

## Population And Migration Statistics (PAMS) Committee (Scotland)

### Issues affecting the age distribution of the mid-year population estimates, 2002-2010 and 2012-2014 – responses from PAMS members and key users of population statistics and the approach to be taken

#### 1. Introduction

National Records of Scotland (NRS) Population and Migration Statistics have recently become aware of errors in the mid-year population estimates for 2002 to 2014 because of an issue with an input data set used in the calculation of the mid-year estimates and other minor processing errors. More information on the nature of the error and its scale can be found in the previous PAMS paper circulated on Friday 18 September, in which we suggested no revisions to the population estimates and not revising them until after the 2021 Census.

#### 2. Responses from PAMS members and other key users of population statistics

Thank you to everyone who replied with thoughts on the approach to take for dealing with the error in the age distribution of the mid-year population estimates. The main view was to correct the mid-year estimates as soon as is practically possible, due to the implications for policy and planning at a local level. However, this should be balanced with not delaying the publication of the sub-national population projections. The majority were not concerned about the errors at Scotland or council area level for total populations but rather with the issues for the age distribution, particularly for the ages 17 to 25. After considering the replies we received, we have decided on the following approach in section 4 of this paper. We have also taken into consideration that no additional resource is available in the current financial climate, and therefore, any revisions must be carried out with the resource currently available. In addition, we have just lost five members of the team, and while we have four new starts due to join us, it will take time for them to get up to speed and familiarise themselves with the methods and procedures.

#### 3. Accuracy of population estimates

It should be born in mind that the population estimates are based on the latest Census and that the Census itself has a level of confidence associated with the population estimates from it. The 17-25 age group in particular in the 2011 Census was also subject to coverage adjustment (that is an estimate of those who did not complete a census form were added to the Census count). After each Census we also revise population estimates to take account of information from the latest Census, which we did after the 2011 Census. We published [reconciliation reports](#) with the population estimates on our website and as part of these reports information on the intercensal error was published. The intercensal error is the difference between the 2011 Census day population estimate and the estimates rolled forward from the 2001 Census to Census day 2011. For example, the difference between the 2011 Census and rolled forward 2001 Census population estimates to Census day for ages 15-24 (this age group is chosen because it is easily obtainable from information in the the reconciliation report) for Scotland was 7,362, and if we assume for arguments sake that the error was split evenly across the ten year period, then that would suggest an error for

this age group of around 736 for one year. When compared with the cumulative error we have recently discovered in the mid-year population estimates for the 15-24 age group, which is 2,577 (say 859 per year), it is broadly similar to the intercensal error of 736. This suggests that the differences are in line with the known errors around the population estimates at Scotland level.

#### **4. Final approach to be taken**

- No correction to the mid-year population estimates for 2002-2010.
- No correction to the 2012-based projections.
- No correction to the 2012 settlement and locality population estimates.
- No correction to the life expectancy estimates, until the next publication in autumn 2016. The publication due on 13 October 2015 will go ahead with suitable caveats.
- No correction to the centenarians publication until the publication in autumn 2016, the publication on 30 September 2015 will go ahead with suitable caveats, although the implications for populations at these age groups are negligible.
- Correct the mid-year population estimates for 2012, 2013 and 2014 and publish the corrected estimates for these years at the same time as the 2015 mid-year estimates are published in April 2016
- Correct the new 2011 Data Zone population estimates for 2012, 2013 and 2014 for summer 2016. Correcting these estimates will mean delaying the 2011 Data Zone population estimates for 2001 to 2010 to the end of 2016.
- No correction to the 2001 Data Zone population estimates, highlight issue to users.
- Office for National Statistics (ONS) do not have time to re-run the 2014-based national projections which are being published on 29 October.
- We will need to think carefully about what data we use for the 2014-based sub-national projections. Revising the population estimates may push this project back by a month or two from June 2016 to July/August 2016. We will try to make the June 2016 deadline if at all possible.
- We will delay planned work on developing migration estimates to include Higher Education Statistics Agency (HESA) data and to produce population estimates by Ethnic Group.
- Sub-council area population and household projections are only really affected for one year, 2012 (as the population estimate for 2011 was not affected), so the impact for this project should be small. For student areas we already incorporate an adjustment for age distributions in these areas for the small area population estimates method. Given the timescales for the project there is no scope to include any corrected data as we would need revised data zone population estimates which will not now be available until later in 2016. The choice here is

either to continue the project with the data we have or abandon the project. Funding is only available in this financial year. Therefore we plan to continue using existing data and publish with suitable caveats.

- In the interim whilst we revise our outputs, we will document the error in our website and link to the explanation from publications. We will email PAMS, key users and those registered on the ScotStat register and let them know of the error and the approach we are taking. We will also be speaking to key users about the implications.

**If there are strong objections to this approach, or if you have further comments, please let us know by 1pm on Monday 28 September as we intend to start preparing a wider communication to all users to be issued next week via our website and by e-mail.**

NRS: Population and Migration Statistics  
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