

Good Practice Guidelines for Indicator Development and Reporting

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Introduction

In New Zealand there is a trend towards an increased use of indicators to monitor development and track progress. This is evident at a national, regional and local level and is reflected in the proliferation of indicator reports in recent years. These range from reports that focus on a particular population group (eg older people or children), region or sector of activity (eg education or health) through to an overarching view of New Zealand's environmental, economic and social progress. Between these extremes are reports that separately monitor social progress, economic development and the state of the environment.

Indicator reports are an indispensable element in the information system of a democratic society. They provide the government, researchers, business and the public with data to inform policy, research and debate. To help ensure the integrity, quality and transparency of indicator reports in New Zealand, Statistics New Zealand has produced a set of good practice guidelines. The guidelines are a web-based product and provide practical advice on the factors that should be addressed in developing indicator reports and the characteristics of good practice. They also include case studies and links to relevant resources where further information can be obtained.

The guidelines are structured into five sections which represent the five main stages in the development and reporting of indicators:

- Establishing the purpose of the indicators
- Designing the conceptual framework
- Selecting and designing the indicators
- Interpreting and reporting the indicators
- Maintaining and reviewing the indicators

This paper summarises the characteristics of good practice associated with each of these stages in indicator development and reporting, and illustrates them with case studies of indicator initiatives in New Zealand and Australia.

Establishing the purpose of the indicators

A critical step in defining a suite of indicators is to identify clearly the target audience and purpose for the indicators. This will help determine the scope of the indicator set and assist in keeping the project focused.

Attention should also be given at an early stage to the processes that will be used in the development of the indicators. Important questions to consider include:

- Who will be responsible for the final selection and publication of the indicators?
- How will key stakeholders be involved?
- Will an expert group be established to provide specialist advice?
- Will public consultation be undertaken?
- How will the indicators be sustained and funded over time?

Case study: Measuring New Zealand's Progress Using a Sustainable Development Approach:2008

The purpose of this report, published by Statistics New Zealand, is to answer the question 'How is New Zealand progressing towards or away from sustainable development'. The target audience is the general public and others with an interest in sustainable development.

An Advisory Group, comprising representatives from central government agencies, local government, business, the academic community and non-government organisations was set up to provide expert advice to the project leader. Public consultation, in the form of workshops was undertaken to obtain feedback on the proposed approach and to provide input to the selection of topics to be included in the development of the indicators. The Government Statistician was responsible for the final selection of the indicators and the content of the report to ensure that an impartial view is presented.

The selected indicators provide information about whether New Zealand is meeting its current needs, how its resources are distributed, how efficiently it is using its current resources, and what impact past and present actions may have on the stock of resources that will be available in the future.

The indicators build on Statistics New Zealand's previous work on sustainable development and on recommendations from an international Working Group for Sustainable Development. They encompass economic, social and environmental areas and the inter-connections between them within an integrated, conceptually robust framework based on a capital approach to the measurement of sustainable development.

Further information can be found on Statistics New Zealand's website:

<http://www.stats.govt.nz/reports/sustainable-development.aspx>

Designing the conceptual framework

It is advisable to have a conceptual framework to guide the development of a set of indicators. A conceptual framework provides a formal way of thinking about a topic area. It is a valuable tool for building a coherent set of indicators. It helps to ensure the selection of indicators is relevant and balanced and it aids understanding of the complicated links between indicators. A conceptual framework also provides a useful device for organising and reporting on indicators in a structured and meaningful way. The absence of a framework can result in the generation of an eclectic mix of indicators, with no clear rationale for their selection.

Case study: Cultural indicators in New Zealand 2006

This report was produced jointly by Statistics New Zealand and the Ministry for Culture and Heritage to establish a basis for monitoring trends in the cultural sector and that sector's contribution to New Zealand's cultural wellbeing.

The report is based on a framework which is structured around five main theme areas, which broadly reflect key goals for the New Zealand cultural sector. The theme areas are:

- Engagement
- Identity
- Diversity
- Social cohesion
- Economic development

Under each of the five theme areas sit a number of desired outcomes, which provide the basis for the selection of the indicators. The indicators relating to each theme area have been designed to provide insight into the extent to which the outcomes are being achieved – that is, they indicate whether there is an improvement or deterioration in the wellbeing of the cultural sector.

For example, for the theme area ‘identity’, two outcomes are identified:

- 1) Identity – New Zealanders have a strong sense of identity based on their distinct heritages and cultures; and
- 2) Strength – the cultures of Maori and Pakeha are strong and living, with both culture being valued by New Zealanders.

Further information can be found on Statistics NZs website at:

<http://search.stats.govt.nz/search?w=cultural%20indicators%20in%20New%20Zealand&af=ctype%3Ainfoaboutstats>

Selecting the indicators

The process of selecting the indicators is generally an iterative one undertaken in consultation with interested stakeholders. Care is needed in selecting indicators which resonate with the target audience and yet which are technically sound.

Selection criteria should be used as a tool to evaluate the proposed indicators during the selection phase to ensure they are relevant, analytically sound and measurable. Experts should be consulted as they will have a good sense of the data issues and the scientific rigour regarding the proposed indicators.

Statistics NZ has developed the following set of criteria for indicator selection:

- **Valid and meaningful** – an indicator should adequately reflect the phenomenon it is intended to measure and should be appropriate to the needs of the user.
- **Sensitive and specific to the underlying phenomenon** – sensitivity relates to how significantly an indicator varies according to changes in the underlying phenomenon.
- **Grounded in research** – awareness of the key influences and factors affecting outcomes.

- **Statistically sound** – indicator measurement needs to be methodologically sound and fit for the purpose to which it is being applied.
- **Intelligible and easily interpreted** – indicators should be sufficiently simple to be interpreted in practice and intuitive in the sense that it is obvious what the indicator is measuring.
- **Relate where appropriate to other indicators** – a single indicator often tends to show part of a phenomenon and is best interpreted alongside other similar indicators.
- **Allow international comparison** – indicators need to reflect New Zealand-specific goals, but where possible should also be consistent with those used in international indicator programmes so that comparisons can be made.
- **Ability to be disaggregated over time** – indicators should be able to be broken down into population sub-groups or areas of particular interest, such as ethnic groups or regional areas.
- **Consistency over time** – the usefulness of the indicators is directly related to the ability to track trends over time, so as far as possible indicators should be consistent.
- **Timeliness** – there should be minimal time lag between the collection and reporting of data to ensure that indicators are reporting current rather than historical information
- **Linked to policy or emerging issues** – indicators should be selected to reflect important issues as closely as possible. Where there is an emerging issue, indicators should be developed to monitor it.
- **Compel interest and excite** - the indicator should resonate with the intended audience.

Interpreting and reporting indicators

The interpretation and reporting of indicators is a critical stage in the development process, as it bridges the gap between measurement and understanding. In deciding how to report the indicators, the target audience should be kept in mind. A mix of graphs and commentary is generally more effective for a public audience than large amounts of commentary. In some instances, producing a summary report and a larger technical report may be the best approach for reaching different audiences.

The presentation of the indicators should be objective and policy-neutral. Contextual information, such as changes in key demographic variables should be provided where appropriate to assist readers to interpret the indicator. In addition to commenting about each indicator, it is often useful to discuss the overall picture based on all the indicators. It is also informative to discuss linkages between the indicators.

All aspects of the indicators should be readily transparent in the reporting of indicators. To ensure that this is the case, detailed meta data describing each indicator and how it was designed should be made available.

It is helpful to develop a communication and dissemination strategy to ensure that the indicators reach target audiences.

Case study: Measures of Australia's Progress

This report, published by the Australian Bureau of Statistics, provides a selection of statistical evidence to enable readers to make their own assessment of whether life in Australia is getting better. The report covers the social, economic and environmental aspects of Australian life.

Measures of Australia's Progress is targeted at the general public. It begins with a description of how the progress indicators are measured and an outline of the framework used for selecting and organising the indicators. This is followed by a chapter on population trends and composition which provides important contextual information. Population has an influence on many dimensions of progress and is used as a denominator in many of the indicators.

The bulk of the report is made up of discussion of each dimension of progress and the associated indicators. Each progress dimension is reported in a consistent format, beginning with a summary of key points, followed by a discussion of the headline indicator, presentation of some differences within Australia, discussion of factors influencing observed changes and ending with links to other dimensions of progress. Statements are objective and no commentary of policy is included. Standards for tabular and graphical presentation are applied uniformly throughout the report. The amount of technical detail and jargon is kept to a minimum. Sources of data are all identified. Definitions of the indicators and important statistical concepts are given, and breaks in data series are clearly documented.

Each edition of *Measures of Australia's Progress* includes one or two essays of topical interest. Examples include essays on multiple disadvantage, subjective indicators and comparisons of progress with other countries.

The report is released by the Australian Bureau of Statistics according to an advertised release date published in advance. A media statement highlighting key findings accompanies the release of the report.

Further information can be found on the Australia Bureau of Statistics website at:

<http://www.googlesyndicatedsearch.com/u/AustralianBureauOfStatistics?q=measures+of+austria's+progress&sa=GO&domains=abs.gov.au&sitesearch=abs.gov.au>

Maintaining and reviewing the indicators

Indicators should be subject to ongoing assessment. They should be open to challenge, discussion and modification to reflect changing objectives, the emergence of new issues and improvement in measurement techniques and data availability.

It is useful to have a formal mechanism or process for reviewing the indicators that will allow for the creation of new indicators and the revision of existing indicators. This should involve open consultation with stakeholders, including technical and subject-matter experts, data providers, the target audience for the indicators, other interested groups and the community. There are a variety of ways that this can be achieved, such as through public meetings, focus groups and written submissions.

It is important to listen to the criticisms and feedback provided through the review process and to react by making adjustments to the indicator report.

The Social Report

This report was first published by the Ministry of Social Development in 2001 as an initial step

towards the establishment of a regular programme of social monitoring in New Zealand. Following its release, a review was undertaken to obtain feedback from a wide range of people and groups on the report and reporting process. The review sought feedback on the domains and outcomes identified in *The Social Report*. It also considered issues relating to data collection for future social reporting, how often the report should be produced and by who, its relationship with other indicator reports, and how policy should target those outcomes identified in the report.

Several modifications were made to *The Social Report* as a result of the review. They include:

- the addition of a chapter on 'People' which provides contextual information on the size and composition of the New Zealand population
- the addition of a new domain on 'Recreation and Leisure'
- the publication of separate regional reports

The Social Report has been published on an annual basis since 2001, with each new addition being preceded by consultation with subject matter experts and data providers. The focus of this consultation is on the indicators and data used in their computation and the proposed topic of special focus for the report. This consultation has resulted in the addition of new indicators and the removal of others not considered robust, and has given rise to a process of on-going improvement in the quality of the indicators used in the report.

Further information can be found on the Ministry of Social Development's website:

<http://www.msd.govt.nz/about-msd-and-our-work/whats-happening/events/2008/social-report.html>

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