

Beyond 2011

**Stakeholder Engagement workshop
Edinburgh, 19th and 21st February 2013**

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Contents

1.	Introduction	3
2.	Current uses of census data	3
3.	Alternative data sources used.....	8
4.	Views on alternative sources	9
5.	Future options	11
6.	Future information priorities	12
7.	Implications of ceasing the census	13
8.	Conclusions	14
9.	Our contact details	14

Beyond 2011 Stakeholder Engagement Workshop – 19th & 21st February 2013

1. Introduction

National Records of Scotland (NRS) has been running a series of stakeholder engagement sessions with representatives from a range of users interested in small area population and socio demographic information. These discussions on the 19th and 21st February 2013 preceded a formal consultation to gather user needs which was launched in March 2013.

Each session began with a presentation detailing the reasons behind the initiation of the project and the different options that are currently being investigated. This presentation can be found within the [Beyond 2011 Events](#) section on the NRS website. Delegates were invited to discuss how they currently use census information and how any changes could affect their work. The outcome of these discussions is included in sections 2 to 9 of this document.

2. Current uses of census data

Delegates discussed how they currently use the census. The following section details how the census is currently used by the delegates.

2.1 Planning services and resource allocation

The majority of delegates predominantly use census data for the planning of services. The delegates use a range of aggregate statistics derived from the census to effectively plan services. Aggregate statistics are a collection of summary counts of the numbers of people, families or households resident in specific geographical areas possessing particular characteristics, or combinations of characteristics drawn from the themes of population, including ethnicity and religion, health, work, and housing. They are derived from analysis of the information provided in returned census forms. Adjustments are made in the outputs for people and households who may have been missed out and not been recorded on a form, or may have been counted more than once by being recorded on more than one form.

A number of the particular characteristics and combinations of characteristics drawn from the census, such as disability, language and ethnicity, were mentioned by the delegates as being important to the planning of a range of services. A number of delegates emphasised the importance of cross tabulations to planning services. Cross tabulations summarise data based on two or more of the characteristics and can show the inter-relationship between two or more characteristics. For example, gender and ethnicity can be cross tabulated with employment information to produce figures on how many unemployed Pakistani women there were within a specified geographical area. Delegates agreed that reliable information on these issues can only be found in the census.

Delegates stressed the importance of knowing the population profile of an area and how services and provisions are suited to the population:

‘We are interested in who the population are and how we serve them.’

‘I also use it to help local authorities understand their ageing population.’

‘It's the base for population estimates; I don't think councils will cope without it.’

Resource allocation

The wide demographic coverage of the census was seen as an important feature by delegates as the census underpins many resource allocations.

‘The census covers everything. Other research and study gives an indication but not the full picture. The census can never be substituted. Resources could be provided and decisions made but wrongly if they are not as accurate as the census.’

‘The resource allocation [for religious services] is based on the population count and the religion question.’

Some delegates also discussed the financial implications of the census:

‘The census as a tool is very important. The user should be able to extract information from the census. If there is a tool for information it saves a lot of money. I think it may turn out that we have an outcome that says ‘even on the basis of cost the census is the best option’. I think money invested in the census saves money elsewhere.’

Equalities monitoring

The [public sector equalities duty](#) (PDF document available on the Press for Change website) arising from the Equalities Act 2010 (on the [legislation.gov.uk](#) website) requires all public bodies to make assessments to ensure they are not discriminating against anyone with a protected characteristic (i.e. age, gender, disability, ethnicity, sexual orientation, religion and belief). The census provides Local Authorities and NHS Boards with baseline information on these characteristics. Many delegates stressed the importance of the census as the primary source of equality information, particularly relating to protected characteristics. The delegates discussed a number of specific services that require unique estimates from the census.

‘We use the census for population based analysis to identify specific groups, in particular ethnicity, with the aim to target services. For instance, we've got a big Polish population and we'd like them to access the services they need. We use a lot the census output area data.’

‘An Arab question was included for the first time in 2011. This will have a huge impact for the Arab community. Up until now the desire for this was variable.’

Aggregate statistics on religion are also used in the planning of religious services:

‘We use nation-wide figures to make sure we have the correct number of [Church of Scotland] ministers. We feed information to congregations, for example, what type of people, the numbers and how affluent or deprived an area is.’

A number of the delegates also said that they were looking forward to the release of the 2011 Census data and that they would be using data from the question on language, especially Gaelic. The census was seen by delegates as being the only reliable source of information on language.

‘Census is essential to find out different languages spoken throughout Scotland particularly small area datasets such as Gaelic speakers and other minority groups.’

‘The Gaelic question is unique to the census and is the only data source that asks the whole population their language ability. It gives you age breakdown such as 5 to 12 year old Gaelic speakers.’

‘Sign language users in Scotland still need the census as a benchmark.’

The delegates mentioned that census categories are used by a range of other public bodies in their own surveys and publications:

‘The police, NHS and prison service all use census categories.’

Geographic coverage

Aggregate statistics derived from the census are available from census output area level to a national level. The flexibility in the statistics was considered by delegates to be very important to the effective planning and targeting of resources. The delegates emphasised the importance of small area data to their work. Having low level geographical outputs was essential to a number of delegates as it allows them to build up to the different geographical areas and boundaries based on their needs. Delegates discussed how they use the census data at low geographies, especially with a focus on service provision.

‘We use the basic population estimates of census data, the household estimates and settlements data, the ethnicity groups and carer information [...], for estimating the services needed in each area at data zone level. The census is the bedrock for getting that information.’

‘We need to look at small data zones by age in years and gender for strategic reasons to understand where there are lots and less people going in to school.’

Considerations of equalities characteristics are important for Local Authorities when producing and maintaining [Single Outcome Agreements](#) (SOAs). SOAs set out how Community Planning departments in councils will contribute to the [Scottish Government's National Outcomes](#) information for both of these is available on the Scottish Government website. The purpose of a SOA is to identify areas for improvement and deliver better outcomes for the people of Scotland as well as individual local authorities. A number of delegates emphasised the importance of detailed geographical coverage to SOAs.

‘Most data requests go to me and they are currently focused on assessing Single Output Agreements. Other alternative data sources such as SIMD¹ are not as useful as the census. For instance we run a multiple deprivation analysis with the census data and we could identify deprived areas within our communities at very low geographical level. One street within a supposedly affluent area can be very deprived and this is something the SIMD survey doesn't detect.’

Footnote

1) [Scottish Index of Multiple Deprivation](#) (SIMD) available on the Scottish Government website.

2.2 Research

The aggregate statistics derived from the census and subsequent Mid-Year Estimates (MYE)² are used with other data sources as denominators in research. Some delegates use census population estimates as the denominator when estimating prevalence rates (the proportion of the population with an illness or condition at a given time) and the health ratios of health conditions. These estimates are based on both the census as the denominator and other data on the total number with a health condition to provide the numerator. This was important to a number of delegates:

‘Census information is used to find out mortality rates and long term illnesses within ethnic groups in small data zone areas (5% of the population). This looks at death rates and health records looking back on trends dating back to the 1981 census.’

The census is also used longitudinally to determine how health varies across different groups and different geographies over time.

‘The census is important for longitudinal study. Longitudinal study offers the opportunity to get new insights into Glasgow’s mortality rate.’

‘I also look at links between census and vital events then input this into longitudinal studies.’

The census is also used in specific areas to determine the context and potential reasons for social change, for example:

‘I think understanding the de-population of islands is important. Simply knowing the number of people is inadequate. Contextual information is more important. Who are the people who are still living in low level areas and islands?’

‘I use it to analyse migration and the impact the expansion of the European Union has had on local authorities.’

Delegates expressed concern that household composition and family make-up would be harder to achieve using non-census methods and that the census provides a range of variables that are potentially harder to cover in administrative sources.

‘The census provides better data on household and family patterns than any other source. If administrative sources are used, the whole family doesn’t have to register with a GP or go to the same school, so it may not be as easy to gather family data as people think.’

Footnote

2) The mid-year population estimates provide an annual estimate for the population as of 30 June. They are based on census data and records of births, deaths and migration patterns.

2.3 Social survey sampling and weighting

Delegates from social research organisations primarily use the census to produce stratified samples³. Delegates from these organisations were worried about their ability to stratify if no census data was available.

‘We have a team of statisticians that deal with sample design and weighting. It’s used to design subgroup samples to find out where the subgroups are most likely to be. It’s used for sample stratification methods.’

‘If we need to target a specific subgroup then we will target that group from information from the census.’

The delegates from social research organisations said that census data is then used to calculate weights for their survey data after it has been collected. These weights adjust for the stratification sampling method used and non-response bias. In most surveys it will be the case that some groups are over-represented in the raw data and others under-represented. These over and under-representations are usually dealt with by weighting the data.

2.4 Information requests and business planning

A number of delegates also discussed their role in providing demographic information derived from the census to small businesses and specific public bodies to effectively target investment and business planning.

‘Census information is used along with the Scottish Household Survey and Scottish Health Survey to find out social demographics of different areas. This is used for a market segmentation approach for detailed spots in the population.’

2.5 Benchmarking

A number of delegates also said that the census is important in providing a benchmark and to check the quality of their survey data:

‘We also use it to check the quality of our survey. You adjust the survey to fit with the census. It is used as a baseline measure.’

‘We use the census to provide health based information and weighted values for the local population samples for health studies. We also use the census to corroborate our health databases.’

‘The census is the benchmark for future social research. Mid-Year Estimates (MYE) would not have a benchmark and could be wildly under or over counted.’

Footnote

3) Stratified random sampling is a technique which involves dividing a population or sampling frame into several, non-overlapping ‘strata’ (subgroups) according to a particular characteristic which reflects the variables of interest. Once the population or sampling frame is divided appropriately, simple random samples would then be selected from within each stratum.

2.6 Genealogy

A number of delegates also stressed the importance of the census to genealogy and the revenue created from this:

‘There is also revenue generated from genealogy and family tree research, which is particularly popular in Scotland. It is a hugely important issue for genealogists.’

The impact on genealogy was discussed in detail at an earlier event on the 8th November 2012.

2.7 Trust in the census

Across the discussions, a number of delegates emphasised that the census is perceived as the most trusted and authoritative source of information. For example:

‘Even people who are not interested in research are aware of the census and its reliability. People look forward to it for the whole decade.’

‘The census is trusted and is familiar. It’s a brand thing.’

‘We still use 2001 Census data in equalities outcomes as we believe in the quality of the data.’

2.8 Limitations to the current census

A number of delegates across the group criticised the frequency of the census and the consequential limited time frame in which it can be used. This was agreed by many delegates to be one of the main issues with the current census model.

‘[The census is valid for] four to five years, after that it’s completely out of date. For instance, in our team we use ethnicity data for that period of time and afterwards we use a software to deduce ethnicity from the name and surname.’

‘The census gives a baseline but needs supplements to keep up to date.’

One delegate also questioned the coverage of the survey in deprived areas. They suggested that administrative sources are used in addition to the census to improve the coverage:

‘The areas census missed are in deprived areas. Administrative sources should be used as well as census to help improve longitudinal study.’

3. Alternative data sources used

Delegates were asked about other sources used in their work. A wide range of alternative sources were used including the Electoral Register, the School Census, Higher Education Statistics Agency (HESA) data, Jobcentre Plus statistics and information supplied by Experian.

The delegates also used a variety of surveys including the Scottish Household Survey (SHS), the Scottish Health Survey (SHeS), the Labour Force Survey (LFS) and the Health and Language Needs Survey.

They also used a range of other sources including the Scottish Index of Multiple Deprivation (SIMD), the Scottish Neighbourhood Statistics (SNS) and Scottish Longitudinal Study (SLS).

The SIMD was considered to be a very useful tool for community planning by many delegates. Local authorities use SIMD to identify small area concentrations of multiple deprivation. It allows effective targeting of policies and funding. The SIMD ranks small areas (called data zones) from most deprived (ranked 1) to least deprived (ranked 6,505). The SNS is the Scottish Government's on-going programme to improve the availability, consistency and accessibility of small area statistics in Scotland and was also deemed extremely useful by many delegates. SNS⁴ has developed the systems to enable statistics across most policy areas, including information about benefits, education, health and the labour market to be brought together on a common small area geography. A delegate commented:

‘SNS and SIMD are the main drivers for planning in our council area. They are useful for investment regeneration.’

4. Views on alternative sources

4.1 Surveys

Delegates discussed how social surveys could be used as an alternative to the census in their work. The two main surveys discussed were the Scottish Household Survey (SHS) and the Scottish Health Survey (SHeS). Although most delegates agreed that they are very useful sources, it was agreed that neither survey had a large enough sample size across all local authorities in Scotland. In order to ensure that results can be said to be representative of the whole population a sufficiently large sample size is required. Usually a sample with between 1,000 to 2,000 interviews will allow for reasonably robust analysis⁵. However the sample size needs to increase if more detailed analysis of sub groups of the population, or aggregate statistics, are required. For example, if analysis is to include results for men and women separately then the sample will be divided in two (leaving 500-1000 per sub-group), but if there are five age categories to be analysed the sample will be cut five ways making the numbers in each sub-group smaller and the results less robust.

‘The Scottish Household Survey provides a variety of useful information, but the problem is that it has a very small sample, only 100 houses in our council.’

‘A sample survey is useless for actually identifying the locations for ethnic minorities. This is not currently part of administrative sources.’

Delegates who work for social research companies producing large scale social surveys also stressed the problems of low response rates in social surveys:

‘You can’t just replace the census with more surveys as there are a lot of problems with response rates. It think it is around a 65% response rate for some of the big surveys.’

Footnotes

4) More information can be found on the [Scottish Neighbourhood Statistics](#) website.

5) Further information on survey design can be found in the [Survey Methods](#) section of the Scottish Government website.

‘The problem is you cannot just add questions to a survey because we would like to know more information – there is a limit to the amount of time you can ask them to give you and how long they can sit with you. We know that this is becoming more of a problem as the response rate is going down.’

4.2 Administrative data sources and data linkage

Data linkage is the joining of two or more administrative or survey datasets to increase the power of analysis possible with the data. The [Data Linkage Framework](#) (available on the Statistics section of the Scottish Government website) aims to address barriers to data linkage, and to widen the range of data linkages that can be carried out, without impinging inappropriately on personal privacy of data subjects. The groups discussed the merits and problems of using administrative data sources and data linkage. For some delegates this was based on their own experience of using administrative data and data linkage projects.

Some delegates were very positive about the use of administrative data sources:

‘The School Census is a good source of information, especially for ethnicity and changes in family structure.’

‘From the School Census we learnt that we have 148 languages in our council. Jobcentre Plus provide some statistics on ethnicity for jobseeker’s allowance.’

A number of delegates had also used data linkage to provide evidence for policy changes or implementations in their areas:

‘We used information from police data and linked it to Accident and Emergency regarding alcohol related incidents to estimate the cost of alcohol abuse.’

Coverage

One of the main concerns by delegates was the perceived coverage issues of administrative sources. Delegates noted that other administrative data sources, such as the Electoral Register, might have specific coverage problems and would therefore need to be used alongside other sources.

‘The Electoral Register could be an alternative source, but it's also problematic. Not everybody is in there.’

‘The School Census is not so good if there are private schools in the area. They don't provide accurate information.’

‘Going forward, for any alternative to the census one of the big challenges will be the hard to count groups.’

However, some delegates said that certain administrative data sources could be better at picking up hard to reach groups:

‘College data and benefits data point to deprived young men and it is probably a richer source.’

Quality and accuracy

Some delegates noted that administrative data sources were not conceived with a statistical use in mind, therefore it can be challenging and time consuming to ensure that these sources are consistent across different areas, especially if the remit of the source varies.

‘Using administrative sources is a great idea in principle, but it would be a great task to make data internally coherent, let alone on a national scale.’

‘Administrative sources vary tremendously in update cycles and categories. Trying to cross harmonise variables with administrative sources is very difficult.’

‘Data linkage will take time. It should be pursued but I don’t think it will be ready to be an adequate alternative for a long, long time.’

One delegate expressed concern that administrative sources would not be consistent and that this could add additional problems when trying to produce co-ordinated approaches across the UK.

‘It is important that census has a standardised UK wide output as it is difficult to have UK policy when you can’t compare statistics throughout it. An administrative source is not collected with this in mind.’

One concern amongst delegates was the flexibility of administrative sources to changing priorities and targets over time. The legal and financial implications of this were also debated by delegates:

‘There should be core indicators that don’t change over time. Some questions change when targets change. It will be even harder to deal with when using administrative sources. They are more vulnerable unless ring-fenced by the legalities of the census. If this is all done you may be able to do an annual census. I can’t see how you would arrive at the same cost though.’

Delegates also had concerns about the practicality and legality to gain access to administrative data in order to carry out data linkage:

‘We use administrative data with Jobcentre Plus. There are problems technically and legally as we need to look at actual names to get a proper match.’

‘We hit a brick wall with legal issues. I think Local Authorities are very keen to share information but the legalities get in the way. People are nervous of putting a foot wrong.’

5. Future options

A number of delegates were interested in the possibility of the traditional census being completed and returned electronically and felt that the online option should be explored further.

‘The 2011 Census was the first census to have an online option. This is surely the way forward and would produce more accurate data.’

‘In Canada they use the internet a lot more. There is a one-page sheet handed out with internet access code. You can encourage online participation.’

'Timeliness is an issue with the census. Even if it came out every 10 years but the results were produced quicker it would be better. It is now almost two years since the census happened and we don't have full results yet. I think greater use of online resource could speed this up in future.'

Delegates also discussed the different census-type options that are used in other countries. Concern was expressed over the apparent disparity in the French rolling census model.

'We can't have a census like the French one that has new information for some areas and older information for others. This is an inequality.'

'In France, you do lose information on migration, and there are no questions on travel to work. There isn't a full picture at any one point in time. At low level demographics it can be difficult to produce this. It is more timely on population figure outputs though.'

Some delegates were also interested in what work was being developed internationally on the census and Beyond 2011 programmes and how this could be applied to Scotland and the UK as a whole.

'I'm keeping tabs on the census and looking at international developments. I'm interested in seeing if there are any alternatives.'

One delegate expressed concerns over the timetable for Beyond 2011, indicating that the decision relating to whether to conduct a census in 2021 should not be made until the 2011 Census benefits realisation work had been completed.

'A decision to replace census should not be made in time for 2021, it should be allowed to take longer. There will not be enough time to report on the value of new research based questions in the 2011 Census before a decision is made.'

6. Future information priorities

The groups were asked to discuss the following aspects of the information they use and their relative importance:

- Quality and accuracy
- Geographic coverage
- Frequency
- Aggregation

There were mixed opinions on which aspects were most important, largely because the uses of the census differed across the delegates. Many delegates were keen to stress the importance of quality and accuracy above frequency:

'The 10 year gap between the census has it's limitations however it does produce quality data.'

'A 10 year cycle is better than nothing. Supplementing in between the census is good.'

'I don't mind a census every 10 years, but I'd like a more accurate MYE.'

Although some delegates were happy with the 10 year cycle, this was not agreed by all delegates.

‘We don't rely so much on the detail and I would prefer more frequent data sacrificing a bit on accuracy.’

‘Every five years would be better. It might be easier to conduct in terms of continuity too.’

‘The time it takes to get information out could be better.’

‘10 years is too long. A topic focused census on an annual basis would be ideal. One year health, next year something else, etc.’

Aggregation was also important to some delegates, where individual level records were seen as valuable for data matching and cross tabulation.

‘The core demographic statistics by age and gender is easy to obtain, it's the other characteristics that's the problem and there's no other way to collect that information other than a big survey.’

Aggregation by protected characteristics under the [Equalities Act 2010](#) (on the [legislation.gov.uk](#) website) were also important to delegates:

‘Equality laws deal with protective characteristics and how results are presented. We have to provide an equal service to the whole community but we don't know the community. We need something to advise us.’

7. Implications of ceasing the census

The groups discussed what the main implications would be if the census outputs were not available. A point was raised in one session which suggested that the census allowed local authorities to work in an open and non-biased way, ensuring that data quality was the same across the different departments and authorities.

‘The census is neutral and avoids infighting between departments in Local Authorities. No census could introduce bias at local level. If council X is richer than council Y they could have better data quality, for example.’

Delegates stressed the importance of high quality data to informing policy decisions:

‘Wrong decisions being made on the back of a lack of information or poor information is unquantifiable.’

One delegate noted that current Gaelic policy assumed that there would be continuity in census data:

‘There is a [Scottish Gaelic Policy](#) (available on the Scottish Government website) target based on there being a 2021 Census.’

There were also concerns about the impact of not having the census in terms of survey sampling design:

‘If we did not have the census it could increase sampling error and it would also interrupt time series data.’

8. Conclusions

The discussions that were held with delegates were very useful and allowed the Beyond 2011 team to see how the census is used across Scotland. Delegates emphasised the importance of the census to their work. There was also a lot of discussion on the issues surrounding data linkage and the potential solutions to these problems.

The contents of this report will be added to the bank of information currently being collected by the Beyond 2011 team and will be used in the evaluation of any possible methods for the future provision of population and socio-demographic information in Scotland.

Delegates will also be kept informed about any future events relating to Beyond 2011 and were sent a link to the Beyond 2011 formal consultation in Spring 2013.

9. Our contact details

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