



The Official
Statistics System

Principles and Protocols

FOR PRODUCERS OF TIER 1 STATISTICS

2007

Principles and Protocols

FOR PRODUCERS OF TIER 1 STATISTICS



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Introduction

In 2005 a set of key official statistics were identified as performance measures of New Zealand. These statistics, known as Tier 1 statistics, are important in their own right, and need to be produced, analysed and released to high statistical standards.

The work of agencies that produce official statistics is guided by the Statistics Act 1975, as well as by other legislation. This includes the Privacy Act 1993, the Official Information Act 1982 and the Public Records Act 2005. The United Nations Fundamental Principles of Official Statistics (see Appendix 1) is another key source of guidance.

This statement of the key principles and protocols embodies the key aspects of the Statistics Act and United Nations principles and the high-level standards. They apply to all Tier 1 statistics. Other statistics have a role in the Official Statistics System and the application of the principles to all official statistics is encouraged.

The development of these principles and protocols has been coordinated by Statistics New Zealand in consultation with Tier 1 producing agencies.

About official statistics

Official statistics are all statistics produced by government departments. They are the cornerstones of good government, and support public confidence in good government. They provide a window to the work and performance of government by showing the scale of activity in areas of public policy, and by allowing citizens to assess the impact of public policies and actions. It is a government responsibility to provide such statistics and to maintain their long-term sustainability.

Official statistics can be collected through surveys or compiled from administrative records collected by government agencies in their daily work. The majority of official statistics are produced by Statistics NZ although many other government agencies produce information that is also highly valued.

Official statistics are defined in section 2 of the Statistics Act 1975. They are statistics derived by government departments from:

- statistical surveys
- administrative and registration records and other forms and papers that are published regularly, or planned to be published regularly, or could be published regularly.

.....

Statistical survey is defined in the Statistics Act as: “a survey of undertakings, or of the public of New Zealand, whereby information is collected from all persons in a field of inquiry or from a sample, by a Government Department with the authority of this Act or any other Act, for the purpose of processing and summarising by appropriate statistical procedures and publishing the results of the survey in some statistical form”.

.....

Administrative records are generally for operational purposes and not primarily for statistical reasons. However, when administrative data records are transformed into aggregate statistics, the principles and protocols apply in the production of those statistics.

Tier 1 statistics

The Review of the Official Statistics System recommended the identification of a set of key official statistics that are performance measures of New Zealand, to be known as Tier 1 statistics.

Tier 1 statistics:

- are essential to central government decision making
- are of high public interest
- meet public expectations of impartiality and statistical quality
- require long-term continuity of the data
- provide international comparability in a global environment.

A list of Tier 1 statistics and the agencies that produce them can be found on www.statisphere.govt.nz.

Part 1:

PRINCIPLES FOR PRODUCERS OF TIER 1 STATISTICS

Summary of official statistics principles

Governments, businesses, communities and citizens use official statistics on New Zealand's economy, society and environment to inform debate, research and decision making.

Official statistics are valued for their relevance, integrity, quality, coherence and accessibility.

Official statistics produced by government agencies are relevant to current and prospective user requirements, in government and in the wider community.

Official statistics gain public trust by being produced and released using objective and transparent methods.

Official statistics are produced using sound statistical methodology, relevant and reliable data sources, and are appropriate for the purpose.

The value of statistical data is maximised through the use of common frameworks, standards and classifications.

Access to official statistics is equal and open.

Official statistics are produced in the interests of all citizens through efficiency, protecting respondent information and minimising respondent load.

Official statistics agencies strive to be efficient and provide value for money.

Respondents' rights to privacy and confidentiality are respected and their information is stored securely.

The costs of compliance are kept to an acceptable level and data is collected only when the expected benefits of a statistical survey exceed the cost to providers.

Official statistics are enhanced through maximising existing data sources and international participation.

Maximise the use and value of existing data by integrating or aligning available statistics and administrative sources.

Official statistics agencies make use of and contribute to international statistical developments.

Relevance

Official statistics produced by government agencies are relevant to current and prospective user requirements, in government and in the wider community.

Official statistics are cornerstones of good government and public confidence in good government. Our community needs information about the society we live in, the state of our economy and environment, and our position in the world. International agencies use statistics to measure our social and economic position in relation to other countries, and international markets use statistics to monitor financial stability. To meet the test of practical utility, statistics must be relevant and in a form that facilitates easy and correct use.

Key elements of this principle

- Official statistics meet the needs of government, business and the community, within available resources.
- Official statistics have clear objectives and identify the information needs that they are attempting to address.
- Development and implementation of statistical policy and programmes is based on effective consultation and meets intended primary users' expectations.
- Statistical work programmes are periodically reviewed to ensure their relevance. Ongoing statistics are regularly assessed to justify their continuation.

The Advisory Committee on Official Statistics (ACOS) represents the interests of the wider statistical community, including users, producers, and suppliers of statistical data, to ensure that official statistics are developed to meet the needs of users while taking into account the cost implications to government, producers and providers. ACOS aims to improve quality and relevance by commenting on the health of Tier 1 statistics.

Reliable and comprehensive statistics are important to the effective operation of any democratic system. Objectivity involves using well-established frameworks, stating methodological assumptions, and highlighting major findings in accordance with clearly articulated criteria. Transparency is achieved by using well-established methodologies and making publicly available the methods and procedures used in the production of the statistics. Trust is enhanced by ensuring that agency staff act professionally and adhere to sound principles of good practice as set out in the United Nations Fundamental Principles of Official Statistics (see Appendix 1), the New Zealand Public Service Code of Conduct, and individual agencies' policies.

Key elements of this principle

- Legislative obligations and internationally endorsed guidelines of good practice governing the collection of data, confidentiality, privacy and its release are followed.
- Compilation and release of data is free from external influences, to ensure impartiality of the statistics producers.
- Decisions surrounding the prioritisation of statistical needs are transparent.
- Release of Tier 1 statistics is by the chief executive of the producing agency according to a calendar of release dates published at least six months in advance.
- The selection of statistical sources, methods and procedures is a professional responsibility and is based on scientific principles and best international practice, taking into account the cost implications to government and providers.
- In analysing and reporting the results of a collection, objectivity and professionalism are maintained and data is impartially presented in a manner that is easy to understand.
- In the dissemination of data, when an organisation reuses data collected by others, the organisation systematically gives credit to the original data source.

PRINCIPLE 2

Integrity

Official statistics gain public trust by being produced and released using objective and transparent methods.

Quality

Official statistics are produced using sound statistical methodology, relevant and reliable data sources, and are appropriate for the purpose.

A professional commitment to quality strengthens public confidence in official statistics. Official statistics need to reflect as faithfully as possible the reality that they are designed to represent. Quality is defined as “fitness for use” in terms of user perspectives and includes the dimensions of timeliness, accuracy and relevance, the priorities of which may vary across different groups of users.

Key elements of this principle

- Professional competence underpins all official statistics activity and is enhanced through training, research and reference to good international practice and professional expertise.
- A culture of continuous improvement, sharing statistical best practice and evaluation, is systematically fostered to manage and improve the quality of statistics.
- Processes and methods used to produce official statistics, including measures of quality such as estimated measurement errors, are fully documented and are available for users to understand the data and judge the quality of the fit.
- Reliable and relevant data is collected from the most appropriate source after due regard to respondent load.
- Data revisions to ongoing statistical series follow a regular, well-established and transparent schedule. If a significant error is found in the data, the corrected data is made publicly available as soon as possible after the identification of the error.

The Minister of Statistics will approve all new or substantially revised Tier 1 surveys. This assures the Minister that the survey meets Tier 1 principles and protocols. It is a self-assessment process that is completed by each agency and forwarded to Statistics New Zealand, which then forwards it to the Minister of Statistics.

Because statistics play a significant role in social and economic research and decision making, frameworks and classifications used in statistics have to be relevant for key users. Data can be more readily interpreted when it is grouped or classified within a structured and understandable picture of the real world. The adoption of common standards for statistics across the vast pool of data available from administrative and survey databases allows separate datasets to be related, and enables more comprehensive statistics to be produced.

Key elements of this principle

- Common statistical frames, definitions and classifications are promoted and used in all statistical surveys and sources to provide consistency over time and between datasets. National and international frameworks and classifications are used wherever possible.
- Automated processes and methods, such as coding tools, are used where practical to minimise bias in the data.
- All new surveys and administrative databases incorporate relevant standards into the planning and implementation phase. Existing surveys and administrative databases are progressively updated to meet the standards at the time of their next major revision or upgrade.
- Statistics users and producers participate in the consultation process for setting national statistical standards to ensure their needs have been addressed.
- Standards and classifications are documented carefully and in a form that can be readily accessed and used by statistics producers and users.
- Classifications must be systematic and should classify observations consistently, using agreed criteria. Classification groups must be unambiguous, exhaustive and mutually exclusive.

PRINCIPLE 4

Coherence

The value of statistical data is maximised through the use of common frameworks, standards and classifications.

Accessibility

Access to official statistics is equal and open.

Official statistics should be published. Only when they are published can official statistics benefit society and its citizens. Publication of data also serves to enhance trust in official statistics. Statistical information is more valuable if it is easily accessed by users, presented in a format that suits their needs, and is sufficiently documented for users to understand the data and judge the quality of the fit.

Key elements of this principle

- Tier 1 statistics producers will ensure equality of access.
- Statistics are presented in a clear and understandable manner and are widely disseminated.
- Release of Tier 1 statistics is by the chief executive of the producing agency according to a calendar of release dates published at least six months in advance.
- The timing of a release is not influenced by its content or set to create an advantage to any particular group or individual.
- Because of potential for financial, political or other gain, strict security is maintained during preparation of, and prior to, the release of key results.
- As much detail as is reliable and practicable is made available, subject to legal and confidentiality constraints. This includes information about the quality of the data and other relevant metadata.
- In using statistical data it is important to keep identifiable information secure and confidential.
- Statistics intended for the broader public are easy to read and do not mislead. Statistical commentary, tables and graphs intended for general use are compiled with a view to their general interest value, impartiality and cost-effectiveness.
- As far as possible, the price of statistics products will not be a barrier to access.
- Official statistics producers listen to and respond openly to all enquiries and make records open to scrutiny on request, subject to resource, legal and confidentiality constraints.

Widespread access to key findings is through major public information service providers and the following channels:

- standard statistical outputs, including commentary, tables and graphs, on the Internet and in hard copy format, for free or at minimal cost

and at marginal cost via:

- customised services
- data laboratory
- confidentialised unit record files (CURFS)
- remote access (RMAS).

Official statistics are public goods; the provision of these goods is the responsibility of the public sector and is funded by tax revenue. Statistics producers are required to spend government-sourced funding wisely by producing and delivering statistics efficiently. It is also important to manage and maintain the existing statistical database as a valuable asset able to produce new official statistics at reasonable cost.

Key elements of this principle

- Surveys and processing systems are to the greatest possible extent designed with sufficient flexibility to accommodate changes in user needs.
- Appropriate opportunities to reduce costs are actively sought. These include economies of scale, data integration, and methodologies and systems developments that use generic, automated processes.
- Administrative sources are used to their full potential for statistical purposes.

The cost-efficiency of producing a statistical product is a measure of the costs and respondent load relative to the output. Costs can be contained by technical measures such as:

- standardising and harmonising surveys
- better exploitation of existing surveys, especially microdata
- shared use of data, particularly administrative data
- improved survey methods using modern information communication technology techniques
- use of sampling techniques.

PRINCIPLE 6

Efficiency

Official statistics agencies strive to be efficient and provide value for money.

Protecting respondent information

Respondents' rights to privacy and confidentiality are respected and their information is stored securely.

The cooperation and goodwill of respondents is essential and is maintained by protecting the information that they supply. Without this cooperation, response rates can be too low and threaten the accuracy or even the utility of the statistics. Public concern about inadequate protection of confidentiality by any government agency can lessen general public confidence in official statistics.

The terms privacy, confidentiality and security are often used interchangeably.

- Privacy refers to the ability of a person to control the availability of information about themselves.
- Confidentiality refers to the protection of individuals' and organisations' information, ensuring that the information is not made available or disclosed to unauthorised individuals or entities.
- Security refers to how the publishing agency stores and controls access to the data it holds.

Key elements of this principle

- Legislative and ethical obligations governing the collection of data, confidentiality, privacy and release are rigorously followed.
- Data provided by respondents is only used for statistical purposes.
- Respondents are informed of the main intended uses and access limitations applying to the information they provide.
- Respondent's anonymity is always strictly preserved unless there is explicit agreement to the contrary.
- Everyone involved in the production of official statistics is aware of their obligation to protect provider confidentiality and of the legal penalties for wrongful disclosure. This obligation continues to apply after completion of service.
- Access to identifiable unit records of information supplied by respondents is restricted to staff who need to use it for the purposes for which it was collected.
- Unless legal permission is provided to allow identification of information in data collected for administrative purposes, the same confidentiality and privacy standards will apply to statistics derived from administrative sources as apply to data collected for statistical purposes.

The production of quality statistics is dependent on the cooperation and goodwill of the data supplier. While some respondents may welcome the opportunity to participate in surveys and accept the importance of providing data to support sound decision making, others may perceive surveys as an imposition – especially if they find it difficult to provide the required data. Special consideration needs to be given to groups that are often subjects for study, for example Māori or Pacific peoples, who are repeatedly targeted in social surveys, and business respondents who often have to meet other governmental demands for information.

Key elements of this principle

- The need to collect data is assessed – for the value of the data to inform decision making against the costs of production and the load placed on respondents.
- Existing data sources, including administrative data, are assessed for their ability to provide all or part of the required information before undertaking new collections.
- The ‘best-supplier’ principle is applied – that is, always collect data from the most appropriate source after considering respondent load.
- To enable respondents to understand their obligations to supply information, the need for the survey is clearly presented to them. Staff who contact respondents can readily explain the objectives of the survey and the statutory obligations on the information provider.
- A continuous effort is made to develop techniques that reduce the burden on information providers.
- A variety of respondent-friendly collection methods, including electronic modes, are available.
- All new or substantially revised surveys with a sample size of more than 2,500 are managed through consultation with the Government Statistician. The consultation covers:
 - ways to minimise overlap of the people being surveyed
 - the elimination of any duplication with existing data sources
 - the collection of data through the survey for other departments (and vice versa).
- Summary respondent-load information for Statistics NZ’s surveys is included in the department’s annual report to Parliament.

PRINCIPLE 8

Minimising respondent load

The costs of compliance are kept to an acceptable level and data is collected only when the expected benefits of a statistical survey exceed the imposition on providers.

Maximising existing data sources

Maximise the use and value of existing data by integrating or aligning available statistics and administrative sources.

The value of statistics can be enhanced through integration, comparison, accumulation and innovation. Integration can occur at all stages of the statistical process. It can produce significant benefits by reducing the cost of statistical collections and the load on respondents, while also increasing the value of outputs. Data should not be collected if suitable data already exists. Over time, and across different collections, integration allows richer databases to be developed and used for more detailed and extensive analysis. However, integration can also carry risks and costs, including potential loss of privacy through unanticipated use of information and the danger of disclosing an individual's information.

Key elements of this principle

- Statistical data are treated as an enduring national resource, with their value increasing through widespread and long-term use.
- Statistical systems are designed to maximise the potential to add value through data integration and comparison.
- The value of administrative data in producing official statistics is recognised, and statistical purposes are promoted in the design of administrative systems.
- Active data integration projects are publicly notified via government agency websites and annual reports.
- Data integration projects comply with the Privacy Act and the regulations and policies that govern the data-supplying agencies.
- Access to microdata is subject to strict confidentiality agreements.
- Statistical coordination is enhanced through various forums, including the Advisory Committee on Official Statistics (ACOS), the Official Statistics System Committee, and involvement with professional statistical associations.
- Statistical material likely to be of historical interest is archived, subject to security, confidentiality and statutory obligations.
- Unit record datasets for all Tier 1 surveys, and Statistics NZ's holdings of Tier 1 administrative datasets and integrated statistical datasets, (including historical data and metadata) are deposited with the Data Archive for research and historical purposes.

The sharing of information and practices, as well as cooperation in the joint development of statistical standards and international statistical activity, is essential for the continuous improvement of the quality and range of official statistics and efficiency of production in all countries.

Agencies that work with international standards and frameworks expect developed countries operating in the global environment to produce official statistics that fully meet those standards.

Key elements of this principle

- Bilateral and multilateral cooperation contributes to the improvement of official statistics systems in all countries.
- International concepts, classifications and methods are used wherever possible to make meaningful comparison of data between countries.
- Opportunities to share statistical knowledge and build relationships with other professional statisticians are facilitated through:
 - attendance at international conferences and workshops
 - secondments to national and international statistical agencies
 - provision of technical assistance to developing statistical agencies.
- Obligations to supply statistical data to international agencies are met.

PRINCIPLE 10

International participation

Official statistics agencies make use of and contribute to international statistical developments.

Part 2:

PROTOCOLS FOR PRODUCERS OF TIER 1 STATISTICS

Summary of official statistics protocols

Underpinning the use of official statistics for informed debate, research and decision-making are practices that ensure confidence in the statistics themselves.

Official statistics adhere to protocols for quality; frameworks, standards and classifications; respondent management; confidentiality, privacy and security; release practices; and management, documentation and preservation of statistical records.

Official statistics are produced using sound statistical methodology, relevant and reliable data sources, and are appropriate for the purpose.

The value of statistical work is maximised through the use of common frameworks, standards and classifications.

The costs of compliance are kept to an acceptable level and data is collected only when the expected benefits of collection exceed the cost to providers.

Respondents' rights to privacy and confidentiality are respected and their information is stored securely.

Access to official statistics is equal and open.

Tier 1 statistics are treated as an enduring national resource which is used for the benefit of all society.

Quality

Summary

Official statistics are produced using sound statistical methodology and relevant and reliable data sources, and are appropriate for the purpose.

Tier 1 statistics producers act professionally and apply good management practices.

Professional competence validates all official statistics activity. It is enhanced through training, research and reference to good international practice and professional expertise.

Statistical development activity and work processes are managed professionally and effectively.

They operate in a culture of continuous improvement.

A culture of continuous improvement, through sharing good ideas and evaluation, is systematically fostered to manage and improve the quality of statistics.

They produce quality statistics that are relevant, accurate, timely, accessible, consistent, coherent, and easily interpreted.*

Official statistics meet the needs of government, business and the community, within available resources.

Source data and statistical techniques are sound and statistical outputs describe the reality they are designed to represent.

Data is released within a time period that permits the information to be of value to users.

Statistics are presented in a clear and understandable way and are widely distributed.

Statistics are consistent within the dataset, over time and with other major datasets.

Processes and methods used to produce official statistics, including measures of quality such as estimated measurement errors, are fully documented. They are available for users to understand the data and judge their usefulness.

* See protocol 5

Quality is an important issue for every statistics producing agency, but it is not a concept that is easy to define. For many years the focus was on accuracy, but during the last decade a much broader understanding of quality has emerged. Quality is now usually defined as fitness for use in terms of user perspectives and includes a number of dimensions, the priorities of which may vary across different groups of users.

Quality of statistics refers to all aspects of how well statistics meet users' needs and expectations of statistical information, once disseminated.

Achieving an acceptable level of quality is the result of addressing, managing and balancing over time the various factors or elements that constitute better quality. Paying attention to the programme objectives, the major uses of the data, costs, and conditions and circumstances that affect quality and user expectations are also important in determining an acceptable level of quality. Since the elements of quality have a complex relationship, an action taken to address or modify one aspect of quality tends to affect the other elements. Thus, the balance between these factors may be altered in ways that cannot readily be modelled or adequately quantified in advance. The decision and actions that achieve this balance are based on knowledge, experience, reviews, feedback, consultation and judgment.

Key Dimensions of Data Quality

<i>Relevance</i>	The degree to which the statistical product meets user needs in coverage, content and detail.
<i>Accuracy</i>	The degree to which the information correctly describes the phenomena it was designed to measure.
<i>Timeliness</i>	The degree to which data produced are up to date, published frequently and delivered to schedule.
<i>Accessibility</i>	The ease with which users are able to access and understand the statistical data and its supporting information.
<i>Coherence/consistency</i>	The degree to which statistical information can be successfully brought together with other statistical information within a broad analytical framework and over time.
<i>Interpretability</i>	The availability of supplementary information and metadata necessary to interpret and use the statistics effectively.

Professionalism involves setting and meeting challenging technical and quality standards and continually improving knowledge and performance.

Key elements of this protocol

Statistics-producing agency leaders:

- Provide clear expectations about the areas of knowledge and expertise expected of their staff working on official statistics.
- Provide access to continuing learning and development opportunities to enable staff to develop their professional skills.
- Provide an environment where professional statistical practices can be applied.
- Encourage and support membership of professional organisations.
- Facilitate secondment and rotation of staff within and between statistics-producing agencies.

Statistics-producing agency staff:

- Act with integrity by being open, impartial and objective.
- Comply with official statistics principles and protocols.
- Promote the principles and protocols, and encourage their adoption by colleagues who handle official statistics.
- Adhere to codes of conduct, legislation (including the Statistics Act 1975 and Privacy Act 1993) and standards expected of New Zealand public servants.
- Collaborate and cooperate with colleagues and are committed to sharing good practice across the Official Statistics System.
- Respect respondents' rights to privacy, confidentiality and security of information.
- Respect statistics users' rights to equality of access to statistics.
- Participate in training and personal development activities to maintain and develop their statistical, technical and managerial abilities.
- Keep up to date with relevant statistical, technical and managerial developments and their costs and benefits.

Legislation relating to statistics includes:

- Statistics Act 1975
- Privacy Act 1993
- Official Information Act 1982
- Public Records Act 2005.

The New Zealand Public Service Code of Conduct is available on the State Services Commission website at:

<http://www.ssc.govt.nz/display/document.asp?docid=4894>

PROTOCOL 1

ELEMENT 1

Professionalism

Professional competence validates all official statistics activity. It is enhanced through training, research and reference to good international practice and professional expertise.

Good management practice

Statistical development activity and work processes are managed effectively.

Statistics producers should develop and implement good management practices to enable them to have the required resources, processes, skills and tools in place to meet the standards for their Tier 1 statistics. Decisions made about quality and fitness for purpose are mindful of costs and the need to provide value for money when producing statistics.

Key elements of this protocol

- Invest in training and development to provide people at all levels with the skills to do their job.
- Use formal project management techniques to assure the effective development of new official statistics and changes to current outputs.
- Use documented quality-management and assurance processes in the development and production of new and changed outputs.
- Use good data-management and quality-assurance processes in the production of ongoing statistics.
- Use structured risk management strategies and business continuity planning to manage the risks associated with producing key statistical outputs.
- The benefits of supply (of data and information by respondents) compare favourably with the costs of compliance.

Continuous improvement

A culture of continuous improvement, through sharing good ideas and evaluation, is systematically fostered to manage and improve the quality of statistics.

It is important to measure quality throughout the statistical life cycle. Quality-measurement indicators provide information that can be used to monitor, improve and compare the quality within and between outputs. Ways to implement new or changed methods or procedures include evaluation, testing and following best international practice.

Key elements of this protocol

- Methodologies, systems and tools are assessed and compared with those used in other national statistics-producing agencies and major statistical organisations to ensure that they continue to conform to high professional standards.
- Seek opportunities to share and use new initiatives and best practice that allow for improvements in quality and efficiency, and for a reduction in the burden placed on providers.
- Details of methodologies, systems and tools are readily available to encourage evaluation and comment through peer group appraisals and other open forums.
- The quality and effectiveness of methodologies, systems and tools are evaluated regularly to ensure they meet required standards.
- A culture of evaluation, including peer group appraisal and comparative benchmarking, is systematically fostered.
- Quality reviews and action plans are published.

Statistics producers need to have effective ways to help them understand the key uses of their outputs, and the key areas of emerging demand and unmet need.

Key elements of this protocol

- Key users are identified and consulted, to understand their needs and to help determine priorities.
- Users are involved from the outset in any proposals for substantial changes to Tier 1 statistics collections, methodologies or outputs. This applies especially to plans to introduce, withdraw, or substantially modify a statistic.
- Concepts are developed and outputs designed that are relevant to users' needs, within available financial resources.
- Ways to develop statistics on emerging issues are in place, to inform public debate and to measure the impact of government interventions.
- The objectives of statistical collections are clear, well-defined, justified and measurable. Statistical outputs can be linked to the objectives.
- Official statistics are reviewed regularly to assess whether they continue to remain relevant and meet their objectives.
- Legislative and policy changes are monitored for their impact on statistical outputs.
 - Statistical collections and outputs are updated.
 - Users are advised if legislative changes result in discontinuities in statistical outputs.

Accuracy begins with a clear definition of the target characteristic and specifications for an acceptable level of error. This may not be possible with statistics produced from administrative records which were originally collected for non-statistical purposes.

Key elements of this protocol

- Have in place a set of accuracy requirements and a system designed to meet those requirements.
- Have information that shows that accuracy requirements are being met.
- Survey errors are controlled and reduced to a level at which their presence does not defeat the usefulness of the results.
- What constitutes an acceptable level of error will vary across subject areas and target characteristics.
- A statistic with a high level of error is unlikely to meet the standard of relevance.
- Error types may vary with the data sources used (eg census, survey or administrative data).

PROTOCOL 1

ELEMENT 4

Relevance

Official statistics meet the needs of government, business and the community, within available resources.

PROTOCOL 1

ELEMENT 5

Accuracy

Source data and statistical techniques are sound and statistical outputs describe the reality they are designed to represent.

Timeliness

Data is released within a time period that permits the information to be of value to users.

A data release is timely if it is available to users within the period in which it remains useful. Planned timeliness is a design decision, based on trade-offs with accuracy, response rates and cost. The achievement of planned release dates should be monitored as a timeliness performance measure, as should changes in planned release dates over longer periods.

Key elements of this protocol

- Statistics are released in sufficient time to meet major information needs of key users.
- Major information releases have release dates announced well in advance.
 - For periodical statistics, this is according to a calendar of release dates published at least six months in advance.
 - For irregular and ad hoc statistics and research reports, exact release dates are provided as soon as possible. Ideally, at least two weeks notice should be given to users.
- For periodical releases, there is sufficient trade-off between early release and consistent quality over time (quality versus timeliness).
- Timeliness of release is balanced with the need to avoid revisions.
 - One way to improve timeliness is the planned release of provisional or preliminary data followed by a final data release. This is only useful if the preliminary data are not too different from the final results.
 - Information about response rates and any potential difference between provisional and final data should be provided with the provisional release.

Timeliness standards for key economic statistics are prescribed in the International Monetary Fund (IMF) Special Data Dissemination Standards (SDDS):

<http://dsbb.imf.org/Applications/web/sddsdatadimensions/>

Consistency can be managed in a number of ways:

- Through the use of good business processes such as:
 - common registers and frames
 - common collection units
 - commonly-formulated questions
 - applying harmonised methodologies and systems
 - using quality guidelines
 - referring to international and national codes of best practice.
- Through the use of commonalities such as standard:
 - frameworks
 - concepts
 - variables
 - classification systems.¹
- Through analysing and focusing on the data themselves:
 - by comparing and integrating data over time
 - managing revision processes by documenting discontinuities and/or providing consistent back-data series.

Key elements of this protocol

- Producers of Tier 1 statistics use standard practices and approaches across official statistics, and foster their adoption.
- Internationally or nationally-agreed definitions, methods and classifications are used where relevant, to aid comparison with other outputs.
- The release of each Tier 1 statistic includes a clear statement on the degree of compliance with agreed definitions, methods and practices (where these have been identified) including any known reasons for deviation.
- Statistics are consistent or reconcilable with those obtained through other data sources and/or statistical frameworks.
- Economic concepts are valued and recorded according to internationally-accepted standards, guidelines, or good practices. Where they are not followed, an explanation is provided and a development plan includes ways to achieve compliance during the next major upgrade.
- Points of discontinuity in a time series are identified and accompanied by an explanation.
- Substantial revisions to time series should provide a consistent back-data series where practicable, an analysis of the differences between the old and revised series, and an explanation of the effect on any previously published commentary or interpretation.
- Users are advised of substantial conceptual and methodological changes before the release of statistics based on the new methods.

PROTOCOL 1

ELEMENT 7

Consistency

Statistics are consistent and coherent within the dataset, over time and with other major datasets.

¹ For further details refer to protocol 2.

Interpretability

Processes and methods used to produce official statistics, including measures of quality, are fully documented and are available for users to understand the data and judge quality of fit.

Official statistics producers have a responsibility to provide sufficient information to allow users to decide if the quality of the presented information fits the intended use. Users need to know what has been measured, how it was measured and how well it was measured. Statistical information that users cannot understand, or can easily misunderstand, has no value, and may even have negative value.

Because it is difficult to provide a profile of all dimensions of accuracy, a description of the methodology also serves as a surrogate indicator of accuracy – it allows the user to assess whether the methods used were scientific, objective and carefully implemented.

Key elements of this protocol

- Releases of Tier 1 statistics include information about the methodology, classifications and processes used, or advise where it can be obtained, to allow users to assess whether the data are fit for the particular purposes for which they are to be used.
- Releases include information on the accuracy of the data and sources of error; including coverage error, sample error, response error and non-sampling error.
- The amount and level of technical detail provided with the data is adapted to the needs of the intended audience. Technical material should be written in the users' language and not in statistical jargon.
- Documentation is reviewed on a regular basis and updated to reflect any changes in methods, classifications and processes.

Documentation that Should Accompany Tier 1 Statistics Releases

<i>Information required</i>	<i>Survey / census</i>	<i>Administrative data</i>
Objectives	X	X
Concepts	X	X
Survey period (from – to –)	X	X
Date of extraction of data		X
Definitions of key variables, concepts etc	X	X
Classifications used	X	X
Administrative data: <ul style="list-style-type: none"> • administrative data source • source agency and publishing agency • major data limitations. 		X X X
Survey methodology and processing: <ul style="list-style-type: none"> • target population, sampling frame and coverage • sample size, desired/achieved sample error • collection method • response rates, imputation rates. 	X X X X	
General warning on sources of non-sampling error: <ul style="list-style-type: none"> • coverage error • measurement error • non-response error • data processing error. 	X	
Analytical methods used, eg seasonal adjustment, multi-variate analysis	X	X
Discontinuities in time series, including: <ul style="list-style-type: none"> • changes in concepts • changes in coverage • changes in collection and methodology • known improvements or deterioration over time. 	X	X
Revisions (if any)	X	X
Other – eg rounding, valuations, time of recording etc	X	X
Contact details for further information	X	X
Technical report available that includes: <ul style="list-style-type: none"> • detailed design and collection methods • estimates of non-sampling error (if known) • quality control and editing procedures used to reduce errors made by respondents, coders, and interviewers • statistical adjustments made for unit non-response and questionnaire item non-response. 	X X X X	X X

Frameworks, standards and classifications

Summary

The value of statistical data is maximised through use of common frameworks, standards and classifications.

Use of common statistical frameworks, standards and classifications by producers of Tier 1 statistics ensures alignment with international best practices.

Common statistical frameworks, standards and classifications are promoted and used in statistical surveys and sources to provide consistency over time and between datasets.

Tier 1 statistics producers use standard practices and approaches across official statistics.

Common statistical frames, definitions and classifications should align wherever possible with national and international frameworks and classifications to facilitate meaningful comparison of data between countries.

To maximise the value of statistical data Statistics New Zealand supports other Tier 1 agencies.

Statistics NZ supports Tier 1 statistics producers to use standard practices and approaches, and fosters a culture that encourages their adoption.

Common frameworks, standards and classifications are the essential operating framework of statistics production. They assist in maximising the effectiveness of statistical outputs and the efficiency of the production process. They facilitate the production of statistics to provide a consistent and coherent picture of New Zealand's economy, society and environment, and allow comparisons to be readily made over time and across geographic areas, industries and other domains.

Common methodologies enhance coherence, while the use of statistical standards and classifications permits the repeated collection of comparable data. Coherence is helped by:

- The use of conceptual frameworks provide a basis for consolidating statistical information about certain sectors or dimensions of New Zealand society.
- The use of standard definitions for the subject-matter concepts, variables and classifications used, as well as the populations and statistical units to which they apply.
- Promotion of, and support for, the use of statistical standards and classifications in official statistics produced by other agencies.

Under the Statistics Act 1975, the Government Statistician is required to "define, lay down and promote standard concepts, procedures, definitions and classifications for use in official statistics".

Standards for harmonisation of official statistics will aim to cover:

- frameworks
- data item definitions
- concepts
- statistical units
- coding processes
- derivation procedures
- harmonised questions and question modules
- classifications, eg geographical, social and economic.

Common frameworks

Common statistical frameworks, standards and classifications are promoted and used in statistical surveys and sources to provide consistency over time and between datasets.

It is important to document the use of frameworks, standards and classifications over the life of a statistic. Obsolete frameworks, standards and classifications should be preserved, and where possible, concordances between previous and new classifications are made available to statistics users.

Harmonisation of data over time, and across different sources aims to minimise:

- the time and costs of developing data collections
- respondent load
- unnecessary duplication across resources

And maximise:

- the quality of information gained from any single source
- opportunities for the cross-analysis, exchange and re-use of data
- users' understanding of statistical information.

Key elements of this protocol

Frameworks

At its simplest, a framework is a logical structure for classifying and organising complex information. New Zealand uses internationally adopted frameworks to integrate the measurements of key aspects of the economy and population.

Using statistical frameworks for presenting statistics, and standards for statistical units, data definitions, questions and classifications:

- permits comparison of data over time and across different collections, thereby increasing the value of information from any single collection
- allows for international comparisons as many standards are based on international recommendations
- greatly reduces the effort in integration and reconciliation required when bringing data together
- can reduce the resources required for developing and conducting a collection.

Examples of internationally adopted frameworks and practices used in New Zealand's official statistics system include:

- *The 1993 System of National Accounts* is the reporting framework used to produce economic statistical indicators such as Gross Domestic Product and structural statistics such as Inter-Industry Studies.
- The fifth edition of the *Balance of Payments Manual (BPM5)* is the framework used for compiling statistics on New Zealand's financial relationship with the rest of the world.
- The *Generally Accepted Accounting Practice (GAAP)* framework is used to prepare the government's key accountability documents such as the year-end financial statements and economic and fiscal updates.
- The *Government Finance Statistics (GFS) 2001* reporting framework has been developed by the International Monetary Fund specifically for government reporting, and is similar to GAAP.

- New Zealand meets the requirements of the International Labour Statistics Convention, 1985 (No. 160) which covers population, employment and unemployment, earnings and hours of work, wage structure and distribution, labour cost, consumer price indexes, household expenditure, occupational injuries, and industrial disputes.

Standards

A statistical standard is a document comprising several different components for each variable. When the components are used together, they produce consistent information across data collections and over time for the same variable. The components include:

- concepts
- statistical units
- coding processes
- derivation procedures
- harmonised questions and question modules
- classifications, eg geographical, social and economic data item definitions.

There is usually a standard classification aligned to the standard.

The adoption of common standards allows separate datasets to be related to each other, to provide a more detailed picture of a particular population or topic than is generally possible from a single collection. The value of information from a single collection is therefore increased.

Standardisation reduces the resource requirements associated with many aspects of survey development and maintenance. For example, once a standard questionnaire module has been written for a particular output variable, it can be adapted for use in other surveys. The module can also be reviewed and any changes implemented across other relevant collections, subject to testing for mode effects.

Standardisation improves the quality of time series data. For example, if the rules for dealing with changes in the population over time are applied consistently, users can be more confident that any differences in survey estimates are actually reflecting population trends. Change in human populations tends to be relatively slow, but consistently-applied maintenance rules are essential in economic surveys, where populations can change overnight as a result of new government policy, marketplace events or environmental pressures.

Because statistics have a significant role in social and economic research and decision making, frameworks and classifications used have to be relevant for key users. It is therefore important to involve statistics users and producers in the consultation process for setting national statistical standards to ensure user needs have been addressed.

Properties of statistical standards

- They clearly define the exact boundaries of the information need.
- They are practical, accommodating collection, processing and output constraints.
- They can cope with different collection methodologies.
- They satisfy the requirements of key internal and external users.

- They are accepted by the producers and users of the key statistics for that output variable.
- They are implemented in a uniform way by all statistics producers and users.
- Their introduction raises the quality of the statistics being produced.
- They enhance the usefulness of the output data.
- They are sufficiently generic to cope with real-world changes thereby avoiding the need for regular revisions.

Classifications

Classifications group and organise information meaningfully and systematically into a standard format that is useful for determining the similarity of ideas, events, objects or people. Preparing a classification creates an exhaustive and structured set of mutually-exclusive and well-described categories to be used in the production and presentation of statistics. Categories are often presented as a hierarchy that is reflected by the numeric or alphabetical codes assigned to them.

Classifications, and associated coding rules and codefiles, are a cornerstone of reliable and comparable official statistics. Data can be more readily interpreted when they are grouped or classified within a structured and understandable picture of the real world. Classifications facilitate the accurate and systematic arrangement of data so the resulting statistics can be easily reproduced and compared, over time as well as between different sources. Consistent classifications allow users to easily define and identify what has been collected and what the data represent.

Statistics NZ has developed a comprehensive range of classifications, and conducts regular reviews to balance contemporary circumstances with consistency over time. Concordances are available which allow comparisons between different versions of a classification and between common non-standard classifications. New Zealand classifications are either integrated or closely aligned with international standards, and in some cases harmonised with the equivalent Australian classification.

Properties of classifications

- They are relevant and meet user needs.
- They have an underlying conceptual basis – they fit within a statistical framework which is intuitive and easy to understand, navigate and apply.
- They have international comparability where it is desirable to compare data across countries.
- They are stable and therefore comparable over time. This needs to be balanced against the need to update classifications to reflect the current situation.
- They are unambiguous, exhaustive and mutually exclusive.
 - Unambiguous – means that observations can be clearly classified into a certain group on the basis of defined classification principles and criteria.
 - Exhaustive – means all cases of the observation data can be classified.
 - Exclusive – means groups are clearly defined to preclude classification of a case in two or more groups.

- They are systematic.
 - Observations are consistently classified using agreed criteria.
 - Concepts and variables related to the classification are defined.
 - Unspecified groups or residual groups such as “not elsewhere classified” contain relatively few cases compared with other groups. If the size of the residual group grows considerably, the classification system should be revised.
- They are operationally feasible.
 - Automated processes and methods, such as coding tools, are used where practical to minimise bias in the data.
 - A classification should be hierarchical, with a main group level which is broken down further into lower classification levels.
 - To maximise flexibility of use, data and files are coded at the lowest possible level of the appropriate classification. Data are then aggregated to higher levels for specified analytical purposes or to satisfy confidentiality or data-reliability constraints.
 - A common collapsing strategy for aggregations should be used. Classifications have names that reflect both the most detailed and the collapsed levels.

Standard practice

Tier 1 statistics producers use standard practices and approaches across official statistics.

Consistent use and application of agreed standards allows for statistical products to work alongside each other and be more easily interpreted.

The adoption of standard practices into existing administrative databases and surveys is likely to involve significant effort, time and cost to government agencies. The process of migrating to common standards needs to be carefully managed and focused on building from existing work in this area.

Key elements of this protocol

- All new surveys and administrative databases should incorporate standards and classifications into the planning and initial implementation phase.
- Existing surveys and administrative databases should be updated to the standards at the time of their next major revision or upgrade.

Use of non-standard practices and approaches

There may be occasions, where for good operational or other reasons, official statistics producers may need to employ non-standard statistical frameworks, questions, statistical units, data definitions or classifications, or employ them in different ways.

On these occasions, producers of Tier 1 statistics will:

- be transparent about their use of non-standard statistical frameworks, questions, statistical units, data definitions and classifications, and publish information about any differences within the metadata that accompanies the statistical release.
- outline definitions, standards and sources used
- explain why a different approach was taken
- provide information, where practicable, quantifying the differences and measuring the impact on comparability
- provide, where possible, a reconciliation or linking mechanism between the non-standard approach and the statistics standard.

Statistics producers work together to ensure that New Zealand makes an effective contribution to the harmonisation of official statistics.

Key elements of this protocol

- Work cooperatively in the development and production of new standards and classifications.
- Work with colleagues across statistical agencies to seek to ensure that international standards reflect the diversity of the New Zealand statistical structure and its governance arrangements.
- Support cooperation between international organisations such as the United Nations, the Organisation for Economic Co-operation and Development and, in particular, promote the use of common standards across the international statistical community.
- Work with Australia to develop and maintain joint Australia/New Zealand classifications and standards.
- Adhere to frameworks, standards and definitions promoted by international organisations. This allows for international as well as national comparability by aligning at the top level, allowing scope for national differences where these are justified.
- Engage with international statistical organisations to ensure that New Zealand makes an effective contribution to international statistical developments, and the development of, or revisions to, common frameworks and classifications.

Under section 14 of the Statistics Act 1975, the Government Statistician is required to define and promote the use of standard statistical concepts, procedures, definitions and classifications. Statistics NZ offers expertise and advice to all official statistics producers and will support Tier 1 statistics producers.

Key elements of this protocol

- Documenting standards and classifications carefully and making them readily accessible on the Statistics NZ website.
- Promoting best practice Statistics NZ frameworks, coding tools etc and making them readily accessible to other Tier 1 statistics producers.
- Providing support and advice to users and producers on the standards and classifications for which they are responsible.
- Undertaking regular reviews of standards and classifications.
- Consulting statistics users and producers to ensure that their needs are addressed when setting national statistical standards.
- Publicising and disseminating any updates or revisions as soon as possible.
- Developing and promoting further standards to make a harmonised approach to business and social surveys possible, and where suitable, apply also to administrative data sources.

Standards and classifications adopted for New Zealand official statistics are available on the Statistics NZ website:

<http://www.stats.govt.nz/statistical-methods/classifications-standards/default.htm>

For further information about classifications see Appendix 2.

PROTOCOL 2

ELEMENT 3

National and international comparability

Common statistical frames, definitions and classifications align wherever possible with national and international frameworks and classifications to facilitate meaningful comparison of data between countries.

PROTOCOL 2

ELEMENT 4

Promoting common standards

Statistics New Zealand supports Tier 1 statistics producers to use standard practices and approaches across official statistics, and fosters a culture that encourages their adoption.

Respondent management

Summary

The costs of compliance are kept to an acceptable level and data is collected only when the expected benefits of collection exceed the cost to providers.

Tier 1 statistics producers seek to minimise respondent load by actively managing respondent burden and rigorously establishing the need for data. They do this by using existing data, collecting from the best supplier, collecting less or simpler data, and by making it easier to provide data, while developing cooperative relationships with respondents and engaging with Māori.

Tier 1 statistics producers actively manage respondent burden across the Official Statistics System.

The need to collect data is assessed to balance its value to inform decision making against the costs of production and the load placed on respondents.

Wherever possible, administrative data or other existing survey data is used.

The best-supplier principle is applied. Data is always collected from the most appropriate source after considering respondent load and cost.

A continuous effort is made to develop statistical techniques that reduce the burden on providers, while maintaining desired quality levels.

Data collection instruments are respondent-friendly.

Tier 1 statistics producers recognise the impact of effective communication on response rates and hence quality, and actively involve respondents during the collection process. This includes demonstrating the value of the information.

Tier 1 statistics producers engage with Māori to ensure that they participate actively in all aspects of official statistics.

Producers of official statistics are responsible for managing the collection of statistical information from data providers and minimising the load placed on individuals, households and businesses. Some respondents welcome the opportunity to participate, and accept the importance of providing data to help assess and manage society and the economy. Others may see surveys as an imposition and regard the request as unreasonable or irrelevant.

Producers of official statistics also recognise the importance of promoting the benefits of active participation in statistical collections to ensure that Māori survey responses are of high quality.

United Nations Fundamental Principles of Official Statistics, Principle 5 states:

“Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.”

This is consistent with government initiatives to minimise compliance costs for business, particularly in supporting initiatives to reduce the burden on small businesses.

Respondent burden is an increasing problem with the growth of statistical and other surveys, and creates compliance costs for both businesses and communities. Respondent burden will be actively managed.

Key elements of this protocol

- The application of common standards across administrative databases and in survey design.
- Use the Data Archive as a central store for unit record data.
- Use of the survey notification process – all government agencies are required to notify Statistics New Zealand of any surveys, whether conducted for statistical or other purposes, which are directly or indirectly funded by the agency. The information, which is published on Statisphere and provides a single point of reference for users and producers of official statistics, will increase the use of existing statistics and minimise duplication.

Managing the burden

All new or substantially revised surveys with a sample size of more than 2,500 are managed through consultation with the Government Statistician early in the planning cycle. The consultation covers:

- ways to minimise overlap of people being surveyed
- elimination of any duplication with existing data sources
- collection of data for other departments through the survey.

Reporting on the burden

Statistics producers should adopt uniform ways of measuring respondent load. The following indicators can measure respondent load:

- average/total time taken to answer statistical enquiries
- average/total number of statistical collections in which respondents are included.

Respondent-burden information will be reported to Statistics NZ for inclusion in *the Annual Report to Parliament*.

PROTOCOL 3

ELEMENT 1

Respondent load

Tier 1 statistics producers contribute to the active management of respondent burden across the Official Statistics System.

Collection value

The need to collect data is assessed to determine its value to inform decision making against the costs of production and the load placed on respondents.

Key elements of this protocol

- Objectives of a new survey are clearly specified, describing how the data will support decision making.
- Impact on respondents is evaluated when changes to existing surveys or administrative data collections are planned or new collections proposed.
- Overall priorities for information in the subject matter area are considered. Non-vital data should not be sought if it hinders provision of vital information. For example, gaining Tier 1 data takes priority over any other data.
- Data quality standards are agreed with users and sponsors prior to a survey collection. Sample sizes are no larger than required to achieve the agreed level of accuracy.
- Regular collections are reviewed periodically to establish:
 - whether the survey is still necessary
 - whether other appropriate data sources have become available
 - that the views of respondents and users of data are being taken into account
 - whether variables are used effectively and that only necessary information is collected.

Existing data sources, including administrative data, should be assessed for their ability to provide all or part of the required information before undertaking new collections.

Key elements of this protocol

- Use survey frames, directly as the frame or to supplement an existing frame, as an alternative to directly contacting firms or households for frame information.
- Use in combination with other data to fill gaps in user needs – that is, use instead of direct collection for some variables or some units. For example, use tax data instead of surveying small businesses.
- Use for direct tabulation into a statistical output.
- Use for editing and imputation, to improve the quality of a statistical output.
- Use to assess the quality of survey data during the expectations and data evaluation processes.

Existing data sources are examined to assess:

- how the concepts line up with the new statistical output requirements
- whether the dataset covers the target population of interest
- whether the timeframe between the end of the reference period and when the data is available for statistical use will meet user requirements
- whether statistical techniques, such as modelling, can be used to adequately approximate the required variable.

To assist in determining whether existing data can be used:

- Standard frameworks, questions and classifications are used with the reasons for not doing so being appropriately documented.
- Detailed descriptions of the methodology used for existing survey outputs and administrative data are provided.

PROTOCOL 3

ELEMENT 3

Using administrative data

Wherever possible, administrative data or other existing survey data is used.

Data sources

The best-supplier principle is applied. Data is always collected from the most appropriate source after considering respondent load and cost.

Rather than directly contacting the respondent, it may be more efficient and less intrusive to collect the information through a third party. Examples include: Companies Office annual returns and financial statements, accountants' client databases, customs returns, and scanner data.

Key elements of this protocol

- When new information is needed, Tier 1 statistics producers examine whether the information can be gathered within an existing survey collection.
- Statistics producers who use administrative data collected by other agencies in ongoing statistical series need to understand the risks to continuity of data supply. This may be done through a memorandum of understanding or contract which should include information about:
 - the authority and legislation under which the data can be supplied
 - the terms and conditions of the supplier
 - the obligations of the receiver, including requirements to protect the confidentiality of the data
 - termination arrangements.
- Information should only be sought from respondents after other potential sources have been investigated and exhausted.
- If a direct survey is necessary, ensure that questions are directed at the person in the household or organisation who can provide the information.

Statistics producers can use a number of statistical techniques to ensure that the load on respondents is the minimum practical to produce results of the required quality.

Key elements of this protocol

- Develop and promote standards for data collection and analysis. Harmonising and standardising classifications, definitions and questionnaire formats will help avoid duplication and make data collection easier.
- Efficient use of registers and sampling frames, and common statistical units.
- Use a collection unit which suits the respondent. If this differs from the statistical unit, techniques that map the collection unit back to the statistical unit should be used.
- Sample where appropriate, rather than using a complete enumeration. Include finding ways to minimise overlap of those being surveyed.
- Use size cut-offs or other coverage restrictions to exclude groups of units which do not have a significant effect on the important statistical aggregates produced by the collection, or which can be adequately accounted for in some other way.
- Using a long-form/short-form approach where the full range of data is collected from a sample of units and a more limited range of data from a larger sample or all the remaining units. Alternatively, non-core variables may be collected at less frequent intervals.
- Using estimation and modelling techniques to reduce what needs to be collected and to replace data that respondents cannot supply.
- Using surveys to supplement administrative data.

PROTOCOL 3

ELEMENT 5

Reducing load

A continuous effort is made to develop statistical techniques that reduce the burden on providers, while maintaining desired quality levels.

Data collection methods

Data collection instruments are respondent-friendly.

Statistics producers take care over questionnaire and interview design to ensure clear and effective communication. The technique chosen is appropriate to the type of information being collected. For example, telephone surveys should only be used when the required information is likely to be readily available and the sample frame is well-defined. In addition, statistics producers use information technology to help in the collection of data, particularly by using formats and methods that suit respondents.

Key elements of this protocol

Statistics producers ensure that data collection instruments:

- have been sufficiently and appropriately tested to ensure they collect the information they were designed to collect and reduce respondent burden
- are clear in their intent
- have been tested for quality before formal use
- are framed in terms of the knowledge and/or types of records normally kept by the respondent and which are readily available in a timely manner
- are easy to understand and use respondent-friendly language; statistical terminology and jargon is avoided
- include the purpose for which the information is used so the respondent understands the value of responding
- are accompanied by clear, concise guidelines for completing the questions
- allow for reporting round figures and/or data in ranges where precise responses cannot or will not be provided.

In maximising the use of information technology, Tier 1 statistics producers:

- provide a choice of response modes that allow the respondent to choose the most appropriate option for them – for example, providing data electronically rather than on paper
- promote and use standards for storing and transmitting data
- use or provide computer software to interface with business packages currently used by respondents.

Statistics producers who support and encourage a customer-friendly culture that is mindful of respondent concerns are more likely to be rewarded with improved response rates and careful, accurate responses from respondents.

Key elements of this protocol

- Collaborate and communicate respondent communities and representative industry and community organisations to gain a better understanding about respondents and their issues.
- Ensure that collection staff can readily explain the purpose of the survey and the statutory obligations on the provider.
- Ensure that collection staff can explain confidentiality/security techniques applied to data collected.
- Coordinate survey information requests to the same respondent.
- Target enquiries to the appropriate person in the household (adult rather than a child) or business (person at a suitable level of management, financial controller, etc).
- Give business respondents advance warning so they have time to collect the required records or make any necessary changes to record-keeping systems.
- Respondents are likely to respond more readily if they are aware they could benefit from using the data. Explain how they might use data for their own purposes and provide them with access to survey results.

PROTOCOL 3

ELEMENT 7

Effective communication

Tier 1 statistics producers recognise the impact of effective communication on response rates and quality, and actively involve respondents during the collection process. This includes demonstrating the value of the information.

Participation by Māori

Tier 1 statistics producers engage with Māori to ensure that they participate actively in all aspects of official statistics.

The increase in demand for information about Māori arises from many needs, including: monitoring social and economic outcomes for Māori, greater awareness of responsibilities under the Treaty of Waitangi, increasing knowledge and use of official statistics by Māori and changes to the way government services are delivered to Māori.

Analysis across statistical surveys indicates that the response rate from people who identify as Māori is consistently lower than for the overall population. There are a number of reasons for this. There are more Māori in the 18–30-year age group than in the overall population; this age group is mobile and therefore harder to reach for surveying purposes; and Māori are already heavily surveyed.

For surveys that target Māori populations, survey takers need to identify the best methods to reach the widest possible audience. This will help to ensure the quality of data about Māori is improved, and consequently of greater value to users. The comments below are relevant to other targeted sub-populations as well: for example, Pacific peoples, youth or older people.

Key elements of this protocol

Competency and trust

- Survey developers and field staff have the appropriate level of experience and knowledge of tikanga and kawa applicable to the Māori respondents they are engaging with.
- Māori leaders are informed and their advice and consent sought before undertaking any major survey where a Māori response is sought.

Involvement

- Involve Māori stakeholders and representative participants in survey design matters – including the design of questions, methodology, methods, analytical frameworks and ways to disseminate results.
- Document and summarise negotiations with Māori stakeholders on issues related to survey design, enumeration and publication of results.
- For major surveys, develop processes that let Māori stakeholders maintain contact with the project team throughout the survey process, and enable the project team to keep participants informed of progress.
- Ensure that survey results are formally conveyed to Māori stakeholders. This includes notification of first release of data.

Strategies to build awareness and support

- Face-to-face meetings are the preferred and most effective means of communicating with Māori.
- Māori media channels provide opportunities to publicise and endorse official statistics.
- Use government department networks which have liaison staff operating at Māori regional and community levels, local bodies with Māori units and Māori liaison staff, and Māori business groups.
- Statistics NZ has developed the Māori Statistics Framework to align the collection and reporting of official statistics with Māori issues and concerns. It provides Māori statistical priorities, which government departments can integrate into their work plans. Agencies inform Statistics NZ how their own work on Māori statistics could contribute to the framework.

Key messages to help improve response rates

- The relevance and usefulness of statistics for Māori individuals and groups, including:
 - assisting with effective governance and management of Māori collective resources
 - empowering Māori communities in their relationships with local bodies and central government.
- The security and confidentiality of respondents' information.
- The role that statistics play in:
 - the drawing of electoral boundaries by the Representation Commission
 - Government policy and effective delivery of services to Māori communities.

Confidentiality, privacy and security

Summary

Respondents' rights to privacy and confidentiality are respected and their information is stored securely.

Tier 1 statistics producers adhere to legislative and ethical obligations and inform staff of their obligations. They use respondents' survey data only for statistical purposes.

Legislative and ethical obligations governing the collection of data, confidentiality, privacy and release of outputs are rigorously followed.

Everyone involved in the production of official statistics is aware of their obligation to protect confidentiality and of the legal penalties for wrongful disclosure.

Survey data provided by respondents is only used for statistical purposes. Administrative data, whilst primarily collected for operational purposes, can also be used for statistical purposes.

They respect and protect respondents' rights to privacy, confidentiality and security. They apply the same standards to administrative data sources.

Respondents' privacy concerns are minimised.

Respondents' confidentiality is always strictly preserved unless they have explicitly agreed to the contrary.

Secure practices and processes are used in the production of official statistics.

When administrative records are processed to produce official statistics, the same confidentiality that is given to census and survey respondents will apply, unless there are explicit limitations on confidentiality in the administrative legislation.

The protection of respondents' information is a cornerstone of maintaining the integrity of the Official Statistics System. Public statements and actions concerning the protection of data help to maintain the cooperation and goodwill of respondents and allay public concerns about inadequate protection of individuals' and business' information.

This protocol sets out how Tier 1 statistics producers will meet their commitments to protect the confidentiality of statistical data within their care. Statistical data include those collected specifically through censuses and surveys for statistical purposes, as well as data derived from administrative systems.

The terms privacy, confidentiality and security are often used interchangeably but each term has a different meaning.

- Privacy refers to the ability of a person to control the availability of information about themselves.
- Confidentiality refers to the protection of individuals' and organisations' information, and ensuring that the information is not made available or disclosed to unauthorised individuals or entities.
- Security refers to how the publishing agency stores and controls access to the data it holds.

This protocol applies where an individual or entity has provided information in a relationship of trust, with the expectation that it will not be divulged to others without permission.

The protocol establishes policies for protecting respondent information when processing statistical data and publishing outputs, together with appropriate action in the event of unauthorised data disclosure.

It covers all statistical data that are required to be kept confidential, including those collected from people, households, businesses and other organisations, whether from surveys, censuses or administrative sources.

Unless explicitly required by law, this protocol applies equally to the living and those thought to be, or known to be dead. Similarly, the protocol continues to apply to businesses, organisations and other non-personal undertakings after they have ceased trading, merged, or been subject to a take-over.

State sector agencies should always consult any legislation guiding their department, and the Public Records Act 2005, Privacy Act 1993 and Statistics Act 1975 when in doubt of privacy, confidentiality or security law surrounding data.

Legal and ethical obligations

Legislative and ethical obligations governing the collection of data, confidentiality, privacy and release of outputs are rigorously followed.

Key elements of this protocol

Legislation that applies to statistics producers

- The Statistics Act 1975 sets out obligations on Statistics New Zealand to protect the confidentiality of information provided by people and businesses.
- The Privacy Act 1993 outlines 12 information privacy principles which should be followed by all official collections.
- Access to official statistics is subject to the requirements of the Official Information Act 1982. The general principle of the Act is that information should be made available on request. Since official statistics are released and therefore public information, they are already available. The Act requires that methods and practices are made known to users of statistics, but disclosure does not apply to information about individuals or entities.
- Statistical records are created, maintained and disposed of in accordance with the Public Records Act 2005. The Chief Archivist is required to authorise the disposal of public records.

Other obligations

- Management and access to the data should be in accordance with the *Policy Framework for Government Held Information*:
<http://www.ssc.govt.nz/display/document.asp?docid=4880&NavID=82>
- Principle 6 of the *United Nations Fundamental Principles for Official Statistics* (<http://unstats.un.org/unsd/methods/statorg/FP-English.htm>) summarises the international commitment to key principles:
“Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.”
- Research ethics committees exist in some health and medical areas, and where appropriate they should be consulted.

Key elements of this protocol

Obligations on staff

- Tier 1 statistics producers ensure that their staff, including any contractors, know and understand the confidentiality requirements of each of their statistical resources, and ensure that anyone involved with the processing of the statistical resource is aware of the penalties for wrongful disclosure.
- Where appropriate, official statistics producers will use legal means to ensure the confidentiality of data under their care (refer element 1 above). Confidentiality clauses will be included in contracts – including the terms and conditions of employment – of any individual or organisation involved in producing official statistics.

Departmental confidentiality and security policies

To protect the integrity of official statistics, statistical producers will have internal policies in place concerning the physical security and protection of respondent-supplied information. These policies are accessible to respondents and should contain:

- an outline of the organisation's general security practices and legislative security obligations
- organisational and technical procedures which assure control of confidential data remains with the statistics producer
- lines of responsibility and accountability for the protection of confidentiality in outputs
- data management policy for the archiving of data or disposal of data that is no longer required.

Handling of confidentiality or security breaches

Statistics producers are open about how they handle situations when confidentiality or security is breached. Any breach of confidentiality is handled with fair and open enquiry, and responses recognise the seriousness with which confidentiality protection is maintained. The following procedures should apply:

- the statistics producer will report to their senior-level management immediately when, in the processing or release of official statistics, confidential data has improperly been put in the public domain
- when information about individual(s) or an entity has been disclosed, the statistics producer, where practicable and reasonable, will advise those statistical unit(s) who provided the data
- the statistics producer will seek recovery of the confidential data
- an investigation of the breach is undertaken to document and understand how the breach occurred and recommend ways to improve culture, processes and systems to prevent future confidentiality breaches.

PROTOCOL 4

ELEMENT 2

Awareness of obligations

Everyone involved in the production of official statistics is aware of their obligation to protect confidentiality and of the legal penalties for wrongful disclosure.

Use for statistical purposes

Survey data provided by respondents is only used for statistical purposes. Administrative data, whilst primarily collected for operational purposes, can also be used for statistical purposes.

Key elements of this protocol

- Where data are collected in a wholly statistical survey or census for the production of official statistics, they will be used only for statistical purposes.
- Administrative data collected for operational purposes may be used for statistical purposes. Respondents should be notified at the time of collection that information they provide may be used for statistical purposes.
- Respondents may be contacted subsequent to data collection and checking, if one of the following conditions is satisfied:
 - it was agreed in advance with the respondent
 - it was included in the statement of purpose for which the data was collected
 - the respondents are part of a follow-up enquiry (by or on behalf of the same organisation that was responsible for the collection) for appropriately authorised statistical research.
- Information that is provided by a respondent, which is collected jointly between Statistics New Zealand and another government department, local authority or statutory body, under section 9 of the Statistics Act 1975, may be exchanged with the other party provided that:
 - the respondent is informed in writing that the information is being collected jointly
 - the respondent is informed in writing about how the information will be used
 - any employee of the other organisation involved in the collection or processing of the information makes a Declaration of Secrecy
 - this authorisation is not valid if a respondent acknowledges to the Government Statistician in writing that they object to the sharing of their information.
- Sponsored surveys and integrated datasets also fall under this protocol. They are all subject to the security of information provisions set out in section 37 of the Statistics Act 1975. For more on administrative data, please see element 7 of this protocol.
- Access to microdata is restricted to approved researchers under controlled conditions. (See element 5 of this protocol or search for 'microdata access protocol' on the Statistics NZ website: <http://www.stats.govt.nz>)

All statistical collection activity represents a degree of intrusion into people's lives or into the activities of businesses or other entities. It is important to maintain the confidence of respondents by addressing their privacy concerns.

Key elements of this protocol

- The need for any information is justified in terms of its use.
- Requests for information, including testing of forms, are limited in their intrusiveness.
- Interviewers are trained to be sensitive to cultural practices and to respect individuals' personal needs for privacy.
- Respondents are informed of the purpose for the information request and the main intended uses of the data they are required to provide. Administrative data collections should inform respondents that information they provide may be used for statistical purposes.
- Respondents are informed of the access limitations applied to their information, including the protection provided through the law.
- Respondents are informed of their rights and obligations in providing information.
- All confidentiality undertakings are honoured, without exception.
- The privacy principles applied to statistical information are followed.
- An authoritative point of contact to confirm the authority of survey interviewers is provided.

PROTOCOL 4

ELEMENT 4

Managing privacy concerns

Respondents' privacy concerns are minimised.

Preserving confidentiality

Respondents' confidentiality is always strictly preserved unless they have explicitly agreed to the contrary.

In publishing statistics and providing access to microdata or aggregate data, Tier 1 statistics producers must take all reasonable steps to ensure that particulars relating to an individual business, household or person are neither divulged in, nor able to be deduced from, published statistics or microdata. Producers must understand statistical disclosure control methods and adopt best practice guidelines. It should be acknowledged up front that there is always an element of risk, particularly when allowing access to microdata – this is why reasonable steps should be taken at every turn to ensure the confidentiality of respondent information.

Key elements of this protocol

- Statistical information published is arranged in such a manner as to prevent any particulars being identifiable unless consent has been given for their publication in that manner. Consent to publish data that can be attributed to a respondent must be given in writing.
- Microdata and aggregate data can be released for approved statistical purposes. Protection of both types of data is accomplished two ways:
 - confidentialisation of the data: eg adding random noise or suppressing certain cells
 - conditions on access: eg access to microdata is only given to researchers who apply for, and state the statistical purposes for wanting, the data. If the project is approved, legally binding contracts are mandatory.
- Statistical disclosure control methods may modify the data or the design of the statistics, or a combination of both. Methods are judged sufficient when:
 - confidentiality is maintained, taking account of information likely to be available to third parties, either from other sources or as previously released statistical outputs
 - it would take a disproportionate amount of time, effort and expertise to identify a respondent or to reveal information not already in the public domain. The level of sufficient modification is determined by those applying the statistical disclosure control methods to the data, followed by Chief Executive approval. If any Tier 1 statistics producer is uncertain, Statistics NZ should be consulted.
- Indications of the impact of the statistical disclosure methods on the accuracy of the results are provided with the statistical release.
- The parameters in any algorithm used to suppress identifiable information should not be released if this action could compromise confidentiality protection.
- Information is protected for the life of the data – that is, rules for protecting the release of identifiable data in outputs must be followed for all data regardless of their age.
- Disclosure control procedures are periodically reviewed, to ensure that new technology or the public availability of additional information has not increased the risk of disclosure to a level where new procedures are needed.

Statistics producers need to have safeguards in place to ensure the security of forms during collection, transporting, processing, storage and destruction.

Key elements of this protocol

- Access to forms and electronically-stored identifiable unit records of information supplied by respondents is controlled, and restricted to those engaged in the production of the statistics for which the data has been collected.
- An up-to-date list of staff who are entitled to have access to the data is maintained. A log of access events should also be maintained.
- Forms and data are stored securely, that is, in locked areas. Electronically-stored records are password protected.
- If the respondent has to be contacted during the editing and data validation process, ensure that the correct person is approached (this generally applies only to data collected via postal questionnaire). Know who the authority is. Ideally this will be the person who supplied the data, or if that person has left the organisation, his/her replacement or another person authorised to provide information. A record should be kept of any additional enquiries and the information securely stored in the same way as the original data request.
- In dealing with respondents, processing staff are careful not to divulge information collected in confidence from other respondents.
- Once required data have been extracted, and forms are no longer required for verification, editing or quality studies, or for archival purposes, the forms are disposed of in a secure manner, providing that approval has been granted by the Chief Archivist. Internal policies and procedures for disposal (destruction or transfer) govern the required processes. See protocol 6 on data management, documentation and preservation for further details.
- An anonymised final or definitive version of each Tier 1 survey dataset is deposited with the Data Archive. Tier 1 administrative unit record data can be taken on a case-by-case basis.
- Names and addresses of individuals and businesses, whether from administrative sources or surveys, should not be retained electronically on databases used for statistical analysis.

PROTOCOL 4

ELEMENT 6

Security

Secure practices and processes are used in the production of official statistics.

Administrative data

Unless specific permission in legislation allows otherwise, the same confidentiality standards drawn from legislation that produce data will apply to statistics derived from administrative sources collected for statistical purposes.

Some individual administrative records are available to the general public. These records are usually governed by specific legislation relating to the process by which they are collected or the uses to which the information is put. Examples include births, deaths and marriages, and reporting obligations to the Companies Office. In other cases, the legislation enabling the collection of data for administrative purposes defines obligations to protect the confidentiality and privacy of those to whom the data relates.

Key elements of this protocol

- When administrative records are processed to produce official statistics, the same confidentiality that is given to census and survey respondents will apply, unless there are explicit limitations on confidentiality in the administrative legislation.
- Any agreement for the supply of administrative data to a third party, for statistical publication purposes, should contain information about confidentiality protection arrangements.

Release practices

Summary

Access to official statistics is equal and open.

Tier 1 statistics are: accessible, widely disseminated and publicly released in a prescribed manner. They are secure, impartial, interpretable, correct, and revised as needed to protect the integrity of the Official Statistics System.

Tier 1 statistics producers will ensure equality of access.

Statistics are presented in an understandable manner and are widely disseminated.

Release of Tier 1 statistics is by the Chief Executive of the producing agency, according to a calendar of release dates published at least six months in advance.

Before release, unit record data, administrative data, and aggregate results are secure.

Statistical information is presented clearly and impartially, without advocacy or unsubstantiated judgement, and supported by commentary and analysis to enable a wide understanding.

Statistics intended for the technical, professional and public audiences should be easy to understand and presented in ways that do not mislead. Statistical commentary, tables, maps and graphs intended for general use are compiled with a view to their general interest value.

Errors in published statistics are removed and corrected as soon as practicable in a transparent manner.

Revisions are as accurate, robust and freely available as new statistics, and are accompanied by relevant supporting and explanatory information.

This protocol describes how producers of official statistics will carry out their responsibilities in respect of release practices. Consistent with the Statistics Act 1975, the results of a survey should be made publicly known and be easily accessible. This ensures that equal access to statistics is enjoyed by all users or potential users of the statistics, and methods and practices are readily available. This is best done by having the main results analysed and reported as statistical tables, along with graphs, maps and commentary to facilitate understanding and have them widely known. In analysing and reporting the findings of a collection, it is important that objectivity and professionalism is maintained. Information on how the data was compiled and analysed, and any qualifications and known limitations should accompany the findings. Also, in presenting statistics in tables, maps and graphs, care must be taken to present the data in ways which make it easy for the results to be understood and to avoid misleading or incorrect conclusions.

If statistics are ever accidentally or wrongfully released, a communications plan and a correction policy is in place to immediately attend to the situation. If errors are discovered after public release, a strategy is ready to replace the statistics as soon as practicable and in a transparent manner.

Accessibility

Tier 1 statistics producers will ensure equality of access.

To achieve impartiality in the release of official statistics, the main findings are widely disseminated and easily accessible to all users of the statistics. Exclusive or privileged access to official statistics can provide an advantage to an individual or group. In particular, for key economic statistics this advantage can be used for financial gain. Similarly, denial of access to individuals or groups can mean disadvantage to them and create uninformed input to political processes and public administration.

Key elements of this protocol

- Tier 1 statistical releases are made available to all at the same time.
- Information dissemination practices are responsive to the needs of users.
- Statistics are released in a variety of formats that meet the needs of users.
- Tier 1 statistics producers endeavour to integrate and harmonise their publications and products with users' needs and give them easy access to related statistics through common gateways or interlinked websites.
- Tier 1 statistics producers respond to changing expectations about access to outputs. Formats, media, content and support materials are regularly reviewed and are modified to meet users' current and future needs.
- The cost of accessing Tier 1 statistics is minimal.

Presentation and dissemination

Statistics are presented in an understandable manner and are widely disseminated.

Key elements of this protocol

- Widespread access to key findings is promoted by distribution through major public information service providers, including the media, public libraries and the Internet.
- Catalogues and directories are readily available so that potential users know where and what statistics are available. A list of official statistics is available at www.statisphere.govt.nz
- Tier 1 statistics producers provide facilities (by electronic and/or print media) to ensure easy, user-friendly access to statistics for everyone, including regular, professional users as well as casual users and the interested public.
- Tier 1 statistics producers have a policy covering release, presentation, dissemination and pricing. Its objective is to ensure the widest possible access to information, while continuing to meet the needs of specific user communities.

Release dates for Tier 1 statistics are open and pre-announced so that the timing of the release is not determined by the content of the release or any other external factors. This is at the core of the integrity and independence of the official statistics system.

Key elements of this protocol

- In order that the statistics are of maximum value to users, results are disseminated as soon as practicable after they have been compiled.
- The timing of release is not influenced by the content of the release or set in such a way to create an advantage to any particular individual or group.
- Any alteration to a pre-announced release date is made public as early as possible and accompanied by an explanation for the change.
- For regular, ongoing Tier 1 statistics the method of release is consistent, for example, use of embargo, lock-up briefing, availability of release on the Internet.
- Tier 1 statistics are released at a point in the week and at a time of day that allows balanced comment and discussion within a short time of the release.
- Standard release arrangements take account of the needs of the media.
- Users are consulted on any proposed changes to the standard publication arrangements.
- Significant changes in statistical methods are advised to users in advance of the release of the new series.

Early access

- Early access to a statistic may be allowed in exceptional circumstances, to key officials or Ministers, as judged by chief executives responsible for releasing the information. The entire process is transparent and the fact that an exception has occurred and the reason for it should be documented and published as part of the first release of the statistic into the public domain.

Accidental or wrongful release

- If any Tier 1 statistic has been accidentally or wrongfully released, the Chief Executive of the agency responsible for it must be notified immediately so that appropriate action to limit loss of confidence is taken quickly. This could be an immediate release of the key features.
- Every agency that releases statistics has a policy that details how to rectify the accidental release of statistical information.
- Accidental or wrongful release by those granted early access before the planned first release will result in action to prevent recurrence.

PROTOCOL 5

ELEMENT 3

Release of Tier 1 statistics

Release of Tier 1 statistics is by the Chief Executive of the producing agency according to a calendar of release dates published at least six months in advance.

Pre-release security

Before release, unit record data, administrative data, and aggregate results are secure.

Key elements of this protocol

- Because of the potential for financial, political or other gain, strict security is maintained during the preparation and prior to the first release of key results.
- Access before release time is restricted to agency staff directly involved in the production and publication of the statistic.
- In order to maintain the trust of respondents, information can only be accessible where it does not impinge on confidentiality constraints.

Administrative data

Every producer of Tier 1 statistics from an administrative source works in a different environment from another and has administrative systems best suited to their own business purposes. The production and dissemination of official statistics is a by-product of these needs. Even so, each agency should ensure realistic and robust processes are in place when determining what secure release practice guidelines are most appropriate for official statistics sourced from their administrative systems. All producers of official statistics should have general security measures surrounding first releases, but it is recognised that in some cases certain types of administrative systems present particular challenges. Instead, these producers resolve the issue through efficient management within their own policy guidelines.

Where Tier 1 statistics are derived from administrative sources, selected individuals will have access to the source data in the course of their normal work. While this 'working' data can be analysed and aggregated for internal management information purposes, it should not be released as official statistics until rigorous quality assurance and confidentiality processes have been carried out.

Standard security measures such as log-in passwords and restricted access to certain work areas are appropriate.

Wherever possible, the same security principles apply to first release of aggregate official statistics derived from administrative sources as to those collected specifically for statistical purposes. Where this is not possible, this needs to be clearly described as part of the documentation for each release.

Unbiased reporting

Statistical information is presented clearly and impartially, without advocacy or unsubstantiated judgement, and supported by commentary and analysis to enable wide understanding.

Key elements of this protocol

- Analysis, commentary and presentation are objective and professional, confined to describing the information in its context.
- The first release of any Tier 1 statistic is by the Chief Executive of the producing agency and is separate from statements that include presentation or advocacy of any related policies.
- Where it will help users to understand the data contained in a statistical release, a factual statement of the policy context may be included. This will do no more than state a policy objective and will not contain anything which could be interpreted as political comment. Such contextual policy statements must be used consistently over time and cannot be inserted only in those periods when they might be judged to have political intent.

First release will often be targeted at specific audiences, such as the media. It will be focused on communicating key headline messages in straightforward terms for the wider public. Within the guidelines of departmental policy and the *Official Statistics Principles and Protocols*, Tier 1 statistics producers exercise their professional judgement to decide on the type of presentation – including commentary, analysis and interpretation – best suited to the users of a particular output.

Key elements of this protocol:

- Statistics presentations set out information neutrally, clearly and simply, according to the Official Statistics System principle of integrity.
- Statistics presentations and commentary are adapted to suit the different needs of the various communities and audiences likely to be interested in a particular output.
- As much detail as is reliable and practicable is made available, subject to legal and confidentiality constraints.
- The main results should be reported in a way that eases understanding. This can be achieved through written commentary, maps, graphs and statistical tables.
- The decisions behind the content and type of commentary and analysis provided should be transparent and reasonable. In this context, producers should take into consideration whether a release includes anything new or exceptional, has an impact on government policy, or involves matters of known public interest.
- To encourage comparative analysis and to provide context, presentation of data should include analysis and background information on methodology, quality indicators, trends, links to related information, and cross-referencing to glossaries and background material.
- Regularly recurring statistical releases are delivered in consistent formats. The format is sufficiently flexible to allow explanations of the data as they vary between periods.
- Tables, maps and graphs should follow best practice so that they are easy to read and do not mislead.
- Users are advised and consulted in advance when there are significant changes in statistical methods or changes to content or format of releases.
- In dissemination of data, when an organisation reuses data originally collected by others, the organisation systematically gives credit to the original data source.

PROTOCOL 5

ELEMENT 6

Unambiguous presentation

Statistics are easy to understand and presented in ways that do not mislead. Statistical commentary, tables, maps and graphs are compiled with a view to their general interest value.

Errors in published data

Errors in published statistics should be removed and corrected as soon as practicable and in a transparent manner.

Members of staff or the public may find that information is in error. All errors in published statistics are handled in a standard manner consistent with their significance.

Key elements of this protocol

- Each state sector agency that releases statistics is responsible for managing and resolving all reported errors, whether real or perceived.
- The significance of any error and whether a correction is needed is determined by the subject-matter area producing the original statistic.
- Users are notified of errors as soon as they are known.
- Each agency that releases data has a policy that details how to deal with errors in published statistics.
- Where appropriate, errors that do not significantly alter the meaning of the published statistics may be revised with the next regular release.

Revisions are not considered errors. Statistics are often systematically amended to reflect more complete information. Improvements in methodologies and systems can help to make revised series more accurate and more useful. Users should know when revisions are due and be aware of them as they arise. Users need to be confident that revisions applied across Tier 1 statistics meet known and agreed principles for handling revisions, and that these principles are applied in a consistent way.

Key elements of this protocol

Tier 1 statistics producers publish and maintain a general statement describing their practice on revisions for each set of statistics.

- Each specific revisions policy should reflect the ways in which the data is collected, how the output is used and the resources available for its production.
- A revisions policy should be stable over time and consistent across related outputs.
- The statement of a revisions policy should cover, as appropriate:
 - dissemination – how and when users will be made aware of any revisions and how and where revisions will normally be published
 - timing – when revisions are to be expected and how far back in time the series will be revised
 - historic and comparative data – an indication of how much back data will normally be given and whether parallel tables will be provided.

Scheduled revisions are managed systematically, pre-announced and are reflected in dissemination plans.

- Causes of scheduled revisions include: late responses to surveys; revised data for individual respondents; as a result of seasonal adjustment, benchmarking or rebasing exercises; changes to underlying methodology, data sources or classifications.

Unexpected revisions are released as soon as practicable after they occur and in an open and transparent manner.

- Causes of unexpected revisions include: unforeseen changes in methodology, unexpected acquisition of new data, and changes to administrative or management systems that contribute to Tier 1 statistics.

Other aspects of revisions policy

- Revisions comply with the same principles as other new information.
- The release of revisions to statistics balances the need for users to have the best estimates against the uncertainty created by frequent revisions. Revisions which are frequent and trivial will undermine user confidence.
- Revisions are generally only introduced when a substantial change has occurred.
- The overriding consideration in publishing a revision should be to ensure that a consistent time series is maintained, as breaks in time series significantly reduce their usefulness.
- All revisions should be accompanied by documentation which adequately explains their nature, provides good analysis of the differences between the original and revised series, and explains the effect on any previously published commentary or interpretation.

PROTOCOL 5

ELEMENT 8

Revisions

Revisions are as accurate, robust and freely available as new statistics, and are accompanied by relevant supporting and explanatory information.

Management, documentation and preservation of statistical records

Summary

Tier 1 statistics are treated as an enduring national resource used for the benefit of all society.

Tier 1 statistics producers have a data management policy and have an identified data custodian for each resource. They document and protect statistical resources as well as preserving them for future use.

Tier 1 statistics producers have a data management policy to govern the management of their statistical resources, ensuring that the statistics are accessible for use by present and future generations.

Responsibility for managing the complete life-cycle of each statistical resource is vested in one or more identifiable data custodians.

Processes and methods used to produce official statistics are documented, to give the statistics context, and are readily accessible.

Tier 1 statistics producers protect the integrity and security of their statistical resources, and minimise the risk of loss, deterioration or disclosure.

Records of long-term archival or informational value are retained, subject to security, confidentiality and statutory obligations.

Official statistics are a valuable and irreplaceable asset. The bank of knowledge they contain is fundamental to the Official Statistics System outcome that:

“Governments, businesses, communities and citizens use official statistics on New Zealand’s economy, society, and environment to inform debate, research and decision making.”

If official statistics are to be used in the most effective and efficient way they must be managed in a clear and accountable manner. With proper management and documentation procedures in place, data suppliers will have an audit trail to assure themselves that the data they have provided is handled in a way which accords with their agreed condition of use; without risk to confidentiality, copyright, or intellectual property rights, and in compliance with all statutory and non-statutory obligations. Robust procedures will also reassure stakeholders that the data will be used and re-used in an optimal manner, for the benefit of users and everyone in society, now and in the future.

Official statistics are records within the context of the Public Records Act 2005 and need to be managed accordingly. Public must be created and maintained according to Archives New Zealand’s standards. For further information refer to The Public Records Act 2005 on: www.legislation.govt.nz.

Official statistics constitute valuable and irreplaceable assets and should be managed in a way that encourages their widest possible use and re-use. This can be achieved through effective data management procedures designed to ensure that statistical resources not only meet current needs but can also be used in the future.

Each Tier 1 statistics agency adopts a data management policy to ensure that statistical data and metadata is managed effectively. The policy embraces the whole life-cycle from data acquisition through to long-term preservation or possible destruction.

Key elements of this protocol

- Foster the development, implementation and maintenance of the detailed data policies, standards and procedures set out in the *Official Statistics System Principles and Protocols for Producers of Tier 1 Statistics*.
- Align the organisation's data management arrangements with international best practice, statutory obligations and wider government policies. These include:
 - the *Open Archival Information System Reference Model (ISO 14721)*
 - the Official Information Act 1982
 - the Privacy Act 1993
 - the Public Records Act 2005 (refer Appendix 1)
 - the *Policy Framework for Government Held Information*
 - the *New Zealand Government Data Management Policies*.
- Ensure that all staff receive appropriate guidance and training to enable them to fulfil their data management obligations.
- Incorporate guidance on the retention and preservation of both electronic and paper records.
- Facilitate access to official statistics by ensuring that all official statistics are documented on Statisphere, and that metadata and unit record data for all Tier 1 surveys are deposited in the Data Archive managed by the Official Statistics Research and Data Archive Centre at Statistics New Zealand – see element 5 of this protocol for further details.

PROTOCOL 6

ELEMENT 1

Data retention policy

Tier 1 statistics producers have a data management policy to govern the management of their statistical resources, ensuring that the statistics are accessible for use by present and future generations.

Data custodians

Responsibility for managing the complete life-cycle of each statistical resource is vested in one or more identifiable data custodians.

Key elements of this protocol

Tier 1 statistics producers should nominate a records management custodian to be responsible for the custodianship of all public records, including statistical records. The business custodian would be responsible for such tasks as:

- approving their department's data management and archiving policies
- compliance with the Public Records Act 2005
- managing their department's relationship with Archives New Zealand
- migration of data to new environments – managing technology changes such as changes to hardware, software and document formats.

Tier 1 statistics producers should nominate a data custodian for each statistic, to ensure accountability for preservation and retention of the resource. Nominated custodians would be responsible for tasks such as:

- security control – compliance with corporate arrangements for ensuring that statistical resources are not put at risk or corrupted at any stage in their life-cycle and meet relevant security and confidentiality restrictions
- statutory compliance – compliance with the organisation's statutory and regulatory requirements
- code compliance – compliance with the principles and standards set out in the *Official Statistics System Principles and Protocols for Producers of Tier 1 Statistics*
- documentation – provision of full documentation on the major stages in the life-cycle of each resource, including easily accessible and comprehensive metadata, to foster users' awareness and understanding
- access – managing appropriate access to data in accordance with data protection assurances given to data contributors
- retention and disposal – compliance with corporate retention and preservation policies, to ensure the continuing and long-term functionality and availability of both the resources themselves as well as any contextual and allied material.

Key elements of this protocol

Documentation

Providing documentation fosters greater awareness, usability and understanding of the data and enhances their functionality. Comprehensive documentation will help in:

- safeguarding knowledge and expertise associated with each resource
- fulfilling statutory requirements relating to confidentiality and access
- providing management information about each resource
- facilitating the integration and cross-analysis of different datasets
- providing user-friendly information about each resource
- enabling the long-term preservation, retention and subsequent retrieval of each resource
- providing explanations for any changes over time.

Coverage

Documentation should include details of arrangements in place to cover:

- data collection (including a business justification)
- consultation with respondents and users
- quality and methodology
- security, confidentiality and disclosure
- dissemination
- archiving (including the rationale and instructions from the Chief Archivist for retention).

Consistency

- Documentation conforms to requirements set by the Data Archive and will be compiled along central government guidelines.
- Documentation is validated and quality checked on a regular basis to avoid the degradation of detail over time. Contact details are reviewed regularly to reflect personnel changes.

Review

- Documentation requirements for both operational and archived data are reviewed regularly in light of emerging standards, to ensure that they continue to meet producers' and users' needs.

Metadata

Metadata (data about data) is a specific form of documentation which is needed for the production and usage of statistical data. It provides information on definitional content; on the processes for the collection, processing, storage and dissemination of data; measures of quality; and on information technology and related issues.

PROTOCOL 6

ELEMENT 3

Contextual documentation

Processes and methods used to produce official statistics are documented, to give statistics context, and are readily accessible.

- Types of metadata include:
 - *discovery metadata* (information which enables users to identify and access information relevant to their needs) which is available on Statisphere.
 - *statistical metadata* (information which covers technical details of the survey design that allows users to understand the data and judge quality of fit) which is provided with the statistical release. Refer to element 8 of the protocol on quality management for minimum statistical metadata requirements.
 - *technical metadata* (information about the software used to arrange and process the statistical resource) which is maintained to ensure that the data can continue to be understood, manipulated and accessed over time.
- Metadata should be compiled and presented using standard templates and terminology, and in accordance with common standards and definitions.
- Metadata is closely linked to the data described.
- Metadata for new official statistics is completed and available with the first release of the data.
- Metadata is available to the widest possible audience through appropriate electronic portals and other dissemination channels.

PROTOCOL 6

ELEMENT 4

Protection of statistical resources

Tier 1 statistics producers protect the integrity and security of their statistical resources, and minimise the risk of loss, deterioration or disclosure.

Key elements of this protocol

Confidentiality protection

- The statistics producer's data management policy outlines the arrangements in place for ensuring the integrity and security of its data holdings in order to preserve the confidentiality of data suppliers' information.

Physical security

Statistical resources can be damaged or lost because of human error, because of technical problems which lead, for example, to the corruption of data files, or because of disasters such as fire or flood.

- Data custodians follow their organisation's standard procedures for ensuring the physical security of their resources, along with associated back-up arrangements for minimising the impact of such events. These arrangements should reflect the importance of each resource and the impact of its destruction.
- Preserved data should be periodically restored to test their integrity.

Long-term use of statistical data is only possible if data is preserved. Statistical datasets should be preserved, unless the reasons to destroy them outweigh the reasons for keeping them.

Key elements of this protocol

Decisions on retention should pay due regard to:

- the potential use of the data in supporting future research, taking account of the value to be derived from retaining records of individual responses over and above published aggregates, and the ability to derive new time series
- the anticipated historical value of the information resource – for example, its relevance to contemporary events or its ability to mark turning points in the social and economic life of the nation
- considerations of storage, maintenance, and protection from damage
- considerations of security, confidentiality, statutory obligations and cost constraints, including the additional costs of converting paper documents for electronic storage and archiving.

Under the Public Records Act 2005, the disposal of public records must be authorised by the Chief Archivist.

All formats of statistical records are defined as public records according to the Act, including the original hard copy of a completed questionnaire plus any copy such as a digital image.

Data Archive

The Data Archive at Statistics New Zealand has been set up as a single reference point for unit record data for Tier 1 statistics for government, university and other researchers.

It is a requirement that the following statistical records will be deposited in the Data Archive:

- metadata for all Tier 1 surveys, Tier 1 administrative-data-sourced statistics and integrated statistical datasets
- unit record datasets for all Tier 1 surveys
- metadata and unit record data from other statistics at the discretion of the statistics producer and the Government Statistician.

PROTOCOL 6

ELEMENT 5

Historic preservation

Records of long-term archival or informational value are retained, subject to security, confidentiality and statutory obligations.

United Nations Fundamental Principles of Official Statistics

Adopted by the United Nations Statistical Commission 1994.

Principle 1

Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy, and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information.

Principle 2

To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

Principle 3

To facilitate a correct interpretation of the data, the statistical agencies are to present statistical information according to scientific standards on the sources, methods and procedures of the statistics.

Principle 4

The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

Principle 5

Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

Principle 6

Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

Principle 7

The laws, regulations and measures under which the statistical systems operate are to be made public.

Principle 8

Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

Principle 9

The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems.

Principle 10

Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

Statistics New Zealand release arrangements for sponsored surveys

Access to data prior to embargoed release

Statistics New Zealand's general policy on the official release of statistics collected under the authority of the Statistics Act 1975 applies to sponsored surveys, with the following exceptions:

- For any new area of statistics involving a sponsor, the Government Statistician will grant the sponsoring agency(ies) appropriate access to the work in progress and final survey results for a reasonable period, specifically to assist in the preparation of the first release. This will enable the agency(ies) to make effective and immediate use of the final data following the first release. Such access will be in accordance with the provisions of section 21 of the Statistics Act 1975.
- For all other sponsored surveys, the Government Statistician may grant the sponsoring agency(ies) appropriate access to the work in progress and final survey results for a reasonable period, specifically to assist in the preparation of the first release to enable the agency(ies) to make effective and immediate use of the final data following the first release. Such access will be in accordance with the provisions of section 21 of the Statistics Act 1975.
- Any other release of the data to other departmental employees or their Ministers will follow the normal Statistics NZ lock-up procedures for releasing embargoed data.

Joint reports

The Government Statistician's approval is needed before the sponsoring agency and Statistics NZ make any commitment to publish a joint report.

Statistics NZ and the sponsoring agency will work together on the reports to mutually agree and take responsibility for:

- the mechanisms and timing of release of the report(s)
- a writing style reflecting Statistics NZ's impartiality as a sponsored survey partner
- ensuring the content of the joint report complies with Tier 1 principles, protocols and standards.

While information that the sponsoring agency(ies) obtains from Statistics NZ may be freely reproduced, or quoted (unless supplied under special conditions), Statistics NZ will be acknowledged as the source of the data.

In all cases, the security clauses in the Statistics Act 1975 will be complied with (section 37, Statistics Act 1975).

The Government Statistician will formally approve the final draft of the joint report for release under section 15(1) of the Statistics Act 1975, following the joint production of the report and after a formal sign-off from the sponsoring agency.

For a full copy of the Terms and Conditions for Sponsored Surveys refer to www.statisphere.govt.nz.



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