



Llywodraeth Cymru
Welsh Government

BACKGROUND

National wellbeing indicators 2020-21: quality report

This document provides links to where further information can be found in relation to the quality of the data used in the National Indicators published in the Wellbeing of Wales report.

First published: 30 September 2021

Last updated: 15 December 2021

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Introduction

The links provide details such as coverage, and strength and limitations of the data, and also the processes used to produce and publish the datasets behind the indicators.

As the data for the indicators have been sourced from a variety of datasets the level of quality information available will differ in each case. For indicators that are taken from data designated by the Office for Statistics Regulation as National Statistics, quality reports will be available elsewhere providing detail of the methodology used and also covering data quality issues. Therefore, where this is the case, below we have provided links to those quality reports. For indicators where the data are Official Statistics, rather than designated as National Statistics, there may not be a quality report available. However, quality information will be available in the Statistical Release, if one is published. Therefore, in these cases we have linked to the relevant Statistical Release.

For some indicators where the data are not published as Official Statistics, there is likely to be less information about quality already published and therefore we have included greater detail about quality within this document.

Indicators 1 to 10

Indicator 1: Percentage of live single births with a birth weight of under 2,500g

Information in relation to data quality can be found in the quality report that accompanies the annual release [Maternity and birth statistics](#).

Indicator 2: Healthy life expectancy at birth, including the gap between most and least deprived

Healthy life expectancy at birth, including technical information about the measures, is published by the [Public Health Wales Observatory](#).

Indicator 3: Percentage of adults with two or more two healthy lifestyle behaviours

The data are from the [National Survey for Wales](#). Health-related behaviours can be a complex area to measure and there may be some differences between what people report and what they do. However, survey data still provides a reliable means of comparing patterns between different groups and over time. This indicator combines information about five different lifestyle behaviours. Results from 2020-21 should not be compared with previous years. For further information, see the results on [adult lifestyle](#) and the [National Survey for Wales quality report](#).

Indicator 4: Levels of Nitrogen Dioxide (NO₂) pollution in the air

Each year the [UK Government's Pollution Climate Mapping \(PCM\) model](#) calculates average pollutant concentrations for each square kilometre of the UK. The model is calibrated against measurements taken from the UK's national air quality monitoring network.

The Welsh Government has used this published data to assign a concentration of NO₂, PM_{2.5} and PM₁₀ to each residential dwelling in Wales based on which square kilometre of Wales it sits in.

For each census output area (statistical geographic units comprising around 150 properties), the pollutant concentrations associated with each dwelling within it were averaged to give an average NO₂, PM_{2.5} and PM₁₀ concentration across the census output area.

For each local authority and local health board, a population-weighted average over its constituent census output areas were calculated to give an average NO₂, PM_{2.5} and PM₁₀ concentration based on where people live in those local authorities and local health boards. The same calculation was also repeated over all census output areas, to give a comparable figure for the whole of Wales.

Indicator 5: Percentage of children with two or more healthy lifestyle behaviours

Data are based on the [Schools Health Research Network \(SHRN\) Student Health and Well-being Survey](#).

The survey is carried out by the School Health Research Network (SHRN), which is a partnership between Welsh Government; Public Health Wales; Cancer Research UK; the Wales Institute of Social and Economic Research, Data and Methods (WISERD); and Cardiff University. The survey is undertaken every two years, and provides a regular snapshot of the health behaviours of 11 to 16 year olds in Wales. The survey is completed online in the classroom setting. In 2019/20, almost 120,000 students took part in the survey.

Please see the Methods section of the report for further quality and methodology information.

Indicator 6: Measurement of development of young children

Please see the statistical release for [on-entry assessments of pupils in reception class](#).

Indicator 7: Average capped 9 points score of pupils, including the gap between those who are eligible or are not eligible for free school meals

Please see the quality section of the [annual statistical release Examination Results](#).

Indicator 8: Percentage of adults with qualifications at the different levels of the National Qualifications Framework

Please see the quality section of the [statistical release Levels of highest qualification held by working age adults](#).

Indicator 9: Gross Value Added (GVA) per hour worked, index (UK = 100)

These data are published by the Office for National Statistics (ONS). Further information can be found on the [Labour productivity quality and methodology information Office for National Statistics webpage](#).

Indicator 10: Gross Disposable Household Income per

head

These data are published by the Office for National Statistics (ONS). Further information can be found in their [regional gross disposable household income quality and methodology information paper \(Office for National Statistics\)](#).

Indicators 11 to 20

Indicator 11: Percentage of businesses which are innovation-active

These data show the percentage of businesses that are innovation active. The UK definition of innovation follows the EU-wide definition adopted by Eurostat. Businesses are considered to be innovation active if they:

- introduced a new or significantly improved product (goods or service) or process
- engaged in innovation projects not yet complete or abandoned
- acquired new and significantly improved forms of organisation, business structures or practices and marketing concepts or strategies

Although each rate is available for the two population bases, as well as for several other age groups, there is an official standard population base used for each of the rates, as follows:

- Percentage of population of working age
- Economic activity
- Employment
- Economic inactivity (including or excluding students)

- Percentage of economically active population aged 16 and over
- ILO unemployment

The UK Innovation Survey is conducted by the Office for National Statistics (ONS) on behalf of the Department for Business, Energy and Industrial Strategy (BEIS). The UK Innovation Survey is part of a wider Community Innovation Survey (CIS) covering EU countries. The survey is based on a core questionnaire developed by the European Commission (Eurostat) and Member States. The UK Innovation Survey 2017 sampled approximately 30 thousand UK enterprises. The survey was voluntary and conducted by means of both a postal questionnaire and telephone interview for businesses that had not yet completed a postal response. The survey covered enterprises with 10 or more employees in sections C-K of the Standard Industrial Classification (SIC) 2007. The sample is drawn from the ONS Inter-Departmental Business Register.

Frequency of publication: Every two years.

Data reference periods: 2008/10 to 2016/18.

Users, uses and context: The data feeds into the economic analyses and other policy related work. It provides both a periodic snapshot of innovation behaviour and has the additional benefit of the panel dataset which facilitates longitudinal studies and evaluations of innovation policy.

Statistical quality: The results are sample-based estimates and therefore subject to differing degrees of sampling variability, i.e. the true value for any measure lies in a range about the estimated value. This range or sampling variability increases as the detail in the data increases, for example individual local authority data are subject to higher variability than Wales data.

For further information see [UK innovation survey 2017 \(Department for Business, Energy & Industrial Strategy\)](#).

Indicator 12: Capacity in megawatts (MW) of renewable energy equipment installed

The indicator is sourced from the [Energy Generation in Wales](#) study. Regen was commissioned by the Welsh Government to produce a database of energy generation projects in Wales; identify the extent to which projects are owned by Welsh individuals, organisations and communities; and analyse the data to produce a report on progress.

The research method developed by Regen to produce a detailed picture of energy generation across Wales includes:

- identifying, collating, cleansing and cross-referencing records from existing datasets
- verifying and analysing the data to ensure a robust national overview and locally specific data where available
- verifying the data with stakeholders and industry where appropriate
- researching ownership details, including referencing to Companies House to identify projects with local ownership

The key sources of data used in the study include:

- Feed-in Tariff data
- Obligation register
- Heat Incentive and Renewable Heat Premium Payment data
- Power Distribution connections data
- Energy Networks connections data
- MCS data
- Energy Planning Database
- with utilities
- with installers and industry organisations
- survey of small scale storage installers.

- energy statistics

Indicator 13: Concentration of carbon and organic matter in soil

Measured from soil samples using the loss on ignition methodology to determine the soil carbon concentration. The **Glastir Monitoring and Evaluation Programme** collects evidence for all six intended outcomes from the Glastir scheme.

1. Climate change mitigation.
2. Improvement to soil and water quality.
3. A halt in the decline of biodiversity.
4. Improved woodland management.
5. Greater access to the Welsh landscape.
6. Condition of historic features.

Much of this is achieved through a field survey of 300 1km squares across Wales, half of which are focussed on areas prioritised for advanced payments. The 1km squares are selected at random from 26 land classes, ensuring good coverage of the Welsh landscape. Squares will be surveyed over a four year period and then revisited over the following four years, meaning evidence of change will be collected and the effects of a single year's weather extremes are reduced. The area of 'Glastir land' within each surveyed square will vary and this is taken into account during analysis. Data from ongoing specialist monitoring programmes much of it collated by the Biological Records Centre is also included in analysis wherever possible to maximise use of all ongoing monitoring activity. Models are being used to estimate expected future outcomes so that adjustments can be made to match Welsh Government priorities and scheme impact can be maximised.

Samples are taken from across all of Wales' 26 land classes, including the

peri-urban and coastal fringe. The survey consists of 300 1km sample squares approximately half of which fall outside of Glastir. The survey is intended to be an all Wales survey. The survey does exclude densely developed city areas and therefore it should not be considered as an inventory for brownfield sites.

Indicator 14: The global footprint of Wales

Information about the methodology can be found in the report [Ecological and Carbon Footprints of Wales](#).

Indicator 15: Amount of waste generated that is not recycled, per person

This indicator is calculated from three separate elements.

Household waste

This element is based on residual (i.e. not recycled) household waste collected. This data does not take into consideration any waste generated as residual that is subsequently recycled, or waste generated in recycling streams that is subsequently rejected for disposal. The source for this data is Waste Data Flow, which collects local authority municipal waste data on a regular basis. Data are based on financial year. Additional information is available in the statistical release [Local authority municipal waste management](#).

Construction and demolition waste

This element is based on the EU Waste Framework Construction and Demolition recovery target definition. This excludes hazardous waste and naturally

occurring soils and stones. It includes backfilling activities. The source for this data is the 2012 Construction and Demolition waste survey where data was collected from 457 business sites of differing sectors and sizes throughout Wales between July 2013 and January 2014. Additional methodological information available in Section 2 of the report [Construction and demolition waste survey 2012 \(Natural Resources Wales\)](#).

Industrial and commercial waste

The source for this data is the [2012 Industrial and Commercial waste survey](#), where data was collected from 1,540 business sites of differing sectors and sizes throughout Wales between July 2013 and December 2013. Additional methodological information available in Section 2 of the report.

Indicator 16: Percentage of people in employment, who are on permanent contracts (or on temporary contracts, and not seeking permanent employment) and who earn at least the real Living Wage

Permanent contracts and those on temporary contracts and not seeking permanent employment as defined by questions in the Labour Force Survey.

This national indicator has been amended from “Percentage of people in employment, who are on permanent contracts (or on temporary contracts, and not seeking permanent employment) and who earn more than 2/3 of the UK median wage” in the Wellbeing of Wales: national indicators set in December 2021, we are working to make further quality information on those earning the real living wage available for this indicator as soon as possible

Indicator 17: Pay difference for gender, disability and

ethnicity

[Annual Survey of Hours and Earnings, Low Pay and Annual Survey of Hours and Earnings Pension Results Quality and Methodology Information \(ONS\)](#).

This national indicator has been extended from “Gender pay difference” in the Wellbeing of Wales: national indicators set in December 2021, we are working to make further quality information on pay difference for disability and ethnicity available for this indicator as soon as possible

Indicator 18: Percentage of people living in households in income poverty relative to the UK median, measured for all people, children, working age adults and those of pension age

[Households below average income \(HBAI\) are published by the Department for Work and Pensions](#).

The Welsh Government also carry out extra analysis of the HBAI datasets to consider economic status, housing tenure, family, ethnicity and disability characteristics. This data and summary analyses can be found on the [Relative income poverty statistics page](#). Information on methodology and data interpretation can also be found on these pages.

Indicator 19: Percentage of people living in households in material deprivation

The questions included in the National Survey for Wales were taken from the

Family Resources Survey (FRS), and the methodology used to classify people uses a similar, but not identical method (the FRS also uses income and some questions in the National Survey were only asked of those who were classed as 'borderline' deprived).

Non-pensioner adults were asked whether they had things such as, 'a holiday away from home for at least a week a year', 'enough money to keep their home in a decent state of decoration', or could 'make regular savings of £10 a month or more'. The questions focussed on whether they could afford these items.

Pensioners were asked slightly different questions such as whether their 'home was kept adequately warm', whether they had 'access to a car or taxi, when needed' or whether they had their hair done or cut regularly'. These questions also asked whether they could afford them, but also focussed on not being able to have these items for other reasons, such as poor health, or no one to help them etc.

People who did not have the items asked about were given a score, such that if they didn't have any item on the list they would have a score of 100, and if they had all items they had a score of 0. Non-pensioners with a score of 25 or more were classed as deprived and pensioners with a score of 20 or more were classed as deprived. Non-pensioners and pensioners have been grouped together for this indicator.

Please see the [National Survey for Wales quality report](#) for further information on the strengths and limitations of the survey.

Indicator 20: Proportion of employees whose pay is set by collective bargaining

This national indicator has been newly added to the Wellbeing of Wales: national indicators set in December 2021, replacing "Percentage of people moderately or

very satisfied with their jobs” we are working to make further quality information available for this indicator as soon as possible.

Indicators 21 to 30

Indicator 21: Percentage of the population aged 16 to 64 in work in Wales

Please see the [Annual population survey quality and methodology report \(Office for National Statistics\)](#).

Indicator 22: Percentage of people in education, employment or training, measured for different age groups

Please see the quality section of the [statistical release Participation of young people in education and the labour market](#) and [Young people not in education, employment or training \(NEET\)](#).

Further detail is available in the [methodology note for the derivation of estimates of the participation of young people in education and the labour market](#) and the [guide to the different sources of NEET statistics in Wales](#).

Indicator 23: Percentage of people who feel able to influence decisions affecting their local area

The indicator uses the percentage of people who ‘strongly agree’ or ‘tend to agree’ with the statement “I can influence decisions affecting my local area”.

Please see the [National Survey for Wales quality report](#) for further information on the strengths and limitations of the survey.

Indicator 24: Percentage of people satisfied with their ability to get to and access the facilities and services they need

This indicator measures the percentage of people aged 16 or over who report feeling very or fairly satisfied with their ability to get to/access the facilities and services they need, within a 15 to 20 minute walk from their home.

Please see the [National Survey for Wales quality report](#) for further information on the strengths and limitations of the survey.

Indicator 25: Percentage of people who feel safe at home, walking in the local area, and when travelling

This is based on four separate questions asked as part of the National Survey for Wales and uses the percentage of people who report feeling 'very safe' or 'fairly safe' in all of the following situations after dark:

- at home
- walking alone
- travelling by public transport
- travelling by car

More in-depth analysis is available in the statistical report [Feeling safe in the local area](#).

Please see the [National Survey for Wales quality report](#) for further information on the strengths and limitations of the survey.

Indicator 26: Percentage of people satisfied with their local area as a place to live

Please see the [National Survey for Wales quality report](#) for further information and the research report [Satisfied with local area](#).

Indicator 27: Percentage of people agreeing that they belong to the area, that people from different backgrounds get on well together, and that people treat each other with respect

This indicator is based on three separate questions asked as part of the National Survey for Wales, and uses the proportion of people who strongly agree or tend to agree that:

- they belong to their local area
- the local area is a place where people from different backgrounds get on well together
- that people in the local area treat each other with respect and consideration

Please see the [National Survey for Wales quality report](#) for further information on the strengths and limitations of the survey and the research report [Sense of community](#).

Indicator 28: Percentage of people who volunteer

The indicator uses the percentage of adults who give their time for free to help clubs or organisations. The data presented does not include people who provide care for someone.

See the [National Survey for Wales quality report](#) for further information on the strengths and limitations of the survey.

Indicator 29: Mean mental wellbeing score for people

Adults

Data are collected via the National Survey for Wales. Due to the sensitive nature of some of the questions, the respondents were handed the interviewer's laptop and asked to complete this section for themselves. In the most recent survey 81% agreed to self-completion, 11% agreed to the interviewer completing the section for them (which may have affected their responses) and 8% refused to answer the questions entirely. Older people were less likely to complete the section for themselves.

The mean mental wellbeing score is calculated according to the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). To assesses mental wellbeing on the WEMWBS scale, respondents were given 14 statements such as "I've been feeling relaxed" and "I've been thinking clearly". They were were asked how often they felt this way on a five point scale, where 1 was 'none of the time' and 5 'all of the time'. A score from 14 to 70 was calculated based on these responses, with higher scores indicating better wellbeing. For further information, see the [statistical bulletin on mental wellbeing](#).

See the [National Survey for Wales quality report](#) for more details on strengths and limitations of the National Survey.

Children

See the quality section of release [Health and wellbeing measures for](#)

children.

Indicator 30: Percentage of people who are lonely

This is the percentage of adults who are lonely according to the De Jong Gierveld loneliness scale.

To assess levels of loneliness on this scale, respondents were given 6 statements such as “I miss having people around” and “There are enough people I feel close to” and were asked to indicate the extent to which these statements applied to them. A score from 0 to 6 was subsequently calculated, and those with a score of 4 or more were classed as lonely.

Due to the sensitive nature of some of the questions, the respondents were handed the interviewer’s laptop and asked to complete this section for themselves. Over a fifth of respondents refused to do this, and the majority of those did answer the questions, but they were administered by the interviewer, which may have affected their responses to these questions.

Whilst 85% of people aged 16 to 64 completed the interview for themselves, only 57% of people aged 65 or over did so. For further information, see the statistical bulletin on [Loneliness](#).

See the [National Survey for Wales quality report](#) for more details on strengths and limitations of the National Survey.

Indicators 31 to 40

Indicator 31: Percentage of dwellings which are free from hazards

The Welsh Housing Conditions Survey 2017-18 measured the percentage of dwellings which were free from category 1 hazards based on the Housing Health and Safety Rating System (HHSRS). More information on the measuring and modelling of these hazards can be found in the Welsh Housing Conditions Survey [headline results](#) and [technical report](#).

Indicator 32: Number of properties (homes and businesses) at medium or high risk of flooding from rivers and the sea

The National Flood Risk Assessment (NaFRA) together with the National Property Dataset (NPD) are used to determine the number of properties (residential and non-residential) at risk of flooding from rivers and sea in Wales.

The chance of flooding is set out in four risk categories.

1. High risk: greater than or equal to 1 in 30 (3.3%) chance in any given year.
2. Medium risk: less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance in any given year.
3. Low risk: less than 1 in 100 (1%) but greater than or equal to 1 in 1,000 (0.1%) chance in any given year.
4. Very low risk: less than 1 in 1,000 (0.1%) chance in any given year.

The NaFRA includes flooding from all rivers with a catchment size greater than 3 square kilometres, and all flooding from the sea (both along the open coast and

tidal estuaries). Smaller rivers are included in the assessment where they fall within the area that could be affected by an extreme flood (0.1% chance in any year).

The assessment takes into account the type, location and condition of flood defences, and the chance of these defences being overtopped or breached during major floods. The likelihood of flooding and the consequent costs (economic damages) are assessed for each 50m square impact zone.

It does not include other forms of flooding such as highway drains, sewers, overland flow or rising groundwater.

Indicator 33: Percentage of dwellings with adequate energy performance

Dwellings with adequate energy performance have a SAP (Standard Assessment Procedure) rating of 65 or above. The SAP ratings were measured by qualified surveyors as part of the Welsh Housing Conditions Survey 2017-18. More information can be found in the Welsh Housing Conditions Survey [energy efficiency of dwellings report](#) and [technical report](#).

Indicator 34: Number of households successfully prevented from becoming homeless per 10,000 households

Information in relation to data quality can be found in the [Homelessness quality report](#).

Indicator 35: Percentage of people attending or

participating in arts, culture or heritage activities at least 3 times a year

This indicator measures the percentage of people who say they have attended or participated in an arts, culture or heritage activity 3 or more times in the previous 12 months.

More in-depth analysis is available in the statistical report [Arts, heritage sites, libraries and museums](#).

See the [National Survey for Wales quality report](#) for more details on strengths and limitations of the National Survey.

Indicator 36: Percentage of people who speak Welsh daily and can speak more than just a few words of Welsh

The results are based on both Census data and Welsh Language Use Survey data.

In order to be consistent with national indicator 37, 'Percentage of people who can speak Welsh', this estimate is based on 2011 Census data as a baseline for the number of Welsh speakers, combined with data from the Welsh Language Use Survey 2019-20 for those who report being either 'fluent in Welsh', being able to 'speak a fair amount of Welsh', or those who could 'only speak a little Welsh'; and who also speak Welsh daily.

The Welsh Language Use Survey 2019-20 noted that 10% of people aged three or older spoke Welsh daily and could speak more than just a few words. This is the same percentage as in the Welsh Language Use Survey 2013-15.

The National Survey for Wales provides annual data for people aged 16 or older

and suggests that this indicator has been stable over the past few years since the 2011 Census, at around 10% to 12%.

See the [Welsh Language Use Survey quality report](#) for more details on strengths and limitations of the survey.

Indicator 37: Number of people who can speak Welsh

This indicator uses the Census of Population.

The census continues to be the key source of information about the number of people who can speak Welsh, although information is available from sources such as the Annual Population Survey (APS) and National Survey for Wales (NSW). When comparing the Welsh language questions from household surveys to the 2011 Census results, it is important to remember that differences in sampling, mode of interview, and questionnaire design may cause differences between estimates. Estimates of the number of Welsh speakers are traditionally higher in household surveys (such as the APS and NSW) than in the census – it is not known precisely why, although it's likely that differences mentioned above affect the results. Further information on this is available from the [Welsh language data from the Annual Population Survey](#). Further [quality and methods information about the Census is available on the Office for National Statistics website](#).

Between Censuses the National Survey for Wales is used to monitor trends in the proportion of adults who speak Welsh. The indicator is based on adults aged 16 and over who report that they can speak Welsh. The question allows people to answer yes, no, and also allows people to spontaneously report that they can't speak Welsh but that they have some Welsh speaking ability. For the purpose of this indicator, people who can speak Welsh is defined as only those who answer 'yes' to this question.

Comparisons with results from previous years of the National Survey (2012 to 2015) are possible.

See the [National Survey for Wales quality report](#) for more details on strengths and limitations of the survey.

Indicator 38: Percentage of people participating in sporting activities three or more times a week

Adults

The questions asked were originally from the Active Adults Survey, now incorporated into the National Survey for Wales, with some minor adaptation.

For this indicator respondents were shown a series of indoor and outdoor activities and asked whether they had participated in any of them. If they did, they were asked how many times they had participated in the activity over the previous 4 weeks.

Results from the Active Adults Survey and National Survey for Wales are not directly comparable due to differences in survey design.

See the [National Survey for Wales quality report](#) for more details on strengths and limitations of the survey.

Children

This information is published by [Sport Wales](#). The School Sport Survey is an online survey of pupils' sports participation and school provision of Physical Education and sport. The latest School Sport Survey took place in the summer

term of 2018 from 16 April until 24 July. Pupils complete a questionnaire on their participation and attitudes towards Physical Education and sport. In the 2018 survey, 118,893 Year 3 to 11 pupils took part in the survey and 1,055 teachers completed a School Sport Survey provision questionnaire.

Indicator 39: Percentage of museums and archives holding archival/heritage collections meeting UK accreditation standards

The measure for archives shows the number of archive-holding institutions that have achieved the UK Archive Service Accreditation Standard. The baseline definition of an archive service for inclusion in this measure is that the institution should be recognised by The National Archives as a Place of Deposit for locally held public records (and therefore required to meet the Accreditation Standard to keep this statutory designation), and also be a member of Archives and Records Council Wales (ARCW).

Information on the process for [museum accreditation](#) and [archive accreditation](#) is available.

Indicator 40: Percentage of designated historic environment assets that are in stable or improved conditions

In 2020-21, condition survey data collection was severely disrupted and delayed due to the Covid-19 pandemic. Condition surveys were carried out for 178 Scheduled Monuments, of which 93 (52%) were found to be stable or improved and 85 (48%) worsened. 37 of the monuments were considered to be at risk (21%).

Scheduled monuments

Surveys of the condition of the scheduled monuments in Wales have been taking place since the mid-1980s and are carried out in-house by Cadw's team of Field Monument Wardens. Today this is through a rolling survey programme during which 10 per cent of assets are surveyed each year to a consistent assessment methodology. Seven overall condition categories are used, ranging from destroyed to greatly improved.

Most scheduled monuments are earthwork structures and unoccupied historic buildings, usually in ruined condition such as castles, medieval abbeys and abandoned industrial remains. Many are in remote and rural locations. The physical nature of the scheduled monuments means that in the absence of any specific interventions, the most likely condition assessment for the majority would be stable or demonstrating slight deterioration. Improvement to condition is almost without exception a consequence of active intervention such as positive land management and targeted conservation projects. The main threats affecting monuments recorded as being at risk are significant weathering, storm and flood damage (all of which have links with the effects of climate change and excessive unchecked vegetation growth leading to accelerated natural decay) which is best controlled through positive land management practices.

Listed buildings

Surveys of the condition of listed buildings have been carried out in Wales since 1998. The review programmes cover a five-year rolling period, with approximately 20 per cent of listed buildings stock in Wales being surveyed per year. The programme of surveys will ensure that the condition of all 30,000 listed buildings in Wales during the survey programme period is assessed using consistent methodology. The proportion of listed buildings in a stable or improving condition is calculated using existing survey data and the most up-to-

date data available from the 20 per cent of the building stock which has been re-surveyed in the past year.

It should be noted that the figures presented for each year relate to the sample surveyed during the course of that year. Each year's sample is drawn from a small number of local authorities across different Welsh regions. Some year-on-year variation is to be expected.

Indicators 41 to 50

Indicator 41: Emissions of greenhouse gases within Wales

More information is available in the report [UK Greenhouse Gas Inventory, 1990 to 2019 \(Department for Environment, Food & Rural Affairs\)](#).

Indicator 42: Emissions of greenhouse gases attributed to the consumption of global goods and services in Wales

Ecological footprint

There is no internationally agreed method for national footprint calculation. However, two basic methodologies are widely accepted and have been applied in numerous studies:

- using financial information (trade values) and multipliers derived from economic input-output analysis
- using physical information (trade volumes) in combination with life cycle coefficients that identify the impact of these traded goods

Each has its advantages and limitations. In the study used for the data presented in the Well-being of Wales report, and previous studies for Wales, the first approach was selected. The main reasons for this are that the method is based on global trade, production and consumption data for the whole economy. This means that it does not suffer from truncation errors (it captures the impacts along full supply-chains). The crucial advantage of input-output based analysis is that it is possible to attribute environmental impacts to virtually any:

- consumption activity, such as consumption of regions, nations, governments, cities
- socio-economic groups or individuals, whether domestically or abroad (imports and exports)
- production activity, such as agriculture, manufacturing, services etc.
- associated economic activity such as supply chains, trade flows or recycling

Input-output analysis has been applied to ecological footprint analyses for a decade and is now a well-established technique for the calculation of ecological footprints of nations, sub-national entities, socio-economic groups and organisations or companies. It is also accepted as an approach within the Global Footprint Network's (GFN) standards.

Carbon footprint

A carbon footprint can also be calculated using the same input-output method described above, and for consistency and to benefit from the advantages listed the same technique is applied. This approach is also commonly used for estimating consumption based emissions at the national level and has been applied in numerous studies for many different countries.

Information about the methodology can be found in the [report Ecological and carbon footprints of Wales update to 2011](#).

Indicator 43: Area of healthy ecosystems in Wales

Natural Resources Wales have developed a new approach using satellite imagery to update our existing understanding of the distribution and extent of habitats across Wales. This will be capable of being updated in the coming years using consistent data sources and methodology.

The latest estimate using this new methodology should be considered as 'experimental' at this stage, as further work is intended to refine the approach and allow more detailed presentation of the results in future. The estimate of semi-natural habitat presented here includes land areas which are clearly semi-natural habitats, those which are bracken and some areas of land, here called 'candidate semi-natural' habitats which have the potential to function more like semi-natural habitats than habitats that have been subject to intensive agricultural improvement.

For further details see [Natural Resources Wales briefing: A new baseline of the area of semi-natural habitat in Wales for Indicator 43](#).

Indicator 44: Status of biological diversity in Wales

Work has been commissioned through the Welsh Government ERAMMP (Environment and Rural Affairs Monitoring & Modelling Programme) on developing the national indicator on Status of Biological Diversity in Wales. The focus of this work has been on combining annual estimates into a single indicator of change in the distribution of priority species over time. An experimental indicator has recently been developed as part of this work.

Please see the [ERAMMP Report-78: Interim Report on the Development of Indicator-44 \(Status of Biological Diversity in Wales\)](#) for further information on methodology.

Indicator 45: Percentage of surface water bodies and groundwater bodies achieving good or high overall status

Water quality

Percentage of surface water bodies and groundwater bodies achieving good or high overall status under the Water Framework Directive. Surface water bodies in Wales are classified on their status by Natural Resources Wales as a requirement of the Water Framework Directive. Good status is defined as water that shows only a slight change from what would normally be expected under undisturbed conditions. Good overall status (Water Framework Directive) encompasses.

Surface water

- ‘Good surface water status’ is that achieved by a surface water body when both its ‘ecological status’ and its ‘chemical status’ are at least good.
- ‘Ecological status’ is an expression of the structure and functioning of aquatic ecosystems associated with surface waters. Such waters are classified as of ‘good ecological status’ when they meet Directive requirements.
- ‘Good surface water chemical status’ means that concentrations of chemicals in the water body do not exceed the environmental limit values specified in the Directive.

Ground water

- ‘Good groundwater status’ is that achieved by a groundwater body when both its quantitative status and chemical status are good.

- ‘Quantitative status’ is an expression of the degree to which a body of groundwater is affected by direct and indirect abstractions. If this complies with Directive requirements the status is good.
- ‘Good chemical status’ is ascribed to a groundwater when it meets Directive requirements for the maximum levels of defined chemicals.

Indicator 46: Active global citizenship in Wales

From 2021 new questions about whether people in Wales are active global citizens will be included in the National Survey for Wales and will contribute to a revised indicator in 2022.

The questions ask whether respondents have donated or raised money, volunteered or supported any activities related to global issues such as human rights, refugees, or global environmental issues.

See the [National Survey for Wales quality report](#) for more details on strengths and limitations of the survey.

Indicator 47: Percentage of people who have confidence in the justice system

To be measured using an appropriate social survey, such as the National Survey for Wales. Further details on the measure for this indicator will be added as the detail of the indicator is developed.

Indicator 48: Percentage of journeys by walking, cycling or public transport

To be measured initially using usual method of travel to work from the Labour

Force Survey.

A National Travel Survey for Wales is in development which will provide the measure for all journeys in future.

Indicator 49: Percentage of households spending 30% or more of their income on housing costs

To be measured using further analysis from the Family Resources Survey/ Households Below Average Income dataset. Further details on the measure for this indicator will be added as soon as possible

Indicator 50: Status of digital inclusion

Currently under development, alongside the development of a minimum digital living standard. Further details on the measure for this indicator will be added as the indicator is developed.

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