

## CENSUS ADVISORY GROUP

AG(09)10 CAG

### Population Bases for the 2011 Census

#### Summary

This paper provides an update on population bases planned for use in the 2011 Census in England and Wales, and differences across the UK. It outlines the benefits of the chosen main output base, and the work ongoing to make outputs possible using other bases.

Advisory group members are asked to note and comment on:

- The explicit alignment of the main output base, at a national level, with that required by UN-ECE regulations, which is the basis for the Mid-Year Population estimates and;
- The slight difference between Census and UN-ECE definitions at a sub-national level;
- The difference between the population bases used for enumeration and outputs;
- Plans for outputs on non-standard population bases; and
- Differences in approach across the UK.

#### 1. The 2001 Census

The 2001 Census used a *Usual Residents* population base, for both enumeration and outputs. However, although instructions were provided on the questionnaire to establish who should be counted as a usual resident at each household, these instructions did not include any explicit definition of who should be counted as a usual resident within the UK.

Field staff were advised that, when households were unsure whether or not to include someone as a usual resident, because they weren't a permanent UK resident, they should direct that people who had been, or intended to be, in the UK for a period of six months or more should be included. This advice was also given to householders if they called the Census helpline.

The decision to use a six month stay to determine usual residence for the Census made the national population estimate slightly inconsistent with the UN-ECE definition used as the basis for the Mid-Year Population Estimates (MYEs). These estimates are required to use a 12 month stay in the UK to determine usual residence.

The 2001 Census also enumerated people with two addresses at their family home in some circumstances, to enable production of accurate family statistics and reflect what respondents were likely to do regardless of instructions. This is also inconsistent with the UN-ECE definition, which advises that everyone should be counted at the address where they spend the majority of their time.

## 2. Initial agreement on Population Base

The three UK statistical offices agreed in 2005 that the population base to be used for enumeration in the 2011 Census should be *Usual Residents and Visitors*. This was consistent with the Registrars General agreement to harmonise the three UK Censuses as closely as possible.

This decision was reached after extensive research and consultation, summarised in the paper: Selection of the population base for the 2011 Census enumeration

[http://www.statistics.gov.uk/about/consultations/downloads/2011Census\\_consultation\\_population\\_base.pdf](http://www.statistics.gov.uk/about/consultations/downloads/2011Census_consultation_population_base.pdf)

At that time, the exact definition of a usual resident to be used had not been finalised, as this was planned for agreement after further consultation and extensive questionnaire testing.

It was also assumed that the same population base would be used for enumeration and outputs, although increasing user requirements for information on short-term migration mean that this is no longer the case.

## 3. Population base for enumeration

At the time of the 2007 Census Test, it was assumed that the enumeration base for the 2011 Census would be broadly consistent with that used in 2001, but with the addition of visitors, and the questionnaire reflected this.

However, further consultation identified increasing requirements for information on short-term migrants, and it was agreed that the Census<sup>1</sup> would be expanded to meet this need. To achieve this, it was agreed that a full Census return would be collected from everyone who has been, or intends to be, resident in the UK for a period of three months or more in the 2011 Census.

It will be necessary to be able to distinguish between usual residents and short-term migrants in the Census database when producing outputs and, as a result, ONS have tested a question on *Intended length of stay in the UK* to help achieve this. Respondents who have lived in the UK for less than 12 months will be asked to indicate whether their overall stay is likely to be less than 6 months, less than 12 months or long-term.

This enumeration base and these questions have been evaluated through qualitative cognitive testing and quantitative postal tests and ONS are confident that they will collect the required information in the 2011 Census. The 2009 Census Rehearsal in England, Wales and Northern Ireland will use this enumeration base and include the new questions.

As the same strength of requirement for information on migration was not identified, the 2009 Rehearsal and 2011 Census in Scotland will not be expanded to collect this information, and only usual residents will be directed to complete a full Census return.

Questionnaire testing has showed that it is beneficial for the Census questionnaire to include explicit instructions on who should be included. These instructions should include clear guidance on the necessary length of stay in the UK for inclusion in the questionnaire and the necessary length of stay outside the UK for exclusion. The 2011 Census will include this guidance in all countries, which was not included in 2001.

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<sup>1</sup> The Census in England, Wales and Northern Ireland will be expanded to collect this information, but the same strength of requirement has not been identified in Scotland.

#### 4. Main population base for outputs

After reviewing the 2001 Census and a series of discussions between Census and demography staff across all three UK statistical offices, it has been agreed that the main output base for the 2011 Census should be *Usual Residents*, and that usual residents should be defined as those people who

- a) have been, or intend to be, a resident of the UK for a period of 12 months or more; and
- b) are not outside the UK for a period of 12 months or more.

This will make the national level estimates directly comparable with the MYEs for the first time, and also allow closer comparability with population estimates from other countries.

However, some respondents with more than one residence will continue to be included at their family home, as in the 2001 Census, to enable the production of accurate family statistics. This will mean that the sub-national population estimates will not be directly comparable with the MYEs, where everyone is, in theory, counted at the address where they spend the majority of the time. In England and Wales, information will be collected on *Second Residences*, which may enable a Census estimate of the *Majority of time* population to be produced. This is discussed further in section 5.

Although the main output base has been agreed, this is not the same population base that will be used for enumeration, as discussed in section 3. Therefore, to produce the main outputs database, additional processing will be required.

In England, Wales and Northern Ireland, information on *Intended length of stay* will be used to remove the short-term UK residents. In Scotland, where a full Census return will be collected from everyone residing or intending to reside in the UK for a period of six months or more, the '12 month or more' population will need to be modelled, and GROS are currently investigating the best way to achieve this.

#### 5. Other output population bases

The 2011 Census for England and Wales will, for the first time, collect information on *Second Residences*. It will be possible to use this and other information to produce outputs using non-standard population bases.

The range of population bases that could be used, and the outputs that could be produced, will be finalised after detailed user consultation on output requirements, but table 5.1 includes some examples of what may be possible:

Table 5.1: Possible non-standard output bases for the 2011 Census

Base	Pop <sup>n</sup>	Length of stay in UK	Where counted	Information required to produce
<b>Usual Residence – 2001 definition*</b>	All	6M+	Usual residence	Intended length of stay
<b>Household</b>	HH	12M+	Usual residence	None
<b>Institutional</b>	CE	12M+	Usual residence	None
<b>Out of term</b>	All	12M+	'Home' address	Term-time address. 2 <sup>nd</sup> residence address and purpose.
<b>Weekday</b>	All	12M+	Weekday address	2 <sup>nd</sup> residence address and purpose.

<b>Weekend</b>	All	6M+	Weekend address	2 <sup>nd</sup> residence address and purpose.
<b>Working</b>	All	6M+	Work address	Workplace address

\* the 2001 Census included no instruction on the duration of stay outside the UK required for exclusion from the census questionnaire, so an exact reconstruction of the 2001 definition will not be possible.

It is also possible that a *Majority of time* population could be estimated, using the information collected on second residences and modelling the length of time spent at that address using the *Purpose of stay* information from the Census and more detailed information from another survey. The ONS Centre for Demography and Census division are currently investigating how accurately this could be done, using information collected through the Opinions (Omnibus) survey. This will only be done in 2011 if ONS are confident that the results would be sufficiently accurate.

It is probable that not all of these population bases will be of use, and also possible that others, not yet identified, will be more so. ONS will only produce outputs for which there is a clear requirement, and which can be produced to a sufficient quality, and will explore this through user consultation.

It will also be possible, in England, Wales and Northern Ireland, to produce detailed outputs on the short-term migrant population<sup>2</sup> within the UK, which will help meet increasing user requirements for this information.

## 6. Conclusions

The 2011 UK Census will, at a national level, use the same definition of usual residence as required by UN-ECE regulations and used in the MYEs. This will enable closer comparability between the UK Census results, the MYEs and information from other countries.

This will slightly affect comparability with the 2001 Census as no explicit definition was given on the questionnaire to explain who should be included, so it is not clear exactly what population was enumerated. It will not be possible to produce directly comparable results unless this guidance is again excluded, which is not desirable given the increase in population mobility, but in any case could not be guaranteed to collect the same information.

Although the Census results will not be directly comparable with the MYEs at a sub-national level, this is considered less of a problem than the reduction in accuracy of the statistics produced on household and family composition that would be necessary to achieve it. ONS are currently exploring whether it would be possible to model this population, for England and Wales, using information on second residences.

In England and Wales, a range of outputs on non-standard population bases may be produced, depending on user requirements. ONS and NISRA will also be able to produce detailed outputs for the short-term migrant population for the first time.

The 2011 Census will provide a wider range of outputs than ever before, and the standard outputs will be more directly comparable with other UK and international population estimates.

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<sup>2</sup> Short-term migrants are defined internationally as those people who have been, or intend to be, in the UK for a period of between 3 and 12 months.