National Records of Scotland

PAMS 19 (06)

Population And Migration Statistics (PAMS) Committee (Scotland)

NRS Survey on small area population projections - understanding user needs

Background

National Records of Scotland (NRS) are currently exploring options for ways to support users of small area population projections. A survey was carried out with the aim of gathering feedback to help us understand what types of support would be most beneficial. Responses were invited from users who already produce small area projections, as well as potential new users.

The survey ran from 17th Dec 2018 to 18th Jan 2019. In total, 125 responses were collected via Survey Monkey, although many questions were skipped[1]. The main questions were answered by over 59 people, and 53 users wanted to hear about our follow-on work.

Key questions

The key questions are around the types of support which are most beneficial to users, who these users are, what is their level of experience with small area projections and how they use these projections.

1. Who are our users

Over half of the users work in local government (58%, n=59) as shown Figure 1. The NHS (14%, n=14) and public bodies (9%, n=9) such as Police Scotland, Scottish Environment Protection Agency (SEPA) and Transport Scotland were the next biggest users. However users work in a range of other types of organisations, including the private sector, third sector, community councils, central government and health and social care partnerships.

Our users have a range of job roles (figure 2). **Analysts are the largest group** (45%, n=45). However we also received responses from those involved with policy, performance, improvement, strategy and planning (17%, n=17) as well as those in management roles (14%, n=14). Two users work in IT (2%). The “other” group (21%, n=21) included users in a wide range of roles, including business intelligence and lifelong learning development.

[1] Note that percentages reported in this paper are based on the number of people who answered the particular question, not based on the number of people who started the survey.

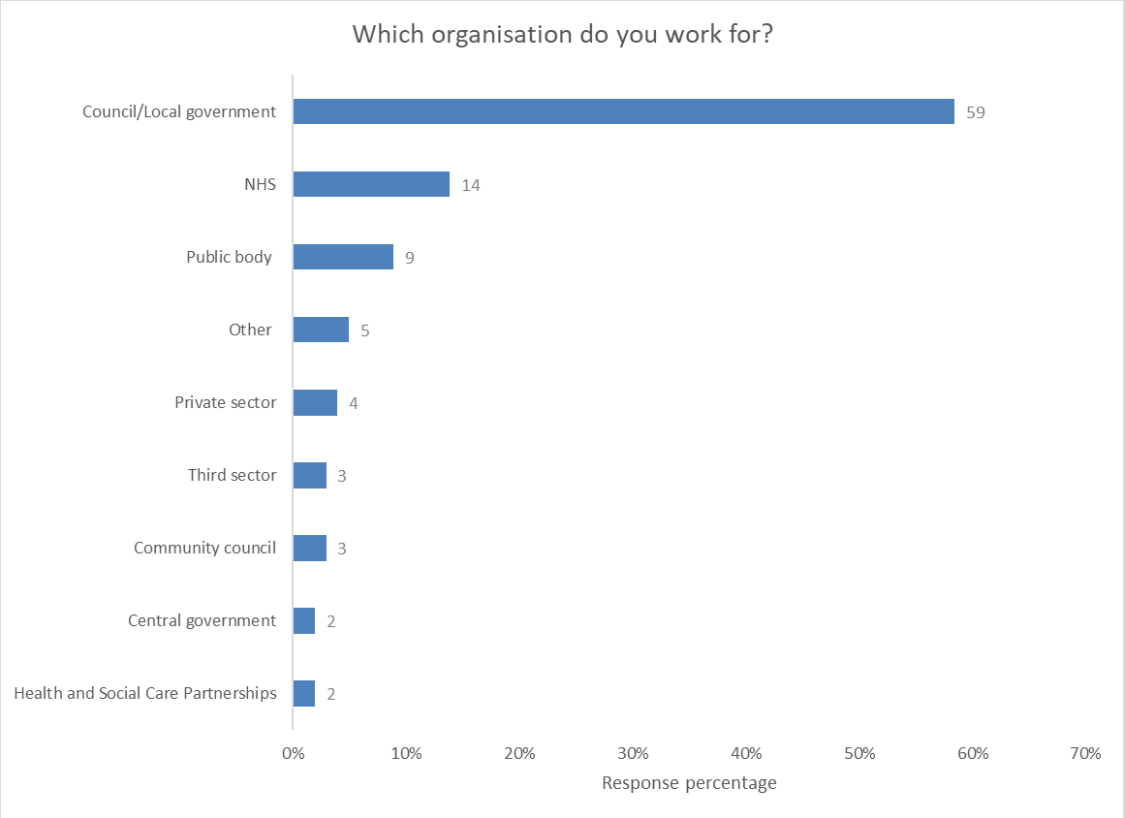

Figure 1[2]

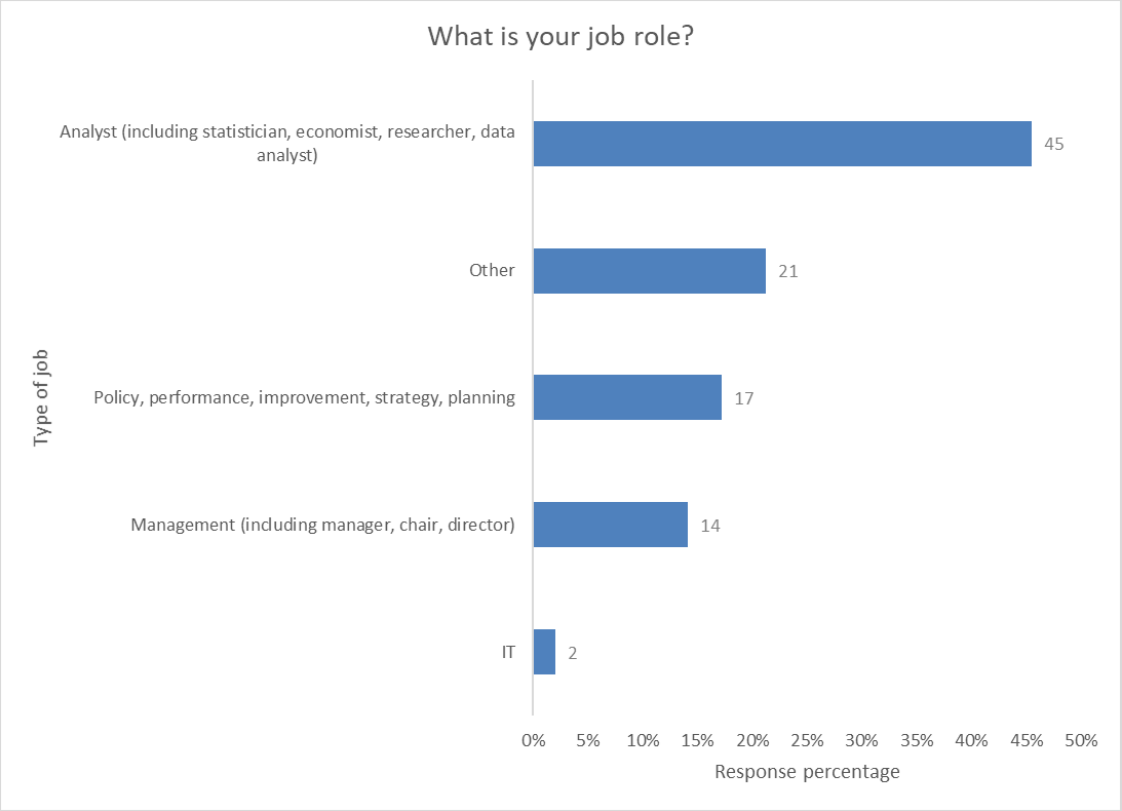

Figure 2

[2] In each figure, the bars show the response percentage and the number next to the bar shows the number of responses.

→ We have diverse users in terms of their organisation and job role.
→ Over 80% of users work in the public sector, with the largest group working for local government.
→ Almost half of users are analysts, while others work in policy-related and management roles among others.

2. Types of support which are most beneficial to users

In two questions users ranked the type of support that they would find most beneficial. The average ranking scores are shown in Figures 3 and 4. More information on the calculation is available here.

a. **For support to produce projections**, users ranked **written step-by-step guides** as their top choice (Figure 3). After this, having the **POPGROUP input files** prepared for them was most popular, followed by **both types of training courses** (producing your own projections and basic introduction to demographic analysis).

   Web-based support (website and interactive online webinars) were moderately popular.

   An online forum and in-person meetings were the least popular choices.

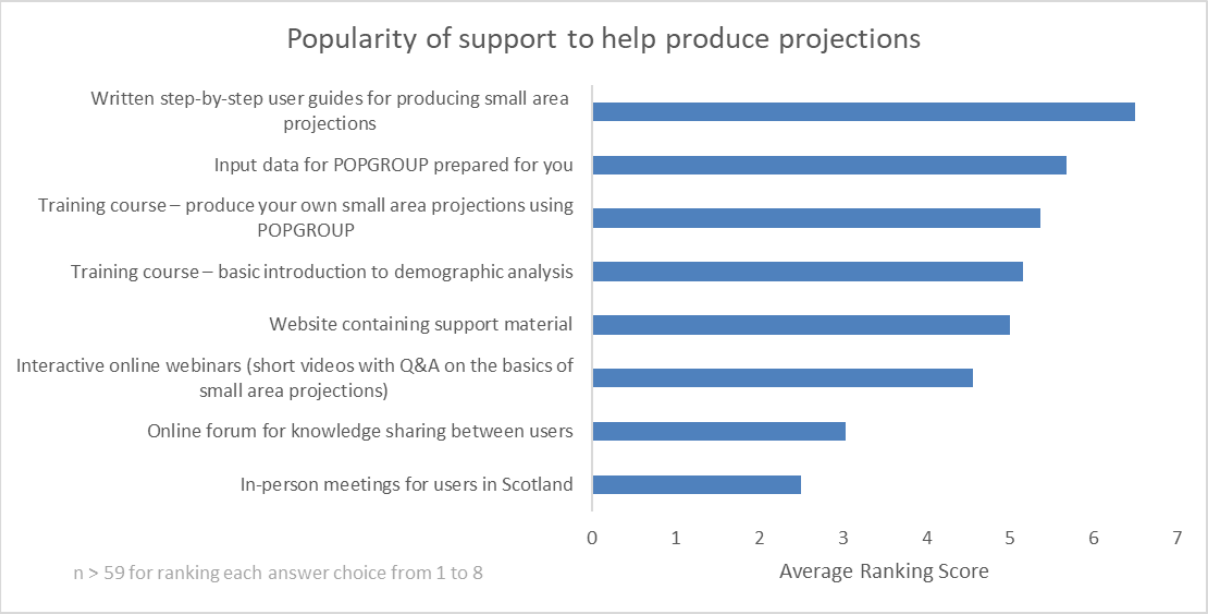

Figure 3

Further analysis was performed to understand the characteristics of those who wanted written step-by-step guidance, prepared input data and both types of training courses:

Written step-by-step guidance:

- 57 users ranked written guidance in their top 4 choices.

- Of these people, 58% (n=33) had used the 2012-based NRS sub-council area projections, 25% (n=14) had produced their own projections and 11% (n=6) had used POPGROUP before.
- 95% (n=54) worked in the public sector.
- 7% (n=4) had attended the 2017 POPGROUP training course funded by NRS.

Having the POPGROUP input data prepared for users:

- 38 users ranked this in their top 4.
- Of these people, 68% (n=26) had used the 2012-based NRS sub-council area projections, 32% (n=12) had produced their own projections and 21% (n=8) had used POPGROUP before.
- 95% (n=36) worked in the public sector.
- 8% (n=3) had attended the 2017 POPGROUP training course funded by NRS.

Training course – produce your own projections:

- 42 users ranked this in their top 4.
- Of these people, 57% (n=24) had used the 2012-based NRS sub-council area projections, 21% (n=9) had produced their own projections and 10% (n=4) had used POPGROUP before.
- 95% (n=40) worked in the public sector.
- 5% (n=2) had attended the 2017 POPGROUP training course funded by NRS.

Training course – basic introduction:

- 42 users ranked this in their top 4.
- Of these people, 50% (n=21) had used the 2012-based NRS sub-council area projections, 21% (n=9) had produced their own projections and 5% (n=2) had used POPGROUP before.
- 95% (n=40) worked in the public sector.
- 2% (n=1) had attended the 2017 POPGROUP training course funded by NRS.

b. **For support to make the case for using small area projections in their organisation**, there were fewer options in the answers. Overall, users ranked **information about the requirements to produce projections** as their top choice, closely followed by seeing **case studies** (Figure 4).

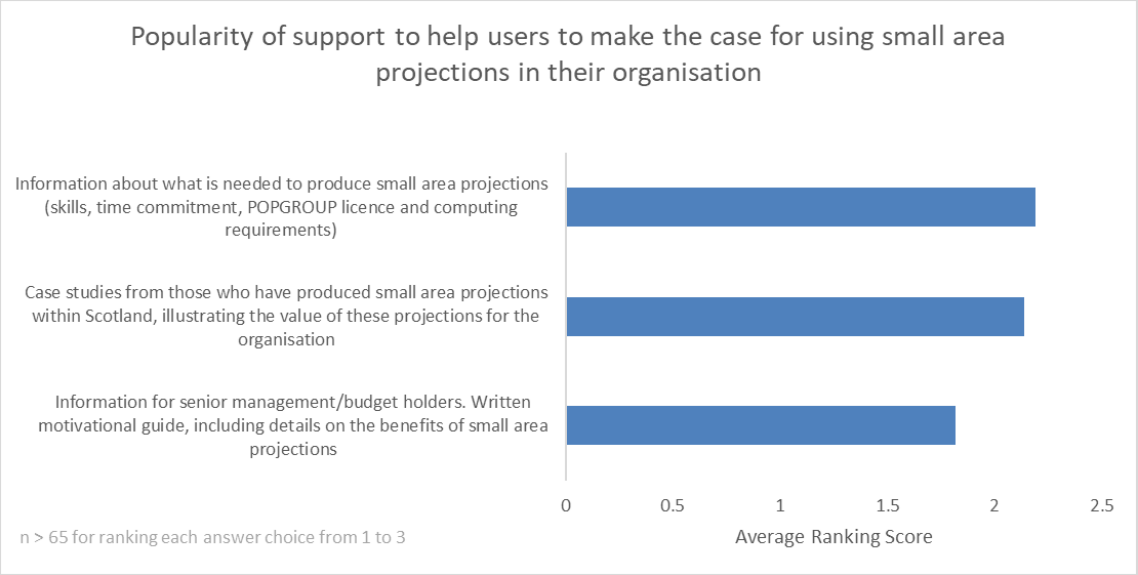

Figure 4

→ the most popular types of support for producing projections are written guidance, POPGROUP input data prepared for users and training courses in producing your own projections as well as in basic demographic analysis.

→ those who ranked written guidance and training courses as most popular were primarily from the public sector. Over half had used the 2012-based NRS sub-council area projections, over 20% had produced their own projections and a small number had used POPGROUP before. Most had not previously attended the NRS funded training course in 2017.

→ the majority of those who ranked having POPGROUP input files prepared for them were also from the public sector. Two-thirds had used the NRS 2012-based projections, almost a third had produced their own projections and around 20% had used POPGROUP. Again most had not previously attended the NRS funded training.

→ to help users to make the case for using projections in their organisation users would prefer information about the requirements as well as examples of case studies.

3. What is their level of experience with small area projections.

Almost two-thirds of all users have used the experimental NRS (2012-based) sub-council area projections (64%, n=43) (Figure 5).

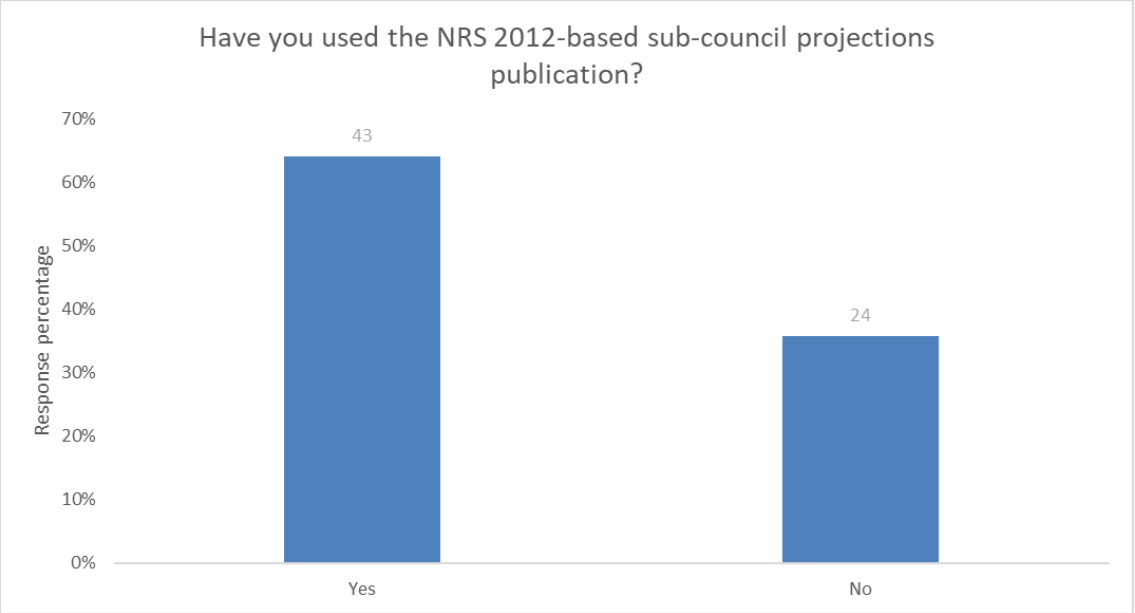

Figure 5

About three out of every ten users have produced their own projections for small area (29%, n=18) (Figure 6).

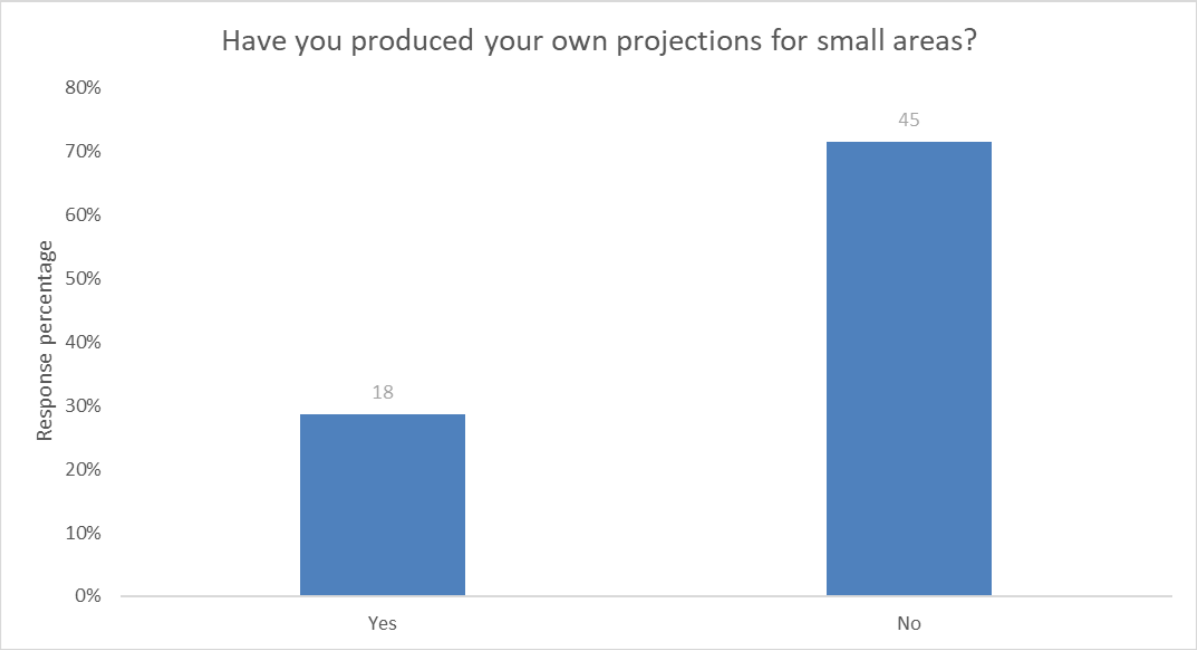

Figure 6

The majority of users (88%, n=56) have not used POPGROUP software before. Only 8 users have used it (13%) (Figure 7).

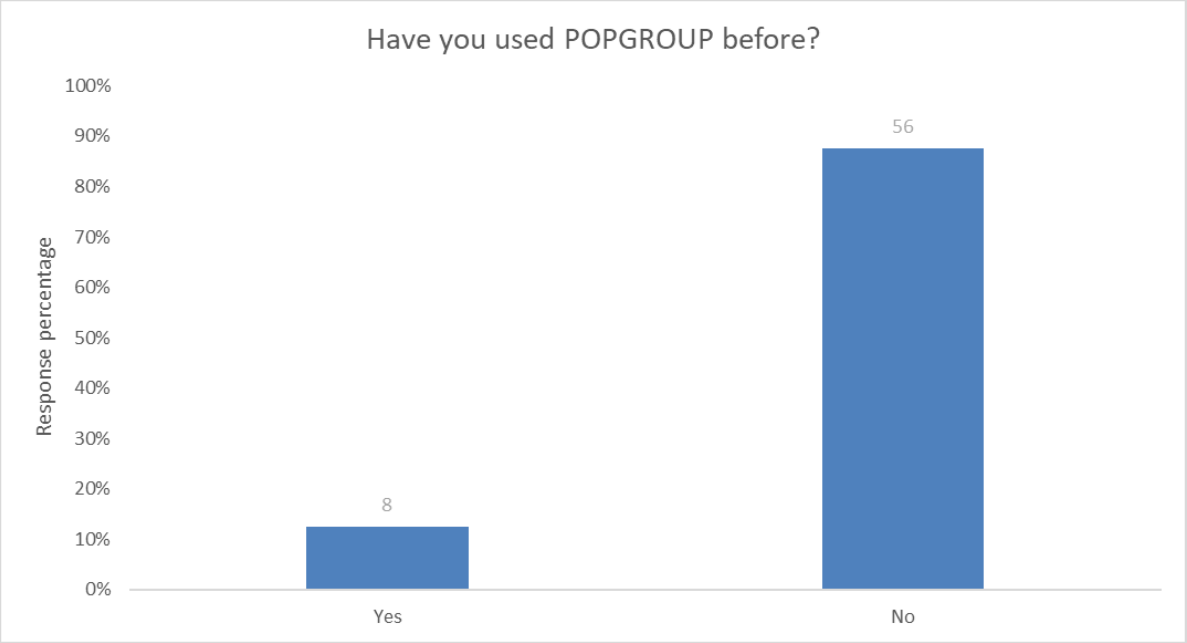

Figure 7

There were 12 users who said that they have produced their own projections but had not used POPGROUP. The majority of them were from the public sector (councils, NHS) and community groups while one was from the private sector. Only one user mentioned how they produced projections: this public sector agency used a model specifically developed for their use.

→ the 2012-based NRS sub-council area projections publication was well used.

→ Most users haven't produced their own projections and even fewer have used POPGROUP before.

4. <u>How do they use small area projections?</u>

We asked users why their organisation needs data on projections for small areas, and asked them to tick any of the answers which were relevant. As shown in Figure 8, data is widely used for a range of purposes such as community profiling, understanding demographic changes, service planning, local forecasting and informing policy, with over 80% of users selecting these categories. Two-thirds of users use the data for resource allocation (67%, n=42). Other uses of the data (16%, n=10) included school roll projections, school estate planning, understanding where within a council population increases are projected and assessing large-scale housing applications.

Figure 8

For those who used the experimental NRS (2012-based) sub-council area projections (n=43), we asked how this had been used. Examples included feeding into local profiles, improvement plans and strategic assessments, projecting levels of dementia and understanding patterns of ageing, calculating crime, choropleth mapping for bus routes and as a standard to help users develop other similar work.

Those who produced their own small area projections (n=18) often used user-defined non-standard geographies, and produced data for bespoke age and sex breakdowns and time periods. These projections often fed into business cases, locality profiles or housing need and demand assessments (HNDA) and were sometimes shared with partner organisations such as Transport Scotland or NHS.

→Small area projections are used for a wide range of purposes, and often feed into profiles and assessments used at a local level.

5. Interest in a standard set of projections being produced on behalf of users

We are in discussion with other organisations to consider the feasibility of collaborating and producing a standard set of projections. We asked users about their preferred standard geography if a standard set were produced.

Figure 9 shows that, of the two geographies that we suggested, **multi-member wards** were much more popular (43%, n=29) than housing market areas (10%, n=7).

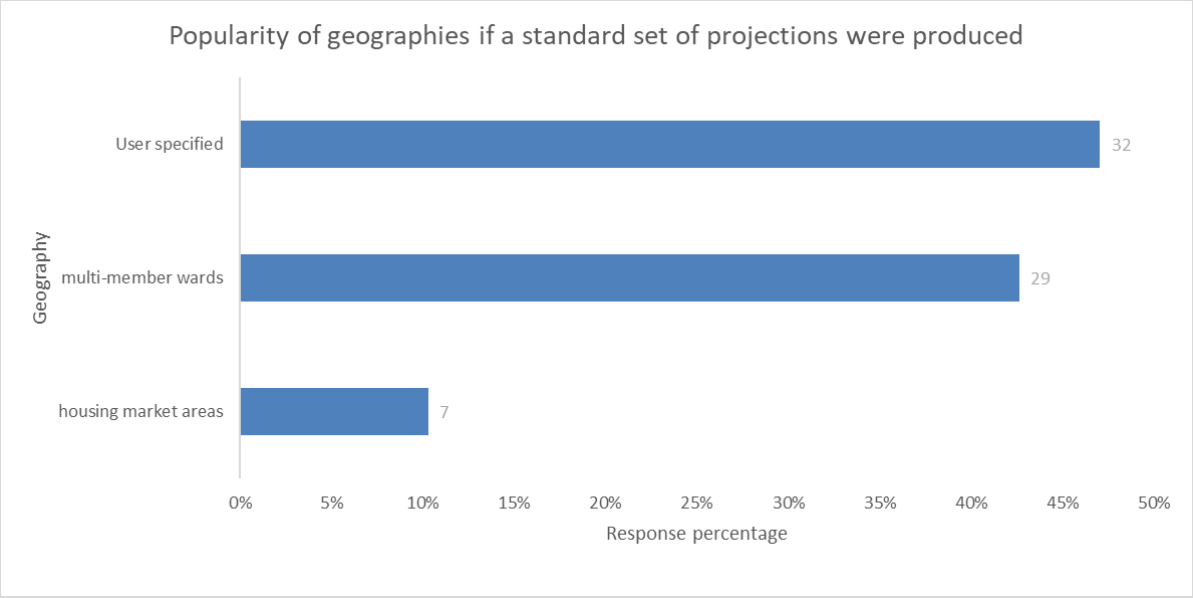

Figure 9

→ There is demand for a standard set of projections at multi-member ward level

However, almost half of users who answered this question would like projections for another geography (47%, n=32). The most popular choices included data zone, intermediate zone, community areas and school catchment areas, as shown in Figure 10.

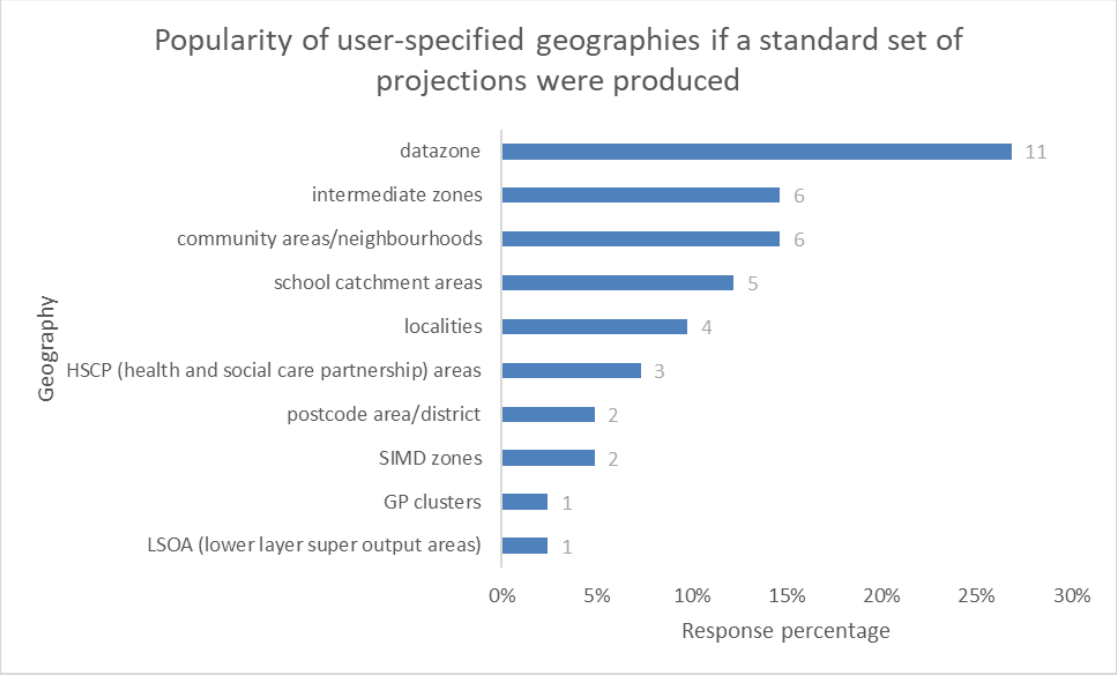

Figure 10

Around a quarter of users said they would like data zone level projections (27%, n=11). A few specified they would use data zone level data to build up their own

user-defined, non-standard geography (e.g. school catchment areas, community areas). However, it is important that all users know the limitations of projections at data zone level and have detail on the smallest geography that is reliable and useful.

A few people said they need the flexibility to produce user-defined geographies as well as the standard geographies, since they have different purposes.

One user said they would like projections for lower super output areas (LSOA) which are a geography used by ONS for England and Wales.

→ the demand for user-defined projections could be addressed by further training to allow users to produce their own projections.

→ include guidance about very small geographies, particularly data zone level projections.

6. Interest in our follow-on work

Many users (83%, n= 53) are interested in hearing more about any follow-on work to support users of small area projections and 52 people left their email address for us to contact them.

Of the 53 users who wanted to hear from us about follow-on work, the majority had not used POPGOUP before (87%, n=46). Five of these people attended the training course funded by NRS in late 2017, although half of them only attended 1 of the 4 days.

→ there is interest in follow-on work.

→ the majority of these people have not used POPGROUP before and did not attend the training course funded by NRS in 2017.

NRS: Population and Migration Statistics branch
11 February 2019
Sarah Mohammed: Sarah.Mohammed@nrscotland.gov.uk

Additional information

Calculation of Average Ranking [3]

Ranking questions calculate the average ranking for each answer choice so you can determine which answer choice was most preferred overall. The answer choice with the largest average ranking is the most preferred choice.

The average ranking is calculated as follows, where:

w = weight of ranked position
x = response count for answer choice

$$\frac{x_1w_1 + x_2w_2 + x_3w_3 \ldots x_nw_n}{\text{Total response count}}$$

Weights are applied in reverse. In other words, the respondent's most preferred choice (which they rank as #1) has the largest weight, and their least preferred choice (which they rank in the last position) has a weight of 1. You can't change the default weights.

For example, our question asking about the types of support users preferred to produce projections (Figure 3) there were 8 answer choices. The weights were assigned as follows:

- The #1 choice has a weight of 8
- The #2 choice has a weight of 7
- The #3 choice has a weight of 6
- The #4 choice has a weight of 5
- The #5 choice has a weight of 4
- The #6 choice has a weight of 3
- The #7 choice has a weight of 2
- The #8 choice has a weight of 1

Weights are applied in this way to ensure that when the data is presented on a chart, it's clear which answer choice is most preferred.

The two ranking questions included an N/A option. Any N/A responses did not factor into the average ranking.

[3] Source: https://help.surveymonkey.com/articles/en_US/kb/How-do-I-create-a-Ranking-type-question