

Summary Quality Report

Coverage: Northern Ireland

Theme: Population

Population Projections for areas within Northern Ireland



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1. Introduction

Context for the quality report.

Sub-national population projections provide estimates of the future resident population for areas within Northern Ireland. They include:

- 11 Local Government Districts
- former 26 Local Government Districts
- Health and Social Care Trusts
- former Education and Library Boards
- former Nomenclature of Territorial Units for Statistics (NUTS III)

Projections give an indication of the possible size and structure of the future population that may result if recent demographic trends were to continue. Population projections are widely used in policy development, in areas such as housing, healthcare and education.

Sub-national population projections are produced biennially and follow on from the corresponding [National Population Projections](#). They relate to the usually resident population, including long-term migrants (people who change their country of usual residence for a period of 12 months or more), on 30th June each year. The projections are based on the latest [mid-year population estimates](#) and on the extrapolation of demographic trends in fertility, mortality and migration. Additionally, following good practice, the projections are constrained to the previously published National Population Projection totals.

They are produced using the cohort component methodology. The cohort component method is a standard demographic method that uses high quality data sources to inform the three major components of population change; natural change (births, deaths and ageing), migration and special populations. [Assumptions](#) around fertility, mortality and migration, are based on recent observed trends and are used to inform projections into the future.

The sub-national projections estimate the population for each year of a 25 year period. Projections become increasingly uncertain the further they are carried forward from the base year, because of the inherent uncertainty of demographic behaviour. This is particularly so for smaller geographical areas and detailed age and sex breakdowns.

These projections are not forecasts and do not attempt to predict the impact that future government policies, changing economic circumstances or other factors might have on demographic behaviour. **Additionally, the impact of the current coronavirus (Covid-19) pandemic has not been taken into account in the production of the sub-national population projections.** Their primary purpose is to provide an estimate of the future size and age structure of the population for areas within Northern Ireland based on fertility, mortality and migration assumptions.

The [sub-national population projections](#) are the official set of population projections for areas within Northern Ireland.

2. Relevance

The degree to which the statistical product meets the user needs in both coverage and content.

As stated, the [sub-national population projections](#) are the official set of population projections for areas within Northern Ireland. These projections meet the known needs of our users as described in this section.

Sub-national population projections are demographic, trend-based projections which estimate likely levels of future population change and structure. While National Population Projections inform policy and planning at the national level, the sub-national projections inform local level policy and planning. Sub-national population projections are widely used in policy development, in areas such as housing, healthcare and education.

A robust and objective methodology is employed to create sub-national population projections that are relevant for all types of users. The projections do not take into account future government policies, changing economic circumstances or other factors might have on demographic behaviour. Rather, the sub-national population projections are produced using a cohort-component based model. This means they are produced without trying to predict any potential impact of unrealised factors.

The sub-national population projections bulletin delivers a detailed analysis on the current 11 Local Government Districts for the first ten years of the projection period. In addition, comprehensive data tables are produced which provide population totals, population by sex and single year of age, population by sex and five year age bands and components of population change for all five geographies. These tables cover the whole 25 year projection period for:

- 11 Local Government Districts
- former 26 Local Government Districts
- Health and Social Care Trusts
- former Education and Library Boards
- former Nomenclature of Territorial Units for Statistics (NUTS III)

Producing a 25 year projection from the base year provides the users of these statistics with a sufficiently long time series to enable analysis and planning while maintaining sufficient robustness that can be combined with population estimates to inform decisions.

The sub-national population projections are also used as an input into the household projections. Household projections are used in policy development and planning for future housing need and service provision (such as waste collection and community care). Household projections themselves are trend based projections and therefore the sub-national population projections are suitable to inform their development.

3. Accuracy and Reliability

The proximity between an estimate and the unknown true value.

Assumptions

Sub-national population projections are demographic, trend-based projections indicating likely size and age structure of the future population if the underlying assumptions about future levels of components of change are realised. They are based on levels of births, deaths and migration observed over the period leading up to the base year.

The assumptions around fertility, mortality and migration for population projections for areas within Northern Ireland were created by the Population and Migration Statistics branch of Census Office, NISRA. These assumptions are reviewed and ratified by the Demographic Statistic Advisory Group (DSAG). The [assumptions consultation paper](#) containing full details of the assumptions is available on the NISRA website.

Basing projections on the previous years' population estimates and components of change for each Local Government District can result in demographic changes in an area not being accurately reflected. If an area experiences significant population change during the trend period the effect of this change may possibly be dampened by utilising an averaging process.

In addition, even though there are assumptions made about fertility, mortality and migration for each area in Northern Ireland, the sum of the individual local area projections are constrained to the overall Northern Ireland projections. Also, the total births, deaths and migrants are constrained each year to the Northern Ireland figures. As a result, this constraining process inherently means any inaccuracies in the nationally projected figures will affect the sub-national figures.

The uncertainty of demographic behaviour, especially the further a projection moves from the base year, means any set of projections will inevitably be proved wrong to a greater or lesser extent. Sub-national projections use the latest available population estimates and are dependent on the accuracy of these estimates. For further details on the quality of mid-year estimates please refer to the [methodology paper](#).

Special Populations

HM Armed Forces are treated as a special population in the sub-national population projections. This group is treated separately to the rest of the population as the age structure of these groups remain stable over time. The HM Armed Forces population is removed prior to ageing on and adjusting for mortality and migration and then added back in at the end of the calculation. Therefore, their population structure remains fixed over the projection period.

Students have not been treated as a special population in the projections since the availability of Higher Education Statistics Agency data has led to an improvement in internal migration estimates when combined with Medical Card Register data.

Data

Fertility and mortality rates are based upon registration data and believed to be very reliable to form a basis for projections. Migration is the most difficult component of population change to measure and therefore one source of potential inaccuracy in the base population estimates.

Migration inflows are estimated from the Medical Card Register, which is a list of patients registered with a family doctor. It is recognised that the Medical Card Register is deficient in recording young adult males; therefore the age distribution of young adult males is adjusted to be similar to the young adult female distribution.

Similarly, migration outflows are measured from the Medical Card Register. Previous research has shown that not all outflows are measured fully by the Medical Card Register and therefore de-registrations (outflows) are scaled up by an additional 67 per cent (i.e. the assumption is that only 3 out of 5 persons who leave Northern Ireland to go abroad deregister with their family GP). As with inflows, it is recognised that the administrative data is deficient in recording young adult males, therefore the age distribution of young adult males is adjusted to be similar to the young adult female distribution.

Population and Migration Statistics branch have undertaken a quality assurance of administrative data (QAAD) sources which are used to produce the Northern Ireland population statistics. Full details from the QAAD can be found [here](#). In addition, a detailed [methodology document](#) for sub-national population projections which addresses limitations, variant projections and comparisons with previous estimates.

4. Timeliness and Punctuality

Timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.

National population projections are published biennially, usually in October following the reference year. This publication includes the principal projection and main variant projections. The time lag between the publication of mid-year estimates and population projections can be attributed to production time.

Following on from the national population projections, sub-national projections are published in April, around two years after the reference period. This timeframe occurs because sub-national projections are based on the National population projections, which are not available until October. The time between October and April is needed for consultation, production and quality assurance of the projections.

The publication schedule for the Population and Migration statistics branch of NISRA is available online and details all planned publication dates 12 months in advance. This schedule can be found on the [NISRA website](#).

In addition, a one month pre announcement on all statistics is made on Gov.uk detailing the exact date of publication.

All statistical publications have been released to the planned publication schedule set out at the beginning of the year.

In the unlikely event of a change to the pre announced release schedule, public attention would be drawn to the change and the reasons for the change explained fully, as set out in the Code of Practice for Official Statistics.

5. Accessibility and Clarity

Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

Sub-national population projections are available, free of charge, online from the [NISRA website](#). Links from the [GOV.UK release calendar](#) also provide the release date and location of each new set of population projections one month in advance of publication.

The main statistical bulletin can be downloaded in PDF format from the NISRA website. Likewise, supporting tables and figures throughout the report are available to download.

As well as the main statistical bulletin the NISRA website hosts a number of data files in Excel format for each of the Northern Ireland geographies which can be downloaded. In addition, detailed data are now published in usable formats (.CSV) as part of the open data initiative on [OpenDataNI](#). Associated metadata accompanies

the data files which details information in relation to variables, timeframes, coverage and methodology.

Population statistics are also published on the [Northern Ireland Neighbourhood Information Service \(NINIS\)](#) website which allows user to interact with a broad range of statistics and interactive content from across Northern Ireland.

Users with any further queries can contact the responsible statistician by phone (028 9025 5156) or email (census.nisra@gov.uk).

6. Coherence and Comparability

Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.

The sub-national population projections are consistent with the mid-year population estimates which form the starting point (base year) for projecting forward. They are also consistent with the national population projections for a given base year. “Consistent” in this instance means the total population and components of population change across all sub-national areas of Northern Ireland sum to those presented in the national population projections.

Each set of projections is internally consistent so can be interpreted as a consistent time series of projected populations for each year of the projection period. Comparability over time can also be used to describe the comparability of different sets of projections. Each set of sub-national population projections is unique and are produced using trends based on the latest available data. Therefore, each new set of projections supersedes the previous set and consideration should be taken when drawing comparisons.

The [sub-national population projections bulletin](#) does provide a comparison of the current and previous projections, for example 2018-based projections compared to 2016-based projections, to evaluate the difference between the two sets of projections. However, when attempting to compare NISRA sub-national projections with projections created by other organisations, careful attention must be paid to any differences in assumptions, methodologies and definitions being used.

Sub-national projections created by the National Records of Scotland and Office for National Statistics are reasonably consistent with NISRA sub-national projections, as the methodologies are similar and they are also constrained to the national population projections, though there may be intricacies of the methodology that are slightly different.

Currently sub-national population projections are produced for five main geographies, two of which are the current 11 Local Government Districts (LGDs) and 26 former Local Government Districts. The current 11 LGDs came into effect in 2014 with the first projection for these geographies being made in 2012, as such, comparability over time further back than 2012 is not possible.

7. Trade-offs between output quality components

Trade-offs are the extent to which different aspects of quality are balanced against each other.

Sub-national population projections give an indication of the possible future resident population in each administrative area in Northern Ireland by sex and single year of age. It is currently not possible to calculate projections for any smaller geographical breakdowns, e.g. Super Output Areas, Electoral Wards and Small Areas, due to the unavailability of reliable population estimates by single year of age and gender to form a base.

The projections are published unrounded, by sex and single year of age, to enable users to carry out further analysis. However, in general the precision of population projections could be considered to be no better than to the nearest 100.

Further information on the methodology used to create sub-national population projections is available within the [methodology report](#).

8. Assessment of user needs and perceptions

The process for finding out about users and uses, and their views on the statistical products.

Information on user's needs for, and perceptions of, the population estimates and projections are collected by:

- user surveys, for example, the latest population and migration statistics user feedback survey was undertaken for 2018/19. The user feedback survey allows our users to comment on existing outputs and put forward changes in their requirements. The [results of the latest user feedback survey](#) have been published.
- contact with individual users – drawing on the evidence provided by the many users who contact the Population and Migration Statistics team with requests for, or queries on, the estimates and projections.
- user groups, such as the [Demographic Statistics Advisory Group](#), which allows the Population and Migration Statistics team to consult with personnel who represent the interests of the main user communities.
- User engagement event – our most recent user engagement event was held in February 2020 and details of this event can be found on the [stakeholder engagement section](#) of our website.

Enquiries and suggestions

- The revisions policy for Northern Ireland population statistics is available [here](#).
- We welcome feedback from users on the content, format and relevance of this release. Please send feedback directly to census@nisra.gov.uk.
- Follow NISRA on [Twitter](#) and [Facebook](#).
- All media inquiries should be directed to the DOF Press Office:

Telephone: 028 9081 6724

Email: dof.pressoffice@finance-ni.gov.uk

- Further statistical information can be obtained from NISRA Customer Services:

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