

Household projections across the UK: user guide

Guidance for users about the coherence and comparability of household projections for England, Wales, Scotland and Northern Ireland.

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1. Introduction

Each statistical agency in the four countries of the UK produces their own household projections. There are many similarities but also some subtle differences between methods. This user guide gives a broad description of the methodologies used in each country. It has been produced collaboratively by the Office for National Statistics (ONS), National Records of Scotland (NRS), Northern Ireland Statistics and Research Agency (NISRA) and Welsh Government.

2. Comparability summary

Overviews of the methodology for each country are shown in the flow diagrams in Section 12.

While there are many similarities in the methods used to produce household estimates and projections for the four countries of the UK, there are some important differences between the methods used and these affect the comparability of the results. The similarities between the methodologies mean that it is possible to broadly compare the results for the four countries. Although, users should be aware that any differences may be partly because of the different methods used to produce the projection results.

Similarities between methodologies

All four countries produce household projections at national and subnational level, projecting 25 years into the future. The uses of household projections are broadly similar across the four countries. For example, they are used as a main source of information for assessing future housing need and service provision, such as waste collection, schools and community care, and for informing policy development and research.

Differences between methodologies

One of the main differences in methodologies between the four countries is the use of headship compared with membership rates, which are then projected and applied to the projected household population. Wales and Northern Ireland use household membership rates, Scotland uses headship rates, while England uses elements of both in its two-stage household projection production process. <u>Section 7</u> provides more detail on the use of these different rates in household projections.

England, Scotland and Northern Ireland constrain their local authority-level projections to sum to the nationallevel figures on the basis that national-level projections will be less subject to variation than those for regional areas because of population size.

For England and Wales, the methodology used to produce household projections is also applied to mid-year population estimates (MYEs) to produce household estimates. For Scotland, household estimates are instead based on Council Tax data.

Scottish estimates are based on more recent data than the household projections and so the household projections for the base year (y) and the following year (y+1) are adjusted to match the household estimates. For the third year onwards, the projections are adjusted by the same proportions as the (y+1) figures.

For Northern Ireland, household estimates are not published, although they could be produced using the same methodology based on population estimates rather than population projections. See <u>Section 8</u> for more information.

The household types projected vary substantially across the four countries; England has the fewest categories with more aggregated household types making comparisons difficult between the four countries. <u>Section 9</u> provides more detail on the comparability of household types.

3. Frequency of updates

England

Household population projections for England are usually published every two years with a two-year lag (for example, 2018-based projections published in 2020), which is a broadly similar timetable to projections for the other constituent countries of the UK. The variant household projections are now published with the main release.

Although we usually publish household projections every two years, we are currently proposing not to produce 2020-based projections, which would theoretically be published in spring 2022. This is because the first results from Census 2021 are also expected in spring 2022; we therefore propose that the next round of projections will be 2021-based, enabling them to use the updated base population and household information that the results from Census 2021 will offer.

At this stage, this is not a definitive policy and we cannot be certain of exact timings. Factors that will affect our plans include how different the results from Census 2021 are from the current population estimates and our evaluation of the causes of any differences. However, we aim to produce national population projections using a mid-2021 population base by around the end of 2022; household projections would then follow in early 2023.

We welcome any feedback on this proposed approach. In addition, please note that updates on this will be communicated in our quarterly Migration and Population Statistics Newsletter. To sign up to this, please email us at pop.info@ons.gov.uk.

Wales

Household projections for Wales were published at national and national park level for the first time in March 2006 and at unitary authority level for the first time in June 2009. Both have been produced at regular intervals since, and they are broadly published every three years. Corrected 2018-based household projections for local authorities were published in August 2020, while the household projections at the national park level will be published in 2021. Timing of future releases will be subject to review, in line with the Office for National Statistics (ONS), to take into account the timescales for the results from Census 2021.

Scotland

Household projections for Scotland are published every two years to a broadly similar timetable to projections for the other constituent countries of the UK. Timing of future releases will be subject to review, in line with the ONS, to take into account the timescales for the results from Census 2021. The latest set of household projections are 2018-based, which were published in September 2020.

Northern Ireland

Household projections for Northern Ireland are commissioned outputs and so do not automatically follow releases of population projections. There have so far been five releases, which used the base years: 2002, 2006, 2008, 2012 and 2016.

4 . Geographical areas projected

England

The household projections are published for local authorities, regions and the whole of England.

Wales

The household projections are published nationally for the whole of Wales and the 22 local authority areas that make up Wales. National park-level projections for the three national park areas (Brecon Beacons, Pembrokeshire Coast and Snowdonia) are also available.

Scotland

The household projections are published for the 32 council areas in Scotland, for the two national parks (Loch Lomond and The Trossachs as well as Cairngorms) and for the four strategic development plan areas (Aberdeen City and Shire, SESplan, TAYplan, and Glasgow and Clyde Valley).

Northern Ireland

The projections are published for the 11 Local Government Districts (LGDs 2014) in Northern Ireland.

5. Uses of household projections within each country

England

Household projections in England are used as an important source of information for assessing future housing need and service provision, such as waste collection, schools and community care in local authorities.

Wales

Like England, household projections are used by local authorities to assess future housing needs and service provision. In Wales they also provide evidence to support the Strategic Development Plans prepared by local authorities, which come together under the <u>Planning (Wales) Act 2015</u> to cover a wider geographic area and deal with broader issues. They are also used for estimating future additional housing need and demand.

Scotland

In Scotland, household projections are mainly used for informing council decisions about future housing need and service provision (such as waste collection and community care). They feed into development plans, including assessments of housing need and demand for the future. The projections are also used to help inform policy development and for answering requests for information from ministers, councils, academics, other organisations and the general public.

Household projections in Northern Ireland are used in policy development and planning for service provision (such as waste collection and community care) and future housing need (Housing Growth Indicators).

6 . Household population projections and communal establishments

Household projections in all four countries of the UK are calculated by first subtracting the projected number of people living in communal establishments (CEs) from the total population for each projection year to establish the private household population. The primary data source for projecting the number of people living in CEs is the 2011 Census, but other data sources are also used across the four countries to supplement census data.

England

In England, censuses are used as the primary source of data to make assumptions about the CE¹ population. Estimates of the CE population are available in the 2001 and 2011 Censuses, but during the inter-census years the CE population is projected. After 2011, it is assumed that a constant number are housed in CEs, by local authority and age group for those aged under 75 years and a constant share of the population for those aged 75 years or over.

Small adjustments are made to the CE population for 2012 to 2018 (the base year) to reflect the change in the prison population over this period. Data on the number of prisoners held in prison establishments are provided by the Ministry of Justice.

Wales

Population projection outputs do not include separate counts for CEs, so data from the 2011 Census are used. For each projected year, we assume that the number of people aged under 75 years and the proportion of people aged 75 years and over living in CEs were the same as at 2011.

Scotland

Numbers of residents in CEs are collected from a range of data sources, depending on the establishment type.

The data are chosen to represent, as closely as possible, the census definition of residence: those individuals "staying, or expecting to stay, in a residential establishment for six months or more". Individuals resident for shorter stays would be considered visitors and are not included, as they should be accounted for in their usual place of residence.

Data are collected from a range of administrative data sources and surveys and refer to the base year, where possible. For some establishment types, no such source is available or base year data are not available, and in these cases earlier administrative data or 2011 Census data are used.

In many cases, we combined more than one data source and used estimation to obtain a full age and sex breakdown. The final CE proportions were then applied to the National Records of Scotland (NRS) population projections for each year. This methodology assumes constant proportions of people living in CEs for each of the 25 projection years.

Population projection outputs do not include separate counts for CEs, so data from the 2011 Census were used. For each projected year, we assume that the age-specific proportions of people living in CEs are the same as at 2011. From the 2012-based projections onwards, the constant proportions for those aged 75 years and over living in CEs were replaced by the average of constant 2011 Census proportions and a 2001 to 2011 trended proportion based on census data.

Notes for: Household population projections and communal establishments

1. Communal or institutional establishments include all people not living in private households. Communal establishments (CEs) provide managed residential accommodation, for example, care homes, student halls of residence, military barracks and prisons. Homeless people may be recorded in CEs, such as shelters; private households, if staying with friends or family; or not recorded on the census, depending on their situation on census day.

7. Household formation – including household representative rates and household membership rates

England

Data from the 2001 and 2011 Censuses provide the proportions of people who were the household reference person (HRP)¹, by geography, age, sex and household type.

As the number of HRPs is equal to the number of households for each geography, age, sex and household type, these proportions are projected forward using a two-point exponential model to determine the proportion of HRPs for the remaining years of the projection.

The projected household representative rates (HRRs) or headship rates (and non-HRRs or non-headship rates) are constrained in two ways: they cannot individually go above one or below zero and they sum to one within an area and age group.

The household projections are then calculated by applying these projected HRRs to the population projections to give an estimate of the number of HRPs in each of the projection years for each geography, sex and age group of the HRP.

The same method is repeated to project headship and non-headship rates with a household type breakdown in stage 2.

Wales

Historical data on the population in each household type are obtained from the 2001 and 2011 Censuses and used to create projected membership rates for each household type. Membership of different household types tends to vary by age and sex, so historical proportions of people in each household type are calculated by sex for each age group. The household types and age groups used are shown in <u>Section 9</u> and <u>Section 10</u> respectively.

As only census data are used, these historical proportions are projected forward using a two-point exponential model. This model ensures that the resulting membership rates for each individual household type are greater than zero but less than one. The projected rates are adjusted to add up to one for each age and sex group so that the private household populations by type add up to the total private household population.

The membership rate model uses historical data on the age and sex of each household member to calculate historical membership rates for all types of household, by age and sex. These historical membership rates are projected for future years and applied to projected population numbers to calculate projected numbers of households.

Multiplying the projected private household population by the projected household membership rates gives the projected population by age group, sex and household type.

As household types are determined by size, the projected numbers of persons by household type are divided by household size (that is, one-person, two-person and so on) to give the number of households by age, household type and sex. The number of people in household types with a household size of five or more people could vary. So, for these types an average household size figure is calculated for each household type using Wales-level data from the 2011 Census. Then, the projected number of people in each household type is divided by this average household size figure to give the number of households by age, type and sex for these larger household types.

The results of the previous stage are then summed by age and sex to give projected household numbers by household type for each year of the projection.

Scotland

Information on household formation is derived from data collected in Scotland's 2001 and 2011 Censuses. In the census, one member of each household is defined as the "Household Reference Person" (HRP), and that is the eldest economically active resident in the household, or if there are no economically active residents, the eldest economically inactive resident.

The headship rate describes, for each age group, the proportion of the population that is designated as the HRP in each household type. The number of people who are HRP for particular household types will be the same as the number of households of this type. The proportion of these within any particular age group and geography is known as the headship rate. This is projected forwards and then applied to the population projections (by age group and geographic area) to give the household projections. The proportion of the private population, for each age group, who are not HRP of any type of household (non-heads) is also available from the census. A projected headship rate is then produced using a two-point exponential model using headship rates from the 2001 and 2011 Censuses.

The projected headship (and non-headship) rates are constrained in two ways: they cannot individually go above one or below zero and they sum to one within an area and age group.

The household projections are then calculated by applying these projected headship rates to the private household population projections to give an estimate of the number of heads of household in each of the projection years for each household type, age group of the head of household and area.

These figures are then constrained to the Scotland total number of households. Therefore, the projected number of households for council areas, national parks (and the rest of Scotland) and strategic development plan areas (and the rest of Scotland) each sum to the total for Scotland.

Historical data on the population in each household type were obtained from the 2001 and 2011 Censuses and used to create projected membership rates for each household type. Membership of different household types tends to vary by age and sex, so historical proportions of people in each household type were calculated by sex for each age group. The household types and age groups used are shown in <u>Section 9</u> and <u>Section 10</u> respectively.

Household membership proportions are projected using the two-point exponential model. This model ensured that the resulting membership rates for each individual household type were greater than zero but less than one. Also, the trend slows down when rates approach zero or one.

The projected rates were adjusted to add up to one for each age and sex group so that the private household populations by type add up to the total private household population.

Multiplying the projected private household population by the projected household membership rates gives the projected population by age group, sex and household type. As household types are based on size in terms of number of persons, the projected private population by household type is divided by household size to give the projected number of households by type.

Since the 2006-based projections, two further refinements were made to the methodology, as some of the census trends did not seem to continue. First, the projected number of households with children became driven by the projected number of children, with constant household membership rates. These households were then completed with adults of an age–sex distribution as observed in the most recent census.

The remaining adults from the projected household population were then distributed over childless household types according to the two-point exponential household membership rate method outlined previously. The refinement prevented the child–adult ratio from going askew.

Secondly, the two-point exponential model based on census trends projected the number of males aged 75 years and over in two-adult households to exceed that of females. The improved life expectancy of males did not seem to be captured in the household formation. The refinement in the methodology consisted of sourcing additional females from the one-adult household type to constrain the sex ratio of persons aged 75 years and over in two adult households to be less than one.

Notes for: Household formation – including household representative rates and household membership rates

1. The household reference person (HRP) is the eldest economically active person in the household. A full explanation of the HRP definition can be found on page 23 of the 2011 Census Glossary.

8 . Household estimates and projections

England

In England, the total number of households within each local authority is "estimated" for each year to the base year of the projection period by applying the projected household representative rates (HRR) to the mid-year population estimates (MYEs). However, these figures still use modelled HRRs from census data and so should still be viewed as projections. They will differ from household estimates, which can be derived from survey data.

The figures are adjusted to ensure that the minimum number of adults required to fill the projected households is not greater than the projected adult private household population (for example, a minimum of two adults would live in the household type "two or more adults"), and the same check is carried out for children.

Wales

For Wales, the exponential model also enables membership rates to be calculated for the years between the last census and the start of the projection period. The rates the model produces can therefore also be used to produce household estimates by applying them to historical population estimates using the approach outlined in <u>Section 7</u>.

Scotland

In Scotland, the total number of households within each geography (council areas, national parks and strategic development plan areas) in the base year (y) and the following year (y+1) is adjusted to equal the household estimates for these years. The household projections for (y+2) year onwards are adjusted by the same proportion as the (y+1) figures, to preserve the trends.

Finally, the figures are adjusted to ensure that the minimum number of adults required to fill the projected households is not greater than the projected adult private household population (for example, a minimum of two adults would live in the household type "two or more adults"), and the same check is carried out for children. Where an adjustment is required, the number of households is kept constant, but the balance of household types is adjusted, to reduce the number of large households and increase the number of smaller households.¹

Northern Ireland

The Northern Ireland Statistics and Research Agency (NISRA) does not produce household estimates. However, the exponential model also enables membership rates to be calculated for the years between the last census and the start of the projection period. Household figures can therefore be created using population estimates rather than projections. However, as the membership rates are still interpolated and extrapolated from the census data, such figures would still be regarded as projected.

Notes for: Household estimates and projections

1. In the 2014-based and 2016-based household projections this final adjustment has not been applied.

9. Household types

Different household types are projected for each country, and these tend to limit the comparability of the respective household projection results. It is possible to compare one-person household projections across the four countries if you aggregate male and female single-person households for England and Scotland. However, there is some difficulty when making comparisons across the four countries for households containing two or more people.

Comparisons can be made easily between Wales and Northern Ireland, which use the same 12 household types. It is possible to aggregate some of the categories for Wales and Northern Ireland to make comparable household types with Scotland. The household types for England are far more aggregated than for the other countries of the UK, based on the numbers of dependent children, rather than the overall household size. It is not possible, with the data provided, to aggregate the household types from Scotland, Wales and Northern Ireland to produce household type measures that are comparable with England.

Dependent children in England, Wales and Scotland are defined as any person aged 0 to 15 years living in a household or a person aged 16 to 18 years in full-time education and living in a household with their parent(s) or grandparent(s). It does not include any people aged 16 to 18 years who have a spouse or child living in the household. In Northern Ireland, only 16- to 17-year-olds in full-time education are defined as dependent children, while 18-year-olds are categorised as adults.

Table 1: Projected household types by country

Household type	England	Wales	Scotland	Northern Ireland
One-person	Can be derived	Available	Can be derived	Available
One-person (male)	Available		Available	
One-person (female)	Available		Available	
Two-person (no children)		Available	Available	Available
Two-person (1 adult, 1 child)		Available	Available	Available
Three-person (no children)		Available		Available
Three-person (2 adults, 1 child)		Available		Available
Three-person (1 adult, 2 children)		Available		Available
Four-person (no children)		Available		Available
Four-person (2+ adults, 1+ children)		Available		Available
Four-person (1 adult, 3 children)		Available		Available
Five+ person (no children)		Available		Available
Five+ person (2+ adults, 1+ children)		Available		Available
Five+ person (1 adult, 4+ children)		Available		Available
Three+ person (1 adult, 2+ children)		Can be derived	Available	Can be derived
Three+ person (2+ adults, 1+ children)		Can be derived	Available	Can be derived
Three+ person (3+ adults)		Can be derived	Available	Can be derived
Households with one dependent child	Available			
Households with two dependent children	Available			
Households with three or more dependent children	Available			
Other households with two or more adults	Available			
Households with dependent children	Can be derived	Can be derived	Can be derived	Can be derived
Other households without dependent children	Can be derived	Can be derived	Can be derived	Can be derived

10. Age groups

The following age groups are used to produce the household projections for each of the four countries; however, Wales and Northern Ireland do not retain these breakdowns in their published projections. Northern Ireland publishes a broad age breakdown for single-person households, and Wales can provide an age breakdown for single-person households upon request.

England and Scotland

- 16 to 19 years
- 20 to 24 years
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 64 years
- 65 to 69 years
- 70 to 74 years
- 75 to 79 years
- 80 to 84 years
- 85 to 89 years
- 90 years and over

Wales

- 0 to 4 years
- 5 to 9 years
- 10 to 15 years
- 16 to 18 years
- 19 to 24 years
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 64 years
- 65 to 74 years
- 75 to 84 years
- 85 years and over

- 0 to 3 years
- 4 to 15 years
- 16 to 18 years
- 19 to 24 years
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 64 years
- 65 to 74 years
- 75 to 84 years
- 85 years and over

11. Variant household projections

Variant projections are based on alternative assumptions of future fertility, mortality and migration. Variant household projections are available for England, Wales and Scotland, but not for Northern Ireland, because there are no variant subnational population projections (SNPPs) produced for Northern Ireland.

England

The principal household projections are based on the principal population projections produced by the Office for National Statistics (ONS), which use assumptions about fertility, mortality and migration that are thought most likely to occur over the next 25 years.

Variant population projections are available at both the <u>national level</u> and <u>subnational level</u>. The <u>2018-based</u> <u>variant subnational household projections</u> are available based on the assumptions high international migration, low international migration, alternative internal migration, 10-year migration and also a variant that uses household representative rates (HRR) projected through to 2043 (the principal projection holds the HRR constant from 2022). These variant projections are published on the ONS website at the national, region and local authority level.

Wales

Variant household projections are based on the variant population projections produced for Wales, which use alternative assumptions of future fertility, mortality and migration. For the 2018-based household projections, variant projections were produced based on high and low population assumptions. It is also planned to produce additional variants based on different migration assumptions in the future. Variant household projections are published on the <u>StatsWales</u> website for each local authority area and for Wales as a whole.

Scotland

For the 2018-based population projections, the National Records of Scotland (NRS) produced both low and high migration variant projections at the subnational level, and also a variant which uses household representative rates (HRR) projected through to 2043 (the principal projection holds the HRR constant from 2022).

Variant household projections are published on the <u>Scottish Government website</u>, for each council, national park and strategic development plan area.

Northern Ireland

There are no variant household projections for Northern Ireland. In theory, it is possible to run the household projections model with variant population projections, although the results should be checked for consistency. For example, a high fertility variant population projection can indicate that more women have children, the same number of women have more children, or (most likely) a combination of the two.

In the current household projections model, a high fertility variant would result in a uniform percentage rise in the projected number of households with children across size and types. These households are then headed by males and females, mainly in their 20s and 30s, leaving fewer adults to form childless households.

There are no variant SNPPs for Northern Ireland, so it is not possible to create variant subnational household projections.

12. Flow diagrams of methods for each country

Household projections methodology for England

Stage one

- 1. Read in subnational population projections (SNPPs) by age and sex.
- 2. Adjust SNPPs using Census data and prison population data to remove those living in communal establishments.
- 3. Read in household population by age and sex.
- 4. Derive household representatives (HRRs) by age and sex of Household Reference Person (HRP) from 2001 and 2011 Census data.
- 5. Project forward 2001 and 2011 HRRs to produce HRRs for years 2001 to 2021. Hold HRRs constant at 2021 values through to 2043.
- 6. Multiply household population by HRRs to produce projected number of households by age and sex of HRP for England, regions and local authorities.
- 7. Constrain projected number of households for regions to England figures and local authorities to region figures

Stage two

- 1. Produce household type breakdowns and constrain to totals from Stage one.
- 2. Apply adjustments to household type breakdowns to ensure projected numbers of adults and dependent children are coherent with household population totals.

Source: Office for National Statistics

Household projections methodology for Wales

- 1. Take total population for year (i) by age (a) and sex (s).
- 2. Subtract assumed communal establishment population (e.g. boarding schools, halls of residence, prisons and residential care homes), which gives the private household population
- 3. Calculate historical household membership rates by age (a), sex (s) and household type (t)
- 4. Project household membership rates for year (i) by age (a), sex (s) and household type (t)
- 5. Apply household membership rates by household type (t) to the private household population
- 6. Divide results by household size for each household type.
- 7. Sum by age and sex. This gives households by household type (t).
- 8. Sum by household type. This gives the total households.

Source: Welsh Government

Household projections methodology for Scotland

- 1. Read in subnational population projections for the base year (y) by area, age, sex, variant, year of projection.
- 2. Estimate the communal establishment population (CE) by type of establishment, area, age and sex.
- 3. Estimate the population living in private households (by subtracting residents living in CEs) by area, age group, sex and year of projection.
- 4. Calculate headship rates (HR) for the 2001 and 2011 Censuses by age group and household type; project the HRs forward using a two-point exponential model by area, age group, household type and year of projection.
- 5. Multiply population living in private households by headship rates to produce household projections at area level (Council/Strategic Development Plan Area (SDPA)/National Park (NP)) by age group, household type and year of projection.
- 6. Control to Scotland total.
- 7. Constrain to household estimates. For (y+2) year onwards the constraining rate is constant and equal to the one for (y+1) year.
- 8. Apply (if needed) minimum adult / children adjustment.
- 9. Sum up to get Scotland/SDPA/NP totals.
- 10. This produces household projections (y+25 years) for Scotland/Council areas/SDPA/NP by age group, household type and year of projection.



Figure 1: Household projections methodology for Northern Ireland

Source: Northern Ireland Statistics and Research Agency

13. Stakeholder engagement, planned updates and developments

England

When the Office for National Statistics (ONS) took responsibility for the household projections from the Ministry of Housing, Communities and Local Government (MHCLG) in January 2017, the production of the 2016-based household projections was guided by an expert steering group made up of the main experts and users of the data. For the 2018-based approach, we have largely modelled the 2016-based method with the exception of bringing together all the releases into one single publication. We have maintained liaison with the UK Population Theme Advisory Board (UKTAB) and Central Local Information Partnership (CLIP) population subgroup to ensure the household projections meet users' needs. We plan to continue looking at administrative and survey data to provide more up-to-date information on the communal establishment (CE) population and household composition.

Wales

The members of the Wales Subnational Projections working group (WaSP) are consulted on the methodology for the household projections.

The plan is to continue looking at Annual Population Survey (APS) data to inform trends in household membership and the use of more recent data on CEs to determine the total private household population.

Scotland

A review of the household projections methodology was undertaken before the production of the 2018-based projections. The proposed modifications related only to the calculation of "headship rates", and on how these rates are projected forwards over time.

The members of the Household Analysis Review Group (HARG) are consulted on the methodology for the household projections. Papers for HARG meetings can be found on the <u>NRS website</u>.

The National Records of Scotland (NRS) plan is to continue to liaise with HARG members and is currently looking at the feasibility of small area (below council area level) projections as some interest in population and household projections at this level of geography has been noted. The introduction of a tool that permits users to run their own variant household projections (based on user-selected inputs) is also being considered.

Northern Ireland

The latest projections (2016-based) include the use of administrative data and pooled household surveys. We found that, while this information supported the methodology and assumptions, its current quality was insufficient to be incorporated into the analysis. Future household projections will re-assess the availability and quality of alternative data sources.

14. Useful links

The household projections are published as a <u>National Statistics</u> release on the Office for National Statistics (ONS) website. A <u>compliance check</u> for this decision can be accessed on the Office for Statistics Regulation website. A methodology article, Quality and Methodology Information (QMI) report, and a report comparing household estimates with previous household projection releases are published alongside the statistical release.

More on household projections

- Main data tables
- Detailed data tables
- Methodology report
- <u>QMI</u>
- <u>Comparison paper: household estimates and household projections</u>

Wales

The household projections report, tables, figures and detailed tables are published on the <u>Welsh Government</u>. <u>website</u>. The report includes summary results and analysis for Wales and a brief background to the methodology. The reports available include <u>Local authority household projections: 2018-based</u> and <u>Household projections for</u> <u>National Parks: 2014-based</u>.

The 2018-based household projections for national parks will be published in 2021.

Scotland

Household projections are produced for each council, national park and strategic development plan area, broken down into seven household types (based on the number of adults and children living in the household) and 16 age groups. These are published on the <u>National Records of Scotland (NRS) website</u>, together with background data on the proportion of the population living in communal establishments (CEs) and the projected private household population. More information is also available on the <u>Scottish Government statistics website</u>.

The <u>household projections for Scotland</u> report, tables, figures and background data are published on the NRS website. The report includes summary results, detailed analysis of the results for each subnational area in Scotland and a brief description of the methodology used. The household projections for Scotland's strategic development plan areas, national parks and sub-council area level are also published on the <u>household</u> <u>projections page on the NRS website</u>.

Northern Ireland

The household projections report, press release, technical note and detailed tables are published on the <u>Northern</u> <u>Ireland Statistics and Research Agency (NISRA) website</u>. The report includes summary results and a brief background to the methodology.

15 . Contact details for further information

For enquiries about the household projections for each country, please contact the appropriate organisation.

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