

POPULATION PROJECTIONS WORKING GROUP

Small Area Population Projections

1. This paper provides PPWG members with an update of current status of the work being carried out by the General Register Office for Scotland (GROS) on small area population projections.
2. The work carried out by GROS looked at how feasible it would be to provide demographic data at data zone level to users to run population projections for small areas using POPGROUP (or any other suitable software) and to identify the data that would be needed to give robust results.
3. A PAMS paper ([Paper 12 PAMS \(10\) 12](#)) that summarised the work was presented at the Population and Migration Statistics (PAMS) meeting on 17 May 2010. Draft copies of the report on the results of the investigation, a Users Guide to assist POPGROUP users in Scotland to produce small area population projections and a data specification that describes the data that will be made available, on request, to local authority users were also presented.
4. The work that GROS did involved running some population projections for multi-member wards in Fife with different assumptions about future fertility, mortality and migration. The projections that were produced made use of data at different levels of detail. The results of the various projections were compared with each other to determine the impact that the alternative assumptions had on the projected population of each ward.
5. The main conclusions of the investigation, with regards to fertility, mortality and migration, were as follows:

Fertility

- The use of total fertility rates estimated from births, together with the national age-specific pattern, should be sufficient for most purposes.
- Local age-specific fertility rates can add some accuracy to the projections, so the provision of 'age of mother' data at some level of detail would be beneficial.
- If local age-specific fertility rates are used, the age/sex structure of the underlying population data must be as accurate as possible, especially in areas with 'special' populations, such as students.

Mortality

- The use of standardised mortality ratios estimated from deaths, together with the national age-specific pattern should be sufficient for most purposes.
- Local age-specific mortality rates can add some accuracy to the projections, so the provision of 'age at death' data at some level of detail would be beneficial.

Migration

- The recent net impact of migration at each age and sex can be estimated from successive population estimates without the need for direct counts of local migration.
 - Population projections will not be significantly helped by standard estimates of migration flows for data zones.
 - Migration data would be useful for other purposes, and could be defined with other purposes in mind, including flows between data zones so that aggregated data could be properly derived.
6. There has been no feedback or comments from the PAMS group on these papers.
 7. GROS has notified local authority users that data on births and deaths are available at data zone and intermediate geography level for the purposes of producing small area population projections and general demographic research. Several council areas have requested this data and most of the data files have been sent out. There was a problem with the births data at intermediate geography level, but this has now been fixed and this dataset will be sent out in due course.
 8. A POPGROUP Users Group has been set up to allow users to meet on a regular basis to exchange ideas and discuss any issues. The first meeting will be held on 4th October 2010, immediately after the PPWG meeting on the same day.

General Register Office for Scotland
Population & Migration Statistics Branch
October 2010