff climbing activities, coastal walking activities, spending general leisure time at the beach, outdoor swimming, leisure sub-aqua diving (open water – from the shore or boat) and coasteering.

Table 2: UK watersports participation 2013 (Source: Arkenford, 2014)

	% of the UK population 16+	Participation (000s)
Any activity	28.8 ³⁰	14,124
Any boating activity	7.1 ³¹	3,497
Small sail boat racing	0.4	177
Small sail boat activities	1.0	493
Yacht cruising	0.7	330
Yacht racing	0.2	88
Using personal watercraft	0.5	249
Motor boating/ cruising	1.0	515
Power boating	0.6	290
Canal boating	0.7	342
Water skiing and wakeboarding	0.7	348
Canoeing	3.0	1,477
Rowing/ sculling	0.8	382
Windsurfing	0.3	165
Surfboarding	1.3	660
Kitesurfing	0.1	63
Angling	2.1	1,035
Cliff climbing	0.7	364
Coastal walking	8.2	4,023
Spending general leisure time at the beach	16.9	8,279
Outdoor swimming	10.5	5,129
Leisure sub-aqua diving	0.6	271
Coasteering	0.3	162

Angling

According to the Environment Agency there were approximately 1.4 million rod licenses sold to freshwater (coarse and game) anglers in England and Wales in 2010-11.³² Sea anglers, who do not need to purchase a rod licence to fish, make up an additional large population of anglers. In 2010 the Environment Agency conducted research to assess the public's attitude toward angling. The aims were to assess the levels of participation in fresh and sea angling, explore latent interest, determine awareness of events and schemes and track trends.³³

The data were collected by a means of face-to-face interviews amongst representative samples of adults within England and Wales aged 15 and over and young people aged 12-16. Over the period of a month 2,304 people were interviewed, of which 408 were young people. The research, which considered all forms of angling, estimated that 9% of the population in England and Wales over 12 years of age (equivalent to 4.2 million people) said they had gone sea or freshwater fishing the previous year. This can be broken down into 2.3 million fresh water anglers and 1.9 million sea anglers. The research estimated that 13% of the population over 12 years of age (equivalent to 6.1 million people) had been sea or freshwater fishing in the last two years.

Because of the way the question was put, these figures may overestimate the numbers actually 'holding a rod.' Some respondents may have interpreted "going fishing" as accompanying an

³⁰ Adjusted to account for double counting therefore if one person does more than one activity they will only be counted once.

³¹ Adjusted to account for double counting therefore if one person does more than one activity they will only be counted once.

³² Environment Agency, (2013)

³³ D. Simpson, G. W. Mawle, (2010)

angler rather than personally fishing. The results from the same survey are available from 2005 and can be compared with 2010 to track trends in attitudes toward angling according to the Environment Agency. The 2005 survey can be found at:

http://resources.anglingresearch.org.uk/sites/resources.anglingresearch.org.uk/files/EA_Public_Attitudes_to_Angling_2005.pdf

More recent research proposes that the 2010 figure is dated and no longer representative of the number of sea anglers. In 2012 Defra conducted a study into recreational sea angling in England, inclusive of both shore and boat catches.³⁴ The research aimed to find out how many people go sea angling in England, how much they catch and release, and the associated economic and social value. The study was undertaken to help policy makers make informed decisions about the sustainable management of the sea. Defra collected data from over 11,000 sea anglers in England through an Office for National Statistics (ONS) household survey, face-to-face interviews with anglers by Inshore Fisheries and Conservation Authorities, catch diaries, and online surveys. To estimate the number of sea anglers and the number of trips made by sea anglers in England researchers used the **Opinions and Lifestyles Survey** run by the ONS. In each month of 2012 postal sectors were selected at random and 30 addresses were randomly selected from each sector to participate. In total 12,619 private households provided face-to-face interviews and answered questions about angling activity. From the responses given the researchers estimated how many people went sea angling in Great Britain in 2012.

It was estimated that in 2012 over 1.08 million people participating in sea angling, which equates to around 2.2% of the adult population. The researchers estimated that there were 884,000 sea anglers in England, 125,000 in Scotland and 76,000 in Wales. Shore fishing was the most common type of sea angling and researchers estimated that there were between three and four million angler days recorded as well as between 0.5 and one million days of private and rented boat angling.³⁵

The Environment Agency's economic evaluation of inland fisheries in 2007 was based on a survey of the economic activity generated by angling on inland waters in Wales and regions of England.³⁶ Thirty-three separate assessments were produced of the dependency of regions on the spending of anglers fishing for coarse fish, trout, salmon and sea trout. Estimates were also categorised by types of surface water, (ie rivers, stillwaters and canals). Assessments were made for the nine government office regions of England, Wales, and for England and Wales as a whole. An online internet questionnaire was used to collect information across the combinations of regions and fish species.

In England and Wales a licence is required to fish in freshwater, and as such the Environment Agency holds the names and addresses of licensed anglers. A controlled sample of 3,000 anglers was drawn from these records. ADAS Ltd then managed a telephone survey of the anglers and collected observations on the average number of angling days per angler across the region/fish species combinations. The figures are inclusive of direct, indirect and induced effects.

³⁴ M. Armstrong, A. Brown, J. Hargreaves, K. Hyder, S. Pilgrim-Morrison, M. Munday, S. Proctor, A. Roberts, K. Williamson, (2013)

³⁵ M. Armstrong, A. Brown, J. Hargreaves, K. Hyder, S. Pilgrim-Morrison, M. Munday, S. Proctor, A. Roberts, K. Williamson, (2013)

³⁶ A. Radford, G. Riddington, H. Gibson, (2007)

Key findings:

- freshwater angler gross expenditure across the whole of England and Wales was worth £1.18 billion
 - this in turn was estimated to support a national household income of £980 million
 - the expenditure supported 37,386 jobs
 - 30,580 were supported by coarse fishing
 - 5,628 were supported by trout fishing
 - 1,179 were supported by salmon and sea trout
 - over 20,000 of those jobs were directly dependent on angling
- freshwater fishing in Wales was associated with £74 million of direct spend, enough to support £32 million in household income and 1,500 Welsh jobs. Two-thirds of this economic activity is likely to have been derived from game fishing (salmon and trout)
- licensed anglers fished around a total of 30 million days during 2005
 - this figure can be broken down to about 26 million for coarse fishing and four million for game fishing
 - 79.3% of angler days were defined as 'at home'
 - 20.7% days were defined as 'away days'.

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2. The visitor economy

Levels of participation in outdoor recreation are significant across the UK and many individuals who engage in activities included within our definition do so away from home. These participants – alongside tourists from overseas – are part of the ‘visitor economy’. The visitor economy is broader and more inclusive than tourism, which is defined by the United Nations as follows:

“the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited.”³⁷

The visitor economy is a more holistic concept than tourism. It recognises the importance of the wider set of individuals and organisations which are fundamental to the success of a destination. At the core of the concept is the economic activity of visitors and refers to all of the elements that make for a successful visitor destination. The visitor economy considers the things that attract people to a destination, the infrastructure that supports their visit and the services provided to them.

Outdoor recreation makes an essential contribution to the national visitor economy and in turn has a very positive impact for the health of the UK’s economy. This contribution has been particularly evident throughout the economic downturn and has a significant impact for rural communities. Tourism is a resource industry and some experts in the field believe that natural environmental assets are the very foundation upon which all tourism rests and are usually the most successful in attracting tourists.³⁸ The natural environment has a ‘halo effect’. Visitors may go to an area to experience a certain landscape and/or activity but while they are there they spend money and so inject cash into the local economy.

2.1. The UK’s visitor economy

The visitor economy in the UK has been considered by various reports which attempt to estimate the size and associated value of the industry. As a result of differing methodologies and time frames of information collection there is variation in the figures assigned to the value of the visitor economy. Nonetheless the consistent message is that tourism makes a large financial contribution to the UK economy.

The Office for National Statistics (ONS) is the national statistical institute and the largest producer of official statistics in the UK. The ONS is independent of government ministers and instead reports through the UK Statistics Authority. The ONS has produced a number of reports which consider the overall contribution of tourism to the UK.

In 2009 the Tourism Intelligence Unit, established within the ONS, created the **Supply Side of Tourism Report** to draw conclusions about the size and structure of the tourism sector in the UK. The report used the UK’s National Accounts, which measure the gross output and Gross Value Added for all industries in the UK. It also used the ONS **Annual Business Survey**, which collects financial data from businesses’ end year accounts.³⁹ The report details various aspects

³⁷ United Nations World Tourism Organisation, Definition of Tourism

³⁸ Z. Liu, (2003)

³⁹ Office for National Statistics, (2012a)

of the supply side of tourism and includes a national level analysis of GVA, turnover and employment in the defined set of tourism industries. It also provides an estimate of employment in tourism industries for the regions and nations of the UK whereby the set of tourism industries used is based on international recommendations.

In 2009 the report found that tourism accounted for 5.4% of GVA to the UK economy, or £68 billion. Businesses in the tourism sector together had a total output (turnover) of £159 billion, or 6.1% of the national total.⁴⁰ The report provided evidence of tourism industry growth during an economic recession in which many sectors contracted. In addition, **The Pink Book**, an annual publication by the ONS that details the UK balance of payments, states that tourism was the sixth largest export earner in 2011 after chemicals, financial services, intermediate manufactured goods, capital goods, and transportation.⁴¹

The visitor economy is a key source of employment in the UK. According to **The Pink Book** the sector employs one in 11 people.⁴² The **Geography of Tourism Employment** published by ONS in 2012 used data from the **Annual Population Survey**, a combined statistical survey of households in Great Britain conducted quarterly by ONS, to estimate employment opportunities created by tourism.⁴³ It concluded that in 2011 tourism-related businesses accounted for 9.1% (249,000) of all UK businesses. 9.72% (24,215) of the tourism-related businesses in the UK are represented in the sport and recreation services sector.⁴⁴ It is the third largest sector; only food and beverage serving services and cultural services sectors are larger,⁴⁵ which account for 57.7% and 12.5% respectively.⁴⁶ The **Geography of Tourism Employment** found, in agreement with Deloitte and Oxford Economics,⁴⁷ that tourism is disproportionately important in predominantly rural or remote areas.⁴⁸

In 2013 VisitBritain and the Tourism Alliance commissioned Deloitte and Oxford Economics to establish the size of the UK's tourism industry. Following a literature and policy review, stakeholder engagement, development of an economic model and data analysis the report estimated that in 2013 tourism was the UK's sixth largest industry, employing 9.6% of the country's workforce.⁴⁹ Tourism was considered to be worth £126.9 billion to the UK economy once the direct and indirect impacts were taken into account, equivalent to 9% of UK GDP. Tourism contributed £94.2 billion to the economy in England, £10.9 billion in Scotland, £6 billion in Wales and £2.1 billion in Northern Ireland.

2.2. Outdoor recreation as a driver of the visitor economy

The Centre for Social and Economic Research on the Global Environment (CSERGE) used an extensive literature review, **Monitor of Engagement with the Natural Environment (MENE)** data, and meta-analysis to establish the recreational value of ecosystems in the UK.⁵⁰ Researchers discovered that prized landscapes such as large areas in the south west of England, the north Norfolk coast, the western coast of Wales and the border areas of Scotland

⁴⁰ Office for National Statistics, (2012a)

⁴¹ Office for National Statistics, (2012c)

⁴² Office for National Statistics, (2012c)

⁴³ Office for National Statistics, (2012b)

⁴⁴ Office for National Statistics, (2012b)

⁴⁵ Office for National Statistics, (2012b)

⁴⁶ Office for National Statistics, (2012b)

⁴⁷ VisitBritain commissioned research, (2014)

⁴⁸ Office for National Statistics, (2012b)

⁴⁹ VisitBritain commissioned research, (2014)

⁵⁰ A. Sen, I. Bateman, (2011)

down into the Lake District all exert a pull on visitors which overcomes the fact that they have relatively low populations.⁵¹ The role of the natural environment in attracting visitors is therefore highly important to communities in these regions. Similarly in the Scottish Highlands, although the total number of visitors is lower than other destinations, visitors spend more on each visit. This boosts the recreational value of these areas.⁵²

Travel time is the most important factor in determining whether someone visits a particular area, with the likelihood of a visit decreasing as travel time increases.⁵³ The associated cost of an activity also influences an individual's decisions about how they engage with the natural environment. The site prediction model highlights that mountain areas provide a lower density of recreational sites, however meta-analysis suggests that visits made to such areas result in greater than average spending. This results in pockets within mountain areas which have a high recreational value.

Similarly coastal environments are a very valuable part of the UK visitor economy. In 2011 the UK **National Ecosystem Assessment (NEA)** provided a comprehensive overview of the state of the natural environment in the UK, and offered a new way of estimating national wealth. This substantial piece of research which was carried out from mid-2009-11. The research, which had £500,000 committed to it by the Secretary of State for the Environment, Food and Rural Affairs, brought together around 500 experts in the natural sciences, economics, and the social sciences, under the chairmanship of Professor Robert Watson⁵⁴ and Professor Steve Albon.⁵⁵

The research assembled and analysed an enormous body of published information about the UK environment. Using contemporary economic techniques it generated new tools for valuing the environment in terms of both monetary 'market values' and non-monetary 'non-market values'. The research considered the cultural,⁵⁶ provisioning,⁵⁷ regulating,⁵⁸ and supporting⁵⁹ services that the natural environment can provide. It then attempted to assign an economic value to each service. Examples of 'market values' are carbon sequestering, fresh water provision, and food provision. Examples of 'non market values' are cultural services such as the value added to spirituality, aesthetic and the inspiration an individual may gain from an environment. The research was carried out to increase efficiency of decision making in relation to resource allocation and to put a stop to the situation in which "the values of most ecosystem services are currently omitted from national economic frameworks and decision making."⁶⁰ It was hoped that the research would provide more certain future investments, new avenues of wealth and future employment, and greater human wellbeing in times ahead.

The **NEA** used available data where appropriate to provide aggregate economic value for goods with non-market values. The strengths of the methodology are that it is geographically sensitive and discounted research considered not sufficiently rigorous. Overall the **NEA** provides a coherent body of evidence about the state of our natural environment and the services it provides for the UK. However there are many questions surrounding the extent to which it is

⁵¹ A. Sen, I. Bateman, (2011) p. 21

⁵² A. Sen, I. Bateman, (2011) p. 22

⁵³ A. Sen, I. Bateman, (2011) p. 14

⁵⁴ Defra's Chief Scientific Advisor and Strategic Director of the Tyndall Centre at the University of East Anglia.

⁵⁵ The James Hutton Institute, Fellow of the Royal Society of Edinburgh.

⁵⁶ Examples of cultural services include spiritual, recreation and tourism, aesthetic, inspirations, educational.

⁵⁷ Examples of provisioning services include food, fresh water, fuel.

⁵⁸ Examples of regulating services include climate regulation, disease regulation, flood regulation.

⁵⁹ Examples of supporting services include soil formation, nutrient cycling, primary production.

⁶⁰ R. Watson, S. Albon, et. al, (2011) p.7

possible to robustly determine an economic value of non-marketable goods.

The research concluded that cultural ecosystem services provided by the coast, where the value of cultural goods linked to ecosystem services is understood via participation and deliberative techniques,⁶¹ are very important to the UK. The public values the coast highly as living space, as a symbol of identity, for its scenery and wildlife, and for activities like walking, boating and outdoor sports. More than 250 million visits are made to the UK coast per year – of which approximately a third are to natural habitats.⁶² Using this figure we can estimate for the purposes of this review that around 83 million visits are made to the coast each year. Elsewhere the total value of seaside tourism has been estimated to be £17 billion.⁶³

Similarly the Natural Capital Committee (NCC), chaired by Professor Dieter Helm and consisting of seven members who collectively bring expertise in the fields of ecology, environmental science, economic, accounting and business, was established to help society take better account of the value of nature and ensure this value fully informs decision-making.⁶⁴ 'Natural capital' refers to the elements of nature that produce value to people, such as the stock of forests, water, land, minerals and oceans. The NCC considers recreation to be active enjoyment of the natural environment, for example walking, fishing and canoeing.

Key findings:

- long term investment in natural capital is necessary; this will facilitate substantial economic benefits
- reversing the decline in the quality of natural assets can benefit the economy and wellbeing
- urban green-space can deliver a wide range of benefits
- recreation in the natural environment is of enormous value and benefit:
 - the benefits can be increased significantly by improving the quality of freshwater areas, increasing the amount of woodlands and other recreation areas around towns and cities and increasing urban green space
 - the potential value that could be generated by improving the quality of major land use categories to policy target levels are £1.5 million per annum for fresh water recreation alone⁶⁵
 - the cost of planting new woodlands when location is determined by considering only market priced goods (costs of planting and subsidies, agricultural losses and timber production values) results in a deficit of £66 million per annum. However, if locations were determined by considering market priced goods (as above) and the economic value of non-market goods (greenhouse gases and recreation) new woodland can be valued at £546 million per annum.⁶⁶

Scotland

Scottish Natural Heritage commissioned a report which aimed to establish an estimate of the economic contribution of Scotland's environment to the nation's tourism economy.⁶⁷ Scottish

⁶¹ The technique is described as a hybrid between consultation and research which aim to involve the public in decision-making in a meaningful way, and the use of quantitative and qualitative methods in multi-criteria analysis.

⁶² R. Watson, S. Albon, et. al, (2011)

⁶³ R. Watson, S. Albon, et. al, (2011)

⁶⁴ Natural Capital Committee, (2014)

⁶⁵ Natural Capital Committee, (2014) p. 42

⁶⁶ Natural Capital Committee, (2014) p. 51

⁶⁷ D.M. Bryden, S.R. Westbrook, B. Burns, W.A. Taylor, S. Anderson, (2010)

Natural Heritage suggests that due to the breadth of the study and limitations of the data available a broad range of sources were gathered to provide a general impression. The data which formed the basis of the report were limited as they did not assess impacts and differed in terms of time period, methodologies, definitions and multipliers. The authors noted that “some methodologies were sounder than others.”⁶⁸ While the report was based on existing studies in some instances, raw data from those studies were used in order to calculate standardised impact assessments.

The report’s strengths lie in the fact that it focussed on the most recent studies available, which were scrutinised for credibility and robustness before inclusion. Where those deemed to exaggerate the impact of a particular activity were discovered, for example due to sampling methods, calculations were reworked.⁶⁹ The report considered wildlife watching, field sports, walking/mountaineering, snowsports, cycling, water sports, horse riding, adventure activities, conservation work, other special interests and scenery. Within the report there are problems associated with accurately attributing a specific motivation to any individual trip. However this is a problem which arises as a result of any such study and is not a unique issue. This is not comparable to studies for England and Wales due to the methodology, but given the difficulties faced by researchers it is a thorough report with a robust methodology.

Key findings:

- nature-based tourism in Scotland was estimated to provide about £1.4 billion in income
- nature-based tourism in Scotland was estimated to support 39,000 FTEs.

Wales

Miller Research, in partnership with the Wales Activity Tourism Organisation, was commissioned by VisitWales to establish the importance of the outdoor activity sector to the Welsh economy.⁷⁰ The research provides an explanation of the direct and indirect economic impact of outdoor activity tourism in Wales, including estimates of its contribution to the wider tourism sector and GVA. Outdoor activities were defined according to those provided by members of the Wales Activity Tourism Organisation, typically adventurous, adrenaline activities requiring some amount of excursion.⁷¹ It should be noted that angling, field sports and motorised activities were not included in the research.

The research comprised a series of initial scoping interviews with regional representatives of Wales Activity Tourism Organisation and two online surveys targeted at outdoor activity providers in Wales and visitors to Wales who had participated in outdoor activities. Information regarding operational details, visitors, business performance and optimism and barriers to growth was collected, and resulted in a sample of 93 businesses. The survey of participants in

⁶⁸ D.M. Bryden, S.R. Westbrook, B. Burns, W.A. Taylor, S. Anderson, (2010) p. 9

⁶⁹ D.M. Bryden, S.R. Westbrook, B. Burns, W.A. Taylor, S. Anderson, (2010) p. 11

⁷⁰ S. White, M. Smith, (2014)

⁷¹ Abseiling, bouldering, rock climbing, canyoning, coasteering, gorge walking, ice climbing, ropes courses, sea level traversing, canoeing, kayaking, white water rafting, windsurfing, board surfing, sailing, diving, improvised rafting, orienteering, scrambling, off-road cycling, mountain biking, fell running, mountaineering, snowboarding, skiing, caving, potholing, mine exploring, paragliding, gliding, hangliding, kitesports.

outdoor activities asked about the detail of the activities undertaken, average stay and spend on activities, accommodation and other items. It was distributed via social media and 1,022 people responded.

As the surveys were distributed via existing networks and online through website links and social media there was the potential for self-selection bias in the response. The extent to which the business sample was representative was largely unknown. Furthermore 69% of the respondents to the visitor survey were male and individuals aged 16 and under, and aged 65 and over together made up only 2% of the sample, with the majority aged 26-44 (49%) and 45-64 (38%). Therefore the extent to which the achieved sample represents the entire population of outdoor activity tourists in Wales is largely unknown.

Key findings:

- attitudes towards outdoor activities in Wales are generally very positive, with many regarding it as a top destination for outdoor adventure experiences
- total expenditure reached £601 million, or £165 million when long walks are excluded
- outdoor activity tourism directly support 8,243 jobs:
 - 5,783 from day trippers
 - 2,254 from domestic overnight visitors
 - 206 from international overnight visitors
- the total economic contribution of outdoor activity tourism was £481 million, or 6% of the total economic contribution of all tourism in Wales:
 - £236 million from domestic overnight visitors
 - £220 million from day trippers
 - £24 million from international overnight visitors
- outdoor activity tourism contributed £304 million in value added when the economic impact is adjusted for people living in Wales
- the average activity spend was £31.71.

2.2.1. Domestic trips

Domestic tourism refers to people visiting a destination within their own country. VisitEngland, whose remit is limited to England, conducts surveys and collects data more widely to measure the volume and value of domestic tourism within Great Britain in conjunction with VisitScotland and Visit Wales, the national tourist boards for Scotland and Wales. Their surveys are the largest available of this type. The national tourist boards conduct surveys relating to 'overnight visits' which is defined as an overnight stay by a UK resident, exclusive of day visitor trips.⁷² The boards also measure the volume of 'day visits', defined as visits by GB residents who take trips of three or more hours outside their place of residence, or one of 15 activities that they don't do 'very regularly', and also leisure visits, which are three or more hours but may take place in their place of residence or be a 'very regular' activity.⁷³

Both of these VisitEngland surveys are rigorous and thorough, though their methodologies differ. Research into overnight visitors is undertaken via weekly omnibus questionnaires conducted using Computer Assisted Personal Interviewing. Around 2,000 questionnaires are undertaken weekly from a representative sample of British residents aged over 16 years.

⁷² VisitEngland, (2013b)

⁷³ VisitEngland, (2013a)

Around 100,000 interviews are conducted per year. It should be noted that each adult or child present counts as a trip so a family of two adults and two children taking a trip away would count as four trips per night spent away.⁷⁴ Research into day visits is undertaken via a series of online interviews carried out as 52 weekly surveys conducted with adults aged over 16 years. In 2012 35,262 adults were surveyed. Respondents were selected from an online panel with demographic quotas based on age, gender, working status, socio-economic status and area of residence.

New information relevant to this review has been generated by VisitEngland using raw data from the **GB Tourist Statistics 2012** and the **GB Day Visitor 2012** surveys. This data refers to all visits which involved outdoor recreation, as defined in the introduction to this review. Findings are outlined in tables 3.1 and 3.2 below.

Table 3.1: visits involving outdoor recreation and associated spend in Great Britain, 2012 (Source: VisitEngland, 2013b, GB Tourist Statistics 2012, VisitEngland, 2013a, The GB Day Visitor 2012)

	Day Visitor	Overnight Visitor*	Domestic Total
Trips (millions)	1,712 ⁷⁵	126.02 ⁷⁶	1,838.02
Spend (£ millions)	57,052 ⁷⁷	23,976 ⁷⁸	81,028
Trips including outdoor recreation (millions)	308.69	46.98	355.67
Spend on trips including outdoor recreation (£ millions)	10,126.33	10,296	20,422.33
Outdoor recreation as percentage of total visits (%)	18.03	37	19.35
Outdoor recreation as a percentage of total spend (%)	17.75	46	25.2

**Overnight Visitor category is inclusive of all overnight visitor categories: pure holidays, visiting family and friends and business trips.*

Note: All secondary expenditure eg food, travel, will be duplicated where a participant does more than one activity.

⁷⁴ VisitEngland, (2013b)

⁷⁵ VisitEngland, (2013a)

⁷⁶ VisitEngland, (2013b)

⁷⁷ VisitEngland, (2013a)

⁷⁸ VisitEngland, (2013b)

Table 3.2: visits involving outdoor recreation and associated spend in England, 2012
(Source: VisitEngland, 2013b, *GB Tourist Statistics 2012*, VisitEngland, 2013a, *The GB Day Visitor 2012*)

	Day Visitor	Overnight Visitor*	Domestic Total
Trips (millions)	1,467 ⁷⁹	104.46 ⁸⁰	1571.46
Spend (£ millions)	48,459 ⁸¹	19,497 ⁸²	67,956
Trips including outdoor recreation (millions)	254.08	37.68	291.76
Spend on trips including outdoor recreation (£ millions)	8,118.94	8,213	16,331.94
Outdoor recreation as percentage of total visits (%)	17.32	36.07	18.57
Outdoor recreation as a percentage of total spend (%)	16.75	42.12	24.03

*Overnight Visitor category is inclusive of all overnight visitor categories: pure holidays, visiting family and friends and business trips.

Note: All secondary expenditure eg food, travel, will be duplicated where a participant does more than one activity.

2.2.2. International trips

The **International Passenger Survey (IPS)** is a sample interview survey of people arriving at and departing from UK main airports and sea routes and the Channel Tunnel. The methodology involves conducting between 700,000 and 800,000 interviews a year to collect travel information. Of these responses 250,000 are used each year, which equates to about every one in 500 people, to produce estimates of overseas travel and tourism patterns. The **IPS** focusses on expenditure, tourism and migration. However, it is a short survey which only asks limited questions relating to length of stay, the cost of the fare, purpose of the visit, locations visited and time of the year.

The nature of the survey means that there are some concerns about the robustness of its conclusions. However the Statistics Authority's Head of Assessment, Richard Alldritt, concluded in 2013 that "the **IPS** statistics are sufficiently robust to meet the needs of users of statistics at the UK level about overseas travel, and visitor expenditure" when bearing all the limitations in mind.⁸³ In 2012 the **IPS** findings supported the conclusion that overseas visitors contribute to the rural economy.⁸⁴ Natural England has used data from the **IPS** to estimate that there are eight million inbound holiday visits to England involving outdoor recreation, accounting for £6 billion in expenditure.⁸⁵

2.2.3. Activity holidays

⁷⁹ VisitEngland, (2013a)

⁸⁰ VisitEngland, (2013b)

⁸¹ VisitEngland, (2013a)

⁸² VisitEngland, (2013b)

⁸³ UK Statistics Authority, (2013)

⁸⁴ Office for National Statistics, (2013b)

⁸⁵ Natural England, (2014)

The ‘activity holiday’ market was reviewed in a 2009 report.⁸⁶ The report draws on original research which is primarily a 2008 telephone survey of over 1,000 adults and analysis of their activity holidays over the preceding five years. The sample size, though not insignificant, is small relative to other surveys considered. The definition of ‘activity holiday’ was clear. It stated that an activity holiday is “a holiday that involves some form of physical, sporting or related activity, ranging from walking, trekking or rambling to skiing or golf, where the activity is provided as part of a package or where independent travellers take part in the activity as a major part of their holiday”. It also stated that it “does not cover activities that are incidental to the main reason for taking the holiday. For example, taking a walk along the seafront as part of a beach holiday does not constitute a walking holiday, nor does hiring a bicycle to travel to the beach qualify as a cycling holiday.” The research used information from the **United Kingdom Tourism Survey**.

The report covered a wide range of activities from rock climbing, white-water rafting and sailing, to horse riding and rambling. It suggested that the most popular activities fell somewhere between the two extremes and include cycling, trekking and golfing. Data collected in 2008 can be summarised as follows:⁸⁷

Table 4: the value of activity holidays in the UK, 2008 (Source: J. Griffiths, 2009)

	Domestic	Abroad
Total number of holidays (millions)	75	44.6
Value (£ billion)	14	23.8
Total number of activity holidays (millions)	8.8	6
Value (£ billion)	1.7*	-

**Based on an average estimated expenditure per domestic activity trip of £193.⁸⁸*

According to Mintel,⁸⁹ an independent market analysis company, “activity holidays are defined as trips for which the main purpose is to engage in a sporting or other physical activity.” In the creation of its reports Mintel uses consumer research which takes the form of:

- online GMI surveys and face-to-face Ipsos Mori interviews, which both ensure high quality samples representative of the GB adult population
- trade research, which is formal and consists of holding interviews with stakeholders
- desk-based research, whereby existing evidence in the domain is considered
- statistical forecasting whereby modelling and insight is combined.

In 2003 Mintel concluded that activity holidays accounted for 10.4% of all UK holidays. They noted that “interest in activity holidays is increasing, with 38% of people having taken one in 2003, compared to 30% in 1999.”⁹⁰ Mintel conducted the same analysis of holiday figures for 2007,⁹¹ finding that activity holidays accounted for 10.2 million breaks taken in 2007 and that there was a volume growth of 17.2% since 2003. Therefore the research concluded that activity holidays are comfortably outperforming the highly valuable overall travel market. The report proposed that by the end of 2008, activity holidays were expected to account for nearly one in

⁸⁶ J. Griffiths, (2009)

⁸⁷ J. Griffiths, (2009)

⁸⁸ J. Griffiths, (2009)

⁸⁹ Mintel, (2003)

⁹⁰ Mintel, (2003)

⁹¹ Mintel, (2008)

eight holidays taken by Britons in 2008 – equating to 12.5% of all UK holidays,⁹² up from 10.4% in 2003.⁹³

2.3. Access to the natural environment

The extent of the contribution of outdoor recreation to the visitor economy is closely linked to the level of ease with which individuals can engage with the natural environment. As such the UK's access network plays an important role in maximising the associated economic benefits.

The foot and mouth disease outbreak of 2001 provided a 'natural experiment' which demonstrated the impact of curbing access to the natural environment and in doing so presented an alternative estimate of the overall size of the outdoor recreation sector. Amongst its many serious effects the outbreak forced a massive but short-lived decrease in participation in many outdoor activities. Using a Computable General Equilibrium model, Blake, Sinclair and Sugiyarto – paying particular attention to the tourism sector – found that over the whole of 2001 the UK experienced an 11% reduction in tourism expenditure, equating to £7.73 billion.⁹⁴ The model used is considered to be the most appropriate at evaluating the economic effects of tourism.⁹⁵ Scotland, Cumbria and Wales experienced declines of 21.9%, 31% and 20% respectively in visitor spending. These three areas alone lost £5.1 billion of tourism receipts compared to pre-outbreak levels, and each has tourism sectors that rely heavily on the outdoors sector.⁹⁶ This is unsurprising given ONS statistics which found that the tourist sport and recreation service sector is the third largest and accounts for 9.72% of tourism-related businesses in the UK.⁹⁷

The National Audit Office proposed that the 2001 foot and mouth outbreak cost the tourism industry an estimated £5 billion.⁹⁸ The cost of the outbreak may be attributed to the fact that within the first week the government announced that all 118,000 miles of Public Rights of Way, as well as nearly 70% of the 2,000 mile tow path network administered by British Waterways, would be closed to public access in order to curb the spread of the disease. Numerous tourist attractions were closed and outdoor activity opportunities ceased in many regions of the UK. These closures not only prevented the public from accessing their habitual recreation areas but also rendered inaccessible those businesses located inside the declared exclusion zones. Industries especially badly affected by this drop in tourist attendance and expenditure included hotels, catering and pubs, and road transport. While some sports enjoyed a modest boom, sea kayaking being an example, the wider picture showed the true scale of how much some areas of the country depend on not just agriculture but also the outdoor recreation economy as we are considering it.

2.3.1. Coastal access

England

The Marine and Coastal Access Act (MCA) 2009 requires the government to establish a continuous path around the coast of England and an associated margin of land to which there

⁹² Mintel, (2008)

⁹³ Mintel, (2003)

⁹⁴ A. Blake, T. Sinclair, G. Sugiyarto, (2003) pp. 449-63

⁹⁵ L. Dwyer, P. Forsyth, R. Spurr, (2004) pp. 307 – 317

⁹⁶ A. Blake, T. Sinclair, G. Sugiyarto, (2003)

⁹⁷ Office for National Statistics, (2012b)

⁹⁸ J. Bourn, (2002)

would also be a right of access on foot, thereby creating a corridor of open access to the English coastline. In addition, and for the first time, the MCA 2009 enables the line of the resulting trail to 'roll back' with an eroding coast. It was proposed that the English coastal path would generate an estimated £2.57 billion per year for the local economies and support 100,000 full time jobs.⁹⁹ The first section of the England Coast Path opened in Weymouth in June 2012. Four years after the initial delivery programme work has commenced on 778km of coast with 123km completed. By April 2015 in excess of 1,000km of coastline will fall within the programme. For the most up-to-date information on the progress of the England Coastal Path visit the Natural England website:

<http://www.naturalengland.org.uk/ourwork/access/coastalaccess/default.aspx>

South West Coast Path

The South West Coast Path is a 630-mile National Trail which runs through Somerset, Devon, Cornwall and Dorset. A report funded by the Countryside Agency and the South West of England Regional Development Agency, compiled on behalf of the South West Coast Path team by Tourism Associates and South West Tourism, was undertaken to assess the economic value accrued as a direct outcome of the South West Coast Path.¹⁰⁰ It considered both overnight guests and day visitors, including residents, whose main purpose of a trip was to use the South West Coast Path. To be included in the research overnight visitors had to be staying within one mile of the path.

The research was not a formalised economic impact survey as not every aspect of the economic value of the South West Coast Path is explored. Instead the study focussed on several key economic outcomes derived. The research was undertaken as four component parts. A standardised questionnaire was designed to establish the economic impact of accommodation, tourism value estimates, low cost accommodation, and south-west residents. The questionnaires had a varied response rate and sample size. For the section relating to overnight tourism this ranged from 31-59% and 55-300 respectively. To establish resident spend a representative sample was established and 1,200 households were interviewed, resulting in a confidence level of 95%.

Key findings:

- the path was an important selling point for 73.3% of accommodation providers
- 27.6% of annual visitors were derived purely because of proximity to the South West Coastal Path
- the path generated an estimated £307 million a year for the economy:
 - £164 million is resident related economic spend
 - 23 million walks are taken on the South West Coastal Path by residents in the four counties
 - 2.6 million walks are used to entertain visiting family and relatives
 - £142.9 million is related to accommodation
 - £7.2 million was estimated to derive from hostels
- the South West Coast Path supported over 7,500 jobs
- the path cost £500,000 a year to maintain.

The findings may be an underestimate as they are based on estimates of spending by visitors within a one-mile coastal corridor only, and they pertain to income and visitor stays

⁹⁹ M. Christie, J. Matthews (2006)

¹⁰⁰ T. Coles, P. Hudson, E. Stevens, (2003)

derived purely from the South West Coast Path. However, the money spent by residents within the local community is not necessarily additional spend. If the path did not exist it is likely that the money would be spent elsewhere in that community. Moreover, the responses were not from a random sample and therefore the research has limited ability to represent clearly and accurately the wider trends evident in a population.

In 2012 the South West Coast Path was revaluated. The new evaluation estimated that the South West Coast Path¹⁰¹:

- has an estimated 8.6 million visitors per year
- estimated GVA from spending by path users was estimated at £349.6 million
- a direct spend of £436 million was estimated to be attributable to the South West Coast Path users during 2012
 - This accounts for 4% of all direct tourism spend to the South West region during 2012
 - It would support an estimated 9,771 FTEs.

Scotland

In Ayrshire, Fife, Berwickshire, East Lothian, Moray, and Aberdeenshire a coast path has been established. In 2007 the Fife Coast and Countryside Trust commissioned TNS and SWQ Consulting to research the usage and impact of the Fife Coastal Path.¹⁰² Research was undertaken from July 2006-June 2007. Results were based on 667 personal interviews and counts at 18 locations along the path during 56 days, together with 104 self-completion questionnaires, three focus groups, 1,000 interviews through the **Scottish Opinion Survey**, an email survey of 600 businesses, and a business workshop.

For each location where counting took place the average number of users observed per hour was calculated, giving an overall figure and figures for different time periods (eg weekends, weekdays, summer months, winter months). For each location these averages were then applied to the total number of days per year within each of these time periods. By adding together the estimates for each count location an overall estimate of annual visits to the path was obtained. The estimates established by this method are for the total number of visits rather than unique visitors.

Face-to-face interviews were conducted with a random sample of visitors. The questionnaires asked about expenditure on the path and the frequency with which visitors used the path. Visitors were targeted on the basis of the next person to leave or pass the interview, on completion of the previous interview. In addition to the face-to-face interviews a secondary form of data collection was used to boost the sample. Where respondents were unwilling or unable to stop for interview, such as long distance walkers or cyclists, self-completion questionnaires were handed out by interviewers. Self-completion questionnaires were also distributed to path users by tourist information centres along the path for visitors to complete and return. 104 self-completion questionnaires were returned, giving a total sample size of 771 respondents.

The research used the UK Sport methodology for assessing economic impact. This methodology makes two assumptions:

¹⁰¹ South West Coast Path, (2014)

¹⁰² Fife Coast and Countryside Trust, (2007)

- all expenditure made by residents within the impact geography (Fife) would have been made in the area anyway at a later date and therefore is discounted from the new additional expenditure
- where respondents stated that the Fife Coastal Path was their primary motivation for making their trip, all of the expenditure is treated as additional. Where the path was only one of several reasons or of no importance at all, only their daily expenditure is attributed and all accommodation expenditures are removed as well.

Key findings:

- an estimated 480,000-580,000 visits were made over a 12 month period:
 - 52% of users were on a short trip from home
 - 20% were on a day out from home
 - 26% were on holiday:
 - 55% lived in Scotland
 - 32% were from elsewhere in the UK
 - 13% were from overseas
- annual net expenditure was estimated between £24-29 million¹⁰³
 - this supported an estimated 800 to 900 FTE jobs in Fife
 - profit, wages and salaries retained within the area as a result of this new expenditure were estimated between £8-10 million
- 89% of local business consider that the path has a positive effect
- 60% of business saw the business potential of the path either for themselves or other operators.

Wales Coast Path

The devolved administration in Wales announced plans for a coastal path in 2006 and the Wales Coast Path opened in May 2012 as a designated walking trail with some stretches of bridal way. The Welsh Economy Research Unit assessed the impact of the path, which stretches 870 miles (1,400km) from the River Dee in Flintshire to Chepstow in the south, by conducting a visitor survey and applying economic modelling.¹⁰⁴

Beauford Research, who conducted the survey, considered responses from people using the path who were 16 and over, and on foot, cycling or on horseback. They did not include those associated with the path as employees and those employees of organisations responsible for setting up the path. They conducted around 700 interviews across 56 sites, which consisted of a short questionnaire. The Welsh Economy Research Unit estimated the economic impact of the path. They applied their own input-output tables which model the trading interactions of campaigns and other economic actors within a region and provide an assessment of the direct and indirect expenditure impacts of established sectors and new infrastructures.

The research was inclusive of direct and indirect economic impacts of visitors to the path as it is considered an 'enabling feature', recognising that relevant spending may take place in shops and hotels in nearby towns rather than on the path itself.¹⁰⁵ People walking the path may stay in local accommodation, which results in increased purchasing from local providers. Regional sourcing results in increased local income and produces induced income effects. The researchers therefore collated the sum total of induced income effects and supplier effects to

¹⁰³ Net expenditure refers to additional expenditure made by visitors that can be attributed to their visit to the path.

¹⁰⁴ Welsh Economy Research Unit and Beauford Research, (2012)

¹⁰⁵ Welsh Economy Research Unit and Beauford Research, (2012) p. 20

form the total indirect consequences of direct local economy activities.

Key findings:

- the path attracted nearly three million (2.89 million) visitors between October 2011-September 2012
- 94% of path users were walking for leisure: 38% of these were using the path as part of a longer holiday
- the average spend by individuals while using the path was £3.04 per party (equating to £1.60 per adult)
- the average spend outside the path per day, per party, excluding accommodation costs, was £12.69
- the path brought an estimated £32 million to the economy over 12 months from October 2011 to September 2012. This can be considered as:
 - £16.1 million of GVA
 - an estimated 730 person-years of employment.

These figures suggest a very large return on the initial £14.5 million investment in the path.¹⁰⁶ However, the **Path Visitor Survey** was carried out over summer months so may be something of an overestimate in terms of visitor numbers. Moreover in some areas of the path researchers used automatic people counters which lack accuracy given that if people undertake a circular route they will be counted twice. The researchers did take this into consideration and on busy parts of the path manual counters were employed. Due to economic limitations there were not counters along the whole of the path. However the researchers did not attempt to estimate spend on the uncounted sections. Similarly where people were taking an overnight visit the researchers only attributed a day and night's spending to the path rather than the total spend. Therefore the spending estimate may be conservative.

2.3.2. National Trails

National Trails are a family of long-distance paths which provide outstanding walking routes and many horse riding and cycling opportunities through some of the UK's finest landscapes. The first National Trail to open was the Pennine Way in 1965. There are currently 13 routes in England and along the border with Wales, forming a path network of over 3,500km. There are also two National Trails in Wales. National Trails are cared for and managed by 50 local Highway Authorities as well as other organisations. The trails are suitable for walkers and some sections are also suitable for cyclists, horse riders and people with limited mobility. In 2005 The Countryside Agency estimated that 12 million people visit the National Trails each year.¹⁰⁷

Hadrian's Wall Path

Research was undertaken to assess the value of the Hadrian's Wall Path over a five year period since its establishment in 2003, when it became the UK's fifteenth National Trail. The trail has 84 miles of uninterrupted walking along the riverside route in Tyneside, through farmland in Tynedale and a grazing upland section following the Whin Sill escarpment. To assess the economic impact of the wall, people counters were put in place and data were collected quarterly. It was hoped that this would establish the number of day visitors and also the amount of long distance walkers along the path. A sample from each group was then asked to estimate their average spend, and in the case of long distance walkers the average number of days

¹⁰⁶ John Griffiths, the Welsh Minister for Culture and Sport quoted on CountryFile

¹⁰⁷ Countryside Agency, (2005)

spent on the path. The average spend was then attributed to each walker. It was estimated that the path attracted £5 million of annual visitor spend and brought £19 million to surrounding communities.¹⁰⁸

Scotland

Scottish Natural Heritage commissioned a report regarding the value of long distance recreational routes, which are the Scottish equivalent of National Trails.¹⁰⁹ Scotland has four nationally-designated long distance routes – the West Highland Way, Speyside Way, Southern Upland Way and Great Glen Way.

Key findings:

- the 152km (96 mile) West Highland Way:
 - the route is walked in its entirety by an estimated 15,000 people each year
 - an additional 50,000-60,000 shorter distance walkers are estimated to use part of the route each year
 - these walkers contribute an estimated £3.5 million to the local economy, directly supporting around 200 businesses and five community clusters
 - the West Highland Way is the venue for Scotland's largest single charity fund-raising event, the Caledonian Challenge, which raises approximately £0.5 million for the Scottish Community Foundation
- the 135km (84 mile) Speyside Way:
 - the route is walked in its entirety by an estimated 2,500 people each year
 - in places the route acts as a focus for the development of community path networks or provides a valuable function by linking networks
- the 340km (212 mile) Southern Upland Way:
 - the route is walked by an estimated 1,000 people annually
 - the route contributes an estimated £0.5 million annually to the local economy
- the 118km (73 mile) Great Glen Way:
 - the route was used by an estimated 25,851 people in 2005
 - in 2005 an estimated 23% of path users were from Scotland, 49% were from England, 13% were from Europe, and 15% were from the rest of the world.

Wales

In October 2005, the Countryside Council for Wales (CCW) commissioned The Tourism Company to report on the benefits of walkers on the Welsh National Trails to local business in order to guide its work in trail management and promotion.¹¹⁰ The report considered Glyndŵr's Way, Offa's Dyke Path and the Pembrokeshire Coast Path. The study was concerned with economic impact from the supply side, with a focus not on users but on the businesses that provided services to walkers making use of one of the National Trails.

In 2005 an audit of businesses along each trail and a survey of accommodation and services providers associated with the three National Trails was carried out. Over 600 accommodation providers were identified that had potential to be associated with one of the National Trails and were contacted via a postal survey with questions specific to each trail. There was also an in-depth survey of service providers in five trail sections and an investigation into how the trails are

¹⁰⁸ Natural England (2007)

¹⁰⁹ V. Wood-Gee, Countryside Management Consultant, (2008)

¹¹⁰ The Tourism Company, (2006)

presented and promoted to potential users. The range of service providers identified as likely to be affected by one of the trails included shops, pubs, restaurants and cafés. 226 completed questionnaires were returned, representing a response rate of 38%.

Key findings:

- over one third of accommodation providers located on or near a National Trail described the trail as “very important to the profitability” of their business
- on average accommodation providers attributed 36% of their turnover to the National Trail
- each business employed on average three full time equivalent workers
- accommodation providers believed that almost 40% of their visitors come to the area to walk the National Trail and consider that this proportion is increasing
- 68% of accommodation providers said that the proportion of their visitors making use of the National Trail had grown over the last three years.

However it should be noted that even where a business can identify that National Trail users are included in its customer base it is simply not possible for all businesses to estimate the amount of their turnover that can be attributed to the National Trail in question. Furthermore only 38% of questionnaires were completed. The sample is self-selecting and willingness to reply may simply be a reflection of those businesses which consider the existence of a National Trail important to their business. The report highlights the issues of measuring activity on the National Trails, which are problematic for all studies of this nature.

2.3.3. National Parks

National Parks are rural areas afforded legal protection due to their beautiful countryside, wildlife and cultural heritage. There are fifteen members of the National Park family, including the Norfolk and Suffolk Broads which enjoy equivalent legal status.

People live and work in the National Parks and the farms, villages and towns within them are protected along with the landscape and wildlife. National Parks welcome visitors and provide opportunities for the general public to experience, enjoy and learn about their special qualities. There are ten National Parks in England, two in Scotland and three in Wales. A large amount of land within the National Parks is owned by private landowners, including farmers and organisations like the National Trust along with the thousands of people who live in the villages and towns. National Park Authorities sometimes own portions of land, but they work with all landowners in all National Parks to protect the landscape.

England

England’s ten National Parks were valued in a Cumulus Consultants report.¹¹¹ The report consisted of a review of existing literature, collection of data from public sources including the **Census 2011** and the ONS **Inter Departmental Register 2012** and visits to all National Park Authorities to gather local data, evidence and feedback. The researchers then collated a series of case studies and analysed future opportunities.

It should be noted that each National Park Authority collected data differently, undermining the consistency of data compilation. These variations were not visible in the datasets but the report

¹¹¹ Cumulus Consultants Ltd and ICF GHK, (2013)

attempted to ensure that data was compiled in a “consistent format.”¹¹² Further problems arose as a result of overlap within National Park boundaries. As a result the ONS use a ‘best fit’ form with regard to their data collection.

Moreover, the remit of the report was far wider than this review as it took into consideration all associated employment including farming, forestry and extractive industries, as well as tourism and recreation. Furthermore, it considered the impact of the parks in increasing the value of property, reducing costs to society by improving health, sequestering carbon, and purifying water. It also looked at the park’s contribution to enhancing the well-being of people and communities by providing recreational experiences, tranquillity and fine views, and maintaining a liveable environment by regulating climate, air quality, soils and water cycles. The report also included an ‘influence’ area which was determined to gain economic impact as a result of the existence of a National Park in the vicinity.

In terms of assessing impact it is hard to distinguish between the overall level of economic activity in National Parks, the impact of National Park designation, and the impact of the National Park Authorities. Furthermore it is hard to differentiate these from other external factors. The report therefore considers overall activity – as opposed to extra activity – which occurs as a result of the park’s existence. However the report makes these issues transparent and states that no attempt is made to quantify or value the net effect of designation itself.

Key findings:

- National Parks cover a total area of more than 9.3% of England’s land area
- around half the population of England resides within one hour’s travel of a National Park
- there are an estimated 90 million visitors to English National Parks and surrounding areas each year¹¹³
- visitors to the National Parks spend more than £4 billion and support an estimated 48,000 FTE jobs; this is around 34% of total employment in National Parks
- there are an estimated 22,500 businesses located in England’s National Parks providing around 141,000 jobs:
 - businesses in National Parks tend to be relatively small, employing half the average number of employees of the average business in England
 - National Parks have a higher proportion (9%) of self-employed people than the national average. Unemployment in National Parks is 2% lower than the national average
 - in 2012 £10.4 billion of turnover was generated by businesses in national parks and employment grew by 2.7%
- it is estimated that volunteering co-ordinated by National Park Authorities contributes the equivalent of an additional 200 FTE jobs:
 - National Park volunteers put in over 43,000 work days per year
 - volunteer time is valued at £3.2 million per year¹¹⁴
- the majority of employment is provided by the National Park Authorities, which conserve and enhance the natural beauty, wildlife, and cultural heritage of the National Park:

¹¹² Cumulus Consultants Ltd and ICF GHK, (2013)

¹¹³ This compares with 5 million visitors a year each to the British Museum, Tate Modern, the National Gallery or the Natural History Museum – the four most popular free visitor attractions in England.

¹¹⁴ Calculation is based on a 50/50 split of unskilled and semi- skilled work, and a rate for unskilled volunteering of £50 per day, and a rate for semi-skilled volunteering of £100 per day.

- the existence of the National Park Authorities resulted in an estimated 1,500 FTE jobs and £50 million GVA to the local economy in 2011/12.¹¹⁵

From an analysis of turnover, employment and county-level productivity data, the report estimated that England's National Parks generated anywhere from £4.1¹¹⁶-£6.3 billion of GVA in 2012, which accounts for 0.4%-0.6% of all GVA generated in England. The report notes that this is comparable to a smaller city such as Plymouth, Coventry, Swindon or Sunderland, or the UK aerospace sector, all of which have a total GVA of between £4-6 billion.

Wales

Arup was commissioned by a partnership of the Welsh National Park Authorities, Natural Resources Wales and the Welsh Local Government Association to consider the economic value of the Welsh National Parks.¹¹⁷ The parks are in the Brecon Beacons, Snowdonia and on the Pembrokeshire Coast. The researchers included a boundary area and therefore the figures outlined are not directly attributable to the National Parks in Wales. The figures are also inclusive of direct and indirect impacts, health and wellbeing benefits, socio-cultural values, and consideration of the additional value the parks bring to the natural environment such as carbon sequestering, water clearing, and flood prevention. The conclusions are based upon a statistical exercise to assess the size and shape of National Park economies, interviews with a selection of business and industry representation, and case studies of activities and initiatives undertaken in the National Parks which show the role that they play.

Key findings:

- National Parks cover an estimated 20% of land area in Wales
- Welsh National Parks receive an estimated 12.92 million visitors a year which equates to an annual injection of spending into the Welsh economy of £1 billion in goods and services
- 73% of the Welsh population visit the National Parks in Wales, relative to 65% throughout the UK
- people spend more time in Welsh National Parks than their English counterparts. The result is a higher average expenditure at £87 per head in Wales opposed to the £60 average in England
- the Welsh National Parks provide employment for 30,000 people. 38% of the jobs provided are linked to the environment
- National Parks recruit and coordinate over 15,000 hours of volunteering activity each year, with a value of £175,000¹¹⁸
- National Parks add an estimated 1.2% of GVA to the Welsh Economy which equates to £0.5 billion.

2.3.4. Woodland

Woodland covers 10% of England's land area, equating to around 1.3 million hectares. Over 89 million non-woodland trees contribute further to the 'woodiness' of England's urban and rural

¹¹⁵ As a result of budgets cuts, this figure is set to decrease in the next few years.

¹¹⁶ The lower limit, £4.1 billion, was calculated using the National Accounts figures to estimate the GVA generated per £1 of output across different sectors and apply this to the estimated turnover for those sectors in the National Parks.

¹¹⁷ Arup, (2013)

¹¹⁸ If average wage rates are applied.

landscapes. 2.6% of the country is ancient woodland.¹¹⁹ In 2012 the Independent Panel on Forestry published its final report in response to the government proposals of 2011 to change the way the Public Forest Estate would be managed.¹²⁰ The final report called for England's woods and forests to be re-valued for all the benefits they provide. The report set out a new approach to the development, management and governance of England's forests and woodlands, in both public and private ownership. Over 42,000 people responded to the call for evidence and more than 60 national organisations were represented at a stakeholder engagement event. Ten visits were made around the country to individuals, charities and community groups.

Key findings:

- people engage with trees, woodlands, and forests in many different ways:
 - recreation and leisure:
 - a study in 2003 found expenditure on forest related day trips in England to be around £2 billion¹²¹
 - it is estimated that the New Forest supports £400 million worth of tourist activity¹²²
 - volunteering and employment:
 - there is a high level of self-employment in forestry – 44% of people are self-employed
 - over 40% of forestry jobs are located in rural areas
 - shooting in woodlands is estimated to account for 28,000 jobs in the UK
- forests facilitate community engagement, enhance health and wellbeing and provide environmental benefits including clean air and water, reduced flooding and habitats for wildlife.

2.4. Individual activities

2.4.1 Angling¹²³

Research carried out by Dr Brown, Dr Djohari and Dr Stolk on behalf of Substance considered the impact of angling on sports participation, health and wellbeing, the natural environment, community development, rural communities and angling tourism, and socially isolated young people. The research used a number of methods to establish estimates due to its wide ranging, multifaceted nature.

They included:

- a large scale (national) survey work on angling participation involving over 2,400 anglers
- focussed surveys with over 200 young people, 54 youth projects and over 200 angling tourists
- 700 in-depth semi-structured interviews and 'light touch' consultations with anglers, practitioners, policymakers and community members
- in-depth case study research with angling organisations amounting to over 185 fieldwork visits, over 430 hours of on-site observation of youth intervention programmes, and action research with youth angling charity Get Hooked on Fishing

¹¹⁹ *National Inventory of Woodland and Trees 2001 England*, cited in Independent Panel on Forestry, (2012)

¹²⁰ Independent Panel on Forestry, (2012)

¹²¹ G. Hill, P. Courtney, R. Burton, J. Potts, (2003)

¹²² Independent Panel on Forestry, (2012)

¹²³ National figures estimating the impact of angling to the visitor economy can be found in section 1.5.

- analysis of particular angling initiatives and events, including National Fishing Month and the Trout in the Town programmes
- consultation with over 245 angling organisations.

The researchers found that angling tourism makes a positive contribution to many communities and has a particularly significant impact in rural communities.¹²⁴ The research included a case study of Assynt, a small and remote rural community in Sutherland, West Scotland. More information about Assynt can be found at: <http://www.assyntanglinginfo.org.uk/>

The study involved both quantitative and qualitative data collection and comprised of online and face-to-face surveys of anglers and other visitors. However the majority of surveys were online and therefore the sample was subject to self-selection. Semi-structured interviews with over 50 visiting anglers were conducted, visit postcode mapping and angling permit surveys were undertaken. An actions research initiative that explored the use of new technology for information provision was put in place, and angler feedback was also considered. Seventeen reports from the study are available from: <http://www.resources.anglingresearch.org.uk/>

The researchers surveyed visiting anglers in Assynt to determine the average expenditure in a number of areas. They then used estimates of total visiting angler numbers (at 1,200 and 1,500 per year) and standard multipliers to estimate the economic contribution to the area. The researchers were not able to conduct an analysis of secondary spend by businesses. They estimated that as a result of angling tourism:

- between £887,000-£1.1 million was contributed annually
- this resulted in between £345,840-£432,300 of GVA
- the volume of tourists resulted in an employment impact of between 25-31 FTEs.

The survey also included questions which required participants to rank the four most important things about angling in Assynt.

The four different categories which received the most votes were:

1. the remoteness of the area
2. the fishing mountain lochs
3. being able to fish without seeing others
4. the scenery.

2.4.2 Camping and Caravanning

According to VisitEngland an estimated 71 million bed nights were spent camping in Britain in 2010 – more than all B&Bs, guesthouses and self-catering excursions combined – and second only to hotels.¹²⁵ According to the Britain on Foot Campaign, Britain is the second largest camping nation in Europe¹²⁶, which can be expected to have an economic impact. VisitEngland estimates that from 2010-11, while trips increased by 5% from 16.6 million to 17.43 million trips, spend by GB residents increased by 10% from £2.3-2.5 billion.¹²⁷

¹²⁴ A. Brown, N. Djohari, P. Stolk, (2012)

¹²⁵ VisitEngland, (2011)

Bed nights are the number of nights away taken by adults and accompanying children on these trips. Each night away spent by an adult or a child counts as a night. Therefore a family of two adults and two children who take a trip for three nights would be counted as 12 bed nights. For the methodology of VisitEngland research see section 2.2.1.

¹²⁶ Britain on Foot

¹²⁷ VisitEngland, (2011)

The Camping and Caravanning Club commissioned research into the value of their industry.¹²⁸ The research was undertaken by academics at Liverpool John Moores University. It considered the psychological and social benefits of camping. The researchers looked at 60 studies published around the world since 1960 which they considered relevant to their study. They also commissioned a quantitative research study using a stratified sample via an online questionnaire. The questionnaire was put to 1,000 adult campers aged 18 and over via the Camping and Caravanning Club's database, and 1,000 adult non-campers aged 18 and over via an online panel. They also surveyed 1,000 children aged 7-11, 50% of whom were regular campers and 50% who had never camped.

Key findings:

- the Camping and Caravanning Club's members are estimated to deliver £40 million each year to the UK economy in terms of GDP, but also indirect economic impact through general wellbeing
- 76% of campers are satisfied with their quality of life compared to 59% of non-campers
- 80% of campers felt that camping brings families closer.

The Camping and Caravanning Club also commissioned research, sponsored by Halfords, into how their members spent money in the local community while camping or caravanning.¹²⁹ The research consisted of a self-completion questionnaire. This considered spend relating to public transport, fuel, eating and drinking out, purchase of provisions and tourist attractions. While 2,033 members who booked club sites were selected at random and asked to keep a diary of spend only 859 campers responded from 89 sites. Therefore the sample size was small as there was an average of 9.7 respondents per site. Site fees were not included in the total average spend per night, which amounted to £28.80, though these fees provide considerable trade and employment.

The research found that the 52.5% of spend was related to eating and drinking at local establishments, which were distinguished in the research from chain establishments. The questionnaire was undertaken during Easter. Over the Easter period there are reported to be fewer tent campers than in high season. This may cause the findings to be an underestimate as it has been suggested that tent campers tend to spend more than caravanners.¹³⁰

Key findings:

- campers and caravanners as a community are among the greatest consumers of outdoor recreation in the UK:
 - they are twice as likely to actively engage in an outdoor pursuit over non-campers
 - this could be as simple as walking and cycling but it could also mean more active pursuits like climbing and surfing
- it also found that campers and caravanners engage differently with the natural environment than the general public:
 - 24% enjoy bird watching and walking on their trips, whereas only 8% of the nation do this as a whole.

¹²⁸ K. Richards, (2011)

¹²⁹ The Camping and Caravanning Club, (2007)

¹³⁰ The Camping and Caravanning Club, (2007)

2.4.3. Motorsport

The Motor Sports Association commissioned the Sport Industry Research Centre Consulting at Sheffield Hallam University to estimate the potential economic value of ‘closed road’ motorsport events to the host communities if they were allowed to take place on public highways.¹³¹ The impact of stage rallies as well as hill climbs and sprints were included as all events have the potential to be held on stretches of public highway. The research also considered the current scale of motor sport events within Britain. Currently the majority of UK events do not occur on public highways as a result of the Road Traffic Act. Consequently they are held on private land, Forestry Commission roads, Ministry of Defence land and disused airfields.

Within the report, economic impact is defined as “additional visitor and organisational expenditure in the host economy that can be directly attributable to the staging of an event” ie over and above what would have happened anyway.¹³² The figures relating to potential economic impact are based on a number of assumptions. These include the assumption that 60% of spectators resident outside of an area are visiting specifically for an event, that events taking place over two days result in 40% of visitors spending one night in the area at an average cost of £35 per night, and that commercial and day visitors spend £25 per head per day on items other than accommodation.

Key findings:

- closed road motor sport events are popular with the general public and spectators are the key driver of the economic impact of motorsport
- the estimated economic impact of the 70 current domestic stage rallies in the UK was £14.9 million
 - this figure is not inclusive of the Welsh Rally GB, which the report highlighted was estimated in separate research by the Welsh Assembly Government as being worth £10 million
 - therefore the local economic impact of stage rallies, hill climbs and sprints was estimated to be at least in £23 million in 2010
- the Jim Clark Rally, which is the only closed road public road rally in mainland Britain was estimated as being worth £3 million to the Scottish Borders¹³³
 - Ramchandani and Coleman stated that this figure was an overestimate according to their own definition and suggested that the Jim Clark Rally was worth £1.2 million in benefits to the host community
- the research considered a “five year development horizon” in which 20 new closed road events emerge and eventually become a prominent feature in the motor sports calendar:
 - provided that the plan was successful the researchers estimated that there would be a minimum economic impact of £18.75 million for 20 hill climbs/sprints rising to £29.7 million assuming a balance of 10 stage rallies and 10 hill climb events
 - it was estimated that this could rise to as much as £40.9 million, dependent on the type of events
- media exposure as a result of the rally’s existence would provide marketing benefits to the host community
- attendance figures for motor sport events are summarised in the table below

¹³¹ G. Ramchandani, R. Coleman, (2010)

¹³² G. Ramchandani, R. Coleman, (2010)

¹³³ L. Dempster, C. McKinnon, (2006) cited in G. Ramchandani, R. Coleman, (2010)

Table 5: attendance figures for motor sport events in the UK (Source: G. Ramchandani, R. Coleman, 2010)

Event	Location	Teams	Attendance	Event days	Attendance per day
Jim Clark Rally	Scotland	280	35,000	3	11,667
Tour of Mull	Scotland	159	5,000	2	2,500
Donegal Int'l Rally	Republic of Ireland	150	50,000	3	16,667
Galway Int'l Rally	Republic of Ireland	200	20,000	3	6,667
Ulster Rally	Northern Ireland	154	7,075	2	3,538
Rally Ireland WRC	NI/Rol	108	254,000	4	63,500

2.4.4. Snowsport

The Tourism Resources Company, EKOS and Land Use Consultants were commissioned by development agencies Highlands and Islands Enterprise and Scottish Enterprise to provide an independent review of the Scottish Snowsports Sector.¹³⁴ Researchers were instructed to analyse the present state of the industry in Scotland and recommend actions to put the snowsports sector on a more sustainable footing. The researchers used data from 1985-September 2010.

The report considered the Cairngorm Mountain, Nevis Range, Glenshee, Glencoe Mountain Resort and The Lecht. The information that the report was based on is confidential given its commercially sensitive nature – it is therefore not available in the public domain. However the economic baseline range, which is the economic value in terms of expenditure and jobs, has been prepared based on a ten-year skier day average and information for the most recent year (2009/10). However there was a peak in visitor numbers in 2009/10 as a result of high snow fall which means that it is likely that the values are overly optimistic.

Key findings:

- snowsports constitute an important sector for Scotland's rural economy
- snowsports were estimated to generate a current (to 2010) economic benefit of £30 million per annum
- snowsports were responsible for supporting 634 jobs directly.

2.4.5. Walking

A report was commissioned by the Ramblers Association and undertaken by Dr Matthew Christie, Lecturer in Rural Studies at the University of Wales Aberystwyth, and Jon Matthews, an independent research consultant. It aimed to provide an independent review of the economic and social values of walking in England.¹³⁵

The research considered resources for walking in England including footpaths, bridleways, restricted byways, and byways open to all traffic. The values assigned by Christie and Matthews are based on the Countryside Agency's 2001 estimate that the rights of way network in England incorporates 188,700km of paths, and uses VisitEngland's 2001 tourism statistics and the *IPS* data from 2000.

¹³⁴ Tourism Resources Company, (2011)

¹³⁵ M. Christie, J. Matthews, (2003)

To calculate spend and the number of full time equivalent jobs Christie and Matthews initially established spend by tourists walking. Christie and Matthews' ranges, given below, account for the percentage of the initial spend which can be estimated to be retained within the local economy according to previously established multiplier coefficients.¹³⁶

Key findings:

- expenditure associated with walking in the English countryside is in the region of £6.14 billion:
 - this expenditure provides an 'injection' of cash into an area
 - Christie and Matthews highlighted that the more remote rural locations tend to have a higher multiplier effect
 - tourism is especially important to rural economies
- the total value to the economy from income generated as a result of expenditure on walking trips in England (including jobs and services supported) was estimated to be between £1.47 billion-2.76 billion
- walking tourism is estimated to support between 180,500-245,500 FTEs.

Similar results were found in Scotland and Wales, which Christie and Matthews suggest increase the validity of their own findings.¹³⁷ The figures are not inclusive of the health and social benefits of walking as at the time of the research such information was not available.

2.4.6. Water sports

The British Marine Federation (BMF) researched the economic impact of UK boating tourism.¹³⁸ The key sources for the assessment of the boating tourism sector were:

- BMF data relating to activities of members and the wider sector (2012/13) including BMF's key performance indicators of the leisure, superyacht and small commercial marine industry 2012-13
- BMF's industry trends survey May-November 2013
- government statistics relating to the economic performance of relevant sectors and economic multipliers (2012-13).

Key sources used to assess wider tourism expenditures were the ***Watersports Participation Survey 2012***, which used a sample of 12,000 nationally representative adults detailing 21 water based activities and a new BMF survey, undertaken between August and October 2013, of more than 3,000 boating and water sports participants covering behaviour and spend. However, this source is private access and therefore no comment can be made about the methodology.

Key findings:

- boating tourism contributed an estimated £3.7 billion to the UK economy in 2012-13 which accounts for 3.2% of all tourism expenditure in the UK
- across more than 2000 businesses UK boating tourism sectors – marinas/moorings, passenger boats, charter/boat hire and sea schools/training – generated a total turnover of £609 million in 2012/13:
 - returning an estimated GVA of £434 million

¹³⁶ M. Rayment, (1995) Nature conservation, employment and local economics: A literature review, RSPB: Sandy was used to establish the upper limits. 'The Countryside Agency, (2001) Resources for public rights of way 1999/2000, Countryside Agency' was used to establish the lower limits.

¹³⁷ M. Christie, J. Matthews, (2003)

¹³⁸ British Marine Federation Press Release, (2014)

- supporting 14,900 FTE jobs (directly and indirectly)
- in addition, wider tourism expenditures (which include purchases of 'non-boating' goods and services such as food, drink, travel and accommodation)
 - generate an estimated £3.3 billion of GVA for the UK economy
 - support a further 81,000 FTE jobs (directly and indirectly).

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3. Employment and volunteering

Outdoor recreation offers a wide range of employment and personal development opportunities for individuals throughout the UK. The opportunities afforded by outdoor recreation in the area of employment and personal development can be direct and indirect. For example people may be employed or volunteer in a delivery role, or they may work within hospitality or retail in a position which was created as a result of the volume of tourists visiting the area to enjoy the natural environment. For this reason the outdoor economy is a key source of employment in rural areas in particular.

The outdoor recreation sector is largely represented by young people, volunteers, self-employed individuals and small to medium enterprises (SMEs). The considerable role played by volunteers suggests that participants are major stakeholders in the sector.¹³⁹ Information relating to employment and personal development opportunities is widespread and can often be found as part of wider surveys conducted for other purposes, such as monitoring overall participation in physical activity or understanding individuals' engagement with specific environments in a distinct geographic location. With this in mind, jobs and opportunities linked to outdoor recreation are referred to not only in this section but throughout the report.

3.1. Research challenges

Difficulties associated with identifying the outdoors sub-sector in national statistics make it a challenge to estimate, let alone calculate accurately, the total size of the outdoor recreation industry. There are difficulties associated with using official government statistics that are compatible with the sector. It is normal to define sectors in terms of Standard Industrial Classification (SIC) codes, particularly for the purpose of drawing down data from national data sources. However the Office for National Statistics (ONS) has confirmed that problems are encountered when trying to assign the sector, as we have defined it, to SIC codes. Therefore it is not possible to use research based on SIC codes to define the whole sector. Sub-sectors can be defined by proportions of four figure SIC codes and sit across several, making the use of SIC codes to identify the size of the sector difficult. It follows that the official figures are likely an underestimate, which has been confirmed anecdotally. A range of estimates are presented in this section in an attempt to build as full a picture as possible in relation to employment, volunteering and other personal development opportunities.

3.2. Estimates by sector

SkillsActive

SkillsActive is the sector skills council for active leisure and learning. It offers training solutions and facilitates career development in the sport, fitness, outdoors, play and caravan industries. The latest official estimates according to SkillsActive in 2006 suggested that the "leisure, learning and wellbeing sector", as defined by SkillsActive, employed 663,300 people, representing just over 2% of the UK workforce.¹⁴⁰

¹³⁹ SkillsActive, (2006)

¹⁴⁰ SkillsActive, (2006)

SkillsActive estimated that there were 39,800 workplaces in the sector, of which 74% employed 10 or fewer people. They estimated that 47% of the workforce was employed in a part-time capacity and seasonal employment was identified as being important for the outdoors, caravan and play sectors. SkillsActive suggested that these sectors often attract people who are only able to work in a temporary capacity and therefore provide an important form of employment for certain categories of individuals, such as students and primary care providers.

SkillsActive states that within the outdoors industry, which encompasses outdoor education, outdoor recreation, development training, exploring and expeditions, and outdoor sports development, there are 26,400 people directly employed. The sector provides a significant number of volunteers and seasonal posts.¹⁴¹ However it is very difficult to define and measure the industry as work is seasonal and a high proportion is carried out on a freelance basis. Furthermore, as explained above, national data source SIC codes do not adequately represent the outdoors and the sector. There is also considerable overlap between industries and therefore it is likely that 26,400 is an underestimate and not representative of the industry. It is, however, the best official estimate available. SkillsActive research also found that the demographic of those employed in the outdoor industry differs from overall UK employment.¹⁴²

Key findings:

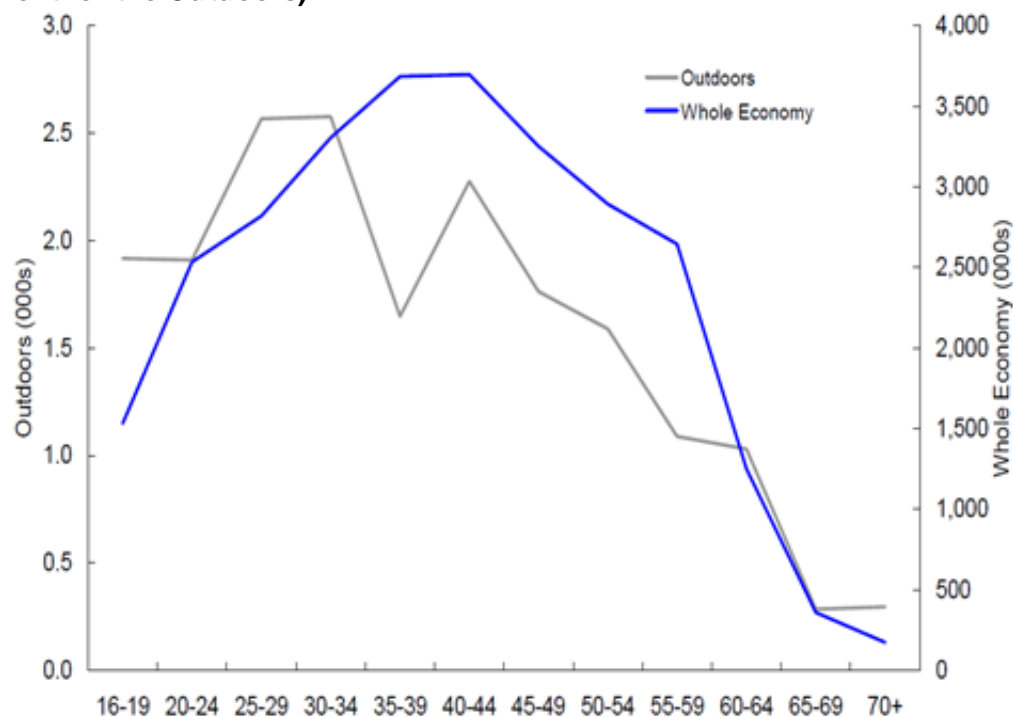
- GVA provided by the outdoor industry, which encompasses outdoor education, outdoor recreation, development training, exploring and expeditions, and outdoor sports development was estimated at £430 million
- 55% of staff are female, compared to 48% from overall UK employment
- 41% of staff work in a part time capacity, compared to 22% in all sector employment
- the industry employs a higher proportion of young people (16-24), concentrated mainly from 18 years onwards due to Ofsted requirements for working with children and minibuses driving
- 16% of staff are self-employed, compared to 13% in all sector employment
- 24% are managers and senior officials, compared to 15% in all sector employment
- 23% of staff are qualified to level four¹⁴³, compared to 29% in all sector employment
- within the industry 45% of the workforce is employed full-time, 41% part-time and 15% are self-employed.

¹⁴¹ SkillsActive (2006)

¹⁴² SkillsActive (2006)

¹⁴³ Certificate of higher education.

Graph 3: the age profile of those employed in the outdoors industry, as defined by SkillsActive, compared with the whole economy (Source: SkillsActive, 2006, *Skills Needs Assessment for the Outdoors*)



National Careers Service

The National Careers Service drew upon SkillsActive research to create a regional picture of how outdoors jobs were dispersed across the UK.¹⁴⁴

Table 6: UK breakdown of employment in the outdoors sector (Source: National Careers Service)

Region	Number of people employed
East Midlands	2,100
East of England	2,300
London	3,100
North East	1,000
North West	2,800
South East	3,700
South West	3,100
West Midlands	1,900
Yorkshire and the Humber	2,000
Northern Ireland	500
Scotland	2,700
Wales	1,400
Total	26,600

¹⁴⁴ National Careers Service website

Northern Ireland

In 2013 Sport Northern Ireland (Sport NI) commissioned the Sport Industry Research Centre at Sheffield Hallam University to assess the economic impact of outdoor recreation in Northern Ireland following a similar piece of research into the impact of sport.¹⁴⁵ Outdoor recreation was defined as encompassing:

“all sport and physical recreation that takes place in the natural environment whether on land, water or air. On land it includes but is not restricted to venues such as forests and woodlands, uplands and open land, caves, beaches and urban parks but also includes activities that take place on trails. In water it can include coastal waters, lakes and rivers and can be on or under the water.”

Therefore the figures are not inclusive of golf or hunting and do not include any contribution made by gambling.

Key findings:

- the GVA of outdoor recreation in Northern Ireland was estimated to be £102 million
- investment by central and local government was estimated at £36 million which generated an income of £69 million
- outdoor recreation employs 3,537 FTEs:
 - 4% are attributed to equipment
 - 12% are a result of bicycles
 - 12% are a result of local governments
 - 29% are a result of commercial and non-commercial ventures related to outdoor recreation
 - 29% are a result of centres, clubs, parks and associations
- when volunteer contribution is also considered the number of FTEs rose to 4,117 which equated to 25% of the FTE employment of the overall sport sector in Northern Ireland
- the contribution of outdoor recreation clubs was valued at £21.798 million, not inclusive of volunteer time; any surplus in clubs is reinvested so they are considered voluntary
- sailing and rowing generates a disproportionate income and associated spend of which 46% overall is spent on construction and 7% is spent on wages
- other clubs spend 44% of their surplus on kit/equipment and 1% on wages
- of particular importance in the economic impact analysis was the number of outdoor activity centres and outdoor education centres, which amount to 250 providers in addition to the retailer Chain Reaction Cycles Northern Ireland.

The study considered consumers and their spend, commercial outdoor recreation, commercial non-outdoor recreation, the voluntary sector and the additional GVA created, local authorities, central government, and outside area sector contribution. The headline figures are inclusive of direct and indirect impacts and draw upon information with a variety of methodologies from varying years. Wherever possible the most up-to-date information available was used. The figures also incorporate the contribution of volunteers' time and place an economic value upon it, as the researchers suggest that this increases 'added value' yet remains invisible in economic statistics. 380 commercial operations and 565 venues were presumed to be associated with outdoor recreation in Northern Ireland. Where existing data was lacking, for example for the

¹⁴⁵ Sport NI commissioned research C. Gratton, T. Kokolakis, (2014)

voluntary sector, an online questionnaire was conducted.

3.2.1. The visitor economy

The popularity of outdoor recreational activities is particularly important for rural communities, who are disproportionately reliant on employment created through rural tourism and consumption of outdoor pursuits.¹⁴⁶ According to a report commissioned to Deloitte by VisitBritain and the Tourism Alliance, which quantified the economic contribution of the 'visitor economy', tourism is the UK's sixth largest industry, employing 9% of the country's workforce.¹⁴⁷

The research found that in general as an area becomes more rural it is likely to have a greater reliance on industries related to the visitor economy. The relationship between the levels of workplace-based employment in visitor economy-related industries in each English authority and the degree to which that area is classed as rural was assessed. They found that there was a reasonably strong and positive relationship between the two, as demonstrated by the correlation co-efficient between the two sets of data at 0.4.¹⁴⁸ Therefore the more rural an area is, the more reliant it is on its visitor economy.

3.2.3. Retail and manufacturing

Despite the difficulties in establishing a number of people employed in the outdoors industry, experts Profile Outdoors estimated the UK outdoor market retail of clothing, footwear and equipment to be worth £1.433 billion at point of sale in 2013.¹⁴⁹ Profile Outdoors also estimated that between 21,000-23,000 people were employed in the outdoor retail sector and a further 4,000-4,500 were employed in the manufacture and distribution of equipment over the same period. The Outdoor Industries Association, the trade body for the sale of all outdoor and recreation equipment in the UK, endorses the work of Profile Outdoors. A full report and breakdown of this market is available for sale on the Profile Outdoors website:

<http://www.outdoori.com/profile-outdoors/current-reports/profile-uk-outdoor-report-2012>

The European Outdoor Group conducts an annual industry-wide survey of the majority of main outdoor brands operating in the sector, to understand the value and volume of brand product selling into retail stores across Europe, including the UK. These numbers are confidential and for the use of brands contributing to the survey. The report covers sales of more than two thirds of the total retail markets covered by the Profile Outdoors estimate. The Outdoor Industry Association has been given access to the market share breakdown of product groups. This, combined with a total breakdown of product groupings in the total Europe market, gives us a likely estimate of how the total £1.433 billion of sales are split in the UK.

¹⁴⁶ For more information see 2. The visitor economy.

¹⁴⁷ Deloitte and Oxford Economics, (2010)

¹⁴⁸ Deloitte and Oxford Economics, (2010)

¹⁴⁹ Outdoor Industry Association, Size of the UK Outdoor Market

Full details on how this is calculated and the in depth market report can be found at Profile UK
<http://www.outdoori.com/profile-outdoors/current-reports/profile-uk-outdoor-report-2012>

Table 7: UK wholesale market share estimation according to item based on 2012 *State of Trade Survey* by European Outdoor Group (Source: European Outdoor Group)

Item	Market Share (%)
Apparel	58.7
Footwear	17.9
Backpacks and luggage	5.5
Tents	7.5
Climbing equipment	1.5
Sleeping bags and mattresses	2.0
Outdoor accessories	6.9

The figures shown in table seven provide a breakdown of the outdoor gear sold in the UK. From the information available is not possible to reach any conclusions about the manufacture of goods and it is likely that much of the gear sold is imported. Moreover, it is not possible to determine the use of goods purchased. For example, a rain coat is not necessarily purchased to undertake outdoor recreation – it may simply be used during a commute to work.

3.2.4. Volunteering

Volunteers can be considered the major stakeholders in the outdoor recreation sector; their own enjoyment of a chosen activity motivates them to offer their time and expertise.¹⁵⁰ Volunteering has multiple impacts, aside from economic capital, which are accrued from free labour and the increased earning power of those who volunteer.

According to the Institute for Volunteering Research these benefits are:¹⁵¹

- increased physical capital which is facilitated through training courses and social events
- increased human capital which improves as volunteers achieve personal development
- increased social capital as a result of increased contacts and networks
- increased involvement in local activities
- heightened cultural capital, which is the increased sense of community and other cultures achieved through volunteering.

The valuable contribution volunteering makes, at both an individual level and to society at large, has been supported by research conducted by the Sport and Recreation Alliance into how sport and recreation can help to make us “healthier, happier and richer.”¹⁵² Through a systematic review of a series of academic research, the publication demonstrates the value which employers place on voluntary work and the positive outcomes associated with volunteering such as increased opportunities and social cohesion. While it is difficult to quantify the contribution of volunteers in the UK due to the lack of a clear legal definition, different organisations have attempted to do so with regard to specific sectors.

SkillsActive

The latest estimates according to SkillsActive in 2006 suggested that the leisure, learning and wellbeing sector has an estimated 1.9 million volunteers in England in the same period

¹⁵⁰ E. Brodie, N. Cowling, N. Nissen, et al., (2009)

¹⁵¹ Institute for Volunteering Research, (2007)

¹⁵² S. Cox, (2012)

(equating to 54,000 full-time equivalents).¹⁵³ Of those 1.9 million volunteers SkillsActive estimated that 61,600 are in the outdoors industry.¹⁵⁴ SkillsActive notes that available volunteer outdoor workforce statistics do not differentiate between volunteers that give their time on a full or part-time basis in an 'employment' setting and those that operate more casually, for instance within a club environment. However differences do exist between these volunteer types.

Lantra and Defra research

Lantra published research into volunteers based upon a survey of 342 UK volunteers, 85 organisations that host volunteers, and 43 organisations that use volunteers.¹⁵⁵ The research also considered Citizenship Surveys, Wildlife Trust Surveys of their own volunteers conducted in 2002, and information received from the National Trust, the Ground Work Trust, the Woodland Trust, the RSPB, the RSPA, the PDSA, the RDA, and the Guide Dogs for the Blind Association relating to volunteers.

The original research which forms a basis for the research by Lantra was conducted over different time periods, using different methodologies and definitions. Lantra reported that: there were in the order of 500,000 environmental and land-based volunteers in the UK, of which 75.2% volunteer regularly, ie not seasonally. However, Lantra identified problems with its own research. The Lantra research reported that a 2005 Citizenship Survey¹⁵⁶ found that 68% of people in England had volunteered informally over the preceding 12 months. This equated to 27.4 million people. Also, given that a Cabinet Office report¹⁵⁷ found that 18% of formal volunteers had been active in the field of conservation, the environment, heritage and animal welfare, then the number of volunteers in the sector might greatly exceed the half million derived from the Lantra survey.

In 2003 Defra reported that there were more than nine million members of the main nature conservation charities (eg the RSPB, the Wildlife Trusts) which collectively had more than 700,000 active volunteers.¹⁵⁸ Therefore, using the data available, Defra proposed a crude estimate of the economic value of environmental and land-based volunteering in England at £7 billion per annum.¹⁵⁹ Lantra found that volunteers are predominantly white and that one sixth are under 24 seeking opportunities to gain paid employment within the sector. Women comprise 46% of volunteers. Half of volunteers are active on a weekly basis, and one fifth every day.¹⁶⁰

3.3. Estimates by activity

Estimates for employment and volunteering within specific recreational activities are outlined below in order to give a more complete picture of the opportunities the sector provides.

¹⁵³ SkillsActive, (2006)

¹⁵⁴ SkillsActive, (2006)

¹⁵⁵ Lantra, (2008)

¹⁵⁶ Conducted by the Department for Communities and Local Government

¹⁵⁷ N. Low, S. Butt, A. Ellis Paine, J. Davis Smith, (2007)

¹⁵⁸ Defra, (2003)

¹⁵⁹ Based on the calculation whereby total economic impact of volunteering, which is a broad estimate, is calculated by using the mean hours spent on formal volunteering in the last four weeks (6.1) x 12 x mean hourly wage (£13 – source: Annual Survey of Hours and Earnings, 2006) x number of adults aged 16 or over. This values the whole of the sector's voluntary work to England's economy at £38.9 billion. If the economic value of environmental and land-based volunteering in England is proportional to its representation the value would be around £7 billion.

¹⁶⁰ Lantra, (2008)

3.3.1. Angling

Note: National estimates of the number of jobs created by other types of angling can be found in section 1.5.

Sea Angling

In 2012 Defra commissioned research into recreational sea angling in England, inclusive of both shore and boat catches.¹⁶¹

The research aimed to find out how many people go sea angling in England, how much they catch and release, and the economic and social value of sea angling. It was undertaken to help policymakers make well-informed decisions about the sustainable management of the sea. They collected data from over 11,000 sea anglers in England through an ONS household survey, face-to-face interviews with anglers by Inshore Fisheries and Conservation Authorities, catch diaries, and online surveys.

The surveys estimated that there are 884,000 sea anglers in England, with 2% of all adults going sea angling. Almost four million days of sea angling were recorded over the year. Shore fishing was the most common type of sea angling; in total almost three million angler-days were recorded. According to the report there are a further 125,000 sea anglers in Scotland and 76,000 in Wales.

In order to estimate spend per angler, Substance obtained information from 2,512 respondents from an online survey and 340 from face-to-face interviews at five case study locations (Weymouth, Deal, Liverpool, Northumberland and Lowestoft). The total annual spend in England was estimated by raising the mean spend per angler to the total number of sea anglers in England estimated from the ONS survey.

Key findings:

- the average spend per individual was estimated to be £1,394 per year:
 - £761 was spent on trip related costs
 - the remaining £633 was spent on major items
- it was estimated that anglers resident in England spent £1.23 billion on sea angling:
 - this equated to an estimated £831 million direct spend once imports and taxes had been excluded
 - the report estimated that the recreational activity supports 10,400 FTE jobs directly
- when indirect and induced effects are taken into account sea angling was estimated to result in £2.1 billion of total spend, equating to 23,600 FTE jobs. Coastal communities reap the benefits of this recreational past time as a result of spend on accommodation and charter boat hire, amongst other things.

The report highlighted that sea angling has important social and wellbeing benefits including providing relaxation, physical exercise, and a route for socialising. The social benefits survey found that 70% of participants considered angling as “important to their quality of life”, 47% of respondents said that “being outdoors and active” was their main motivation for going sea angling, and 55% said it was to “relax and get away from things.”¹⁶²

¹⁶¹ M. Armstrong, A. Brown, J. Hargreaves, K. Hyder, S. Pilgrim-Morrison, M. Munday, S. Proctor, A. Roberts, K. Williamson, (2013)

¹⁶² M. Armstrong, A. Brown, J. Hargreaves, K. Hyder, S. Pilgrim-Morrison, M. Munday, S. Proctor, A. Roberts, K. Williamson, (2013)

Tackle Trade Survey

The value of angling to the tackle trade can be discerned from the ***Tackle Trade Survey 2011***. The survey, designed by the Angling Trades Association, was sent to 1,000 companies and individuals operating in the specialist fishing retail sector. There was a 15% response rate to the survey which was conducted via Survey Monkey. Searce, an independent consultancy, then analysed the data. The survey did not count the growing numbers of non-specialist (ie high street) retailers.¹⁶³ However, due to the nature of the survey it was self-selecting as responses were collected online.

Key findings:

- 20,005 jobs are supported by the tackle trade
- sales of tackle, bait, clothing and accessories totalled £541 million (exclusive of VAT), up 4.9% on 2006:
 - not all fishing equipment sold is manufactured in the UK
 - £56.8 million worth of rods, reels, hooks and other line fishing tackle were imported from other countries
- the average turnover of each retailer was estimated at £218,653; this figure represents an increase from the 2006 figure of £190,827
- the total number of retailers in the sector is 2,472
- there is a trend towards larger retailers:
 - online or mail order sales accounted for 43.9% of all sales
 - nearly half of all outlets in the survey reported fewer than 100 customers per week
 - 70% of customers spent £50 or less per week
 - the aggregate value of small purchases is key to the trade.

3.3.2. Cycling

Dr Alexander Grous, productivity and innovation specialist in the Centre of Economic Performance (CEP) at the London School of Economics, conducted research on behalf of British Cycling and Sky in an attempt to chart the full extent of cycling's contribution to the British economy, which they referred to as the "Gross Cycling Product".¹⁶⁴ The researchers considered existing research in the sector, including previous estimates of employment forecast, conducted discussions with key industry bodies and stakeholders, and undertook their own primary research.

The research findings account for factors such as bicycle manufacture, cycle and accessory retail, and cycle-related employment. Cycle-related employment encompasses individuals, the majority of whom are employed by Sustrans and local authorities, which build and maintain dedicated cycling infrastructure in the UK. Estimates are also inclusive of the impact of cycling as a mode of active transport which we would not include within our definition. Readily available data for cycle-related employment do not exist. The estimates outlined were sourced from industry discussions and the utilisation of already available reports. Nonetheless the research provides a comprehensive, reliable and robust estimate of the sector.

¹⁶³ Searce, (2012)

¹⁶⁴ A. Grous, (2010)

Key findings:

- 23,000 people are employed directly in the cycling economy inclusive of manufacturing and maintenance.¹⁶⁵ This generates:
 - over £500 million in wages
 - around £100 million in taxes
- on average each cyclist is valued at around £230 per annum
- around 2,000 retail stores currently operate across a spectrum of activities including sales, servicing, workshops, and other speciality areas
- there are around 1,000 additional independent specialist cycling shops.

3.3.3. Horse riding

In 2009 the British Horse Industry Confederation published a briefing to assess the size and scope of the equine sector.¹⁶⁶ To assess the sector the British Horse Industry Confederation took information from the **National Equestrian Survey** (conducted by the British Equestrian Trade Association in 2006), the British Horseracing Authority's **Economic Impact of British Horse Racing** (carried out by Deloitte in 2009), the National Equine Database, Sport England data and British Horse Society statistics.

Key findings:

- horse owners, carers and riders in Britain spend more than £7 billion per year in gross output
- the average annual expenditure per privately owned horse was estimated at £2,166
- British riding supports thousands of small businesses. It is estimated that these businesses provide over 48,000 full-time jobs
- there was an estimated 19,000 businesses active in the equestrian sector offering services, including riding schools (1,800 licences by local authorities), farriers (2,400 registered), livery yards and trainers. These businesses, which are not associated with racing, we estimated to provide over 28,000 full time jobs
- when racing is included, riding in Britain contributes an estimated £4.3 billion per annum to the Treasury each year through tax. The figure includes direct spend on keeping horses, riding lessons, and the value of indirect expenditure on associated products by and for riders
- the research estimated that there are 17 horses per 1,000 people. They are owned or cared for by an estimated 550,000 people.

The scope of this study captured the contribution of hunting to the equine sector. The impact of hunting as a standalone activity was considered in 2000 by the report of the Committee of Inquiry into Hunting with Dogs in England and Wales, **The Burns Report**.¹⁶⁷ According to **The Burns Report**, "hunting as an economic and social activity is intrinsically intertwined with other activities within the horse and countryside economy." The report, which predates legislative changes, also estimated that:

- the total number of horses involved in hunting was estimated between 50,000-56,000
- the total amount spent by subscriber/member and follower households on all horse-related activity was £124 million per year

¹⁶⁵ Though the report highlights the lacking accuracy in relation to employment data attained in relation to employment.

¹⁶⁶ British Horse Industry Confederation, (2009)

¹⁶⁷ Home Department, (2000)

- the indirect employment by suppliers of goods and services, many of which were supplied by the equine sector, to hunts and hunt followers created an estimated 1,992 FTEs.

3.3.4. Shooting

Research firm Public and Corporate Economic Consultants (PACEC) was commissioned to research the impact of shooting in the United Kingdom in 2004.¹⁶⁸ A survey was conducted which was designed to ensure statistically robust estimates of activities and impacts across different geographical areas and quarry types. Over 10,000 questionnaires were mailed using a stratified random sample frame provided by 20 different groups based on the databases of stakeholders. In addition, questionnaires were sent out to shotgun certificate holders (via the Association of Chief Police Officers).

Over 2,000 completed questionnaires were returned to PACEC. The findings outlined are based on survey research but are 'grossed up' to reflect the total population of providers, participants and suppliers. This is not without its challenges as the total population of these groups was unknown at the outset and the population is inter-connected. The researchers note that due to the methodology it is likely that there will be a margin of error of at least 10%. The research was reviewed by Emeritus Professor David Colman of Manchester University, President of the International Association of Agricultural Economists.

Key findings:

- around 480,000 people take part in shooting activities
- shooting sports add £1.6 billion GVA to the economy
- in 2004 it was estimated that shooting providers in the UK spent an estimated £850 million providing sporting shooting opportunities:
 - employment costs were the largest single outgoing, accounting for just under a quarter (22%) of their total spend
 - over half of providers' annual expenditure goes on operational spend (68%).
 - only 10% is spent per year on capital items¹⁶⁹
- the number of direct jobs supported was estimated to be 600,000
- due to the seasonal/part time/unpaid and voluntary nature of employment in the sector it was estimated:
 - that those 600,000 undertook work equivalent to 49,000 FTEs
 - only 390,000 received payment therefore the number of direct paid FTEs supported was estimated to be in the region of 31,000¹⁷⁰
- PACEC estimated that 16,000 supplier jobs were supported in the UK as a result of shooting. The greatest proportion of jobs was in the food and accommodation sector. 5,700 jobs were supported in the UK¹⁷¹
- in total, spend by participants and providers on downstream industries came to £59 million in 2004. PACEC estimated that 22,000 paid FTE jobs were supported across the UK by sporting shooting in the rest of the supply chain.

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¹⁶⁸ PACEC, (2006)

¹⁶⁹ PACEC, (2006) p. 33

¹⁷⁰ PACEC, (2006) p. 34

¹⁷¹ PACEC, (2006) p. 46

4. Health and wellbeing

The evidence base for the wide range of benefits of physical activity for individual health and wellbeing is well-established. The right amount and intensity of physical activity positively impacts upon many parts of the body including – the heart, skeletal muscles, the immune system and the nervous system.¹⁷²

Physical activity can reduce many of the risk factors for non-communicable disease.¹⁷³ The World Health Organisation (WHO) estimates that physical inactivity is the fourth-leading risk factor for global mortality¹⁷⁴ with only smoking, high blood sugar, and high blood pressure responsible for more deaths worldwide. This is because physical inactivity is the main modifiable risk factor contributing to the development of many chronic diseases, such as obesity, cardiovascular disease, type II diabetes, hypertension, breast and colon cancer, osteoporosis, osteoarthritis, and depression.¹⁷⁵

Physical inactivity is estimated to be responsible for 3.2 million deaths per year accounting for more than 6% of total deaths. Moreover WHO estimates that physical inactivity is the main cause for approximately 21-25% of breast and colon cancers, 27% of type II diabetes cases and approximately 30% of ischaemic heart disease burden.¹⁷⁶ According to the **Health Impact of Physical Inactivity**, a tool which estimates the burden of illness and death from physical inactivity for those aged 40-79, in England 37,000 premature deaths are caused by inactivity every year.¹⁷⁷

There are many estimates which attempt to quantify the cost of inactivity to the public purse. In 2004 the Department of Health estimated that when the cost of treating diseases and sickness-related absence is accounted for, physical inactivity in England costs £8.2 billion annually.¹⁷⁸ This can be broken down as £1.7 billion in costs to the NHS, £5.4 billion in work absence and £1 billion in early mortality. This accounts for about 5% of the NHS budget, 72,000 work days lost and 86,000 lives lost prematurely. The figure outlined is not inclusive of the impact of obesity, a physical indicator of inactivity, which has large cost implications for the NHS and economy as a whole, and could be dramatically decreased by a greater uptake of physical activity.¹⁷⁹ It was estimated that the equivalent cost of physical inactivity in 2013 prices would be £10 billion.¹⁸⁰

More recent research from 2011 found that in 2006-07 the direct cost to the NHS of stroke, heart disease, colorectal cancers, breast cancer and type II diabetes was £936 million.

¹⁷² S. Cox, (2012)

¹⁷³ F.J. Penedo, J.R. Dahn, (2005)

F.B. Hu, M.F. Leitzmann, M.J. Stampfer, G.A., Colditz, W.C. Willett, E.B. Rimm, (2001)

J.S. Rana, T.Y. Li, J.E., Manson, F.B. Hu, (2007)

J. Myers, A. Kaykha, S. George, J. Abella, N. Zaheer, S. Lear, T. Yamazaki, V. Froelicher, (2004)

W.L. Haskell, I.M. Lee, R.R. Pate, K.E. Powell, S.N. Blair, B.A. Franklin, C.A. Macera, G.W. Heath, P.D. Thompson, A. Bauman, (2007)

¹⁷⁴ The World Health Organization, (2010)

¹⁷⁵ A. Bauman, (2004)

S. Biddle, N. Cavill, J. Sallis, (1998)

D. Warburton, C. Whitney, N. Shannon, S.D. Bredin, (2006)

¹⁷⁶ The World Health Organization, (2010)

¹⁷⁷ Health Impact of Physical Inactivity, burden of illness and death from physical inactivity for those aged 40 – 79 by county and unitary authority.

¹⁷⁸ Department of Health, (2004)

¹⁷⁹ P. Scarborough, P. Bhatnagar, K. Wickramasinghe, S. Allender, C. Foster, M. Rayner, (2011)

¹⁸⁰ D. de Moor, (2013)

Overweight and obese individuals cost £5.1 billion over the same period.¹⁸¹ However other estimates suggest that this figure is an underestimate. In 2007 Allender et al. proposed that physical inactivity costs the NHS in England £1.06 billion a year.¹⁸² Allender et al. identified diseases for which physical inactivity is a risk factor and calculated total number of deaths and daily adjusted life years lost for the diseases. They identified the population attributable fractions for each disease and applied these to NHS cost data to calculate the direct cost of physical inactivity to the NHS. Based on those calculations Allender proposed that 35,000 premature deaths could have been avoided if the population were more physically active and that 3.1% of morbidity and mortality could be attributed to physical inactivity. Indirect costs, such as the earnings lost through inability to work or premature death, were not included.

Levels of physical inactivity and the associated problems will likely become increasingly pressing given that younger generations are not meeting the Chief Medical Officer's recommended levels of physical activity in the UK.¹⁸³ According to the **Health Survey for England 2012** just 70.1% of young people aged 11-24 meet the recommendations.¹⁸⁴ There are many social determinants of health. It is an issue which is borne socially and economically – inactivity levels are not uniform across society and those from lower socio-economic groups are less likely to take part.

Similarly, young women are less likely than young men to meet the recommended levels of physical activity. According to the **Health Survey for England 2013**, 43% of young women aged 16-24 and 16.8% of young men fail to meet recommended levels of physical activity.¹⁸⁵ Physical inactivity in itself poses a major risk to health, independent of any other factor to which it is linked, such as obesity. For example, low cardio-respiratory fitness is estimated to be the cause of 16% of all early deaths.¹⁸⁶

StreetGames commissioned the Centre for Economics and Business Research (CEBR) to assess the potential cost of physical inactivity among the current generation of 11-25 year olds.¹⁸⁷ They estimated that, when reductions in healthcare costs and the increase in quality-adjusted life years were considered, the levels of physical inactivity among the demographic concerned will cost the state £53.3 billion over their lifetimes in today's prices.¹⁸⁸ Of these costs, £8.1 billion was directly related to the healthcare expenditures that will be needed to deal with the burden of non-communicable diseases, such as type II diabetes, chronic heart disease, stroke and colon cancer, among this cohort alone as they age.

4.1. The value of the outdoors for health and wellbeing

The benefits of physical activity to health are well documented. However, the additional benefits afforded through exercising in a natural environment are less well known and the subject of increasing focus for researchers. Nonetheless there is a consensus among experts in the field that facilitating equitable access to the natural environment is an essential part of ensuring the

¹⁸¹ P. Scarborough, P. Bhatnagar, K. Wickramasinghe, S. Allender, C. Foster, M. Rayner, (2011)

¹⁸² S. Allender, C. Foster, P. Scarborough, M. Rayner, (2007)

¹⁸³ Department of Health, (2011)

¹⁸⁴ NatCen Social Research, Research Department of Epidemiology and Public Health (2013)

¹⁸⁵ NatCen Social Research, Research Department of Epidemiology and Public Health (2013)

¹⁸⁶ S. Blair, (2009)

¹⁸⁷ K. Evans, (2014)

¹⁸⁸ This figure is the aggregate lifetime cost, calculated in 2013 constant prices, and discounted to present value (PV) terms using a discount rate of 3.5%. It is estimated through consideration of an increased burden of disease linked to inactivity, reduced quality of life and lower life expectancy.

improved health of the nation. These improvements in health transfer to savings for the public purse.

In November 2008, Sir Michael Marmot, Professor of Epidemiology and Public Health, was asked by the Secretary of State for Health to chair an independent review to propose the most effective evidence-based strategies for reducing health inequalities in England from 2010. Professor Marmot concluded that action to reduce health inequalities was vital given that it “will benefit society in many ways. A significant economic benefit will be felt by reducing losses from illness associated with health inequalities. These currently account for productivity losses, reduced tax revenues, higher welfare payments and increased treatment costs.”¹⁸⁹ Marmot suggested that the cost of treating various illnesses that result from inequalities in the levels of obesity alone will rise from £2 billion per year to nearly £5 billion per year in 2025 if no action is taken.¹⁹⁰ Professor Marmot also suggested that there is a link between “better health related to green space regardless of socio-economic status.”¹⁹¹ Access to the natural environment is therefore important in ensuring equitable levels of health and wellbeing across the population.

Similarly in 2013, following an extensive literature review, the Kings Fund prioritised green space as one of the most effective ways for local authorities to improve public health and reduce health inequalities. It considered nine key areas in which authorities could help to improve the health of the population. Access to green and open spaces was included as a priority, alongside ensuring the best start in life, healthy schools and pupils, and making people’s homes warmer.¹⁹²

The value that the natural environment provides for individuals is becoming increasingly recognised. In 2011 the UK National Ecosystem Assessment (NEA) provided a comprehensive overview of the state of the natural environment in the UK, and in doing so offered a new way of estimating the national wealth. The methodology and findings of this study are discussed in section 2.2.

4.2. Physical health

There is little evidence to suggest that exercising in the natural environment is better for your physical health compared to an equivalent amount of exercise indoors – though it is an up and coming area of research. However, there is an evidence base which, when assuming a causal relationship, proposes that when individuals are more regularly exposed to the natural environment they are physically active more often, and it is assumed that this would translate into improved physical health.

A study in the Netherlands which considered the impact that the natural environment had on self-reported health found that self-reported health increased with exposure to green space. The research was reliant on the self-reported health of over 10,000 people using the **Dutch General Health Questionnaire**, with land-use data on the amount of green space in their living environment.¹⁹³ Multilevel analysis was put in place in order to control for socio-economic and demographic characteristics, as well as urbanity. The researchers considered three available health indicators: the number of symptoms experienced in the last 14 days, participants’ perceived general health measured on a five point scale, and individuals’ scores on the **Dutch**

¹⁸⁹ M. Marmot, (2010)

¹⁹⁰ K. McPherson, M. Brown, (2009)

¹⁹¹ M. Marmot, (2010)

¹⁹² D. Buck, S. Gregory, (2013)

¹⁹³ P. Groenewegen, S. de Vries, R.A. Verheij, P. Spreeuwenberg, (2003)

General Health Questionnaire.

Key findings:

- living in a green environment was positively related to all three indicators of health
- the type of green space was irrelevant for health outcomes
- more green space results in a less polluted environment, more frequent contact with green space, and more physical activity.

The researchers concluded that every 10% increase in exposure to green space resulted in age-related expected health problems being put off by five years when assuming a causal relation between green space and health.¹⁹⁴ However, as in many of these types of study, outcomes may merely demonstrate the choice of richer (and therefore generally healthier) individuals are able to live nearer to green spaces. Moreover, due to the self-reporting nature of the survey, the research only established a relationship between access to green spaces and perceived health. It cannot determine whether access to green space actually makes people healthier. Therefore no causality can be inferred, merely correlations. Furthermore, data were collected in different years resulting in error. Nonetheless similar benefits were found by studies in Canada¹⁹⁵ and Japan, which strengthens the likelihood of a relationship existing.¹⁹⁶

Similarly, Professor Mourato, Professor of Environmental Economics at London School of Economics, found that improvements in green infrastructures and increases in their use can improve people's health and provide economic benefits.¹⁹⁷ The improvements come from regulatory services offered by the natural environment that provide cleaner air and water, and outdoor recreational activities that generate physical and psychological benefits. The health improvements can lead to economic benefits through cost savings to the NHS and through increased economic output due to a reduction in ill health, stress, absence from work and incidence of premature death.

The study presented a hypothetical scenario that assumed a change in natural habitats which lead to a 1% increase in the number of people who are physically active on a regular basis. The resulting improvement in morbidity and mortality was estimated to lead to overall annual cost savings of £1.44 billion when those aged 75 and over were included in the analysis, or £750 million when they were excluded. In the assessment the researchers only considered the health benefits of created exercise. That is, exercise directly attributable to the green space which would not have occurred if that green space did not exist. However there is no consistent and reliable estimate of the proportion of physical exercise which can be attributed to the existence of a green space. While there is a body of evidence which proposes that there is a positive relationship between environmental attributes and physical activity, it is "not possible to accurately value, at the present time, the health benefits of created exercise due to additional green space provision."¹⁹⁸

While it is not possible to accurately establish the extent to which additional green space confers health benefits on a population – it is possible to assess the extent to which there is an existing relationship between the proximity of an individual's home to specific habitats and their physical function, emotional wellbeing, and health utility score. Researchers analysed the physical and mental health benefits which arose from differing forms and quantities of exposure

¹⁹⁴ P. Groenewegen, S. de Vries, R.A. Verheij, P. Spreeuwenberg, (2003)

¹⁹⁵ P.J. Villeneuve, M. Jerrett, J.G. Su, R. Burnett, H. Chen, A.J. Wheeler, M.S. Goldberg, (2013)

¹⁹⁶ T. Takano, K. Nakamura, M. Wantanabe, (2002)

¹⁹⁷ S. Mourato, G. Atkinson, M. Collins, S. Gibbons, G. MacKerron, G. Resende, (2010)

¹⁹⁸ S. Mourato, G. Atkinson, M. Collins, S. Gibbons, G. MacKerron, G. Resende, (2010) p. 66

to the natural environment. They found a strong positive relationship between the proximity of an individual's home to a specific environment and their health scores.

They found that:

- having a view of a green space from one's house increases emotional wellbeing by 5% and general health utility by about 2%
- using the garden at least once a week increases physical functioning and emotional wellbeing by around 3.5% and general health utility by 2.7%.

However, no causal relationship can be inferred from this research. Variables may have been omitted from the models that cause changes in both dependant and explanatory variables. For example, the use of green space may be determined by physical functioning as opposed to the use of green space increasing physical functioning.

4.3. Mental health

Mental health is a level of psychological well-being. Mental ill health is becoming more prevalent among the population at large.¹⁹⁹ Doctors routinely prescribe antidepressant medication, and the personal suffering and measurable costs from mental ill health are enormous.²⁰⁰ Some of the negative implications are readily quantifiable, including the cost to the NHS of antidepressants and estimates of work days lost to mental ill health. Indeed, prescriptions for antidepressants are at record levels in England, with 50 million dispensed in 2012.²⁰¹ The cost burden will become increasingly significant given that WHO predicts that mental ill health is likely to become increasingly prevalent – WHO has predicted that depression will be the second biggest cause of illness worldwide by 2020.²⁰²

Mental ill health is linked to poor physical activity levels, increased smoking, increased sugar and fat intake and high levels of stress, all of which contribute to instances of non-communicable disease. Mental health problems place social and economic strains on individuals, their families and communities. There are cost implications for the state as a result of increased demand for health and social care services and welfare benefits. Tax and national insurance contributions from people who cannot work are lost.

The Department of Health has proposed that general wellbeing should be taken into account within health measurements.²⁰³ It suggests that the current method of measuring Quality Adjusted Life Years (QALYs) is not sufficient as it does not take wellbeing into account and therefore skews cost-benefit analysis.²⁰⁴ The potential financial pressure that obesity will place on the NHS in future years is similarly projected to increase rapidly.²⁰⁵ It is very difficult to ascribe any definite values to the outdoors in terms of savings made through preventing or reducing health problems, or identifying latent potential. However, there is a clear consensus that access to the outdoors makes a genuine contribution to health and wellbeing, even if in some cases it is limited to an individual's perception of their own wellbeing. Physiological

¹⁹⁹ E. Halliwell, L. Main, C. Richardson, (2007)

²⁰⁰ E. Halliwell, L. Main, C. Richardson, (2007)

²⁰¹ New Economics Foundation, (2013)

²⁰² World Health Organisation, (2013)

²⁰³ Department of Health, (2014)

The Department of Health believes that good wellbeing adds years to life, improves recovery from illness, and is associated with positive health behaviours and attitudes, the influence that individual wellbeing and mental ill health have on those around us, and has implications for treatment decisions and costs.

²⁰⁴ Department of Health, (2014)

²⁰⁵ M. Marmot, (2010)

benefits of exercising in the natural environment are not different to those facilitated by exercising indoors. However, there is an evidence base which suggests that exercising in the open environment is beneficial to mental health. Research also suggests that the psychological benefits may encourage us to exercise for longer – and therefore there may indeed be a physiological impact beyond that offered by indoor exercise.

The University of Exeter Medical School analysed data from over 1,000 participants of the **British Household Panel Survey** over a period of five years, in an attempt to provide a longitudinal analysis of the impact of moving to a greener or less green urban area may have upon mental health over time.²⁰⁶ They found that on average, those who move to greener areas experienced an immediate improvement in mental health that was sustained for at least three years after they moved. Compared to pre-move mental health scores, individuals who moved to greener areas (594) had significantly better mental health in all three post-move years ($P=0.015$, $P=0.016$, $P=0.008$). They also found that moving to a greener area had a greater lasting positive affect on mental health than marriage, and positively impacted on mental health more quickly than a lottery win. However, it is not possible to infer a causal relationship between moving to green areas and improvements in health since it may be that external variables that are unaccounted for resulted in the improvements in mental health.

The diverse literature on this broad theme of 'ecotherapy', which refers to healing and growth nurtured by healthy interaction with the earth, was considered by Jo Thompson Coon, Senior Research Fellow in Evidence Synthesis at the University of Exeter, and colleagues who attempted to resolve methodological issues in the area using a medical systematic review. The review analysed 11 existing studies covering 833 adults to conclude that there are benefits to mental and physical wellbeing from taking exercise in the natural environment.²⁰⁷ Within the review trials deemed eligible were those that compared the effects of outdoor exercise initiatives with those conducted indoors, and those which reported at least one physical or mental well-being outcome in adults or children. Results demonstrated that most trials showed an improvement in mental wellbeing.

When exercising in a natural environment was compared with exercising indoors the team found that exercising in natural environment was associated with greater feelings of revitalisation, increased energy and positive engagement, and with decreases in tension, confusion, anger and depression. Overall participants also reported greater enjoyment and satisfaction with outdoor activity and stated that they were more likely to repeat the activity at a later date.²⁰⁸ However, no research has been undertaken into whether people actually were more likely to continue exercising in the outdoor than the indoor group.²⁰⁹

Similarly in 2013, Mind, the mental health charity, published a report demonstrating that 'green exercise' or 'ecotherapy', is good for wellbeing.²¹⁰ Ecotherapy is an intervention that is facilitated and structured, focusses on doing an activity rather than 'health', takes place in a green environment, is related to exploring and appreciating the natural world, happens over time, and involves contact with other people. The evidence for the report was drawn from Mind's five-year Ecominds scheme which supported 130 ecotherapy projects and over 12,000 people in England. This included:

²⁰⁶ I. Alcock, M. White, B. Wheeler, L. Fleming, M. Depledge, (2003)

²⁰⁷ J. Thompson Coon, K. Boddy, K. Stein, R. Whear, J. Barton, M.H. Depledge, (2011) pp. 1761-72

²⁰⁸ J. Thompson Coon, K. Boddy, K. Stein, R. Whear, J. Barton, M.H. Depledge, (2011) pp. 1761-72

²⁰⁹ J. Thompson Coon, K. Boddy, K. Stein, R. Whear, J. Barton, M.H. Depledge, (2011) pp. 1761-72

²¹⁰ M. Ryan, (2013)

- an independent evaluation by the University of Essex of the Ecominds scheme which used the Warwick-Edinburgh Mental Well-being Scale
- research on the economic benefits of Ecominds projects by the New Economics Foundation
- independent evaluations of more than 25 individual ecotherapy projects
- a national evaluation of the Big Lottery Fund's £160 million Wellbeing and Changing Spaces programmes
- a survey of General Practitioners, nurses and clinical commissioning groups.

Key findings:

- ecotherapy helps to lower stress, improve mood, increase self-esteem, provide meaning and purpose, promote skill development and improve physical health by raising activity levels of people who are reluctant to access other forms of activities
- ecotherapy can be used as a form of preventative medicine as well as treatment
- traditional measures of success in healthcare do not acknowledge the holistic effect of multi-faceted interventions like ecotherapy.

Research undertaken on behalf of the Countryside Recreation Network measured the effects of ten 'green exercise' case studies inclusive of walking, cycling, horse-riding, fishing, canal boating and conservation activities. Comparing surveys from four regions involving a total of 263 participants the research found that even though these participants were generally an active and healthy group, 'green exercise' led to a significant improvement in self-esteem and total mood disturbance. 'Anger-hostility', 'confusion-bewilderment', 'depression-dejection' and 'tension-anxiety' were all reported to improve following the activity. Self-esteem and mood were found not to be affected by the type, intensity or duration of the 'green exercise', as the results were similar for all ten case studies. Therefore the researchers concluded that all activities generated mental health benefits, indicating the potential for wider health and wellbeing as a result of a wide variety of 'green exercise'.²¹¹

Coastal environments have an impact upon an individual's happiness, and being by the seaside is perceived to make a difference to health. Research published in 2012, conducted by the European Centre for Environment and Human Health at the Peninsula College of Medicine and Dentistry at the University of Exeter, considered data about 48 million people from the 2001 Census in England. In particular it focussed on the **British Household Panel Survey**. Researchers compared how close people were to the sea according to a geographic information system, and their answers to the question: "*over the last 12 months would you say your health has on the whole been: good; fairly good; not good?*"²¹²

Key findings:

- people living near the sea perceive themselves as happier than those inland²¹³
- those living less than 1km from the sea were more likely to describe themselves as 'in good health'²¹⁴
- the association between good health and coastal proximity is strongest in the most deprived areas²¹⁵

²¹¹ J. Pretty, M. Griffin, J. Peacock, R. Hine, M. Sellens, N. South, (2005)

²¹² B. Wheeler, M. White, W. Stahl – Timmins, M. Depledge, (2012)

²¹³ B. Wheeler, M. White, W. Stahl – Timmins, M. Depledge, (2012)

²¹⁴ B. Wheeler, M. White, W. Stahl – Timmins, M. Depledge, (2012)

²¹⁵ B. Wheeler, M. White, W. Stahl – Timmins, M. Depledge, (2012)

The researchers suggested that although only a small improvement in health was visible it could have a 'considerable' cumulative impact on the public health of coastal communities and when applied to the population as whole.²¹⁶ However, it should be noted that the findings were based upon a self-reported questionnaire. The research conclusions are based on the assumption that just because a person lives near the coast they are likely to visit often. Furthermore the research was not able to account for potential selection effects. Therefore while the coastal environment may afford more opportunity for engagement with physical activity and thereby result in improved wellbeing, it may be the case that wealthier, and therefore generally healthier people, can afford to move to a coastal environment. Therefore no causality can be inferred.

Further research was undertaken which controlled for factors which do not vary over time (such as personality) and compared the strength of relationships (such as how employment status impacted upon perceived health).²¹⁷ It also accounted for the impact of green space on perceived health to enable an understanding of the additional effects of coastal proximity. The longitudinal study compared the health and wellbeing scores of an individual when they were living further than 5km from the coast and then when they were less than, or equal to, 5km from the coast. However, as with earlier work undertaken, the research assumed that just because a person lives near the coast they are likely to visit more regularly. No causality can therefore be inferred.

Key findings:

- individuals reported significantly better general health ($p=0.028$) when living near the coast
- individuals reported significantly better mental health ($p=0.023$) when living near the coast.

Researchers at the University of Exeter are undertaking further research into whether the benefits of being in a coastal environment are transferable to non-coastal environments.²¹⁸ One preliminary study found that people's mood increased more when they were shown a blue environment, compared to green, urban or a blank wall.²¹⁹

4.4. Individual activities

4.4.1. Angling

Research by Substance carried out by Dr Brown, Dr Djohari and Dr. Stolk considered the impact of angling on sports participation, health and wellbeing, the natural environment, community development, rural communities and angling tourism, and socially isolated young people.²²⁰ The evidence for angling's contribution to health and wellbeing came from an angling participation survey, over 150 in-depth interviews with anglers, research visits to projects that employ angling as a tool to intervene in physical and mental health, and an online comment facility that collected anglers' personal interpretations of the health and wellbeing benefits of their participation.

²¹⁶ B. Wheeler, M. White, W. Stahl – Timmins, M. Depledge, (2012)

²¹⁷ P. White, I. Allcock, B. Wheeler, M. Depledge, (2013)

²¹⁸ L. Stewart, (2013)

²¹⁹ L. Stewart, (2013)

²²⁰ A. Brown, N. Djohari, P. Stolk, (2012)

Key findings:

- angling contributes to preventative and restorative measures by increasing physical activity and providing programmes that assist in recovery from physical illness
 - it incorporates a range of physical activity levels:
 - it is a useful addition to the physical activity regime of older people
 - it is one of the few sports where individuals with very different characteristics and abilities can compete on genuinely similar terms
 - when physical exertion in angling was compared to six other activities angling was half as vigorous as activities like mountain biking or horse riding but because of the longer duration, the total energy used per session was greater than any other activity²²¹
 - the rugged terrain and areas where people choose to fish means that just getting to a fishing spot requires considerable effort
- angling makes both a preventative and restorative contribution to mental health. It can assist in treatment and recovery from mental ill health
 - it incorporates therapeutic engagement and contact with 'blue-green spaces', and as a consequence helps maintain positive mental health, and provides stress relief
 - it provides escape and respite from stressful environments
- angling introduces protective factors that promote good mental health
- angling makes a contribution to improved social wellbeing
 - it helps build young people's relationships and confidence
 - it provides social opportunities which support active ageing.

4.4.2. Cycling

Dr Alexander Grous, productivity and innovation specialist in the Centre of Economic Performance (CEP) at the London School of Economics, conducted research on behalf of British Cycling and Sky in an attempt to chart the full extent of cycling's contribution to the British economy, which they referred to as the 'Gross Cycling Product'.²²² The researchers considered existing research in the sector, including previous estimates of employment forecast, conducted discussions with key industry bodies and stakeholders, and undertook their own primary research. The research findings account for factors such as bicycle manufacture, cycle and accessory retail, and cycle-related employment. Estimates are also inclusive of the impact of cycling as a mode of active transport which we would not include within our definition. Nonetheless the research provides a comprehensive, reliable and robust estimate of the sector.

Key findings:

- the current cost of inactivity to the UK is £760 million per annum
- regular cyclists take one fewer sick day a year than non-cyclists. This saves the economy an estimated £128 million per year in absenteeism
- a 20% rise in cyclists by 2015 could save the NHS £52 million in costs
- there are also potential benefits associated with reductions in congestion and pollution.

More recently British Cycling commissioned Cambridge University to research the impact of an increase in the number of people travelling by bike who would otherwise use a car.²²³ The

²²¹ J. Pretty, J. Peacock, R. Hine, M. Sellens, N. South, M. Griffin, (2007)

²²² A. Grous, (2010)

²²³ British Cycling, (2014)

research used an Integrated Transport and Health Impact Modelling tool (ITHIM) which was originally designed to evaluate the health and environmental impacts of high walking and cycling transport scenarios for English and Welsh urban areas outside London. The British Cycling research generated scenarios using increased cycling and lower car use based upon the Visions 2030 Walking and Cycling project which considered alternative transport scenarios for the UK for the year 2030. The visions were compared with a base line study. Changes to carbon dioxide emissions were estimated by environmental modelling. Health impact assessment modelling was used to estimate changes in Disability Adjusted Life Years (DALYs) resulting from changes in exposure to air pollution, road traffic injury risk, and physical activity. The research looked at the impact of increased physical activity on health outcomes in over-15s inclusive of cardio vascular disease, type II diabetes, breast cancer, colon cancer, and dementia. It considered the impact that it would have on a representative demographic.²²⁴

Key findings:

- if 10% of trips were made by bike that would save the NHS in England and Wales at least £250 million a year²²⁵
- if cycling made up 10% of all trips, compared to the current figure of about 2%, the nation would also gain the combined equivalent of more than one million years of healthy living over a decade due to lower rates of inactivity-related illnesses
- if five minutes of the average 36 minutes people spend in cars each day was used for cycling the NHS would see a 5% fall in inactivity-related illnesses
- the study suggested that total injuries need not rise with increased cycling as long as there are sufficient reductions in motor vehicle distance and lower motor vehicle speeds.

The research is robust as it uses recognised models and is based on large data sets which are representative of the demographic. The suggested outcomes are indicative of those which could emerge as a result of increased cycling. However, the data sets used consist of self-reported information and the research is based on a number of assumptions. The assumptions are that the increase in cycling will have represented a reduction in the short car trips and that adults outside of London spend an average of 10% of their travel time cycling.

However, if more young people cycled more relative to older people the health gain benefits would be smaller because most disease occurs in older adults. Eventually the impact on the nation's health would be evident but there would be a lag. The models do not allow for a reliable estimation of the impact of change over time and within the models lagged impacts are not accounted for. Similarly if the increase in cycling occurred amongst already active people the benefits would be much smaller. The research also assumes that the increase in cycling would occur as a result of journeys made by car being replaced. If journeys made by bike were simply replacing journeys previously made on foot then the differences would not be as large. As the authors note, the findings could also be considered to be an underestimate since the models consider a demographically representative sample and the positive impact that increased physical activity would have on obese and overweight individuals, and the consequently the NHS, would be disproportionately large.

²²⁴ J. Woodcock, M. Givoni, A. Morgan, (2013)

²²⁵ This is different to a mode share of all trips. As cycle trips are usually shorter in terms of trips than the average journey, this assumption will lead to a higher estimate of cycling than one based just on trips.

4.4.3. Horse riding

The British Horse Society commissioned the University of Brighton in partnership with Plumpton College to research the physical health, psychological and wellbeing benefits of recreational horse riding in the UK.²²⁶ Two scientific exercise testing trials were undertaken to analyse the physical exercise intensity of recreational horse riding. The first trial involved 17 participants cycling in a laboratory to assess their aerobic fitness levels. In the second trial the same 17 participants rode a horse for 45 minutes at the Plumpton College equestrian centre, following a protocol that replicated the pattern of a typical riding lesson. A questionnaire survey was undertaken of 1,248 horse riders. The quantitative and qualitative data gathered by the questionnaire allowed an analysis of the respondents' self-reported measures of exercise intensity and frequency, and their perceptions of the social and psychological benefits of horse riding.

Key findings:

- more than 80% of questionnaire respondents reported that horse riding made them feel 'quite a lot' or 'extremely' cheerful, relaxed, happy or active
- qualitative data suggests that horse riding can play a role in managing negative feelings relating to anxiety and depression
- horse riding and activities associated with horse riding, such as mucking out, expend sufficient energy to be classed as moderate intensity exercise
- horse riders with a long-standing illness or disability are able to undertake horse riding and associated activities at the same self-reported level of frequency and physical intensity as those without such an illness or disability.

4.4.4. Walking

Research undertaken by Natural England provided an assessment of the health and economic value of the Walking for Health initiative which was established to get more people walking, especially those who are less physically active or live in localities with particularly poor health.²²⁷ The research estimated the health value of universal green space provision. Within the research green spaces were defined as areas of natural or semi-natural land that are accessible to people.

Illustrative estimates based on assumptive models proposed by the National Institute for Health and Clinical Excellence,²²⁸ which did not allow for inclusion of all costs and benefits, were used to suggest that expansion of Walking for Health would, over a three year period, result in 2,817 QALYs delivered at a cost of £4,008.98 per life year based on the assumption that the weekly walks formed an additional activity and were not a substitute for existing activity, and participants would adhere to the programme for the duration.²²⁹ Researchers also suggested that the expansion of the programme would deliver 3,382 QALYs at a cost of £3,340.81 per life year based on the assumption that 20% of the participants do two additional physical activity events per week and 80% one additional event.²³⁰

²²⁶ The British Horse Society commissioned research conducted by the University of Brighton, (2011)

²²⁷ D. Stone, (2009)

²²⁸ National Institute for Health and Clinical Excellence, (2007)

²²⁹ D. Stone, (2009)

²³⁰ D. Stone, (2009)

The potential cost saving to the NHS through the prevention of illness as a result of the programme was estimated to be £81,167,864. This is based on the prevention of cardiovascular disease, stroke, and type II diabetes because the prevalence in the general population as well as the cost per person of treatment are known.²³¹ Therefore the figure presented may be an underestimate given other illness are associated with a sedentary lifestyle²³² and an increasing body of evidence which highlights the link between other types of access to green space and mental wellbeing. The return on investment ratio of Walking for Health was estimated to be £1:£7.18.²³³ The figures assume that the prevalence of each disease in the population would remain consistent over three years.

Based on previous research by Tsuji et al., which estimated the savings that could be attributed to walking an hour a day,²³⁴ it was predicted that universal and equitable access to green spaces could potentially save the NHS £2.1 billion per annum based upon a life-cost averted saving to the NHS.²³⁵ In order to establish a health value of UK-wide, equitable provision of access to green space a number of assumptions were established. For example, the model assumed that everyone behaves in a similar manner and that everyone's health outcomes are equal, which is not the case. Furthermore it assumes that where people have good perceived and/or actual access to green space, defined as within 500m from their home, they are 24% more likely to be physically active as is suggested by Coombs et al.²³⁶ Therefore if it became applicable to the whole population, as opposed to the assumed 24%, a cost saving of £8.8 billion would emerge.²³⁷ Despite the fact that local authorities and primary care trusts invested in the scheme, the value for money assessment only considers the investment made by the Department of Health as there was a lack of data available for local authorities and primary care trusts.

The benefits conferred for wellbeing gained via outdoor recreation are reflected in individuals' perceptions of the importance of the outdoors. **Monitor of Engagement with the Natural Environment (MENE)** found that 48% of the English population strongly agreed that having open green spaces close to where they live is important, 40% strongly agreed that spending time out of doors was an important part of their life and 33% strongly agreed that they were concerned about damage to the natural environment.²³⁸ It is possible that in England people are increasingly conscious of the health benefits associated with engaging with the natural environment. **MENE** found that since its establishment in 2009 the most notable change in motivation for engagement was health and exercise which increased from 34% in 2009-10 to 44% in 2012-13. It was the second most prominent motivator after exercising a dog.²³⁹ Similar evidence exists for the Welsh population. According to the **Welsh Outdoor Recreation Survey** in 2011, 60% of the population stated that they would like to visit the outdoors more often. That this was the case three years previous, yet participation remains very similar, must indicate that people are not engaging with the outdoors how they would ideally like to. This could suggest that infrastructure is not adequately facilitating engagement with the natural environment.²⁴⁰

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²³¹ D. Stone, (2009)

²³² According to the [World Health Organisation](#) in 2002 sedentary lifestyles "increase all causes of mortality". In addition to those considered by Stone, which are the illnesses most strongly associated with physical inactivity, are an increased risk of colon cancer, high blood pressure, osteoporosis, lipid disorder, depression and anxiety.

²³³ D. Stone, (2009)

²³⁴ I. Tsuji, K. Takahashi, Y. Nishino, O. Takayoshi, S. Kuriyama, Y. Wantanabe, Y. Anzai, Y. Tsubono, S. Hismichi, (2003)

²³⁵ D. Stone, (2009)

²³⁶ E. Coombs, A. Jones, M. Hillsdon, (2004)

²³⁷ D. Stone, (2009)

²³⁸ Natural England commissioned report, NECR122, (2013)

²³⁹ Natural England commissioned report, NECR122, (2013) p. 45

²⁴⁰ Countryside Council for Wales and Forestry Commission Wales commissioned report, (2012)

Concluding thoughts

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In considering the complex landscape of the economic assessment of the impact of outdoor recreation this review shows that there is no shortage of studies setting out to establish aspects of this puzzle. This review has set out to serve as a concise synthesis of existing information, research and evidence relating to the economic impact of outdoor recreation. It also crucially stands as a vehicle to stimulate future debate and encourage further investment in the sector and as such it is hoped that it will be a valuable asset to members of the Sport and Recreation Alliance as well as those with a professional interest in outdoor recreation. As with any undertaking of this size and scope there are inherent weaknesses, limitations and complex research challenges. But I would suggest that the undertaking in itself can provide a useful starting point for those entering the debate and a valued critical policy document to outline existing evidence bases in various aspects of valuing the outdoors.

Five key themes have emerged from this review:

1. An inconsistent approach to research

The research methodologies and approaches undertaken by universities, consultancies, government agencies, in-house research teams and public and quasi-public organisations are multi-faceted, diverse and philosophically wide ranging. Likewise we see a very wide range in the commissioning approach and scope and robustness of the many studies included (and those not included within this review). Perhaps a clear outcome from the review is the need for a focussed debate, review and discussion between practitioners and academics and the end user, and not just policy makers on these matters.

2. A need to de-mystify evidence

There is a need for greater awareness of the limitations of methodology and what constitutes best practice when it comes to evaluations and impact assessments in the field of outdoor recreation. This is particularly relevant to Sport and Recreation Alliance members which may commission, seek advice on and purchase such research. Mixed methods, quantitative and qualitative methodologies in the field of economic impact assessment and valuation are varied and a wider understanding and de-mystification of these techniques and approaches is required.

3. The pitfalls of over-simplification

Simplistic generalisations in complex societal impact areas are more common than you would imagine, and for this reason a number of studies have been excluded from this review. We see this and hope our own critical transparency goes some way to beginning a more nuanced debate about 'impact', 'value' and what 'open spaces' and outdoor recreation may offer.

4. The value of insight

In an era of evidence-led policy and scrutiny of public finances it is apparent that even the great outdoors, arguably our finest asset, must justify itself. What we have located are many particularly strong large scale studies, and some smaller scale, innovative studies that both critique (rightly), evaluate and in some cases estimate the worth and valuation of this most

prized of assets. We take the stance that insight and research-driven policy thinking can only improve access, participation and usage of such a potent vehicle for economic, social, environmental and psycho-social and physical health benefits.

5. Understanding individuals

It appears that the economic value of outdoor recreation is a strongly tested idea, and the conduit for these gains are the enthusiasts, volunteers and organisations who are active in the sector. The next phase of research may seek to highlight the levers, drivers and capacity-building vehicles for increasing access to the outdoors. In particular the research agenda might focus on the factors influencing an individual's relationship with outdoor recreation and could explore the inequality that exists in this area between different groups in society.

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The **Sport and Recreation Alliance** is the independent umbrella body for the national governing and representative bodies of sport and recreation.

Almost every recognised sport and recreation activity in the UK has its own governing or representative body – organisations like the Football Association, the Amateur Swimming Association, British Gymnastics and the Ramblers – who exist to organise, to set rules and to encourage more people to join their activity. The Sport and Recreation Alliance is their voice. Established in 1935 and originally named the Central Council of Physical Recreation, the Alliance exists to protect, promote and provide for its members. In fact, there is barely a recognised sport or activity in the country which is not affiliated to the Sport and Recreation Alliance. We have over 300 member organisations drawn from right across the entire spectrum of the sector.

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