

Assessment of compliance with the Code of
Practice for Statistics

2021 Census in Northern Ireland

(produced by Northern Ireland Statistics and
Research Agency)

Office for Statistics Regulation

We provide independent regulation of all official statistics produced in the UK. Statistics are an essential public asset. We aim to enhance public confidence in the trustworthiness, quality and value of statistics produced by government.

We do this by setting the standards they must meet in the [Code of Practice for Statistics](#). We ensure that producers of government statistics uphold these standards by conducting assessments against the Code. Those found to comply with the standards of trustworthiness, quality and value in the Code are given accredited official statistics status (called National Statistics in the Statistics and Registration Service Act 2007). We also report publicly on system-wide issues and on the way statistics are being used, celebrating when the standards are upheld and challenging publicly when they are not.

Acknowledgements

We would like to acknowledge the significant input of all the individuals and organisations that contributed to this report as we sought feedback and gathered information to inform our Assessment.

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Summary

Why we did this Assessment

- ES.1 The census is one of the most important sources of data and statistics, informing decisions about almost every aspect of life within the UK. It gives users – including government, local authorities, academics and commercial businesses – access to important information on the people and households of the UK and helps us better understand the places in which we live and work.
- ES.2 The Office for Statistics Regulation has conducted assessments of the censuses produced by the Office for National Statistics (ONS), the National Records of Scotland (NRS) and the Northern Ireland Statistics and Research Agency (NISRA). It is essential that the data and statistics from the censuses are reliable and provide valuable insights by meeting the rigorous standards of Trustworthiness, Quality and Value outlined in the [Code of Practice for Statistics](#). The last census by NISRA was carried out in 2021.
- ES.3 Our assessments have been conducted in three phases. In October 2019, we published our reports on [Phase 1](#), focusing on the planning and consultation activities undertaken by the census offices across the UK. In November 2021, we published our Phase 2 Assessment reports, focusing on the strategies for developing and providing outputs for both the [England & Wales Census 2021](#) and the [Northern Ireland Census 2021](#). For [Scotland Census 2022](#), our Phase 2 Assessment report was published in April 2023.
- ES.4 This report covers the third and final phase of our Assessment, focusing on the Northern Ireland Census 2021. In 2022, the day before the first release was published, [we wrote to NISRA](#) confirming the National Statistics designation (*now referred to as [accredited official statistics](#)*) for the 2021 Census in Northern Ireland. At that time, our judgement was based on NISRA's commitment to ensure that the Census 2021 statistics for Northern Ireland would be of high quality and meet the wide and varied needs of users of these data.
- ES.5 This report therefore focuses on the extent to which NISRA succeeded in its commitments from 2022 and met the needs of statistics and data users with the Census 2021 outputs.

What we found

- ES.6 Users of the 2021 Census outputs reported a high level of satisfaction, driven in part by NISRA's open and collaborative approach throughout the census process. The positive user feedback highlighted in this report reveals significant areas of success and strength, especially in public engagement and the unparalleled ability of users to access and analyse the statistics through a variety of innovative dissemination methods. These accomplishments were achieved despite the challenge of delivering Census 2021 during the COVID-19 pandemic.
- ES.7 We commend NISRA for the way it has worked with key users and for its recognition of the crucial role that census statistics play in both decision making and describing the society in which we live. NISRA has adopted a collaborative and transparent approach to engaging with this Assessment.

ES.8 Overall, NISRA has responded well to the requirements of our Phase 2 Assessment. NISRA's comprehensive approach to addressing the requirements included effective user engagement, the provision of sufficient documentation on quality and methods, and the publication of timely, accessible and flexible census outputs. In particular, the Flexible Table Builder has proven to be a successful innovation which has helped expand the public ownership and use of the census results. We regard this tool as an example of good practice that other statistics producers should seek to emulate.

ES.9 Our key findings are as follows:

- a. NISRA's census outputs were released in an orderly way supported by its proactive and clear communication with users.
- b. High response rates, sound methods and NISRA's extensive quality assurance of the census data mean that, overall, users trust and have confidence in the quality of the estimates.
- c. NISRA has identified the topic areas most likely to have been affected by the 2021 Census being carried out under the unique circumstances of the COVID-19 pandemic. Further detail is needed to fully support the ongoing use of those statistics impacted.
- d. NISRA has shown that it understands the public value of the census outputs and the role of statistics in society. NISRA has collaborated well with ONS and NRS and is currently working with the Central Statistics Office (CSO) to produce all-Ireland outputs for 2021/2022. NISRA should continue to collaborate with relevant organisations in the production of census statistics, particularly to improve comparability of outputs where possible.
- e. NISRA's public engagement and publication of supporting resources have increased awareness of the outputs and helped users to understand the census results.
- f. NISRA has developed a range of innovative and intuitive tools that have enabled users to access and maximise their use of the 2021 outputs and helped to unlock public curiosity in the census results.

ES.10 We have identified several areas for further improvement, building on the exemplary actions that NISRA has already taken in response to our requirements to date. We recommend that:

- a. Given the insight gleaned from the Census Quality Survey on topic questions, we expect NISRA to use its 2021 results, in particular those questions with a lower than 85% agreement rate, to inform any future development of any survey questions, including the 'Ever worked' question.
- b. To support the appropriate use of census data affected by the pandemic, NISRA should review its explanations and be more explicit in its guidance to help users understand what weight can be placed on affected statistics in decision making. In addition, signposting to other relevant topic statistics available in 2021 beyond those based on census could also provide users with a more holistic view of a particular topic. This work should be completed within three months of the publication of this report.
- c. NISRA should continue to build on the work already planned with producers in the rest of the UK and the Republic of Ireland, as such cross-working

would provide added public value to the availability and comparability of census statistics across jurisdictions.

- d. To aid transparency and help manage expectations, NISRA should keep users updated on ONS-led plans to develop and publish UK-level estimates for key census categories. These updates should include information about anticipated timelines and what outputs are being developed in partnership with ONS and NRS.
- e. NISRA should review the census section of its website to consider how navigability and the user interface can be further improved to enhance the user experience and increase the accessibility of the statistics.

Next steps

ES.11 The census currently forms the backbone of the UK statistical system. NISRA's recently published [Census 2021 general report](#) demonstrates the organisation's commitment to reviewing and learning from its approach to this important method of data collection. As part of planning for the future provision of population statistics in Northern Ireland, it is imperative that NISRA continue to identify and evaluate what lessons can be learnt from Census 2021.

ES.12 In addition to considering the above recommendations, NISRA plans to carry out a Census 2021 benefits realisation exercise, which will be crucial in ensuring the voices and needs of users are heard in this process. While producers explore the future of population statistics in the UK, NISRA should consider how it can plan and deliver population statistics for Northern Ireland that meet the standards of Trustworthiness, Quality and Value.

Our approach

- 1.1 For this third and final stage of our Assessment, we split our work into two strands:
 - A review of NISRA's Census 2021 outputs against the Code of Practice for Statistics, with particular consideration of the extent to which the outputs have met user needs.
 - A review of NISRA's progress towards any outstanding commitments it made in response to the census Phase 2 requirements (as outlined in Annex 1).
- 1.2 This report was prepared by an Assessment team composed of OSR statistics regulators. The team conducted desk research and engaged with key stakeholders and users to gather its findings. The report was then approved by the Regulation Committee on behalf of the Board of the UK Statistics Authority, on the advice of the Director General for Regulation.

Desk research

- 1.3 While the census results were confirmed as National Statistics (now called accredited official statistics) in 2022, our desk research determined that the outputs continue to comply with the standards of Trustworthiness, Quality and Value in the Code of Practice for Statistics. This research involved reviewing the outputs over the course of 2024 to confirm their accessibility, means of dissemination and methodological information, as well as many of the supporting resources, reference materials and assurance mechanisms published by NISRA alongside the outputs.
- 1.4 These findings were complemented by information that NISRA shared with the OSR Assessment team, which focussed on the progress it had made against each of the census Phase 2 requirements. We also conducted two interviews with senior members of the NISRA census team to discuss our findings and seek further insight. We thank NISRA and its staff for their cooperation during this process.

User engagement

- 1.5 In developing this report, we spoke to users of the Census 2021 outputs in Northern Ireland. OSR conducted 11 interviews with a wide range of users of the Census 2021 outputs from Northern Ireland government departments, local authorities, charities and academia. These included those with a statistical background, researchers, policy developers and non-expert interested stakeholders. We also interviewed NISRA's counterpart in the Republic of Ireland, the Central Statistics Office (CSO). The interview period ran from 1 October to 3 December 2024.
- 1.6 The information collected in this interview process complemented that gathered in an online survey that OSR ran in the summer of 2024 for Census 2021 output users, which received nine responses relevant to Northern Ireland. The online survey was advertised on OSR's website and also sent by email to known users of NISRA's statistics. It was run alongside a survey seeking feedback from users on the 2021 England and Wales Census outputs.

Findings

2.1 Our findings are summarised into six key areas:

- NISRA's release and communication of Census 2021 outputs,
- the quality assurance of the census estimates,
- supporting the ongoing use of census data affected by the pandemic,
- meeting user needs and collaboration with other parts of the UK and Republic of Ireland,
- NISRA's user engagement and,
- means of dissemination.

NISRA's release and communication of Census 2021 outputs

Key finding: NI census outputs were released in an orderly way supported by NISRA's proactive and clear communication with users.

2.2 NISRA has continued to put users at the centre of its planning and dissemination of the Census 2021 outputs. NISRA conducted two public consultations in [2018](#) and [2021](#): one on the proposed strategy for the Census 2021 outputs and another on the outputs' content and release timeline. NISRA's publication of the responses has meant that users can understand how their input shaped the final release plans in a transparent way.

2.3 NISRA published the [first results](#) from Census 2021 on 24 May 2022. This was around 14 months after the Census was taken (on 21 March 2021), and 2 months sooner than done for the 2011 Census. The release provided headline population statistics for Northern Ireland by age and sex, number of households with usual residents and the communal establishment population. Users are kept up to date with published and upcoming releases by NISRA's [Census 2021 outputs prospectus](#). Generally, census outputs in NI are grouped into three phases:

- **Census 2021 First Release: Population and household statistics.** Headline population estimates in NI were published on 24 May 2022. Small area geographies for Data Zones (DZs), Super Data Zones (SDZs), District Electoral Areas (DEAs), unit-level postcodes, postcode sector and districts in Northern Ireland were published in February 2023 and 2024.
- **Census 2021 Second Release: Main statistics** by topic with NI and Local Government District (LGD) breakdowns were published between September 2022 and March 2023. Supplementary geography breakdowns and main statistics on approximated social grade were published in 2023.
- **Census 2021 Third Release: Flexible Table Builder and multivariate data.** A selection of multivariate tables were published in May 2023, including religion, national identity and economic activity, ahead of the release of the Flexible Table Builder in June 2023. Further updates to the Flexible Table Builder were made in 2023 and 2024 providing additional geography and topic variables.

2.4 Most Census 2021 outputs were released in line with their pre-announced publication dates; the only exception was a minor delay when all NISRA outputs were paused due to the death of the monarch in September 2022. Any corrections made to census

data have been made in line with NISRA's policy, with any issues also highlighted on the [Quality notes, issues and corrections](#) page of the NISRA website. Five corrections have been made to census data spanning different topic areas and, on each occasion, NISRA has provided information on the extent, scale and impact of the correction made. The last correction was made in May 2024 to tables presenting historical trends on marital status to account for changes in categories over time.

- 2.5 Most users that we spoke to were happy with the timeliness of the NISRA outputs, with a minority sharing frustrations around the time taken to release them. However, the overall user sentiment was positive in relation to NISRA's delivery of census outputs.
- 2.6 NISRA effectively promoted its census releases. For example, NISRA announced its first outputs with a suite of communications, including a [press release](#), [briefing](#), tailored presentations to key stakeholders and the use of social media. Users were notified about the releases via email alerts and social media posts. This proactive approach to announcing the outputs continued throughout the release timeline. Overall, the users that we spoke to were very complimentary about NISRA's communication and engagement.

Quality assurance of the census estimates

Key finding: High response rates, sound methods and NISRA's extensive quality assurance of the census data mean that, overall, users trust and have confidence in the quality of the estimates.

Census response rates and use of methods

- 2.7 Census 2021 involved a move from a traditional paper-based questionnaire to a digital-first data collection approach. Census returns were made either online (just over 80%) or on paper. NISRA achieved a person response rate of 97% in Northern Ireland, the highest response rate of the last three censuses (2001, 2011 and 2021), as highlighted in its [Statement about data quality](#). The move to electronic questionnaires also resulted in higher item level response. NISRA's analysis of the first five questions on the 2021 questionnaire (first name, last name, date of birth, sex and marital status) showed that the electronic questionnaires had a 99.5% item response rate, while the paper questionnaires had a 96.4% item response rate.
- 2.8 NISRA worked with ONS and NRS and used international good practice and principles in developing its methods. The [Demographics Statistics Advisory Group](#), consisting of external experts, advised NISRA on how to maximise the relevance, quality and usefulness of statistics produced from the NI census. The group was also a consultative forum providing technical advice and guidance on methodological developments.
- 2.9 The majority of methods used in 2021 remained largely unchanged from 2011. To address any potential bias in the estimates, NISRA used robust methodologies for data processing and estimation to account for participants who did not respond or had missed particular questions. Those who did not respond were estimated and modelled using two processes (as was done for the 2011 Census). The Census 2021 Census Under Enumeration (CUE) process added 26,900 high quality administrative records into 12,700 non-responding households where evidence pointed to the presence of usual residents at the time of the census. Separately, the Census Coverage Survey (CCS), a subsequent representative sample of households, was then used to estimate any coverage error from the remaining non-responding

households, and to estimate those missed from counted households. This led to an adjustment of around 31,900 people and 9,200 households. The CUE adjustment was equivalent to 1.41% of the total population and 1.65% of total households, while the CCS added a further 1.67% and 1.20% respectively.

- 2.10 NISRA put measures in place to maximise the response rates of special population groups (such as students, homeless people, Irish Travellers), including engagement with relevant organisations and community groups. Given the challenges in counting full-time students observed in the 2019 census rehearsal, NISRA took additional steps to ensure that students were fully counted. Students were encouraged to make returns at their home and term-time addresses. A post-collection process was then used to address any overcount/duplication. A [published technical paper](#) details the enumeration and data processing phases for the student population in NI.

Quality assurance

- 2.11 NISRA used a rigorous quality assurance approach to understand and assure the reliability of the census results before publication. Guided by its [2021 Census Quality Assurance Strategy](#), NISRA used a range of quality assurance activities to ensure that the census data were robust and fit for purpose. These efforts included seeking feedback from stakeholder boards, groups and panels comprising a wide range of people and organisations. The expert quality assurance (QA) panel reported directly to the Northern Ireland Registrar General and provided additional assurance. To test the accuracy of the census estimates, NISRA also benchmarked census data against administrative datasets and other statistical releases. NISRA were able to assess the plausibility of the results, for example with the [NI population and household estimates](#), by comparing them to 2021 health, education, pension and electoral register administrative datasets.
- 2.12 NISRA also carried out a [Census Quality Survey \(CQS\)](#) between October and December 2021 to assess the overall quality of the census. The CQS was a voluntary survey across a random sample of households that had responded to Census 2021. The characteristics of the survey respondents were compared to those of the census, and individual responses were weighted to ensure that the sample was representative (by age, sex, religion). Analysis of the responses was done by matching the individuals (3,936) in the same 1,511 households in the census and comparing agreement rates with confidence intervals to account for sample variability. The results from the [Census Quality Survey](#) published in 2023 demonstrated that the Census 2021 is of high quality and fit for purpose.
- 2.13 The survey asked seven household questions and 33 individual questions. 40% of the CQS questions had an agreement rate above 90% and 67.5% of questions (27 out of 40 questions) had agreement rates over 85%. However, 12 individual questions had an agreement rate lower than 85%. In its analysis, NISRA recognises that the census and CQS responses may not align and explores in more detail the reasons behind the differences. As the CQS was conducted seven months later than the census, it is reasonable to expect that a change in circumstances over time and who in the household provided the response may have led to a difference in responses. Given the timing of the census, an impact on individual responses (such as hours worked) could also be expected due to the pandemic, yet there is no specific mention or acknowledgement of this in NISRA's analysis.
- 2.14 The most notable difference is with the 'Ever worked' question. The wording of the question was updated from the Census 2011, and the responses indicated an

anomaly when compared to broader labour market trends. After concluding its investigation, NISRA told us that it suspects an issue with the understanding of the question. The affected data were published and accompanied by an [issue note](#). NISRA intends to revisit the purpose and wording of the question as part of future census planning. **Given the insight gleaned from the Census Quality Survey on topic questions, we expect NISRA to use its 2021 results, in particular those questions with a lower than 85% agreement rate, to inform any future development of any survey questions, including the ‘Ever worked’ question.**

Supporting the ongoing use of census data affected by the pandemic

Key finding: The Census 2021 was carried out during the pandemic. NISRA has identified the topic areas most likely to have been affected by these unique circumstances. Further detail is needed to fully support the ongoing use of those statistics impacted.

- 2.15 Overall, Census 2021 data in NI are well trusted and regarded by users as being of high quality. The high response rates and NISRA’s extensive quality assurance process mean that users have confidence in using NI census estimates. The data from Census 2021 provide a snapshot of life in Northern Ireland at an unprecedented time. Data collected during this time may well be unusual or different from what might have been expected, and this was particularly the case for topics such as employment and economic activity. Interestingly, most users raised no concerns about the impact of the pandemic on either their use of or the quality of the statistics.
- 2.16 Supporting methodology documentation for the 2021 Census is available, with NISRA taking a proportionate approach to reflect the differing needs of users. For example, [NISRA’s Census 2021 methodology overview](#) summarises the census process, including the methods used, and provides links to more-detailed reports, such as the Census Quality Assurance Strategy (which includes details on the Census Address Register, methods used to process / validate responses, coverage estimation and adjustment and statistical disclosure methods). All the census topic bulletins and data tables also include links to enable users to navigate to additional methods documentation. The users that we spoke to were happy with the level of detail accompanying outputs. One user noted that the Flexible Table Builder could have benefited from further technical notes but understood the importance of not overwhelming non-expert users of the tool. Users were confident in using census data and content with NISRA’s methodology reports and supporting information.
- 2.17 NISRA included some explanation of the possible distortive effects in specific topic areas most likely impacted by the pandemic in its statistical bulletins. The [labour market](#) bulletin highlights the possibility that some people on furlough may have responded as being economically inactive instead of temporarily away from work. The bulletins for [Migration](#) and [Place of work or study](#) also highlighted to users that related statistics would be impacted by the pandemic owing to travel restrictions and the shift to home working for many.
- 2.18 There are limited explanations of how users should interpret trends over time and the extent to which decisions should or should not be made based on these data. NISRA told us that it is difficult to understand the full extent of the impact that the pandemic

has had on the census estimates. **To support the appropriate use of census data affected by the pandemic, NISRA should review its explanations and be more explicit in its guidance to help users understand what weight can be placed on affected statistics in decision making. In addition, signposting to other relevant topic statistics available in 2021 beyond those based on census could also provide users with a more holistic view of a particular topic. This work should be completed within three months of the publication of this report.**

Meeting user needs and collaboration with other parts of the UK and the Republic of Ireland

Key finding: NISRA has shown that it understands the public value of the census outputs and the role of statistics in society. NISRA has collaborated well with ONS and NRS and is currently working with the Central Statistics Office (CSO) to produce all-Ireland outputs for 2021/2022. NISRA should continue to collaborate with relevant organisations in the production of census statistics, particularly to improve comparability of outputs where possible.

Meeting user needs

- 2.19 Throughout the census process, NISRA has demonstrated that it understands the public value of the census outputs, and the overarching feedback from users was that the census outputs had met their needs. This was achieved in part through the two public consultations that NISRA conducted to gather input from users that fed into the design and delivery of the Census 2021 outputs. Users felt that NISRA recognised the range of potential uses for the statistics and that the census results had value in both describing society and aiding research and decision making. NISRA has a good understanding of the wide range of potential users from both within the statistical system and in wider society.
- 2.20 It is welcome that NISRA is planning to conduct a census benefits realisation exercise in 2025. Looking towards the future, one user suggested that NISRA could do a series of events and publications to showcase all the research and learning from the census. This would demonstrate that NISRA had also reflected on the public value of the outputs, not just the quality of the process.
- 2.21 NISRA demonstrated sensitivity and insight around how the data could be used to inform decision making and public debate, such as through publishing the [guidance note on use of religion question outputs](#). Prior to Census 2021, NISRA carried out several community liaison events to increase awareness of the census among community groups and the voluntary sector. Users reiterated that they found it helpful to have an in-depth conversation with NISRA about their census experiences and concerns.
- 2.22 New questions on sexual orientation and renewable energy have been well received by users and, as new datasets, their results have been well communicated by NISRA. An outstanding gap raised by users was on education data in post-16 qualifications, where the lack of breakdowns in degree level and apprenticeship type limited the usefulness of the statistics.

Comparability with censuses in other parts of the UK and the Republic of Ireland

- 2.23 Another area where user needs were not currently fully met was in comparability with the Republic of Ireland and the rest of the UK. In general, comparability between

Census 2021 and Census 2011 is high where the questions are broadly similar. Nonetheless, several users would like it to be easier to compare NISRA outputs with other contemporary datasets. Despite this, one user described the breakdowns presented in the downloadable tables of the outputs as being clear enough for them to conduct their own, albeit laborious, comparison work.

- 2.24 NISRA continues to actively collaborate with other statistics producers, particularly those in the UK and the Republic of Ireland, namely the Office for National Statistics (ONS), National Records of Scotland (NRS) and the Central Statistics Office (CSO). Building on those existing relationships, we would like to see the needs of all census data users met, particularly those interested in comparing NI census data with the rest of the UK and the Republic of Ireland.
- 2.25 While the census in the Republic of Ireland was held in April 2022, officials are still planning to produce a joint report on statistics from the 2021/22 censuses. This joint report is due to be published in 2025 and is widely anticipated by Northern Irish users of the Census 2021 results. The report will provide valuable high-level all-Ireland statistics on key areas covered by the censuses in Northern Ireland and the Republic of Ireland. NISRA's strong collaboration with CSO is of significant public value and acknowledges the user interest in all-Ireland statistical outputs. NISRA has informed us that further work on comparability is also planned, in collaboration with other UK producers, which is being led by ONS. **NISRA should continue to build on the work already planned with producers in the rest of the UK and the Republic of Ireland, as such cross-working would provide added public value to the availability and comparability of census statistics across jurisdictions.**
- 2.26 UK statistics producers, led by ONS, are working towards providing UK census outputs. These efforts are formally supported by the [Concordat on Statistics](#). The Inter-Administration Committee supports the implementation of the Concordat and resolves any inter-administration issues at a strategic level. Current plans and timings for UK census outputs are yet to be confirmed. Managing UK census data users' expectations is important. **To aid transparency and help manage expectations, NISRA should keep users updated on ONS-led plans to develop and publish UK-level estimates for key census categories. These updates should include information about anticipated timelines and what outputs are being developed in partnership with the Office for National Statistics (ONS) and National Records of Scotland (NRS).**

NISRA's user engagement

Key finding: NISRA's public engagement and publication of supporting resources have increased awareness of the outputs and helped users to understand the census results.

- 2.27 NISRA has taken an inclusive approach to supporting users to understand and make use of the census statistics. Its efforts here have included directly engaging with users and making a wide variety of resources and information publicly available on its website. Generally, users reported that the NISRA census engagement team had been effective in communicating with different sections of Northern Irish society and taking their requirements into consideration. Several users noted that the outputs had successfully engaged users and potential users, ensuring that data were publicly accessible. One user highlighted that more census-related information is available now than ever before.
- 2.28 NISRA used a variety of methods to engage with users about the Census 2021 outputs, taking a proportionate approach to increasing awareness of the data,

reaching a wide audience in Northern Ireland. This approach has been sustained throughout the release timeline, thereby ensuring consistency and predictability for users.

- 2.29 The census team was described as helpful and professional. One user noted that the census team became less proactive in engaging with users once the outputs had been published. Another user suggested that NISRA could do more to signpost census-related events on its website to enable more public participation. NISRA told us that it was subject to resource constraints and needed to focus on other priorities at the time, such as providing research datasets. Further direct engagement with community groups following the release of the outputs could have reinforced the value of the statistics to the public and we suggest NISRA consider the benefit of any post census engagement in the future.
- 2.30 NISRA used a variety of methods to engage with users about Census 2021 outputs, including [email alerts](#), [social media posts](#), media briefings, [press releases](#), [webinars](#), custom presentations, visits to schools and universities and conference attendance. Government users and interested groups were supported through a series of well-received bespoke presentations about relevant outputs to Northern Irish government departments. NISRA has provided a comprehensive [frequently asked questions](#) page on its website. To aid user understanding, NISRA published information papers describing key elements of the Census 2021 methodology and data processing, with a dedicated area for [reference materials](#).
- 2.31 To support sophisticated analysis of the data by the research community, NISRA is making more-detailed census information, such as microdata, available to accredited researchers. Examples include the [Northern Ireland Longitudinal Study](#) (NILS), the Northern Ireland Mortality Study (NIMS) and the [Census 2021 Comprehensive Microdata Dataset](#) (C21CM). Controlled access to specific microdata samples has been informed by consultation with users so that access to the most in-demand data can be prioritised. The release of microdata has conformed with requirements around confidentiality and disclosure control.
- 2.32 Supplementary statistical services are available through the [Census Commissioned Output](#) service. Commissioned outputs are made available to users on the census website. Users valued NISRA's attention to these bespoke requests, including offering meetings to refine the user requirement. Subsequent statistical releases are consistently released in the same format and advertised on the same platforms. NISRA has published transparent correction notes in the form of [Statistics Press Notices](#) when necessary. At the time of publishing this report, NISRA is still planning to release additional Census 2021 products, including additional census microdata products for research.

Means of dissemination

Key finding: NISRA has developed a range of innovative and intuitive tools that have enabled users to access and maximise use the 2021 outputs and has helped to unlock public curiosity in the census results.

- 2.33 The range of 2021 outputs and online tools produced by NISRA, in particular the Flexible Table Builder, has allowed users to maximise the value of census data for their own analyses and use. Several users with longstanding experience of using Northern Irish census outputs described the 2021 outputs as the most accessible census statistics published to date. By making the census outputs available in a

range of formats, NISRA has demonstrated an understanding of the different types of users who may be interested in the statistics.

- 2.34 These tools are accompanied by statistical bulletins which have been published to suit users of varying expertise. The tools on the NISRA website are intuitive but are nonetheless accompanied by user guides. Ways of providing feedback are available to users to enhance NISRA's insight into the user experience. This comprehensive approach to the user experience has been crucial in enabling public interaction with the statistics.

Website

- 2.35 NISRA published all of the census outputs and supporting materials on the [2021 Census](#) section of its website. This enabled users to access all outputs through a single portal. Users reported that the website was a significant improvement on the Northern Ireland Neighbourhood Information Service used for the 2011 results, with accessibility and navigation greatly improved. Overall, the website is relatively simple to navigate, with links provided to the main statistics, Flexible Table Builder, commissioned tables and other output tools, as well as supporting materials, such as guidance, quality notes and revisions information.
- 2.36 The [Main statistics](#) tables provide summary statistics for the majority of census questions and topics, arranging published data by theme. The webpage also provides an overview of which statistics were released in each phase of NISRA's release programme (Phases 1, 2 and 3). From here, tables can be relatively easily located and downloaded in a variety of formats. NISRA provides a bulk download option for users. Each table includes appropriate coversheet information to aid user understanding.
- 2.37 While most users found it easy to access the data they required, two users highlighted that the website could be more user-friendly and was at times difficult to use. Criticisms included that many pages on the website contained large bodies of text, which increased the cognitive burden on users, and that outputs were not always easy to navigate to from the landing page. Three users also noted that statistical bulletins were not always easy to find alongside relevant outputs, and that casual users may find them hard to locate. One user suggested that NISRA could improve the language accessibility of the outputs for minority groups, such as through using an imbedded automated translation tool.
- 2.38 NISRA has a [Help viewing documents](#) page which provides links to reader software. There is also the option to request alternative formats and guidance on PDFs. NISRA has an [accessibility statement](#) on their website and a specific [accessibility statement for the Flexible Table Builder](#). While giving appropriate consideration to the needs of those with disabilities, NISRA has acknowledged that not all accessibility limitations can be overcome through these methods.

Online output tools

- 2.39 NISRA developed several online tools to help users access and interpret the statistics. These tools have increased accessibility and general interaction with the census outputs, helping to unlock public curiosity in the statistics. The [Flexible Table Builder](#) was a major innovation that enabled users to build their own census tables for the first time, using almost all categories and breakdowns from the census data. It maximised the utility of the census data, as millions of tables could be produced, thereby offering users much more flexibility. User feedback on the Flexible Table

Builder was extremely positive, and its usability was vital to both technical and casual users of the outputs. Supporting explanatory information, such as training videos, was easy to find. This innovative tool has been a successful response to users' request for a more flexible way of creating bespoke tables following feedback from Census 2011.

- 2.40 The [Area Explorer](#), which allows users to explore geographies, was described by several users as intuitive. Its success led NISRA to develop the [Northern Ireland Local Statistics Explorer](#). The continued publication of the [Grid Square product](#), which allows for granular analysis of small area geographies, was also valued by users, though it is not as intuitive to use or visually palatable as the other output tools. An online version of the product, overlaid on mapping software, would likely be easier to navigate and use. The development of this product is planned under an ESRC funded project and is supported by NISRA.

Statistical bulletins

- 2.41 NISRA published 18 Census 2021 statistical bulletins to accompany the detailed characteristics tables. These provided comprehensive but accessible written summaries of the main findings of the census, offering users important commentary and context. They contained useful and appropriate data visualisations, such as maps and graphs, and objectively described the statistics, using straightforward language. Where necessary, the bulletins provided definitions and information about non-response and any uncertainty around the figures. Links were provided to a range of supporting documents, such as methodology, quality assurance and associated outputs.
- 2.42 The statistical bulletins are located on the release page for each phase of NISRA's release programme and in a separate [statistical bulletins](#) webpage. This means that they are not always conveniently located alongside the main data tables and can be unnecessarily complicated to find. **Given user feedback, NISRA should review the census section of its website to consider how navigability and the user interface can be further improved to enhance the user experience and increase the accessibility of the statistics.**

Looking ahead to the future

Learning lessons

- 3.1 Taking the time to reflect on how well the 2021 Census was planned and delivered is an important part of the 10-year census cycle to identify any lessons that can be learnt for the future. With that in mind, we welcome NISRA's recent publication of its [Census 2021 general report](#).
- 3.2 NISRA's general report details how the census was conducted in Northern Ireland and looks back at what was done to deliver Census 2021, highlighting the successes and areas where lessons can be learnt for the future. In planning for Census 2021, NISRA took account of lessons learnt from the review and its evaluation of Census 2011 and responded to changes in society, such as an increasingly ageing and more diverse population, to ensure that everyone was counted.
- 3.3 Census 2021 in Northern Ireland was carried out during a global health pandemic. The report discusses the impact of the pandemic, and the anticipated changes due to Brexit, on Census 2021 operations and delivery. NISRA faced logistical challenges in its operations that involved direct face-to-face contact. As the general report highlights, many of the planned face-to-face activities moved online or were cancelled, which did lead to some gaps, for example providing in-person assistance for respondents completing their census return.
- 3.4 There were also some unexpected benefits; for instance, the desk-based check of the Census Address Register using administrative datasets and geographic information system software saved time and money. The move to online training for field staff meant that the training was timely, consistent and easier to arrange logistically.
- 3.5 NISRA's evaluation of the impact of the pandemic and the broader lessons learnt from Census 2021 provide valuable insight for NISRA to use in its future planning. It is also good to see that NISRA has planned a census benefits realisation exercise, which will include a census user satisfaction survey, face-to-face interviews and follow-up discussions with key stakeholders. The exercise will provide valuable insight on the utility of the data from a user perspective and identify any data gaps to help NISRA plan for the future. Publishing the outcomes of this work and any planned actions NISRA takes in response will ensure that users' expectations are managed in a transparent way.

The future of population statistics in the UK

- 3.6 The future of population statistics across the UK is currently being considered by each of the government administrations. In 2014, the [UK Government set out its ambition](#) that 'censuses after 2021 will be conducted using other sources of data and providing more timely statistical information'. In 2018, ONS committed to respond to this ambition with a recommendation to government with the ONS Future of Population and Migration Statistics programme. ONS conducted a [public consultation in 2023](#) to understand the extent of population data user needs in England and Wales. The UK Statistics Authority Board will make a recommendation on the future of the census on advice from the National Statistician.
- 3.7 The outcome of the UKSA recommendation on the future of the census in England and Wales will significantly impact the broader UK statistical landscape. The census

is the backbone of the UK statistical system, and any decisions around its future must be carefully considered, including what impact it will have on devolved governments and other statistical releases that heavily rely on census data. Strong collaboration between the three statistical offices continues to be crucial during this period of systemic uncertainty.

- 3.8 As demonstrated by NISRA's delivery of the 2021 Census (and in the delivery of other censuses across the UK), administrative data has a role in supporting and enhancing the collection of data held about our population. The future role of these data is yet to be determined. NISRA's first step to prioritise understanding user need in its planning is the right way forward. Putting users at the heart of any decision making should lead to the continued delivery of population statistics that are trustworthy and of high quality and value.

Annex 1: Actions that NISRA has taken in response to the Phase 2 Assessment requirements

In 2022, NISRA made [a number of commitments](#) to action each of the Phase 2 Assessment requirements. On that basis, National Statistics status was awarded to 2021 Census outputs in Northern Ireland. The below table outlines the actions that NISRA has taken since that time and highlights where further improvements are needed.

Requirement	NISRA's 2022 commitment	Action taken by NISRA	OSR's evaluation of evidence
In order to support society's need for information, NISRA needs to clearly communicate how 2021 Census data may be impacted by COVID-19 and how it plans to address any unmet user needs. NISRA should ensure this information is communicated in an accessible and timely way, being open on plans, developments and progress even where definitive answers or solutions are still being sought.	NISRA publicly committed to provide information on how data may be affected by COVID-19 alongside census outputs, for example in its operational report published on 31 January 2022.	NISRA highlighted the data likely to be impacted by the pandemic in its 2021 outputs consultation . For the subsequent outputs release phase, NISRA provided further information for users in the statistical bulletins accompanying specific releases. NISRA's published Census 2021 general report includes detail on the impact of the pandemic on data collection and the operational decisions taken as a result.	NISRA has considered the impacts of the pandemic on census responses, communicating any impacts specific to topic areas. NISRA is open in its communication that the scale of the impact is difficult to ascertain.
	NISRA will complete its data processing and quality assurance (QA) so as to be fully informed on any impacts due to COVID-19 on census data. NISRA intends to publish supporting quality information alongside its outputs, with more detailed information to be developed and published as its outputs release phases progress.	NISRA completed its data processing and quality assurance and has identified those topics most likely to have been impacted by the pandemic. NISRA has published a number of quality-related information papers during the Census 2021 outputs release phases. Quality notes are available to help users understand quality considerations of the data; this includes highlighting statistics relating to economic activity and migration in terms of the impact of the pandemic on responses to the questions.	More explicit guidance for users is needed to fully support any decision making based on affected statistics. In addition, signposting to other related statistics beyond those based on census data would also help users understand any differences.
	NISRA plans to produce further narrative on the utility of census data – given the pandemic, Brexit, migration, Ukrainian	NISRA's planned census benefits realisation exercise will provide valuable insight into the utility of census data from a user perspective.	NISRA should use the outcomes of its planned census benefits realisation exercise to help inform any plans to produce further

	population crisis etc. – after census results are published.		narrative on the utility of census data.
To assure Northern Ireland users of how their data needs will be addressed, NISRA needs to provide users with transparent, accessible and timely information on how UK population estimates for 2021, UK Census data and Ireland-Northern Ireland data will be provided. NISRA should continue to work with, and align communications with, ONS, NRS and CSO to explain any impacts on data quality and describe where user needs may or may not be met as a result.	NISRA's Outputs prospectus includes high-level plans for UK population estimates and UK census data, and NISRA has reaffirmed its commitment to producing a report and data from Census 2021/22 for the island of Ireland.	The Census 2021 Release plans section of the NISRA website provides information to users on output releases, including UK data for Census 2021/22 and a joint Ireland and Northern Ireland Census 2021/22 report. There is a commitment from the three UK census offices, in the statement of agreement, to produce consistent, coherent and accessible statistics for the UK from Census 2021/2022. Work on UK data is ongoing, with ONS leading the development of these outputs. Work on the Ireland and Northern Ireland Census 2021/22 report is underway. NISRA is collaborating with CSO to develop this output, with the aim to publish it before the end of the 2024/25 financial year.	NISRA continues its strong collaboration with ONS, NRS and the CSO and is an active member of cross-UK forums in supporting census data user needs. The impending UK Census outputs and the Ireland and Northern Ireland 2021/22 report planned for publication in 2025 should fill the current gap and aid users in any future comparisons of NI census data. In the interim, NISRA should continue publishing any updates on plans and timelines to manage user expectations.
	NISRA is an active participant in a variety of cross-census office groups, including the UK Census Committee. The census team has told us of its continued productive and positive relationship with ONS, NRS and Central Statistics Office (CSO) of Ireland to progress collaborative working on these matters.	NISRA was an active participant in the UK Census Committee throughout the duration of the Census 2021 program. The Committee now convenes as part of the GSS Inter Administration Committee, which works in the context of the Concordat on Statistics between the UK Statistics Authority and the devolved administrations, outlining the way in which England, Northern Ireland, Scotland and Wales work together and cooperate on statistical matters. NISRA maintains a strong working relationship with CSO in Ireland, including through the Census Advisory Group the CSO Census Project Oversight Board.	
	NISRA plans to continue to update its UK census data webpage as plans for the delivery of UK census data are finalised.	Plans and timings for UK Census outputs are yet to be finalised. NISRA updates users on its UK census data webpage . The online Census 2021 dictionary includes definitions, variables and classifications to assist users of Census 2021 data across the UK.	

NISRA should ensure finalised documentation on quality, information and judgements on suitable data sources, and methods and their application are complete. All supporting information should be sufficiently open and easily available to Census data users alongside its range of Census outputs.	NISRA has established a new expert QA panel, reporting directly to the Registrar General, ahead of summer and autumn 2022 census releases. This panel is tasked with reviewing the methods and approach to QA, adding an additional level of assurance to its previously planned approach.	NISRA used an expert quality assurance panel to assess and provide assurance on the quality of high-level Census 2021 outputs. The panel reported to the Northern Ireland Registrar General. The QA panel was made up four external experts with experience of census and population statistics. This panel asked important and probing questions regarding the estimates and helped to shape the quality assurance report published alongside the first release of Census 2021 outputs in May 2022.	NISRA has published a range of easily accessible documentation on quality, data sources and methods used in producing 2021 census outputs. The users that we spoke to were content with NISRA's quality documentation.
	NISRA plans to publish finalised documentation, including quality assurance reports and methodology reports, to support its census outputs.	To supplement the release of Census 2021 outputs, NISRA has published a number of information papers relating to quality assurance and methodology. There is a variety of other reference materials available on the NISRA website to help users make the most of Census 2021 data.	
In order to ensure the relevance of data and statistics to users, NISRA needs to continue to develop and enhance its user engagement activities, connecting with a broad range of users and embracing challenge. NISRA should continually review and seek to implement improvements in its engagement strategies and should ensure its decision making is open and transparent, being clear where users' needs can or cannot be met.	NISRA has secured additional funding for social media advertising leading up to and during the release of Census 2021 outputs to raise public awareness, which will supplement its use of existing channels for communication with users.	NISRA used the social media channels of Facebook and Twitter/X during the Census 2021 data collection phase to raise public awareness and promote participation. NISRA continued to use both channels during the outputs release phase to support public engagement and communication. NISRA continued engagement with the Demographic Statistics Advisory Group during the outputs release phase, holding meetings in September 2022 and June 2023. Extensive user engagement activities (such as hosting information sessions and webinars with key stakeholders and users and attending conferences) and communication were also maintained throughout the outputs release phase, with a key focus on promoting the digital products supporting Census 2021 outputs, primarily the Flexible Table Builder and Area Explorer dissemination and data visualisation tools.	NISRA has engaged with users extensively and carried out a range of activities to promote and assist users in using census data. This has included seeking feedback and challenge from key stakeholders and groups such as the Demographic Statistics Advisory Group. Overall, users were happy with NISRA's engagement and had confidence in liaising with the NISRA team to ask or identify any potential gaps required for their individual needs.
	NISRA explained some of the new and innovative engagement routes put in place for live operations, such as new social media channels on Facebook and Twitter. NISRA told us it plans to use these new routes for engagement strategies on census outputs alongside its more established routes, such		

	as its Demographic Statistics Advisory Group.		
NISRA needs to deliver its aims in relation to timely, accessible and flexible Census outputs – while ensuring sufficient data quality and supporting appropriate use of the data. It should clearly communicate its plans and timelines for outputs at the earliest opportunity, updating and revising these as soon as more detail is available or to reflect any changes to its plans.	NISRA published its outputs prospectus in January 2022, giving users a broad schedule of outputs for 2022/23. NISRA will update this with further release dates when they are finalised.	NISRA continues to use the Census 2021 outputs prospectus as the main mechanism by which it communicates plans for outputs releases. The Release plans provide a detailed schedule that informs users in advance about the content of each release, the planned release date and the associated geographies.	NISRA has delivered its aim to produce timely, accessible and flexible census outputs, with clear communication of its plans and releases. Users shared overwhelmingly positive feedback about NISRA's online tools, particularly the Flexible Table Builder.
	NISRA has announced the date for the release of first census outputs for Northern Ireland – confirming these will be made available on 24 May 2022.	The first release of Census 2021 statistics was published on the NISRA website as planned at 9.30 am on 24 May 2022.	
	The census team continues to work closely with the NISRA branch leading on the development of the new output dissemination platform, which will be used for the first time for census data.	The NISRA Data Portal launched in early 2024 provides data on a range of themes, including the census. Users can access census data from both 2011 and 2021 on topics such as demography, ethnicity, language, religion, housing and the labour market.	
	Work is ongoing with ONS on the development of a flexible table builder.	NISRA launched the Census 2021 Flexible Table Builder in June 2023, allowing users to build and/or customise census tables for the first time.	
To best support Census data users, NISRA needs to continue to improve its webpage navigation for current materials. NISRA's plans for a separate website or	NISRA has started a review of its existing Census 2021 webpages to aid accessibility for users. NISRA will continue to update and refresh its census webpages as outputs are delivered.	NISRA restructured the Census 2021 section of its website to coincide with the outputs release phase, with the aim of making it easier for users to navigate and access data and reference materials. NISRA continually reviews the structure and content of the webpages, including a review of the Census 2021 section of the NISRA website in summer 2024.	We recognise that NISRA has made some improvements to its webpage; however, more work is needed to optimise navigation of census outputs for users. This should be

webpages for Census outputs themselves will require sufficient consideration of its navigation and accessibility. NISRA should keep webpages and content refreshed and current.	The census team will work with NISRA's IT support team to ensure that dissemination systems are successfully integrated with the NISRA website.	The main self-service dissemination tools for Census 2021, namely the Flexible Table Builder and the Area Explorer, have been successfully integrated with the NISRA website. They were both subject to accessibility and security checks, and any significant remediations were actioned before going live.	improved in line with the feedback we heard from users.
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