



General Register Office for Scotland
information about Scotland's people

**Population Estimates by Marital Status: Methodology
Paper**

10 March 2011

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1. Introduction

- 1.1 This paper describes the methodology used by the General Register Office for Scotland (GROS) to produce annual mid-year estimates of the population of Scotland by legal marital status for the period mid-2001 to mid-2008. These show the number of people usually resident in Scotland who are single, married, widowed and divorced, as at 30 June of the reference year. These estimates are provided by Single Year of Age (SYOA) and sex.
- 1.2 The latest datasets can be found at:
<http://www.gro-scotland.gov.uk/statistics/theme/population/estimates/special-populations/marital-status.html>
- 1.3 The approach used is a cohort component method in which information on natural change (births and deaths) and migration are used to update census-based estimates of the resident population. The migration components take account of people who enter or leave Scotland with the intention of staying for a period of at least 12 months using data from the International Passenger Survey, the Home Office and other data sources. Data on marriages, birth and death registrations are collected by GROS and information on divorces is supplied to GROS by the Scottish Court Service and they are used to account for changes between marital status categories. Marital status estimates are constrained to match GROS mid-year population estimates.

2. Definitions

- 2.1 Population estimates by marital status describe the population usually resident in Scotland by legal marital status. Usually resident refers to where people usually live. A full discussion of those included in the usually resident population can be found in the GROS mid year estimate methodology guide (<http://www.gro-scotland.gov.uk/statistics/theme/population/estimates/mid-year/index.htm>). Population estimates by marital status refer to legal marital status only and do not account for living arrangements or relationships that are not legally recognised according to the categories below.
- 2.2 There are four categories of legal marital status:-
- Single: people who have never been legally married
 - Married: people who are currently legally married (including those who are separated)
 - Widowed: people who were legally married until the death of their partner, and have subsequently neither remarried nor divorced
 - Divorced: people who were legally married but have been legally divorced, or had their marriage annulled, and have not since remarried
- 2.3 Those who have formed, or formed and dissolved, a civil partnership are classified according to their marital status prior to forming that civil partnership because we do

not have census data at present for Scotland to allow the separate estimation of these categories.

3. The cohort component method

3.1 The standard approach to producing population estimates is the cohort component method. This is the same method used for GROS national and local authority mid-year estimates and more information on the method can be found in the mid-year estimates methodology paper on the GROS website at: - <http://www.gro-scotland.gov.uk/files2/stats/population-estimates/mid-year-pop-est-methodology.pdf>.

3.2 The overall approach as applied to marital status estimates is as follows:-

1. Take previous year's estimate by marital status
2. Age on by one year
3. Add births
4. Subtract deaths by marital status
5. Allow for migration by marital status
6. Adjust for changes between marital status categories (marriages, divorces and widow(er)s in last year)

4. Data used

4.1 Population estimates by marital status are derived from, and are consistent with, GROS mid-year population estimates. Both estimates use the same data sources to measure the components of population change used to update the total population. Detailed descriptions of these sources are available in the mid-year estimates methodology paper mentioned in section 3.1. The input data required to produce the marital status estimates is:-

- Previous marital status estimates – by single year of age and sex
- Mid-year population estimates – by single year of age and sex
- Marriages – by single year of age and sex and previous marital status. Age is age at mid-year and the data is for the mid-year to mid-year period. Marriages between two non-Scottish residents are excluded.
- Divorces - by single year of age and sex by date of decree. The data is for mid-year to mid-year. Age is age at date of divorce. Data on residency of divorces is not collected and so non-resident divorces are not excluded.
- Survivor – Married deaths by age of surviving spouse (this gives the number of 'new' widow(er)s by single year of age and sex). Age is age at mid-year and data is for the mid-year to mid-year period.
- Deaths - by single year of age and sex and marital status by date of occurrence. Age is age at mid-year and data is for the mid-year period to the mid-year period. Deaths of non-Scottish residents are included.

- Total migration – in and out migration by single year of age and sex and marital status. Compiled using estimates of internal migration, international migration, asylum seekers and other changes (armed forces and prisoners). The marital status of total in and out migrants is assigned using proportions from the previous census (currently 2001) with an adjustment made for widows and widowers aged 16-19 to avoid increasing teenage widows and widowers each year.
- Births by sex for the mid-year to mid-year period. Births to non-Scottish residents are included.

5. Other adjustments

- 5.1 These figures are rounded and constrained to the national population estimates by single year of age, and adjusted for small differences created by the rounding process.
- 5.2 The current method takes no account for marriages and divorces of Scottish residents that take place outside Scotland.