

A demographic statistics service for the 21st century

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This article provides a summary of a review of the uses made of population and household statistics across government in England and Wales, setting out the policy and statistical impacts of demographic change. It looks at the broad span of government uses of population and household statistics – and what these uses imply for the qualities inherent in these statistics.

The article considers alternative population definitions and refers to several ongoing projects that are aiming to enhance demographic statistics in England and Wales. Following an analysis of the key issues relating to the implementation of an improved statistical service, a series of action points for ONS emerging from the review is set out.

INTRODUCTION

In July 2003 Len Cook, the National Statistician and Registrar General for England and Wales, announced a series of measures to improve the quality, timeliness and relevance of population statistics over the next decade.

The announcement followed the publication of a review by the Office for National Statistics (ONS) of the uses made of population and household data across government in England and Wales. The report of the review was entitled 'A demographic statistics service for the 21st century'. This article provides a summary of the review and the planned improvements to demographic statistics over the next decade set out by the National Statistician. The full version of the report can be found on the National Statistics website.¹

This article begins by explaining the demographic context for the review and the key uses of population statistics across the government. Taking both of these factors together shows what population statistics have to be in order to meet the needs of users. Finally the article talks about the status of the current plans surrounding the subject and some key issues.

Welcoming the publication of the study, Len Cook said:

"ONS recognises that its population estimates have been subject to challenge in the recent past and that there are lessons to be learned from these experiences. I see the publication of this review as a major step in restoring confidence and satisfaction in these key statistics."

"The review identifies a variety of ways that we can improve our current population statistics operation. We need key statistics that

are more timely and of better quality. We need a stronger and more definite recognition of the local dimension of these statistics. We must also take full advantage of opportunities we now have for improving the data sources, methods and systems used to estimate population between Censuses."

"The review provides a basis for a clearly-focused agenda, whose cornerstone is the development of data sources, methods and outputs that recognise the dynamic shifts in the population."

Alongside population estimates and population projections, the uses across the government of other population statistics were also considered in the review. For example, the need for household and labour projections were reviewed, as well as the need to understand projected populations of people within particular age groups and those in well delineated groups (the retired, women in fertile ages, those in education, etc.).

This was an ONS review, based on the position in England and Wales, which may be relevant to the rest of the United Kingdom.

Other UK government departments, devolved administrations, local government representatives and academic colleagues were involved in the review. A working level seminar of public sector experts was held in February 2003 in order to validate the initial analyses undertaken and to seek additional input. The current project has built on the information obtained from UK government departments and the Welsh Assembly Government during earlier exercises that have sought to establish the

uses made of population and household estimates and projections across government.

THE DEMOGRAPHIC BACKDROP

Our changing society brings new requirements for population statistics. The population is becoming more mobile, older, more ethnically diverse and household structures and lifestyles are changing. Simple counts of the population by sex and age, whilst an essential output, are no longer sufficient to provide understanding of the demographic picture.

Population change over the next decade will be large, as will the policy, community and personal responses to it. There is a need to anticipate and measure such effects as they occur. The challenge for the next decade and beyond is to meet the demands for more varied population measures while coping with an increasingly diverse and difficult to count population.

The following table considers the major demographic shifts expected over the coming decades, links these to some of the policy areas likely to be affected by these changes and lists some of the potential statistical responses.

Many of the main demographic changes listed below are reported within demographic outputs produced by government and references to them can be found on the National Statistics website. For some there are specific references to papers given in the text.

Main demographic changes	Policy impacts	Statistical impacts
Ageing population, increasing life expectancy	<ul style="list-style-type: none"> • Greater social care, health provision • Carers • Fiscal policy – pensions and revenue • Planning/Housing policy • Transport policy 	<ul style="list-style-type: none"> • Greater disaggregation of higher age-bands in standard outputs • Cohort analyses
Ageing workforce ² (exacerbated in some specific industries)	<ul style="list-style-type: none"> • Pensions / retirement policy • Adult education and training policies and provision 	<ul style="list-style-type: none"> • Greater disaggregation of age-bands in population projections • No standard retirement age • Cohort analyses
Ageing of the post-war baby boom generation	<ul style="list-style-type: none"> • Fiscal policy • Social care, health provision 	<ul style="list-style-type: none"> • Cohort analyses
A slow decline in fertility, and women having children later ³	<ul style="list-style-type: none"> • Taxation, benefits • Education – schools • Health provision 	<ul style="list-style-type: none"> • Reflect in assumptions used in population projections • Cohort analyses
Women outnumbering men at younger ages	<ul style="list-style-type: none"> • Health provision • Benefits • Housing 	<ul style="list-style-type: none"> • Cohort analyses
More lone parents – but recent trends show a less rapid increase ⁴	<ul style="list-style-type: none"> • Taxation, benefits • Flexible working 	<ul style="list-style-type: none"> • Ability to model people, household and family relationships
Increase in multiple residence	<ul style="list-style-type: none"> • Planning and housing policies – need to plan for more demand for urban housing • Family impacts • Demand for local services 	<ul style="list-style-type: none"> • Produce population figures for different definitions that reflect different residence or work patterns • Combined population/household models

Main demographic changes	Policy impacts	Statistical impacts
Increasing commuting to work (daily/weekly)	<ul style="list-style-type: none"> • Transportation systems • Planning/housing policies • Demand for local services 	<ul style="list-style-type: none"> • Produce population figures for different definitions that reflect different residence or work patterns • Combined population/household models
International commuting	<ul style="list-style-type: none"> • Employment policies • Transportation planning • Planning and housing policies • Family impacts • Demand for local services 	<ul style="list-style-type: none"> • Improving sources of data on international migration. Use records held by other countries, administrative sources (dependent on the outcome and implementation of the National Statistics Quality Review of International Migration⁵) • Produce population figures for different definitions that reflect different residence or work patterns
Internal migration of younger people from North to South – but recent trends suggest this may be slowing down	<ul style="list-style-type: none"> • Planning and housing policies • Regional economic interventions • Demand for local services 	<ul style="list-style-type: none"> • More accurate local area estimates of internal migration • Regional cohort analyses
International immigration	<ul style="list-style-type: none"> • Possible changes to policies on immigration and asylum seekers • Workforce planning • Planning and housing policies • Demand for local services 	<ul style="list-style-type: none"> • Improving sources of data on international migration. Use records held by other countries, administrative sources (dependent on the outcome of the National Statistics Quality Review of International Migration⁵.) • Cohort analyses
International emigration – young males in particular	<ul style="list-style-type: none"> • Workforce planning 	<ul style="list-style-type: none"> • Improving sources of data on international migration. Use records held by other countries, administrative sources (dependent on the outcome of the National Statistics Quality Review of International Migration⁵) • Cohort analyses
Increasing ethnic populations	<ul style="list-style-type: none"> • Greater focus on community development and neighbourhood renewal policies • Impact of Race Relations Act 	<ul style="list-style-type: none"> • An estimate of the population in different ethnic groups to be provided in routine figures, including projections • Authoritative small area population estimates⁶ available on a regular basis
Different age profiles of different ethnic communities	<ul style="list-style-type: none"> • Greater focus on community development and neighbourhood renewal policies 	<ul style="list-style-type: none"> • An estimate of the population in different ethnic groups to be provided in routine figures, including projections • Authoritative small area population estimates⁶ available on a regular basis • Cohort analyses by ethnic group
More one person households	<ul style="list-style-type: none"> • Planning and housing • Taxation and benefits 	<ul style="list-style-type: none"> • Ability to model people, household and family relationships • Impact upon household projections
Fewer married couple households, increasing cohabitation, marrying later in life, separation and divorce, complex family structures, same-sex couples ^{7,8,9}	<ul style="list-style-type: none"> • Taxation and benefits framework to reflect changing family structures 	<ul style="list-style-type: none"> • Ability to model people, household and family relationships • Impact upon household projections
Regional/local differences in the pattern of change	<ul style="list-style-type: none"> • Resource allocation models • Neighbourhood renewal, community regeneration policies 	<ul style="list-style-type: none"> • More accurate local area estimates

MAKING USE OF THE STATISTICS

Government makes use of population statistics in a wide variety of ways. The following main uses in particular dominate how we plan our system of population measures:

Resource allocation and targeting resources

Population figures are typically the statistical platform for the variety of other components of the funding formulae used to allocate central government resources to other organisations such as the devolved administrations (via the Barnett formula), local authorities and health bodies. £44 billion in Formula Grant was allocated to English local authorities and £148 billion to Primary Care Trusts in England in 2003–04. These data also inform the targeting of resources or programmes on particular areas, such as the European programmes of regional economic aid.

Understanding the long-term context and the demographic consequences of public policy

Population analyses are used to inform how public policies impact on and cause demographic changes to take place. Examples include the international migration effects of immigration policies, the internal migration patterns resulting from regional economic changes and the impacts on household formation of housing and planning policies. These impacts can be hard to measure: population levels are relatively stable, and it is hard to isolate the impact of public policies and determine causal effects.

Assessing the implications for public programmes of demographic and social change, including the impact on wealth creation

Population data inform long-term strategies and policy considerations and the planning of policies that anticipate future demographic change. Long-term public expenditure planning and the future provision of public services to the population are highly dependent on accurate forecasts or projections of the population and household numbers.

Policy development and service planning – setting targets, monitoring and evaluation

These data help to identify the trends and target populations for different policies and inform service planning across the broad span of Government activity. Examples include transport (journey to work), location of agencies and urban renewal priorities.

Population data are used in the denominators of a broad span of strategic, policy related and operational targets across Government. These data also inform target setting and are used in the evaluation process.

Understanding the labour market

Population data are used to estimate and forecast labour supply and demand and government revenue and expenditure (e.g. tax revenues and pensions). They provide the denominators for many of the key economic indicators and are used in the process of estimating and forecasting the numbers in the workforce and inform the development of macro-economic policies that reflect demographic changes.

Effective local government

Good quality population and household data support many of the activities of local government in similar ways to the uses of these data made by central government. These data influence the allocation of

resources within authorities and are used to help with the planning of council services including education, social services, housing, transport and planning policies.

Supporting operations

Population statistics are also used directly by government in running operations such as providing information to the public, running services, making payments, recruiting personnel, transportation planning, locating and assessing the workload of service teams.

Democratic accountability

Population data help to inform the electoral process and the broader constitutional agenda. They are used to benchmark the analysis of electoral roll coverage in the context of national, local and devolved elections.

Meeting international obligations

The UK Government provides a wide range of data to Eurostat and other international organisations. These data allow international comparisons of key indicators such as the GDP per head and life expectancy to be made on a comparable basis.

Informing the public and businesses

These data provide source material for demographic monitoring and various detailed analyses of the population. As well as its own use of population statistics, government is the source of population statistics for researchers, businesses, other organisations and the public. These data have many diverse uses that include planning team workloads and business services.

The needs for population measures have become more varied, and the population more diverse and less able to be exactly quantified, over a period when our statistical system has changed little, until the two major events of NeSS – the development of a system for disseminating a broad span of neighbourhood statistics – and the One Number Census in 2001.

The standard, official counts of the mid-year estimates and the national and sub-national projections are the widely used and broadly accepted measures of population across government. For some uses these estimates have proved not to be adequate and, by 2001, some local authorities showed unacceptably high differences between population estimates and the 2001 Census. Furthermore, where more up-to-date or smaller area figures are needed, then there is little consistency in how the mid-year estimates and projections are adjusted to fit the purpose.

REQUIREMENTS

Each category of use identified in the review requires a different set of qualities to be inherent in the statistics available: the same emphasis on particular attributes does not give the best set of measures for each of these needs. The broad attributes identified in the review are:

- accuracy;
- acceptance of accuracy;
- measures of accuracy;
- consistency over time;
- availability of small area information;
- timeliness;
- consistency across the UK;
- consistency across Government;
- capability to identify new trends;
- availability of different population definitions.

The major uses of population and household statistics across government require these statistics first and foremost to be accurate. Allied to this accuracy is a need for a common acceptance of the accuracy of the estimates and a call for quantitative measures of how accurate they are, although in the context of demographic statistics the 'truth' is not usually known and thus it is difficult to produce hard accuracy measures. The concept of accuracy varies according to the use being made of the statistics. Variation between estimated and actual population that might be acceptable at national level may not be at local authority level for resource allocation purposes.

Users throughout government also require these statistics to be far more timely than current official estimates and for there to be a more responsive timetable for the production of estimates and projections.

The study has also identified a need for demographic outputs to be far more analytically detailed to inform policies and the delivery of programmes, services and operations. Demographic analyses across Government should pick up emerging trends and inform the policy response to these. ONS has been building up its analytical capability in demography over the past year and plans to build on this resource.

POPULATION DEFINITIONS

The usually resident population will not always be the most relevant basis for defining the count. More complex patterns of residence and working arrangements require us to take different demographic views of the population in our analyses. We generally assume that the usually resident population is reasonably stable over the year. Less closely linked populations – such as the tourism population and those associated with it – may be seasonally variable in numbers, and require explicit and regular measurement. Catchment populations for a public programme may be determined by transportation systems, place of work, or the location of national or regional service centres.

Where people belong, be it which household, which place or which ethnic community is no longer rigidly or uniquely defined for large parts of our community.

The following list provides an indication of the range of different population definitions that emerged during the course of the review:

- usual residence;
- household population;
- institutional populations;
- out-of-term population;
- seasonal populations;
- de facto population;
- legal populations;
- temporarily resident populations;
- week-end or week-day populations;
- derived populations, such as the average level of residence;
- UK residents living abroad;
- non-UK residents living in the UK;
- bespoke service populations.

A balanced approach is needed that is practicable while recognising that population and household figures based solely on usual residence do not adequately describe the dynamic nature of many parts of UK society in the 21st century.

PLANS AND COHERENCE

There are now a number of projects in train to address previously identified gaps in official population statistics. These developments should increase the range of outputs and the quality and coherence of

what is used. Better estimates of international migration,⁴ small area populations⁵ and up-to-date quarterly population estimates¹⁰ are the goal. The availability of improved statistics should, in itself, lead to greater coherence as the authoritative sources of population should match users' needs better. ONS's joined-up data project¹¹ will provide users with guidance on choosing and using data sources for a particular purpose. ONS will also be reengineering its own processes and systems for producing population estimates and projections over the next three years.

ONS is also assessing the feasibility of a common population register through the Citizen Information Project.¹²

The 2001 Census results have called into question the data and methods used to estimate population change between censuses. Detailed work is underway, comparing census results with the 2001 population estimates (calculated by rolling forward earlier census figures). These analyses will help to explain the differences evident between the census and the population estimates.

For local authorities, future population estimates depend substantially on the figures obtained from the One Number Census. The estimation of population levels for successive years during the inter-censal period depends on rolling forward census figures by age and sex. Demographic parameters are applied to the census age/sex distribution and so any errors present in the census base will become enshrined in the population estimates derived year-on-year between censuses. These errors are likely to be much larger for smaller age and sex groups within the total population. It is useful to provide a set of local estimates that are consistent with official national estimates and which are produced with transparency in the methods and data sources used.

Population estimates based on the 2001 Census will provide good quality statistics on which to base public policy for the early part of this decade. But as we move further from the 2001 Census, the reliability of these estimates, both nationally and at local authority level will become increasingly unstable and open to valid questions being asked of their accuracy. New data sources and estimation methods will need to be in place by the middle of the decade to maintain the accuracy that the users and uses of population estimates demand. The use of such sources is subject to the provisos and qualifications about current administrative and other data sources' suitability for informing population statistics or being part of the estimation methodology.

The first half of the decade will also see the detailed planning for the collection of census-type information in 2011.¹³ The scale of the census operation requires decisions to be made many years in advance of a census itself to allow sufficient time for the necessary legal/parliamentary processes, consultation, planning and operations to be in place. As well as planning for a traditional census, other options for obtaining statistics of the accuracy and detail that would be provided by a census are being evaluated. Fundamental to this evaluation are issues about how we define the population base.

Decisions on a census in 2011¹³ or an alternative approach will underpin the basis of the long-term population estimates system in this country and will need to reflect the requirements for population and household statistics.

KEY ISSUES

The demands for improved population measures have accelerated over the past two decades such that we need to look afresh at the very nature of our system of population statistics. We are not alone in this – other, large countries with statistical systems comparable to that of the UK – are doing this also. The experiences most relevant to the UK include those of the United States, France and Italy. These countries have similar

legacies in having periodic censuses, and similar pressures for accurate, timely local data; the need to have a variety of population bases; diverse ethnic mixes that influence population change; huge shifts in the nature of households; and regional and internationally mobile populations.

The review identifies a variety of ways that we can improve our current population statistics operation. We need key statistics that are more timely and of better quality. We need a stronger and more definite recognition of the local dimension of these statistics, particularly relating to the accuracy of local authority population estimates. We must also take full advantage of opportunities we now have for improving the data sources, methods and systems used to estimate population between censuses.

Ethnic communities not only are affected by migration differently, but their fertility, life expectancy and household formation may be distinctively different from the white British 'norm'. In areas where there are high concentrations of ethnic communities, accurate population modelling needs community-specific assessment of demographic patterns.

For local authorities, as opposed to the country level, it is less easy to develop a cohesive process to validate results where they are an intrinsic part of a larger urban centre and their boundary is a political artefact rather than a cultural, social or geographic border.

Such a large amount of population change occurs in those areas also experiencing high external and/or high internal migration flows, that the errors from having disparate processes can disproportionately influence the reliability of population measurement.

A key part of the work to improve population statistics will involve making greater use of administrative data sources. ONS will exploit the potential of parallel developments: the International Migration Quality Review¹, the Citizen Information Project², the Civil Registration Review, the re-engineering of key ONS processes, and the ongoing development of Neighbourhood Statistics.

What emerges from the review of the need for population and related statistics across government are clear requirements for:

- the routine production of population estimates to deliver accurate, up-to-date and consistent statistics. There are specific demands:
 - (i) for national and regional population estimates to be available quarterly¹⁶ – in line with many other National Statistical Institutions – along with local quarterly estimates for weighting survey results,
 - (ii) for annual estimates for areas as small as electoral divisions and
 - (iii) for a significant improvement in the timeliness of the first estimates;
- more analysis of population measures produced to these standards;
- statistical outputs and analyses responsive to a variety of policy needs with the analytical capability to better understand demographic changes.

A new system of population statistics should be supported by a single, coherent strategy for demographic statistics and an integrated set of outputs that is:

- timely and sufficiently accurate for purpose;
- seamless – a coherent set of population and household estimates and projections;

- consistent and integrated across time and geography;
- making the best use of national and local data sources;
- employing flexible methods, rather than 'one size fits all';
- produced efficiently – minimising bespoke solutions;
- trusted.

Such a system would draw on what is already being done in ONS, the Government Actuary's Department, the Office of the Deputy Prime Minister, Home Office, the devolved administrations and local government. A new structure would need to involve these contributing organisations – as well as others both within and outside government active in demography – and the key users of the statistics. A component of these links would be close consultation and collaboration with the National Statistics Population and Migration Theme Group.

IMPLEMENTING AN IMPROVED SERVICE

The demands are large and good public policy depends increasingly upon meeting them. At present, fragmented approaches to supply mean that resources are not effectively targeted. The solution needs to take account of various factors:

- *Delivery* – the demands must be met and in a way that is coherent. – different parts of the public sector must not be using different figures on which to base their judgements. There is added value to be drawn from users across government accessing a coherent base of the same fundamental statistics about the population. This will require a well articulated, single system of population statistics.
- *Efficiency* – present fragmentation does not deliver value for money. Many agencies do work on population statistics to make up for limitations in the current system to create bespoke solutions to their own needs. There is scope for engaging a wider variety of interested parties to maximise the combined impact of the available resource and to ensure that the duplication of work is minimised.
- *Leverage* – a single centralised supply of all population statistics through a single agency is unlikely to give best leverage. There are lots of valuable resources, both in terms of source data, knowledge, especially local knowledge, and finance available in many bodies including local authorities – recognising that, at each level of reporting, the capacity to validate results will differ. A system of population statistics must get leverage from these resources in a way that delivers results that can be trusted by all.

New structures and systems need to be more efficient, to free-up some of the resource currently used across government in the production process for analytical work, demographic investigations and the development of new products.

To ensure coherence across government, a strong governance framework would provide for agreements on methodology, underlying assumptions and priorities for development.

Population statistics in the United Kingdom have long been one of the strengths of national official statistics, and the rich demographic detail that they provide continues to be valued immensely. However, the regular population estimates have been subject to strong criticism, particularly the population Census of 1991 and the estimates for subsequent years that were based upon it.

Population estimates based on the 2001 Census provide good quality statistics. But as we move further from the census, the reliability of these estimates will reduce, requiring new data sources and estimation methods. Decisions on a census for 2011 or an alternative approach will underpin the basis of the long-term population estimates system

in this country and need to reflect the requirements for population and household statistics.¹²

The future strategy for population estimation should aim to achieve consistent accuracy of estimates rather than setting out to apply consistent methods across all areas. Greater accuracy may result from developing a limited number of alternative methods to apply, depending on the type of area.

The review provides a basis for a broad but clearly-focused agenda, whose cornerstone is the development of data sources, methods and outputs that recognise the dynamic shifts in the population. These enhanced outputs will include greater analysis of ethnic populations and their characteristics, and an improved ability to count the population according to different definitions. ONS will plan the further expansion of analytical capability in a way attuned to users' needs, recognising the impact of demographic change on policy development and the modelling work that underpins it.

ACTION POINTS FOR ONS

This section sets out the key action points to emerge from this review. These actions represent an ambitious programme of work, and particular projects may depend on the future availability of resources (both in ONS and elsewhere) and on political and legislative developments.

1. ONS will work to advance the quality of the national address register in the UK, and will use it in conjunction with other detailed sources of information that relate to enumeration issues. This will allow us to develop enumeration strategies for censuses and surveys that reflect the varying levels of difficulty in contacting householders. We will also be able to assess the associated response risks.
2. ONS are currently in preliminary planning for the next expected census of population in 2011.¹³ It is possible that there would continue to be some process for enumerating the population as in a traditional census, although the extent of enquiry is uncertain. If an enumeration-based approach were eventually confirmed as a central element of the census, we would set up an intensive process for assessing the required resources to achieve given levels of response. This would cover the response rates for different areas, ethnic communities and age groups, and would allow agreed targets to be set within the boundaries established by the level of the census enumeration budget.
3. As part of any such process, ONS will look at options for providing an effective mid-decade population benchmark for London, and possibly other large urban areas where population flows are high. However, no cost-benefit analysis yet exists for this concept.
4. ONS will seek to exploit the potential of several high-value data sources about individuals that might be used as a basis for regular production of population estimates. We will draw on the further work to be taken forward to investigate the feasibility of a population register for England and Wales (the Citizen Information Project¹⁴).
5. Large countries, such as the United States, France and Italy, share many of the challenges faced in the United Kingdom, and are evaluating and adopting alternative means of enhancing the traditional population census. ONS will be evaluating the initial year (2004) of the newly established annual population surveys in France and the United States (the 'American Community Survey'), to assess whether they provide effective and relevant models for strengthening inter-censal population estimates in the UK. This evaluation will conclude during 2004, so that we can gain early knowledge of the risks and gains experienced in the course of these surveys. Among the larger countries, more general collaboration on difficult methodological problems is well in train, and will be a critical influence on the speed with which many of these plans are concluded.
6. ONS and the Home Office published the International Migration Quality Review report on 2 September 2003. There are more opportunities to improve the quality of migration estimates (particularly of inward migration), through using existing surveys such as the Labour Force Survey in new ways. In addition, we expect that new estimation methods will produce more accurate estimates from existing statistical and administrative sources. We could expect further gains in quality if there was a policy initiative that led to an increase in the level of documentation required to enter the UK. Measuring the level of outward migration is still likely to continue to be uncertain. This increases the potential benefit to be gained from a new population benchmark for London and other large metropolitan areas, particularly if migrant flows continue at the level of the last five years.
7. ONS will explore what analysis can be made of various definitions of the population from existing sources. Thus, as well as the traditional concept of 'usual residence', we will seek to explore the numbers of people present but not counted in the various definitions of 'usually resident'.
8. ONS will draw up a clear specification of the quality expectations for major uses of a future census, against which both plans and results can be tested. This applies particularly to the financial settlements for local government and for health services, where there are a large number of stakeholders who could potentially challenge the quality of the results. The experience of the United States, which has used population-based funding more extensively and for longer than the UK, is that satisfying all stakeholders generates demands for assurances of quality that are not always deliverable within the census process itself.
9. Along with the mid-year estimates for 2002, ONS will publish a set of supporting evidence based on the outcome of an extensive range of studies conducted since 2001 Census results were first published. This will include analysis of comparator data in a variety of areas and for specific age groups, demographic analysis, migration studies and longitudinal analysis. We will also publish the results of the matching exercises to compare Census results with administrative datasets in Westminster and Manchester, once these studies have been completed.
10. ONS will provide information about the quality of population estimates, and establish processes for analysing the risks to quality at local, regional and national level.
11. ONS will need to obtain more information about the quality of population benchmarks. It is likely that new questions will be added to the next census that reinforce our capacity to assess the quality of the census itself, in preference to those that address new topic needs. This will be an issue for consideration as the 2011 Census planning process develops.¹⁵
12. It is possible that we will not preserve a fixed link between the 2001 Census and the 2001 mid-year population estimates. There may be some back-revisions to estimates resulting from the planned improvements to migration flows, advances in demographic estimation methods, or from access to data series that span the period around the census but are not currently available. ONS will be taking forward the expansion of the information base used in population

estimates during the remainder of this decade. The next 'benchmark' of population will occur either with the next census (expected in 2011¹³), or when another major innovation such as a population register or an annual population survey is initiated.

13. ONS will prepare for England and Wales population estimates at national level being produced quarterly within three months of the reference period. An evaluation of this proposed development is currently in hand.¹⁴
14. ONS will also provide leadership in ensuring that users have seamless access to population statistics for the UK as a whole and for constituent geographies within the UK. In taking forward the above action points to improve population estimates for England and Wales, ONS will work closely with the General Register Office for Scotland and the Northern Ireland Statistics and Research Agency. These organisations will be considering the implications for their respective countries, and we will be working closely with them to ensure that population statistics for the UK as a whole remain as consistent as possible.

This article reflects the position in August 2003. In the future the latest situation will be reported on the National Statistics website.

REFERENCES AND LINKS TO BACKGROUND INFORMATION TO RELATED PROJECTS

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10. Quarterly population estimates project http://www.statistics.gov.uk/about/Methodology_by_theme/qfe/default.asp
11. Joined-up data project <http://www.gov.si/zrs/obvestil/raden02/r15.doc>
12. Feasibility of creating a common population register (Citizen Information Project) <http://www.statistics.gov.uk/registration/cip.asp>
13. UK census strategic development programme http://www.statistics.gov.uk/census2001/small_area_dd.asp

ADDITIONAL LINKS

14. Population projections by ethnic group - feasibility study http://www.statistics.gov.uk/downloads/theme_population/SMPS_67_v2.pdf
15. Report of 1998 study on alternatives to census <http://www.statistics.gov.uk/census2001/reviewevaluation.asp>
16. Review of the need for a 2006 Census in England and Wales <http://www.statistics.gov.uk/census2001/2006brief.asp>