

UK natural capital accounts: Tourism and recreation method changes

Explanation of the changes in how we estimate the recreational benefits of nature, which will be used in the UK Accounts.

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1 . Overview

We published estimates of nature's contribution to tourism and outdoor leisure for the first time in April 2021. This outlined plans to further develop our tourism account ready for integrating this into our annual UK natural capital accounts publication.

These plans included avoiding double-counting expenditure estimates when integrating tourism into the UK natural capital accounts 2021. They also included exploring tourism-related datasets for Northern Ireland to enable the production of UK-wide tourism statistics.

This article focuses on the former, proposing the creation of a combined tourism and recreation account. The estimates of the tourism and recreation natural capital accounts being reported within the upcoming 'UK natural capital accounts: 2021' are experimental and should be interpreted with caution in this context.

We welcome discussion regarding any of the approaches presented in this article via email at natural.capital.team@ons.gov.uk.

2 . Tourism account

Our tourism and outdoor leisure publication estimates nature's economic contribution to tourism and outdoor leisure. Data is gathered predominantly through the Great Britain Day Visits Survey and the Great Britain Tourism Survey. These represent trips during which at least one activity related to outdoor leisure was completed of three hours or longer in duration, taken within Great Britain. Additional data from the International Passenger Survey is gathered to capture visits to the UK from abroad.

To produce estimates of nature's economic contribution to tourism expenditure, the amount spent on items that enable or enhance these visits to the natural environment are counted. This includes costs of transport, car parking and entry tickets to visitor attractions. Other expenditure, such as money spent on food and drink or shopping, is excluded. Expenditure is then attributed to different habitats using a mixture of survey responses and the area covered by each habitat type within different regions of the UK. The number of outdoor-related activities completed within the UK is also estimated alongside expenditure. These methods have been adapted from a [report \(PDF 3.45MB\)](#) written by the Economics For The Environment Consultancy Ltd (Eftec).

3 . Recreation account

Our recreation account focuses on people's interactions with the outdoors for leisure and recreation purposes. It includes estimates for the total number of visits taken to the outdoors, as well as the total duration and amount spent while visiting the outdoors.

For estimates of outdoor recreation in England, the Monitor of Engagement with the Natural Environment Survey is used. The survey collects detailed information on people's use and enjoyment of the natural environment during visits of any duration. Similar survey sources are used to produce estimates for Scotland and Wales. For Scotland, Scotland's People and Nature Survey and the Scottish Recreation Survey are used. For Wales, the Welsh Outdoor Recreation Survey and National Survey for Wales are used.

The recreation account estimates the spend incurred to travel to an outdoor location and some expenditure incurred during the visit. This expenditure method considers the market goods consumed as part of making the recreational visit (fuel, public transport costs, admission charges and parking fees). This expenditure is currently assumed as a proxy for a marginal price for accessing the site.

4 . Comparison of accounts

The estimates of expenditure in the tourism and outdoor leisure natural capital account are similar to the recreation account. Both capture the amount spent on travelling to the natural environment. Including each measure within the UK natural capital accounts, 2021 would lead to double counting, in which some of the same expenditure is counted twice.

However, each account is not identical and therefore some expenditure data is present in only one account. Recreation estimates exclude overnight stays and tourist visits, while tourism estimates include both overnight stays and visits to the UK from abroad. The tourism account contains trips three hours or longer in duration only, while recreation covers all day trips, including ones shorter than three hours in duration.

Survey sampling also differs substantially between the two sets of accounts. The largest contributor by sample size of recreation data is the Monitor of Engagement with the Natural Environment survey, which samples approximately 48,000 interviews within England annually. The survey uses question modules to ask a subset of questions to individual respondents. As a result, only a total of around 4,000 people each year between 2009 and 2015, and 1,600 people between 2016 and 2018 were asked about the amount spent during their visit. The largest contributor to tourism data by sample size is the Great Britain Day Visits Survey, which samples approximately 35,000 interviews within Great Britain annually. Of those interviewees in England, approximately 22,000 each year were asked about the amount spent during their visit.

The overall methodological approach taken for each account also varies. Estimates of tourism and outdoor leisure are created using a top-down approach, where we attempt to isolate nature-related data from the available tourism data. Recreation estimates take a bottom-up approach, with individual respondent-level data being summed up to create national estimates. The bottom-up approach allows for more detailed analytical outputs to be generated from the same data. We currently cannot use the bottom-up approach for our tourism account because of data limitations.

5 . Methodological changes

A combined account

To generate a combined recreation and tourism account, we have taken the approach of adding the aspect of recreation estimates not already captured within tourism to the tourism estimates.

This involves determining recreation estimates for the number of visits and amount spent on day trips less than three hours in duration. This method maintains the larger sample size of the tourism-related surveys, while also using the respondent level data of the recreation surveys to generate detailed estimates for trips less than three hours in duration.

All the recreation surveys used within our approach asked respondents about the duration of their trip. Fortunately, responses to these questions were grouped so that three hours was always the upper or lower limit. For example, between two to three hours and three to five hours. As a result, only respondents that stated their trip was less than three hours in length were used to generate new estimates. The remaining methods for the recreation account are unchanged and outlined in the [UK natural capital accounts methodology guide: 2020](#). An updated methodology guide will be published on 12 November 2021 alongside the UK natural capital accounts 2021.

Regarding the tourism account, to enable better comparisons between this and recreation accounts, the physical flow estimates within the tourism account were altered. Previously, these measured the total number of outdoor-related activities undertaken within the UK. The recreation account captures the total number of visits taken to nature within the UK. An additional methodological step was added to the tourism estimates, which determines the average number of outdoor-related activities undertaken in one visit, for each type of activity. The number of times each activity was undertaken is then divided by this figure to ensure each visit is not counted multiple times. This is because we would expect people to complete multiple outdoor-related activities during a single trip. The remaining methods for the tourism account are unchanged and can be found within the [UK natural capital accounts: Tourism methodology guide](#).

Improved estimates for Northern Ireland

The [Tourism and outdoor leisure accounts, natural capital, UK: 2021](#) included initial estimates for nature's economic contribution to tourism and outdoor leisure in Northern Ireland. Since then, we have improved estimates for Northern Ireland within these accounts.

The integration of Northern Ireland data from the Northern Ireland Statistics Research Agency's annual tourism statistics publication has been enhanced. The UK natural capital accounts (to be released 12 November 2021) include data on overnight trips taken within Northern Ireland from across the UK. This survey captures the same type of data (overnight stays) for Northern Ireland as the Great Britain Tourism Survey (GBTS) does for Great Britain. As a result, this data follows the same methodology as data received from the GBTS.

Currently we do not have Northern Ireland data for day trips. The Great Britain Day Visits Survey (GBDVS) currently collects this data for Great Britain and provides the largest values towards visits and expenditure estimates of tourism and outdoor leisure. To ensure estimates are comparable across all UK countries, day trips data has been imputed for Northern Ireland. The ratio between total annual expenditure estimates from the GBDVS (day trips) and GBTS (overnight stays) is calculated and multiplied by Northern Ireland (overnight stays) data to generate a Northern Ireland equivalent of day trips. This new annual value is then proportioned by activity using GBDVS (day trips) data as a proxy. We then use the same methodology as for data from the GBDVS.

6 . Future developments

Additional changes to the methodology may also be explored in the future. The Monitor of Engagement with the Natural Environment (MENE) survey used for recreation estimates was retired in 2019 and replaced by the People and Nature Survey (PANS) in 2020. PANS was created to build on the MENE survey, though there were changes to methodology. We will need to explore these before using PANS for recreation estimates.

In 2020, the Great Britain Day Visits Survey and Great Britain Tourism Survey (GBTS) were combined, which has changed the way respondents interact with the former GBTS questions. Further work is required to understand and implement the changes, and to continue to produce tourism and outdoor leisure estimates.