



**Privacy Impact Assessment for the
Inter-censal Ethnic Mobility Study, 2001–06**

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Citation

Statistics New Zealand. (2009). *Privacy Impact Assessment for the Inter-censal Ethnic Mobility Study, 2001–06*. Wellington: Author

Published in April 2009 by

Statistics New Zealand
Tatauranga Aotearoa
Wellington, New Zealand

ISBN 978-0-478-31581-3 (Online)

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1. Introduction and overview

This Privacy Impact Assessment (PIA) has been prepared for a proposed Inter-censal Ethnic Mobility Study in accordance with Statistics New Zealand's data integration protocol requirements.

The information for this study will be created by integrating data from previous censuses. No information will be published in a form that would allow individuals to be identified.

This PIA identifies privacy risks associated with the study and outlines the processes for addressing these risks. The PIA begins with a description of the legal context of the study. It then outlines the purpose, background, methodology, and flow of information of the study. Issues associated with the integration, storage, and use of the data are discussed. The release, access, and compliance practices that will be used in the study are then described. The PIA concludes that risks to privacy from the study are low, and that the study could significantly increase public confidence in the decisions that Statistics NZ may make about the ethnicity question for the 2011 Census.

Statistics NZ proposes this data integration study as an efficient way to investigate patterns of responses to the ethnicity question in New Zealand's Census of Population and Dwellings. No significant ethical implications have been found to exist for those individuals who responded to previous censuses.

2. Legal context

The Statistics Act 1975 and Privacy Act 1993 form a framework to protect information about individuals when used for statistical or research purposes. The Privacy Act 1993 provides protection for living persons, while the Statistics Act 1975 has a wider security coverage including deceased persons.

The **Statistics Act 1975** regulates the collection of information, whether from statistical surveys or administrative records, for use in producing official statistics by government departments. The Act includes strict provisions to protect the security of collected information and to prevent the release of identifiable information about an individual or business (information is still considered identifiable when identifiers such as names have been removed but where a third party could identify that the information relates to a particular person). Section 37 of the Act states that information provided under the Act shall only be used for statistical purposes. In accordance with the Act, Statistics NZ ensures that information furnished to the department is kept securely, access is restricted and any publication avoids disclosing identifiable information. All data held by Statistics NZ is subject to these strict provisions.

The **Privacy Act 1993** provides protection for information about an individual and applies to every agency that deals with personal information. Twelve information privacy principles in the Act provide a foundation, which governs the protection of privacy concerning the collection, use, disclosure, storage, and access to personal information. The Act also includes specific guidelines and rules governing information matching which emphasise the need to consider the balance between the public benefits of any proposed information matching exercise and the associated privacy intrusion. Under the terms of the Act, the Privacy Commissioner must retain the capacity to conduct an independent review in the event of a complaint. Consequently, the Privacy Commissioner does not approve proposals such as this in advance. However, the Privacy Commissioner is able to signal any practices that are not permitted under the Act or that might pose a problem of perceived privacy risks.

Statistics NZ has taken the position that any such concerns, even of perception, should be addressed in an appropriate and defensible manner before integration begins. The intention is that Statistics NZ should take all necessary steps to comply with both the spirit and letter of the Act.

Compliance with the Statistics Act 1975 and the Privacy Act 1993 ensures that the privacy concerns of individuals are not set aside for the potential value and perceived benefits of record linking.

Over the past decade, submissions to government have pointed to privacy issues present in data integration initiatives undertaken by government agencies. Public confidence and acceptance are concerns that need to be addressed. To address these concerns and the risks inherent in statistical integration work, Cabinet assigned responsibility to Statistics NZ for cross-agency statistical integration work using information collected for unrelated purposes. Statistics NZ was also assigned custodianship of the resulting datasets [CAB (97) M 31/14].

Statistics NZ has considerable experience with complying with and applying the requirements of the Privacy Act 1993. Well-established practices ensure the security of information once the department obtains it. Statistics NZ maintains a 'culture of confidentiality' – all staff abide by confidentiality protection rules to ensure that the information entrusted to us by individuals is kept private.

Security, privacy and confidentiality rules operate through a series of departmental and Official Statistics System policies including:

- Principles and Protocols for Producers of Tier 1 Statistics
- Data Integration Protocols
- Population Census Record-matching policy
- Microdata Access Protocols
- Confidentiality Protocols
- Policy for Publishing Official Statistics

3. Study description and information flow

3.1 Purpose and background

The purpose of this study is to produce statistical estimates of inter-ethnic mobility between the 2001 and 2006 Censuses. This research will supply key information for the current review of the Official Ethnicity Statistical Standard (which is about managing the 'New Zealander' responses in the census) and it will update the inter-ethnic mobility parameters used to produce the periodic ethnic population projections.

Background

Statistics NZ is reviewing the Official Ethnicity Statistical Standard to resolve issues relating to the growth of New Zealander responses in the Census of Population and Dwellings. The growth of this group poses some challenges relating to public trust and confidence in ethnicity statistics and to the consistency of the census measure with statistics derived from other sources.

The trust and confidence issue stems from public debate and criticism of the measure, most noticeably during the 2006 Census. The statistical consistency issue stems from a change made to the standard at the previous review in 2004 and from the relatively higher level of New Zealander responses in the census compared with all other sources.

Statistical management of the New Zealander response is problematic because of opposing views held by stakeholders. Some proponents have argued for better facilitation of the response through the provision of a tick-box in the census question and more explicit reporting. Others oppose this view because they believe that encouraging the response will undermine the accuracy of the count of groups other than European and/or that it constitutes an unacceptable appropriation of the New Zealand national identity label by a sub-population.

This proposal will provide statistical evidence for those people who are concerned about the impact of increasing New Zealander responses (if any) on the counts of groups other than European. This impact can be usefully investigated by analysing patterns of *inter-ethnic mobility* between the 2001 and 2006 Censuses.

Inter-ethnic mobility refers to the phenomenon of people changing ethnic groups over time and in different contexts (ie changing their response to survey or administrative questions). This phenomenon has been documented widely in social science and it reflects the socio-political and contestable nature of ethnicity. Ethnic mobility is acknowledged in official statistics and factored into the projection model used to produce our periodic ethnic population projections.

Information from the study will also contribute to updating the inter-ethnic mobility parameters used in the population projection model and the resulting dataset could be used for further investigation of *ethnogenesis* of other groups (*ethno-genesis* is the formation or emergence of an ethnic group within a larger community).

Methodology

To analyse ethnic mobility patterns, we need information about the responses of individuals at different times or in different contexts. This study will include information from different times and will require linking individual records from the 2001 and 2006 Censuses. In 1998, Statistics NZ carried out a similar ethnic mobility study, which linked data between the 1991 and 1996 Censuses. While that study provided useful information, the results are now out of date and the analysis was not detailed enough to give information about the impact of the New Zealander response. Other potential sources, such as the Survey of Families, Income and Employment, do not replicate closely enough a census-type context and do not have large enough samples to support detailed analysis.

The study population will need to be confined to people who, at the 2006 Census, indicated that they were in New Zealand at the time of the 2001 Census. This confinement will enable subjects to be integrated via meshblock or area unit blocking. The Quality Stage computer package will be used to achieve probabilistic links using the standard integration variables of date of birth, sex and location. This approach is consistent with Statistics NZ's policy governing linking of census records.

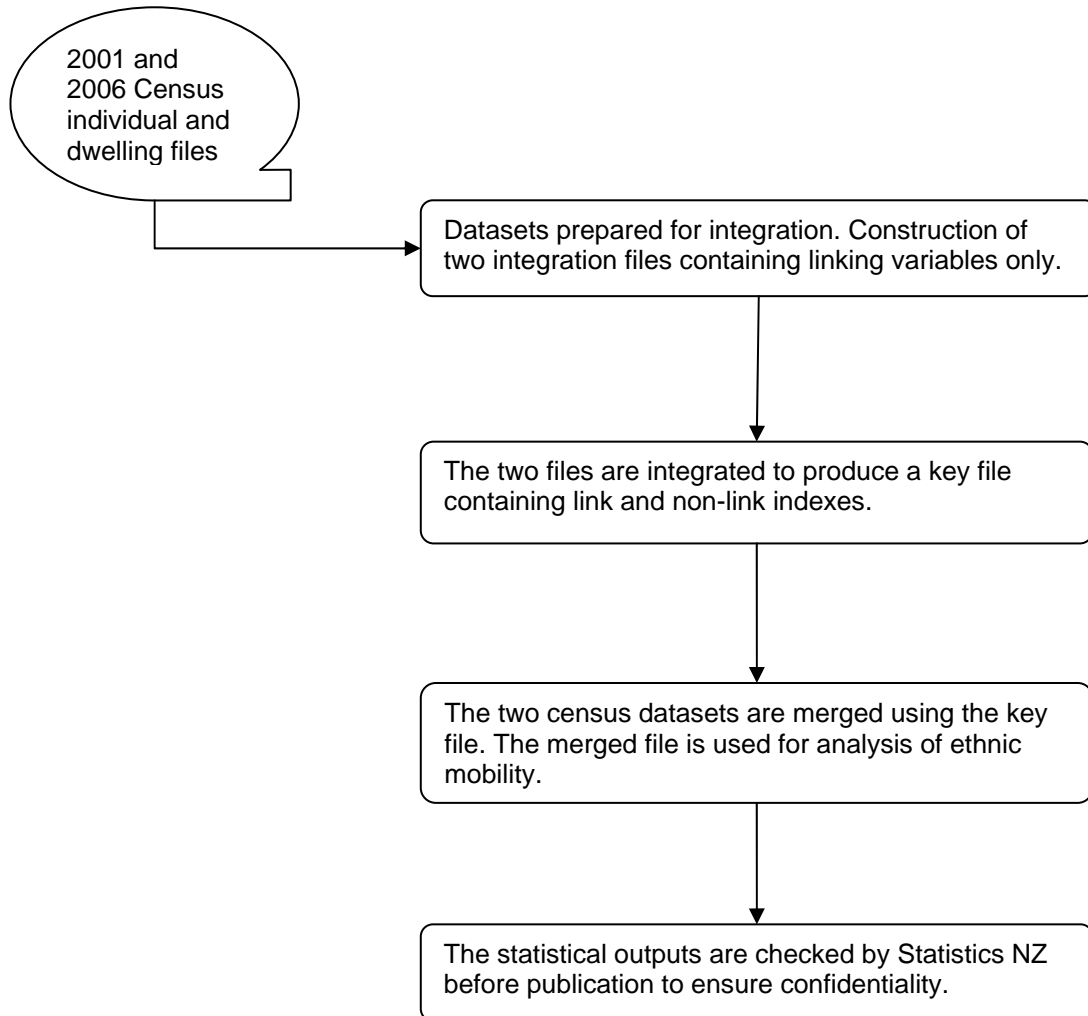
3.2 Information flow

This study integrates data from previous censuses (2001 and 2006). The variables for comparison are those that relate to the ethnicity question.

The following diagram summarises the flow of data within Statistics NZ.

Figure 1

Flow of data for the Inter-censal Ethnic Mobility Study, 2001–06



4. Privacy analysis

This section discusses the privacy issues associated with the use of personal information in the Inter-censal Ethnic Mobility Study, and reviews issues relating to the source data, data integration, and the storage and use of the data.

Compliance with Statistics NZ data integration protocols and generic processes will mitigate many of the risks identified in this section. However, the risks are described in their 'raw' form so that the extent of their mitigation by generic processes and specific actions can be assessed.

4.1 Informed consent

Consent to integrate census data is not obtained directly from the subjects of this project, so they may not be aware that their data is being used in this way. The Privacy Act 1993 (Information Privacy Principle 3) generally requires that agencies collecting personal information directly from individuals ensure that those individuals are aware of the purposes of collection. However, an exemption is made for information used for statistical or research purposes, which will not be published in a form that could reasonably be expected to identify the individual concerned. This project fulfils this exemption, so it is not considered necessary to obtain consent directly from individuals. However, it is still worth considering the issue of informed consent because the project potentially impinges on the privacy of individuals and the risks should be weighed up against the benefits of the research.

It would be impractical to gain individual consent from all the subjects of this project given the numbers and the age of the source datasets (2001 and 2006).

The subjects of the project may be aware that their information will be used for statistical purposes. Census forms contain a statement that data will be used only for statistical purposes. A related issue is whether people are aware that the term statistical purposes includes data integration, as this is not explicitly stated on census forms. Information about this study, including this PIA, will be available on the Statistics NZ website page along with information on other data integration projects.

Over the last eight years or so, Statistics NZ has undertaken several major projects involving the integration of micro-data records from official survey and administrative data sources (eg Student Loans, Linked Employer Employee Dataset, Census Mortality and CancerTrends). Each of these studies has generated a programme of published research reports and official statistics and there has been no evidence of any adverse public reaction over privacy issues. The latter two studies have involved the integration of population census microdata. Therefore, it is reasonable to contend that there is currently no outstanding public concern with projects of this type conducted by Statistics NZ.

4.2 Source data

Information for this project will be sourced from population census data within Statistics NZ. The information obtained will be in the form of unit record data relating to individuals.

Information sourced from the 2001 and 2006 Censuses will include:

- Date of birth
- Other demographic data (sex, marital status, living arrangements)
- Cultural identity variables (eg ethnicity, Māori descent, religion, languages spoken)
- Socio-economic variables (eg employment status, income, educational qualification)
- Household variables (eg size and tenure)
- Geographic location (current and last census meshblock and area unit).

Record linking will be done probabilistically using date of birth, sex and geographic location data.

4.3 Data integration

Data integration extends the value of existing datasets by adding to the information available without adding to the compliance burden on subjects of the data.

Statistics NZ employees will complete the integration process within the confines of Statistics NZ premises. Processing of identifiable data is part of the normal business of Statistics NZ and data security and confidentiality are assured through well-established processes and procedures, and an organisational culture that places a high value on confidentiality and privacy protection.

The Office of the Privacy Commissioner will be informed of this study. In keeping with Statistics NZ protocols for data integration, information about the study will be available on the Statistics NZ website, including an explanation of the project and this PIA. The Statistics NZ website also contains general information on data integration.

Despite the proposed actions to mitigate the risk to individual privacy resulting from the integration of this data, the potential remains that public concerns may still be raised regarding the integration of data from successive censuses. If concerns are raised, Statistics NZ is well placed to explain the processes that have been undertaken to protect personal privacy under Statistics NZ protocols and in accordance with the Privacy Act and Cabinet's directive on this issue.

4.4 Storage

The Privacy Act requires that all reasonable steps be taken to ensure that personal information held by an agency is protected against loss, unauthorised access, use, modification or disclosure, or other misuse. Statistics NZ's standard security measures and protocols will govern the management of the data used in this project. Statistics NZ is required to comply with the confidentiality provisions of the Statistics Act and with Security in the Government Sector (SIGS) protocols.

The following well-established policies, procedures and systems are in place to ensure adequate measures of physical and electronic security:

- Physical security systems control entry to the premises and limit entry to certain sections of the premises to authorised people only.

- Visitors to Statistics NZ must register, and supervision procedures and systems ensure that their activities are confined to legitimate business.
- Access to data is restricted on a 'need to know' basis.
- Access to Statistics NZ IT systems and databases is password-protected and restricted to authorised personnel.
- A Statistics NZ security office functions to actively audit and review security processes and address new and emergent threats.

If the Government Statistician approves this study, data from the full project will be subject to standard Statistics NZ data management and archiving practices.

4.5 Use

The Inter-censal Ethnic Mobility Study data will be used for research and statistical purposes only, and not for administrative purposes. Any amendments to the data during processing will be for the statistical purposes of this study.

Initially, the results of the study will be used to inform a review of the Official Ethnicity Standard being undertaken by Statistics NZ. The results will provide information on the extent that individuals have changed their ethnicity classification between the two censuses and how these changes affect the consistency of the statistical measurement of ethnicity over time. The results will also be used to update the ethnic mobility estimates in the model used to construct projections of ethnic population groups.

4.5.1 Microdata access

The dataset compiled for this study will not be available to other researchers for other uses and will be destroyed when the study is completed. However, Statistics NZ will retain the index file used to construct the integrated dataset by and it may be used for subsequent research projects requiring this or a similar dataset. If any subsequent proposals are submitted, they will be subject to a separate approval process.

4.5.2 Release of results

Statistics NZ plans to publish the results of the Inter-censal Ethnic Mobility Study on the Statistics NZ website. The results of the study are also likely to be cited in a report of the Review of the Official Ethnicity Standard. The results are also likely to be used to update a model used to construct projections of ethnic group populations.

All information released, whether in the form of official statistics or research outputs, will need to meet Statistics NZ confidentiality requirements including the confidentiality rules for the release of aggregated census data. According to these rules, output that might identify the characteristics of individuals must be withheld, and in particular, output in which there are both small geographies and small populations is restricted.

Statistics NZ is confident that the policies outlined above and the 'culture of confidentiality' that exists in the organisation provides a high degree of protection for data held by the organisation.

4.6 Data retention

Integrated data from the study will be retained and stored according to Statistics NZ data retention protocols. The integrated dataset compiled for this study will be used only for this study and destroyed when the study is completed. Statistics NZ will retain an index file that enables the two constituent datasets for this study to be linked. If a subsequent study requires the creation of the same or a similar dataset, the index file will be used, subject to prior approval of an appropriate data integration proposal.

5. Summary of the privacy risk assessment

The following table summarises the privacy risks of the Inter-censal Ethnic Mobility Study, 2001–06.

Table 1

Summary of the Privacy Risk Assessment for the Inter-censal Ethnic Mobility Study, 2001–06

Privacy risk	Risk probability/ impact	Risk mitigated by	Assessment of residual risk
<p>Adverse public perception or rejection of the legitimacy of the proposed use of this information.</p> <p>Note: any adverse public reaction might not only affect this project but could also affect census data, the reputation of data providers, and the ability of government agencies in general to link data from unrelated sources in the future.</p>	Low / Low	<ul style="list-style-type: none"> • adhering to Cabinet directive [CAB (97) M31/14] • informing the Office of the Privacy Commissioner about the project • being transparent about project objectives and processes • not using identifiable data during data integration • complying with the Statistics Act 1975 and other relevant legislation. 	Low
<p>Questions regarding the use and retention of unique identifiers.</p>	Low / Low	<p>Adherence to Statistics NZ policies regarding use and retention of unique identifiers.</p>	Low
<p>Use of the integrated data for purposes other than statistical research.</p>	Low / Low	<p>The dataset compiled for this study will be used only for this study and will be destroyed when the study is complete.</p>	Low

6. Future compliance mechanisms

Following consideration of this Privacy Impact Assessment, the Government Statistician will determine whether the project will proceed.

Any proposal to link data between future censuses will require separate approval including an updated privacy impact assessment, approval by the Government Statistician, and consultation with the appropriate data providers.

7. Conclusions

The risks to individual privacy arising from the Inter-censal Ethnic Mobility Study have been identified and this impact assessment indicates that they can be adequately managed within the Statistics NZ policy and operational framework. The study is likely to reduce the overall 2011 Census programme risk posed by the ethnicity question and to increase confidence in decision making, both internally and externally, in relation to this risk.

8. References

The **Data Integration Protocol** is available on the Statistics NZ website at:
<http://www.stats.govt.nz/about-us/policies-and-guidelines/data-integration-protocol/default.htm>

Microdata Access Protocols are available on the Statistics NZ website at:
<http://www.stats.govt.nz/about-us/policies-and-guidelines/general/microdata-access-protocols.htm>

The **Population Census Record-Matching Policy** is available on the Statistics NZ website at:
<http://www.stats.govt.nz/about-us/policies-and-guidelines/privacy-confidentiality/pop-census-record-matching-policy.htm>

Appendix

1. Privacy checklist for the Inter-censal Ethnic Mobility Study, 2001–06

Have security procedures for the collection, transmission, storage and disposal of personal information, and access to them, been documented?	Yes (see section 4).
Are privacy controls in place for the project?	Yes, for example the 'need to know' policy, procedures for physical security, IT security and access controls.
Have technological tools and system design techniques that may enhance both privacy and security been considered?	Yes, for example restricted directories and technologies of anonymity (eg Personal Identification Key (PIK)).
Has there been an expert review of the security risks and measures to secure the system against unauthorised access, use, disclosure and disposal?	Yes, an expert review will be carried out at the start of the full project.
Have staff been trained to protect personal information and are they aware of policies regarding breaches of security or confidentiality?	Yes
Are there authorisation controls defining which staff may add, change or delete information from records?	Yes, access is restricted on a 'need to know' basis.
Are user accounts, access rights and security authorisations controlled and recorded by an accountable systems or records management process?	Yes
Are access rights provided only to users who actually require access for the stated purposes of collection or consistent purposes?	Yes
Are the security measures commensurate with the sensitivity of the information recorded?	Yes
What steps will be taken to make the public aware of the study?	Information will be published on Statistics NZ website. Key stakeholders have been informed of the study.