

Population And Migration Statistics (PAMS) Committee (Scotland) Projections Sub-Group (PSG)
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Minutes of the Projections Sub-Group Meeting: 19 August 2015

Present	Organisation
Jayne Whytock-Celeste	Aberdeenshire Council
Chris Carr (phone)	Argyle and Bute Council
Emma Fitzpatrick	East Dunbartonshire Council
Jenny Boag	Falkirk Council
Siobhan Couttie	Falkirk Council
Andrew Ballingall	Fife Council
Jan Freeke	Glasgow City Council
Mike Atkinson	Highland Council
Trudi Tokarczyk	Inverclyde Council
Colin Davidson	Midlothian Council
Sandra Thomson	Perth and Kinross Council
Allison Craig	South Ayrshire Council
Allan Lambie	South Lanarkshire Council
Angela Adams	Clyde Plan Strategic Development Planning Authority (SDPA)
Hervey Gibson	Cogent Strategies International
Olga Krikun	Office for National Statistics (ONS)
Kirsty MacLachlan	NRS Demography Division
Esther Roughsedge	NRS Household Estimates and Projections
Hannah Rutherford	NRS Household Estimates and Projections
Esta Clark (Chair)	NRS Population and Migration Statistics
Luke Main	NRS Population and Migration Statistics
Huw Landrock (Minutes)	NRS Population and Migration Statistics
Alan Jackson (Phone)	Welsh Government

1. Welcome and introductions

- 1.1. Apologies were received from;
 - Marciej Alexander, Clackmannanshire Council
 - Stephen Morley, North Ayrshire Council
 - Lesley Mann, North Lanarkshire Council
 - Luke Fraser, Orkney Council
 - Craig McCorrison, West Lothian Council
 - David Redhead, NHS Information Services Division (ISD)
 - Laura Kate Campbell, NHS ISD
 - Dr Fiona O'Hanlon, Bord na Gàidhlig
 - Cliff Beevers
- 1.2. Esta Clark welcomed the group and everyone introduced themselves.
- 1.3. Due to IT issues the presentation slides were not shown at the meeting.

2. Overview of the project and benefits

- 2.1. Esta Clark provided an overview of the project of updating the Sub-National Population Projections (SNPP) methodology, summarising the background to the project and the benefits of the change in methodology.
- 2.2. Further details of this overview are available in slides 1-8 of the [presentation](#) found on the NRS website.
- 2.3. The main motivations for changing the SNPP methodology were that ONS had introduced a new methodology for national projections and the old method for SNPP had been in place for many years and was due to be reviewed.
- 2.4. The main changes to the national projections method implemented in 2012 and 2014 were to model international migration as flows and use rates for cross border migration within the UK.
- 2.5. The project was taken forward in conjunction with the Population and Migration Statistics (PAMS) committee and this sub group and a review of current SNPP methodology was commissioned from academics from Leeds University led by Phil Rees.
- 2.6. The academic review suggested using the same approach as ONS for international migration in the national population projections and keeping mortality and fertility the same as in the previous system. For internal migration they suggested moving from a single-region model to a multi-region model by using the rates based approach and potentially using the Statistics Canada adjustment.
- 2.7. The benefits of the project are that it allowed NRS to review an outdated method with latest academic thinking and best practice. It will result in a more flexible system that is easier to use and maintain; allow additional outputs, split projected migration flows into international, rest of UK and within Scotland and allow NRS to publish projections for all areas at the same time.

3. The new methodology and geography

- 3.1. Luke Main provided a summary of the changes to the methodology in the new SNPP and the Statistics Canada adjustment.
- 3.2. Further details of this summary are available in slides 9-20 of the [presentation](#) found on the NRS website.
- 3.3. The projections use the cohort component method. For this method NRS need to model the component factor of births, deaths, special populations and migration.
- 3.4. For births and deaths, scaling factors are applied to the Scotland level age specific fertility rates (ASFR) and age specific mortality rates (ASMR), to create subnational ASFR and ASMR – these are then applied to the population at risk.

- 3.5. Special Populations were previously included as a miscellaneous adjustment. In the new projection model the special populations of armed forces and prisoners are removed and added back in each year.
- 3.6. For international migration, each area uses proportion applied to the national total. The proportions are created using Auto Regressive Time Series analysis, a simple version of ARIMA (auto regressive integrated moving average) analysis.
- 3.7. For rest of UK and within Scotland migration, the model uses rates from previous years single year of age and sex data.
- 3.8. The model then applies the Statistics Canada adjustment – if this has been selected. The statistics Canada adjustment means that the population of the destination area as well as the population of the origin area is used in calculating a migration rate.
- 3.9. In terms of the Geography used – some of the 32 council areas are split to account for the other projected geographies (National Parks and Strategic Development Plan Areas).

Discussion and Questions

- 3.10. Hervey Gibson asked for further details on the Statistics Canada adjustment – whether the origin and destination populations were equally weighted to calculate the migration rate.
- 3.11. Luke Main indicated that he thought this was correct. [This paper](#) on the NRS website provides details of the Statistics Canada methodology.
- 3.12. Jan Freeke asked whether Asylum seeker would be treated differently and as part of the international migration flows.
- 3.13. Luke main replied that Asylum seekers would be included in the Glasgow international migration figures in line with the current estimates, but are calculated separately and are not included in the ARIMA modelling.

4. Comparisons with published 2012-based projections

- 4.1. Esta Clark introduced a paper which showed a comparison of the previously published 2012 results with results from the new method using 2012 as a base year. Results were shown from two models, one which did not include the Statistics Canada adjustment and a second which did.
- 4.2. The paper contained two annexes, charting the change in overall population in Annex A from 2002 - 2037 and the projected 2037 Age distributions in chart B.
- 4.3. She highlighted that the main difference seen in the results was that the new models (both with and without the adjustment) projected lower populations in city areas and higher populations in non-city areas.

- 4.4. Highlighted that the model which included the Statistics Canada adjustment was closer to the original 2012 projections, but the model without the adjustment had a better looking age/sex distributions by 2037.
- 4.5. Esta asked the group to take time to look at the results, and come back with any questions and feedback, especially concerning whether or not to apply the statistics Canada adjustment.

Discussion and Questions

- 4.6. Jenny Boag pointed out that the previous net migration figures were based on past trends and the new ratios are also based on past trends and asked if that's why the figures were so similar?
- 4.7. Esta Clark replied that Jenny's Description of the methodology was correct - but some areas had seen significant changes.
- 4.8. Jenny Boag asked whether some cities were coming down because of the student issue?
- 4.9. Jan Freeke asked why Edinburgh was six per cent higher with the Stats Canada adjustment.
- 4.10. Esta Clark replied that NRS were still trying to work this out – it is complicated because of the interaction between the origin and destination populations.
- 4.11. Jenny Boag replied that with growing population there are more migrants to lose so she can see the logic in it.
- 4.12. Jan Freeke noted that the effect of the new models was to put more people into the SESplan area – and asked why this was?
- 4.13. Esta Clark replied – that this was because of the relative importance of local area migration.
- 4.14. Hervey Gibson wondered whether the new system would throw up challenges to the ONS assumptions on international and rest of UK migration.
- 4.15. Luke main replied that this could be seen through a comparison of constrained vs unconstrained results but didn't believe that ONS would have the time to review this.
- 4.16. Colin Davidson asked for more details about the Statistics Canada Adjustment.
- 4.17. Luke Main recapped the details of the adjustment, and explained that Statistics Canada introduced the adjustment because of regional projections. Esta Clark highlighted that the Statistics Canada adjustments had been used in the national projections for the cross border flows.
- 4.18. Hervey Gibson asked whether or not the Statistics Canada adjustment was an iterative process.

- 4.19. Luke Main replied that it wasn't – there was just a single instance of the rates based on the origin areas being weighted by the destination areas.
- 4.20. Jan Freeke asked whether using the adjustment or not meant that projection results were closer to the 2013-2015 mid-year estimates.
- 4.21. Esta Clark replied that NRS were still to do this analysis.
- 4.22. Jenny Boag questioned whether or not this would help determine the best methodology. Stating that there could be good reasons for differences between estimates and projections such as a change in migration patterns.
- 4.23. Referring to the timing of making the decision, Esta Clark highlighted that NRS were working to a tight timeframe – and were hoping to consult on the 2014 figures (refer to section 5.)
- 4.24. Jan Freeke commented, that unless there were quality issues with releasing the figures, getting them out as soon as possible should be the priority.
- 4.25. Esta Clark highlighted that NRS had not yet come to a conclusion on whether or not to include the Statistics Canada adjustment. Luke Main stated that his preference was to not apply the adjustment because this resulted in more realistic projected age sex distributions. Esta Clark stated that her initial thoughts were to use the adjustment because it was in line with the national projections.
- 4.26. Jenny Boag asked if there was anything in the old methodology that you would have to explain anyway and asked whether you could wrap the changes from the methodology change into that explanation?
- 4.27. Esta Clark said that they have run the 2014 based projections but cannot discuss the results because they are pre-release statistics.
- 4.28. Jan Freeke asked whether ONS had any views on which methodology should be used.
- 4.29. Olga Krikun replied that at a sub-national level ONS were redeveloping their system. She was here to hear views.
- 4.30. Jenny Boag highlighted that there were advantages to having the same methodology across the UK.
- 4.31. Esta Clark said that for the national projections, using the Statistics Canada adjustment for the cross border migration gave a better result.
- 4.32. There was some analysis of the results, looking at age sex profiles in Aberdeen and South Lanarkshire. Highlighting that the new projections methodology seemed to partly deal with the issue of students being aged on in the previous methodology.
- 4.33. Esta Clark asked whether any consensus had been reached on whether or not to use the Statistics Canada adjustment.

4.34. Jan Freeke replied that he thought it would be better to still keep an open mind on whether to use the adjustment –to which there seemed to be general agreement.

5. Plans for consulting on 2014-based projections and Next Steps

- 5.1. Esta Clark laid out the plan for consulting on the 2014 results. Provisional results, detailing total population, births ,deaths and migration flows would be sent to (at most) one representative of each area for quality assurance purposes on Friday (19 August). NRS needed replies back by 2 September.
- 5.2. She asked that if councils had any further thoughts on whether the adjustment should be applied the should write back by Thursday 18 August.
- 5.3. She also reiterated that the intention was to publish the sub national projections by the end of October.
- 5.4. Hervey Gibson asked whether councils having access to this data for so long would constitute some kind of moral hazard.
- 5.5. Esta Clark replied that the quality assurance process had worked well for the sub-council area projections and that there had been no leaks as a result of the day ahead access to councils and health boards.
- 5.6. Sandra Thompson highlighted that in fact it might not just be one person who had the required knowledge to analyse these results for council areas. Esta Clark replied that there needed to be a balance due to risks of sharing too widely and believed that one representative per council was the right way to go.
- 5.7. Jenny Boag and Jan Freeke expressed concern that would have to wait for up to 10 weeks to share their knowledge of the data. Highlighting that it could be difficult to have information which differed dramatically from the previous release whilst discussing the previously published figures in planning meetings.
- 5.8. Esther Roughsedge and Angela Adams highlighted that this had been done previously for household projections and they were unaware of any issues.
- 5.9. Jenny Boag provided further context on the importance of these projections for Falkirk council, considering the impact on school places. She highlighted the difficulty of having information which could help make better decision but being unable to share this.
- 5.10. Kirsty MacLachlan indicated that if it was preferred NRS did not have to send out the projections for QA.
- 5.11. Esta Clark indicated that ONS had held meetings with council representatives, where they were shown the results, but only made changes in one or two areas. Olga Krikun confirmed this, indicating that changes had related to students and armed forces.

- 5.12. Angela Adams asked whether the area representatives could be provided with more 2012 data instead.
- 5.13. Following further discussion, area representatives concluded that they would prefer not to receive the 2014 data for Quality assurance but would like to receive further 2012 data.
- 5.14. Esta Clark asked what further data people would like to be provided and highlighted that NRS would have to consider how they could release the data – due to email size etc.
- 5.15. The general view was the more detail the better and if possible the full detailed tables. Jan Freeke asked whether this meant that the decision on whether to include Statistics Canada Adjustment could be delayed – and details results of both models could be provided for analysis.
- 5.16. Esta Clark agreed that the time to respond on this could be extended and that the projections sub-group members could have until the 2 September to provide feedback on this question and that results from both tables would be released to sub-group members.

6. Post Meeting Note

- 6.1. It was decided to not use the Statistics Canada Adjustment. The 2014-based population projections were published on 27 October 2016.