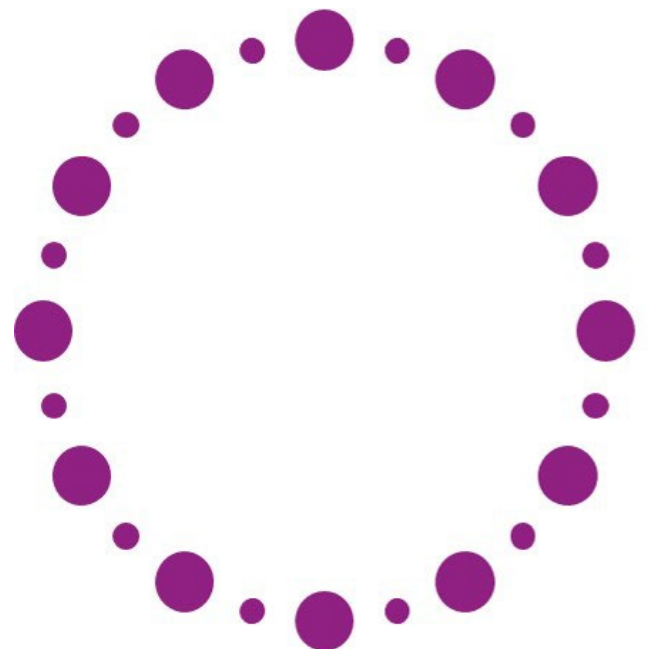


census
2021

Response to Census 2021 Outputs Consultation for Northern Ireland

Executive summary

August 2022



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1 Introduction

The Northern Ireland Statistics and Research Agency (NISRA) published their [plans for Census 2021 outputs](#) in October 2021. NISRA invited views on these proposals through a public consultation that was launched on 1 October 2021 and ran for a period of 8 weeks ending on 26 November 2021. This consultation allowed NISRA to gather the views of users on the proposed plans for outputs including dissemination approach, content design and release schedule.

This report presents the views expressed in response to this consultation and the results of NISRA's assessment of those responses. [Responses in full as well as summary tables of the responses received](#) can be found on the NISRA website.

1.1 Responses received

A total of 42 valid responses were received for this consultation, the majority of responses were received via the online consultation hub whereby users could type their responses directly into the Citizen Space system. Responses received via paper forms were manually entered onto Citizen Space by census office staff. The majority of responses (62%) were received from organisations with the remaining 38% of responses received from individuals.

1.2 Evaluation strategy

The responses were considered against the following criteria:

- accessibility and flexibility;
- timeliness;
- user acceptability; and
- public confidence.

This report will examine these areas in relation to each of the sections within the consultation. This is the same approach taken for the [assessment of 2021 Census Outputs Strategy consultation](#).

While this report contains a summary of findings from the consultation, an [annex](#) has been created that presents a selection of responses, appropriate to the question asked. This annex also provides further information on criteria used to evaluate each qualitative response.

Overall, respondents to the consultation agreed with the proposals presented and noted that these plans would meet their user needs. While most of the responses were positive, any concerns expressed by respondents have been noted and highlighted within this report. A number of comments focused on the need for outputs on specific topics, or expressed a need for detailed statistics at specific levels of geography, however, concern was expressed at the level of skill required to fully explore results from Census 2021.

2 Accessibility and flexibility

2.1 The provision of online outputs

NISRA are planning to publish data from Census 2021 using a range of methodologies; these include pre-defined, ready-made tables hosted on the NISRA website, build-your-own tables that will be available via a flexible table builder, as well as more specialist products, like microdata, that provide access to record level data available through secure mechanisms such as the NISRA Research Support Unit (RSU).

The majority of respondents (95%) indicated that they planned to access Census 2021 results via the ready-made tables with half of respondents stating that they had planned to access data via the build-your-own table system. 34% of respondents expressed an interest in accessing data in a different format such as through the RSU.

While the majority of respondents felt that the proposed publication plans met their data user needs through the ready-made tables (65%), the flexible table builder (73%), the Northern Ireland Longitudinal Survey (NILS, 60%), or the Administrative Data Research Northern Ireland (ADR NI, 53%), concerns were raised about how technical these products may be to use and if too involved, this could put some people off accessing the data.

Way forward: NISRA are continually reviewing the methods of online dissemination. The ready-made tables will be published, in the first instance, as Excel files on the NISRA website. Work is continuing in NISRA on the data.nisra.gov.uk platform (PxStat) and with ONS on the flexible table builder. It is hoped that these solutions will be ready for use in spring/summer 2023. NISRA aim to release Census 2021 outputs in a variety of formats to allow people to easily access the data they require.

2.2 The format of online outputs

NISRA had planned for data obtained via the flexible table builder to be provided via flat files and 82% of respondents believed that this proposal would meet their data requirements. Comments received were generally positive, though users did express concerns that this approach may require a level of skill and experience to utilise. This suggests that the flat file format may remove the ability for some people who are less technically experienced in working data to directly access that data.

Respondents indicated that most would import the data downloaded from the flexible table builder into Excel for analysis (N=34). Respondents identified a range of other statistical and software packages that they would import the data into, including:

- Microsoft SQL Server;
- SPSS;
- STATA;
- R studio;
- Tableau;
- Power BI; and
- Microsoft office packages.

Each of the statistical packages noted above require a certain level of technical knowledge, however, all can import data via flat files and as such NISRA can be sure that the dissemination plans won't prevent users from analysing the data through whatever products they chose.

Way forward: Development of the flexible table builder is ongoing and it is planned that the data will still be delivered in a flat file format. It will be in a format that allows it to be imported into a variety of statistical or software packages to aid further analysis.

In addition NISRA is also developing an area explorer package that will help less experienced users understand the data from census.

3 Timeliness of release

3.1 Release schedule

Respondents to the [outputs strategy consultation](#) in 2018 were largely in favour of the proposal to publish a first release of population and household estimates by summer 2022, with all other planned releases being published by summer 2023. NISRA provided detailed plans to the public about the three planned phases of release, including the data that would be available in each phase and were keen to gauge public opinion on this approach.

A large proportion of respondents (69%) indicated that the proposed release dates for releases one, two and three met their requirements, with 81% of respondents supportive of plans to release second and third releases simultaneously. However, a number of comments were received stating that these plans did not meet their needs. These comments either related to a need for the time between census data collection and the publication of results to be reduced, or they simply requested that the results from a particular topic of interest to them be moved up the release schedule.

Way forward: NISRA continue to release results as soon as they are available and once all the necessary QA checks have been completed. The outputs prospectus is updated regularly with any changes to the release schedule. Stakeholders are kept up to date as progress is made.

4 Public confidence

4.1 Statistical disclosure control

In the previous outputs strategy consultation, NISRA assessed public confidence in relation to their approach for Statistical Disclosure Control (SDC). NISRA did not ask any direct question in relation to their proposed SDC methodologies within this consultation so are unable to assess this area more thoroughly. It was noted however that a small number of respondents expressed a need to disaggregate the results of specific interest to them at a lower level of geography that could result in some disclosure risks. The planned incorporation of Cell Key Perturbation (CKP) alongside Targeted Record Swapping (TRS) for the 2021 data will provide more security for individual level data. This will enable data to be released in a more detailed way and will prevent the identification of individuals.

Way forward: In the interest of data protection and the protection of individual responses to the census, NISRA have developed the dual approach described for use in the safe production of Census 2021 outputs.

5 User acceptability

The questions in this consultation had a particular focus on whether the proposed detailed output plans would meet the data users' requirements and as such, many of the questions would fall under the umbrella of user-acceptability. In general, respondents were positive about the products being released with all topics deemed sufficient to meet their requirements by the majority of respondents.

5.1 Public data tables

The Census 2021 output plans identified a number of multivariate and univariate tables to be included within each release phase, as well as the dissemination methods for each release. Respondents indicated that the proposed plans for ready-made tables (65%), build-your-own tables (73%), cross tabulations (86%), the commissioned table service (56%) and the list of topics to be included within each release (77%) would meet their data user requirements.

When individuals identified that the proposals would not meet their requirements they were invited to provide further comments as to why this was the case. These comments primarily related to a need for more detailed outputs in relation to specific topics including; the demographic characteristics of military veterans, equality statistics, highest level of qualification and additional disaggregation's by topics such as sex, deprivation and other economic characteristics.

There were 93% of respondents who agreed that the proposals to produce full-detail tables in the same way as in 2011 would meet their needs.

Way forward: NISRA continue to plan for the release of Census 2021 outputs as outlined in the consultation document. This will include ready-made tables in Excel, build-your-own tables through the flexible table builder as well as a commissioned table service, where necessary. The outputs prospectus will be updated with table titles and layouts as plans are developed.

5.2 Microdata products

NISRA has planned to produce, as a minimum, the same microdata products as 2011, including:

- microdata teaching file;
- safeguarded microdata; and
- secure microdata.

In the current climate of limited access to research facilities due to COVID-19 restrictions, NISRA wanted to investigate additional approaches to widening access to these datasets, while ensuring continued high levels of security.

While only 6% of respondents had used a microdata product from a previous census, 36% of respondents stated that their requirements were met by the proposals for microdata products and it was noted that 56% of respondents identified no user need for microdata from Census 2021.

Additionally, dependent upon user need, NISRA planned to investigate a facility to produce a new microdata product for Ireland and Northern Ireland. Just over half of

respondents (55%) stated that they would not have any use for an all-Ireland microdata product with 45% stating that they would. When respondents were provided with the opportunity to express how they would use such a resource, most were very positive outlining what analysis they planned using such a product.

Way forward: NISRA will continue with the plan to provide microdata products with, as a minimum, the same products as were available in 2011. Further investigation will be carried out on the new microdata product including Ireland and Northern Ireland.

5.3 Statistical output geography

NISRA are looking into additional methods to produce estimates of outputs for alternative geographies. It is planned that this would allow an element of flexibility with outputs if any further changes to administrative geographies occur before a future census is taken. The majority of respondents (59%) did not have requirements for census outputs aligned with geographies other than Local Government District (LGD), the remaining 41% had a need for alternative geographies.

Further examination of the responses showed that respondents had a need for census statistical outputs to align with Electoral wards, District Electoral Areas (DEA), Travel to Work Areas (TTWA), Super Output Area (SOA), Small Area (SA), Neighbourhood Renewal Areas (NRA), Urban or Rural areas, and Health and Social Care Trust (HSCT) mapped to 2012 LGDs. One user requested data by river water body, groundwater body and river basin district if possible. Specific responses relating to the geographies above are included in the annex to this document.

The responses highlight a need for census data to reflect political geographies of Northern Ireland and how they may change over time so that public institutions and political parties can best utilise Census 2021 outputs.

Way forward: In respect of the geographies, census outputs will initially be provided by the current LGDs and subsequently by a revised census geography aligned to as many alternative geographies as feasible. NISRA will also provide a grid square product which can be aggregated to alternative geographies. Guidance on how to do this will also be provided.

5.4 New standard variables

Several new variables and classifications were added for Census 2021, either as a result of a new question being asked, or because of the availability of administrative data which can be linked to census data. NISRA proposed a number of classifications for each of these new variables along with potential cross tabulations for 2021 outputs within the consultation document. NISRA was keen to establish whether these proposals met data users' requirements. In each instance the majority of respondents were in favour of the proposed approach as can be seen in the following outcomes:

- renewable energy: 97% of respondents felt that they would not need any additional classifications and 87% indicated that they had no requirement for additional cross tabulations;
- sexual orientation: 90% of respondents indicated that they would not need any additional classifications and 87% indicated that they had no requirement for additional cross tabulations;
- military veterans: 90% of respondents indicated that they would not need any additional classifications and 87% indicated that they had no requirement for additional cross tabulations; and
- Irish and Ulster Scots frequency of use: 87% of respondents indicated that they had no requirement for additional cross tabulations.

Any comments in this section were in relation to user needs for specific cross tabulations or for data to be disaggregated at specific levels of geography. One response indicated that the categories for the sexual orientation question may not be sufficient and that work may be required to identify the best categories for outputs.

Way forward: Work is continuing as planned to produce cross tabulations using the new variables and classifications. As previously stated, the outputs prospectus will be updated as soon as plans are developed.

5.5 New derived variables

NISRA also provided respondents with a range of proposals to combine existing data in new ways, often from multiple questions, in order to create more variables that would meet a wider range of user needs. Each of the proposals was outlined within the consultation document and its supporting information; the three topic areas presented include:

- education and employment;
- health and living arrangements; and
- accommodation type.

A wide range of potential variables were explored within this section and results in full can be found in the consultation [annex](#). The most commonly selected proposed derived variables include:

- 63% of respondents stated that they would like to see a variable on the number of people not in employment, education or training (NEETs);
- 55% of respondents stated that they would like a variable identifying multi-generational households;
- 55% of respondents stated that they would like to see a variable on a skills mismatch;
- 53% of respondents stated that they would have a need for a care home resident indicator; and
- 52% of respondents stated that they would like to see a variable on economic risk caused by the COVID-19 pandemic.

Most comments were supportive of the proposed variables, particularly those relating to education, employment and COVID-19. One response did however express concern that without the date of educational attainment the route to highest level of education would not work. The reason being someone could have a degree and then pursue a level 3 vocational qualification and career. This will be considered if NISRA develop this variable further.

Aside from this response, the majority of respondents were in favour of the proposals and 86% of respondents noted that there were no other new derived variables they needed, that had not been previously suggested in the consultation documents.

Way forward: NISRA will continue to develop outputs which will include the suggested new derived variables.

5.6 Population base specification

Another focus of this consultation was to explore the public's view on the alternative population and small population bases. For more information on the main population bases, please refer to the [2021 Census outputs consultation document \(PDF 977KB\)](#). The alternative population bases noted within the consultation document include:

- workplace population;
- daytime population;
- out-of-term population;
- small populations.

Responses were mostly positive with respondents indicating that the proposals would meet their data requirements in each instance, as outlined in the following points:

- 57% of respondents stated that the proposals for the workplace population met their data user needs, while 27% of respondents stated that they had no user need for workplace data;
- 70% of respondents stated that the proposals for the daytime population met their data user needs, while 23% said they had no user need for daytime data;
- 59% of respondents stated that the proposals for the out-of-term population met their data user needs, while 35% said they had no user need for out-of-term data;

- 53% of respondents stated that they required information from the census for a small population group, while 47% of respondents stated that they did not require information on small population groups.

As with other sections, the majority of comments related to users' needs for specific variables to be included within the outputs, and tended to relate to the respondents' own work area.

Way forward: NISRA aim to produce these populations where possible and investigate what the most appropriate and useful geography is for each.

6 Taking a census during a period of change

Up until this point, the consultation explored data users' needs in relation to the accessibility and flexibility, timeliness, user acceptability and public confidence of census outputs. While understanding these needs are important, a lot of the plans are based on a replication of what was produced from the 2011 Census. Through this consultation, NISRA aimed to understand how data users' needs have changed over the past two years and the perceived positive and negative attitudes of conducting a census in a period of social and economic change. This section of the consultation evaluation will explore these needs.

6.1 Place of residence

There will have been some situations where the pandemic has affected respondents' place of residence. There were 93% of respondents who did not anticipate any need for additional place of residence data, while 14% of respondents noted that they had planned a new analysis using this data from Census 2021. When these responses were explored further through open ended questions, respondents noted a need to explore changes to 'where students resided' and changes in 'commuting flows', particularly for those who travel to work in the Republic of Ireland.

Way forward: NISRA will continue to develop the outputs outlined in the prospectus and will consider the potential impacts of the COVID-19 pandemic and EU-exit as potentially impacted data is released.

6.2 Economic activity and employment

Aspects of employment may have been impacted by the COVID-19 pandemic. Examples include an increase in the number of people who were temporarily away from work because they were furloughed or self-isolating. However, 83% of respondents stated that they did not anticipate a need for additional economic data other than what had been presented within the consultation documents.

There were 19% of respondents who noted that there were additional areas of analysis that they had planned; these included exploring economic activity trends, the impacts on veterans in Northern Ireland and a range of Census 2021 workplace questions relating to disruptions caused by COVID-19 or EU-exit.

Way forward: NISRA will continue to develop the outputs outlined in the prospectus and will consider the potential impacts of the COVID-19 pandemic and EU-exit as potentially impacted data is released.

6.3 Travel to work or school

There were 19% of respondents who stated that they anticipated needing additional data other than what had been presented within the outputs prospectus, with 15% of respondents stating that they were planning on using the data for new analysis.

When these responses were explored via open ended questions, similar responses, as were seen in previous sections, were raised around a need or plan to conduct an analysis in relation to the COVID-19 pandemic and EU-exit.

Way forward: NISRA will continue to develop the outputs outlined in the prospectus and will work with ONS and NRS to investigate other potential sources of data to supplement census outputs.

6.4 Workplace zones

NISRA are considering the need to produce workplace statistics by workplace zone, for use in origin-destination data and other research datasets, like the NILS or microdata. Workplace zones are a small-area geography designed to contain a consistent number of workers. This allows NISRA to release workplace statistics at a

more granular level. The zones provide more detail in areas with high numbers of workers and workplaces. For example, this might include city centres, retail districts and business parks.

There were 22% of respondents who stated that they require data published using the workplace zone geography. When these responses were explored further via open ended questions, respondents again noted a need similar to travel to work/school and workplace areas.

Way forward: NISRA will continue as planned with workplace zones while remaining aware of concerns in terms of census data limitations, as mentioned in other sections of the consultation responses.

6.5 Impacts on other outputs

Respondents were provided with a list of other potential areas of change due to the COVID-19 pandemic, including:

- migration;
- general health and disability; and
- unpaid care.

It was noted that 85% of respondents did not anticipate needing additional data to supplement Census 2021 data. When explored further, respondents noted that they would like to see some additional data including:

- data to have additional health and social care and charitable resources in relation to veterans;
- an own service activities dataset mapped to census outputs to gauge rates, and population impacts; and
- additional data on the impact of COVID-19 on migration, women with disabilities, and unpaid care work.

Way forward: NISRA will provide the planned output and, if feasible, will look to guide users to additional related robust data sources when releasing outputs.

7 Final comments

Respondents were asked if they had any additional data or analysis needs that will not be met. The comments received to this question related mainly to the need for NISRA to offer training to the public, in order to ensure ease of access to the table builder system, and the need for an enumeration report.

Respondents were then provided with another open ended question to allow them to describe any final unmet user needs, much of which has been discussed within responses to previous questions. Users again stressed a need for data on:

- qualifications particularly in relation to NVQ level 4 and data on individual qualification levels rather than simply the highest obtained;
- increased information on parliamentary constituency, and this to be updated when the political boundaries are reviewed;
- need for NISRA to ensure the PxStat system is as accessible as possible, and for training to be made available, where necessary; and
- additional breakdowns on Section 75 categories, gender, postcode data and deprivation.

Finally, NISRA asked respondents if they had any further comments on the content of this consultation. Responses indicated a number of areas for further information or improvement including:

- need for a gender question alongside sex;
- need for data to be accessible to a wide range of audiences including those without strong technical knowledge, examples included, the need to reduce the use of jargon and to allow for a commissioned table service;
- need for additional Section 75 breakdowns; and
- need for NISRA, ONS, and NRS to align outputs in quantity, topic and date wherever possible, with a particular focus on veteran data (within a particular response).

Way forward: NISRA will continue to align and harmonise with ONS, NRS and CSO where feasible. NISRA will further consider its dissemination methods and will aim to provide any necessary guidance to help enable and increase access to census data. Requests for additional topics or questions will only be considered in a future consultation for a subsequent census.

8 Going forward

As NISRA moves forward with the publication of Census 2021 outputs they will continue to consider the comments made in response to this consultation. As plans progress, the [Census 2021 outputs prospectus](#) will be updated with the most current information on the content of future releases.