

# **DRAFT** (as at August 2009)

## **SUB-NATIONAL INDICATORS: PROJECT TO IDENTIFY THE AVAILABILITY OF LOCAL AND REGIONAL DATA FOR LTCCP<sup>1</sup> INDICATORS**

### **INTRODUCTION**

#### **PURPOSE**

1. This paper documents a project to align localised and national scale monitoring. It identifies the indicators and data currently used by central government and local authorities for environmental, economic, cultural and social monitoring, and provides ideas for further work.

#### **PROJECT AIMS**

2. The project aims to align, and improve the consistency of, environmental, economic, cultural and social data used by local authorities and central government to establish baseline indicators for national monitoring, and for monitoring progress in achieving community wellbeing in local areas. The project:
  - documents the indicators that local authorities are using to measure progress in achieving environmental, economic, cultural and social wellbeing, align these with national level indicators used by central government agencies, and establish a common set of core indicators
  - aims to improve the quality and consistency of data collection and management, analysis and presentation being used for these indicators
  - identifies what further data is needed, and what work is required to fill gaps.
3. The work should enable councils to compare their data/indicators over time with those of other local authorities, their region, and/or nationally, as appropriate.

#### **WHAT ARE INDICATORS?**

4. Indicators help measure progress towards a desired outcome. Indicators are chosen because they measure the outcome directly, or because they are known to be a good predictor of an outcome [*from the Social Report 2008, page 5*]. They are used as planning tools, tools for engaging citizens in discussions on future planning, goals and priorities, and as reporting tools for tracking progress in achieving outcomes and goals, and as an information tool to educate and raise awareness.
5. Indicators are a 'social construct' (that is, depend on consultation, analysis, judgement, professionally acquired understanding and skills, etc) and are, therefore, contestable [*PUCM<sup>2</sup> LGA Report 4, page 9*].

#### **BACKGROUND**

##### **Why is this project necessary?**

6. Sub-national indicators are needed by local authorities for LTCCP/LGA monitoring and reporting, for future planning, for meeting Resource Management Act requirements (State of the Environment reporting, assessing the effectiveness of policies and plans, meeting national environmental standards, e.g. air quality), and the requirements of various other Acts (e.g. Land Transport Act, Biosecurity Act).

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<sup>1</sup> LTCCP: Long Term Council Community Plans

<sup>2</sup> PUCM: Planning under Co-operative Mandates Local Government Act Report 4 – Karen Johnston and Ali Memon (2008) *Choosing Community-based indicators to Monitor and report Progress towards Community Outcomes* University of Waikato, Hamilton

7. Planning and decision-making at the national level depends on the aggregation of consistently collected local information. It also requires an understanding of local and regional patterns and trends, and the inter-relationship of these.
8. An uncoordinated approach could result in the same or similar data/indicators to be analysed, interpreted and presented inconsistently across the country, creating misinformation and limiting benchmarking. A common approach should reduce overlap and encourage beneficial behavioural change.
9. PUCM notes that a more collaborative central-local government approach to identifying indicators and developing consistent data-sets could create cost savings, and improve consistency. A nationally agreed common suite of indicators would make it easier for territorial authorities to (*from PUCM LGA report 4*):
  - attain baselines for monitoring
  - link their community indicators into a broad development strategy
  - access analytical research and planning skills to explain possible reasons for observed trends and possible future courses of action
  - integrate findings into policy/decision-making
  - improve communications with citizen's and ratepayers about the achievement of community outcomes
  - potentially encourage greater citizen engagement.

### **Project scope**

10. Starting with work already undertaken in this area (such as the Environment Waikato Mapping report, Statistics New Zealand's work on sustainable development, Anew NZ, Ministry of Cultural and Heritage's Cultural Indicators, Ministry for the Environment's environmental indicators, Ministry of Economic Development's Economic Indicators, Ministry of Social Development's Social Reports, and other work), identify the indicators being used by central government agencies and those used by local authorities for LTCCP strategic planning and community outcomes monitoring.
11. Investigate the availability of data to populate these indicators, and agree methodologies for data collection.
12. Identify data gaps, and the cost of collecting this data.

### **Criteria for selecting indicators<sup>3</sup>**

13. The indicator should:
  - be the most accurate statistic for measuring both the level and extent of change in the outcome
  - adequately measure what it is intended to measure
  - be selected on the basis of being widely support so not changed
  - be a reflection of key influences and factors affecting outcomes
  - be consistent over time (the usefulness of indicators relates directly to the ability to track trends)
  - be methodologically rigorous.

### **SPONSOR**

14. CLOGS<sup>4</sup> has agreed to support this project by linking the work currently being carried out independently by central government agencies and by local authorities (as noted below).

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<sup>3</sup> from the Ministry of Social Development's *Social Report*

<sup>4</sup> CLOGS: Central Local Government Officials Group on Sustainability. Its role is to explore opportunities for central and local government collaboration on local economic growth while taking account of social, cultural, and environmental factors and the linkages and tensions between them.

## STEERING AND WORKING GROUPS

15. The steering group tentatively includes:
- Melanie Thornton (Greater Wellington)
  - a representative from the Canterbury Working group
  - Alison Reid (Auckland Regional Council)
  - Beat Huser (Environment Waikato/MARCO)
  - A representative from Statistics NZ
  - Justine Daw (MfE)
  - Isabella Cawthorn (MoRST)
  - Ann Pomeroy (CLOGS/DIA)
  - Kate Barker (CLOGS/LGNZ)
  - Kerry Harvey (MC&H)
16. The Canterbury Working Group includes:
- Josie McNee/Andrew Willis (Environment Canterbury)
  - Mary Sparrow (Waimakariri District Council)
  - Kath Jamieson (Christchurch City Council)
  - Gavin Thomas (Ashburton District Council)
  - others as required

## ISSUES TO ADDRESS

17. PUCM suggests there needs to be an integrated top-down and bottom-up approach to indicator development that links national and regional and local across the four dimensions of well-being (*from PUCM LGA report 4, page 82*)
18. Outcomes developed at the level of territorial authorities are often the same as the outcomes developed at the regional level. MARCO<sup>5</sup> notes that each council in the Waikato region uses its own strategies and processes for reporting on progress towards community outcomes. Attaining agreement on the general scope content and format (e.g. how to present indicator data, producing indicator summaries/report cards) may provide cost savings and facilitate uptake of the information by the community<sup>6</sup>.

## CURRENT WORK – who’s doing what

19. The work on sub-national data-sets for LTCCP indicators will involve a subgroup comprised of councils and central government agencies involved in work to progress the Genuine Progress Indicator, a Canterbury working group and the Waikato MARCO group. It will also be informed by work being carried out by central government agencies.

### MARCO

20. Since 2004 the 12 territorial authorities of the Waikato region have cooperated with each other and the Waikato Regional Council (EW) to coordinate a process to identify regional level community outcomes. These outcomes supplement the community outcomes identified by the people of each territorial authority. Since 2005-06 MARCO has been developing indicators to assist monitor progress towards the achievement of the regional level community outcomes. MARCO identified 200 indicators, out of which a core set of 75 was selected which are relevant at both the regional and district/city level.

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<sup>5</sup> MARCO (Monitoring and Reporting Community Outcomes) is a group of Waikato region strategic planners.

<sup>6</sup> MARCO Working Group: Community Outcomes Reporting (CORE) 30 June 2008

21. MARCO collated all available data and produced a Benchmark Report in 2006 (<http://www.choosingfutures.co.nz/Tracking-on-progress/>). Since then annual up-dates (Data Analysis Reports) have been produced, most recently in April 2009 (<http://www.choosingfutures.co.nz/Publications/>).
22. In 2008 MARCO produced a discussion document outlining several options for common outcome reporting in the Waikato<sup>7</sup>. These are that (instead of each territorial authority and the regional council producing its own community outcomes report – the status quo):
- either, the regional council produces a regional overview of the community outcomes and each territorial authority then produces a community outcomes report that incorporates the regional overview; or,
  - the territorial authorities each produce community outcomes reports and these are then incorporated into a regional community outcomes report.
  - A variation on this is that the regional council could produce a regional perspective based on the territorial authorities' community outcomes (that is there would be no separate regional community outcomes and Community Outcomes Report), but the regional council (EW) would work collaboratively with territorial authorities on relevant community outcomes where they can add most value.
  - A third option was that all the territorial authorities and the regional council combine to produce one report for the Waikato.

*Genuine Progress indicators:*

23. The New Zealand Centre for Ecological Economics<sup>8</sup> is developing a 'genuine progress indicator' (GPI). The project amends New Zealand's measurement of economic growth - GDP - adjusting the current estimated growth rate used in New Zealand (i.e. Gross Domestic Product - GDP) to include environmental and social costs such as soil erosion, air pollution, crime and traffic congestion.
24. An improvement in well-being for a nation can be interpreted as genuine progress. Traditionally, Gross Domestic Product (GDP) has been used to measure progress but there is increasing demand for indicators that take into account a broader range of factors than national income. It was never intended GDP be used as a measure of welfare for a nation, but it has assumed this role by default. Simon Kuznets, the inventor of GDP is reported as saying "The welfare of a nation can scarcely be inferred from a measurement of national income as defined (by the GDP) .... Goals for 'more' growth should specify of what, and for what" (Kuznets, 1934). The need for a meaningful measure of national well-being has led many countries to construct indicators such as the Genuine Progress Indicator (GPI) or the Index of Social and Economic Welfare (ISEW). With these measures, well-being is seen to consist of both economic and non-economic factors.
25. A list of all the components included in the New Zealand GPI is below (Annex 1), with a brief description of what each component measures.
26. Work on the Genuine Progress Indicator is led by Greater Wellington Council and includes Christchurch City Council, Environment Canterbury, Wellington City Council, Auckland Regional Council, Environment Waikato, Statistics New Zealand, the Ministries for the Environment and Culture and Heritage, and the Ministries of Economic Development, Social Development and Research, Science and Technology.

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<sup>7</sup> <http://www.communityoutcomes.govt.nz/web/coutcomes.nsf/unid/CFIN-7FG73N?openDocument>

<sup>8</sup> Contact Vicky Forgie [http://www.nzcee.co.nz/staff/staff\\_vicky.html](http://www.nzcee.co.nz/staff/staff_vicky.html)

### *Canterbury Working Group*

27. The Canterbury working group is firstly identifying the indicators that are easy to quantify, that match the main outcomes being used by Canterbury councils, and secondly working on indicators that are more difficult to obtain data to quantify.

### *Statistics New Zealand*

28. Statistics New Zealand has recently published a report on NZ's progress towards sustainable development, including a framework and a set of indicators to measure sustainable development in New Zealand,. This project builds on the 2002 Statistics New Zealand publication *Monitoring Progress Towards a Sustainable New Zealand*. and involvement in the international Working Group on Statistics for Sustainable Development. An advisory group was set up for this project which involves central government agencies and representatives from local government (LGNZ and SOLGM), as well as representatives from NGOs and business organisations. The sub-national indicators work will be aligned with this Statistics New Zealand project.

### *Ministry for the Environment*

29. The Ministry for the Environment (MfE) is working on environmental indicators and national environmental standards (see annex 1 below). It is reviewing reports by regional and unitary councils and also coordinates the National Forum on Environmental Reporting. This initiative includes work to integrate approaches to environmental monitoring and reporting (at the international, national, regional and local levels).

### *Ministry of Research Science and Technology*

30. The Ministry of Research Science and Technology (MoRST) is focusing on the consistent and accurate collection of information.....

### *Ministry of Culture and Heritage*

31. Culture has been defined as being about the shared values, attitudes, beliefs, identities, rituals and practices that are common to a group or a community. It encapsulates ethnicity (being Māori, Samoan, Chinese, a New Zealander, etc) and is expressed in multiple ways including through architecture, events, signage, parks and gardens, the arts (music, ballet, sculpture, artwork, etc)<sup>9</sup>. In the local government context, cultural wellbeing has been defined by the Ministry of Culture and Heritage as:

*“The vitality that communities and individuals enjoy through:*

- *Participation in recreation, creative and cultural activities*
- *The freedom to retain, interpret and express their arts, history, heritage and traditions.”*

Cultural wellbeing is seen to contribute to how people express themselves, identify themselves, enjoy themselves and connect with each other. The Ministry's research shows that culture and cultural activities make an important contribution to our sense of identify as a community and a nation, and that 82% of New Zealanders agree that supporting and encouraging cultural activities is an important role of local councils.

32. Cultural indicators that reflect this range of cultural expression were developed by the Ministry in 2006 and expanded in 2009 and have been designed to indicate whether there is an improvement or deterioration in the wellbeing of the cultural sector (see annex 1 below). They have become the basis for use by at least 19 councils.

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<sup>9</sup> Mary Donn (2008) “Cultural wellbeing and local government” paper to the 2008 SOLGM AGM

*Ministry of Social Development - Social Report*

33. Established in 2001, the *Social Report* provides information on 10 'desired social outcomes' or components of social well-being. In 2005, to support local authorities monitor progress in achieving community outcomes, social report indicators have been provided, where available, at the regional and territorial levels.
34. The *Social Report* covers ten domains including Cultural Identity (here reported on under cultural indicators); Physical Environment (here reported on under environmental indicators); Paid Work, and Economic Standards of Living (here reported on under economic indicators).

*Quality of Life Report*

35. The *Quality of Life Report* provides information that contributes to understanding of the social, economic and environmental conditions prevailing in New Zealand's 12 major urban areas of:
- Rodney
  - North Shore
  - Waitakere
  - Auckland
  - Manukau
  - Hamilton
  - Tauranga
  - Porirua
  - Wellington
  - Hutt
  - Christchurch
  - Dunedin
36. The report is compiled following the release of Population Census data and uses indicators and measure that "are related to outcomes that can maintain and improve quality of life in our cities". The indicators are organised under 11 domains (see annex one below).

**FURTHER WORK**

37. The Department of Internal Affairs is proposing further work to understand how councils have monitored community-led indicators in the three years following the 2006-16 LTCCP, and how they are using this information to inform their own decision-making, and encourage collaborative activity.
38. A project is underway to develop a "library" of indicators (MfE/Anew NZ),
39. It would also be of value to have an understanding of:
- the range and impact of approaches to monitoring being used to date
  - the benefits of monitoring to councils and wider community stakeholders (including links to collaboration)
  - the range of common measures that councils might require
40. Monitoring of indicators helps to provide a benchmark on which to identify progress across a whole community. If DIA's project is given the go-ahead it is likely to:
- report on the range of indicators used, sources, availability and timing
  - report on trends in the use of monitoring reports by councils
  - investigate the make-up of a likely suite of commonly used indicators and potential ways this data can be made available to the sector.

## **Annex 1: INDICATORS**

### **ENVIRONMENTAL**

#### **Environmental data and indicators – national level**

41. Information about the New Zealand environment includes:

- statistics about natural resources
- how much of those natural resources are being used by different industries
- information on expenditure on environmental protection and sustainable development.

42. Environmental indicators are used for tracking trends over time and between places. The trend information is used for policy development and natural resource management.

#### *Data sources*

43. National data used by MfE for its state of the environment (SoE) report is compiled from environmental monitoring information collected primarily by regional councils. MfE also uses data from Crown Research Institutes, central government agencies, territorial authorities, and others.

#### *Content*

44. For environmental monitoring at national level MfE uses a core set of 10 domains, comprised of 22 indicators (66 variables). These domains are:

- Consumption (household consumption expenditure – 7 variables))
- Transport (vehicle km traveled – fuel/vehicle type, vehicle age)
- Energy (supply/demand – 4 variables)
- Waste (solid waste disposal (landfill) – 2 variables)
- Air (air quality pollutants) – 5 variables)
- Atmosphere (greenhouse gasses – 7 variables)
- Land (land cover, land use, soil health, erosion risk)
- Fresh water (river/lake/groundwater quality, recreational water quality, freshwater demand)
- Oceans (marine protected area, fisheries effort, recreational water quality)
- Biodiversity (native land cover, 7 indicator species).

45. These particular indicators were selected according to international best practice, through a process including extensive consultation with reporting partners and information users. They were derived using a modified Pressure-State-Response framework used internationally (by, for example, the OECD) and for regional-scale state of the environment reporting.

#### *Issues*

46. MfE has noted the importance of consistent data sets, so that:

- data collected recently is comparable with that collected in the past
- data collected across the country by different agencies uses the same method through time and at all places
- common methodologies are applied to sampling, analysis and reporting
- record keeping methods are the same, and are of high quality.

47. In addition, users need to be able to access the data easily such as through a centralised environmental data storage system with web-based access via an electronic data platform. For example, Waikato and Southland regional councils display underlying data with their environmental reports.

48. MfE has identified opportunities for working with other agencies such as the Ministry of Research Science and Technology (MoRST) to improve data collection on the 'pressure' domains important for understanding the main drivers of environmental degradation (consumption, transport, energy and waste). New technologies may support the development of real-time environmental sensor networks strategically located to provide useful monitoring information.

*Environmental Indicators in the Social report:*

49. Under the heading Physical Environment, the Ministry of Social Development publishes information in its Social Report on two indicators. They are Air Quality (information from MfE compiled from regional council data) and Drinking Water Quality (data is based on the Ministry of Health's Drinking Water standards and is sourced from the Institute of Environmental Science and Research Ltd).

**Environmental data and indicators – sub-national level**

50. MfE notes that most of the 12 regional councils and four unitary authorities are producing State of the Environment reports (required under the Resource Management Act) on a five-yearly basis. Some councils undertake continuous web-based reporting, and others are reporting three-yearly as part of the LTCCP community outcomes reporting framework. Most reports use a Pressure-State-Response model.

51. More than 90% of regional State of the Environment reports monitor results for air/ atmosphere and freshwater, while over 80% monitor land and oceans.

52. Core reporting topics are:

- regional information
- air quality
- fresh water
- biodiversity
- waste
- land
- natural hazards
- hazardous substances and contaminated sites
- coast
- oceans
- bathing water quality (fresh and marine)
- climate (precipitation and temperature information)
- energy
- transport.

53. While transport is the least commonly reported on subject area this may change with the new emphasis on accessibility planning being introduced by the New Zealand Transport Agency.

54. The *Quality of Life* report measures progress of the 12 cities in the following environmental wellbeing domains:

- Natural environment (local natural environment issues; waste management and recycling; Biodiversity; Energy use; Air quality; Beach and steam/lake water quality; Water consumption)
- Built environment (Look and feel of the city; Land use; Traffic and transport; Public transport).

*Waikato*

55. MARCO has identified the following environmental indicators for the Waikato region

- River water quality for ecological health (includes: temperature, pH, dissolved oxygen, biochemical oxygen demand, total ammonia, total phosphorus, nitrate, chlorophyll, enterococci, arsenic)
- River water quality for recreation
- Lakes water quality for ecological health
- Lakes water quality for contact recreation
- Land use
- Urban air quality (levels of fine particles in the air in selected urban areas)
- Groundwater availability and use
- Surface water availability and use
- Protection of natural heritage and landscapes
- Extent of native vegetation
- Protected native vegetation areas

In addition to the above indicators identified through the community outcomes process, the regional council (Environment Waikato) also publishes a set of indicators for State of the Environment reporting<sup>10</sup>. These include:

- air quality (levels of benzene, particles, nitrogen dioxide, carbon dioxide, lead and ozone in the air, and sources of air pollutants)
- inland water (groundwater: availability, micro-organisms in groundwater, pesticides in ground water, groundwater well construction, nitrate in groundwater; lakes: Lake Taupo's water quality, Peat lake water levels, nutrient enrichment in shallow lakes, condition of aquatic plant communities in lakes; rivers and streams: nitrogen losses from land, river water quality for contact recreation, sources of nutrient in rivers, river biology, river water quality; wetlands: extent of wetlands)
- natural hazards (coastal hazards: coastal development at risk, shoreline protection structures, shoreline change; hazards (general) natural hazard awareness and readiness)
- waste (hazardous substances and contaminated sites: dealing with contaminated sites)
- coasts (coastal water quality: for contact recreation, pollutants in sediments; natural character and diversity: coastal biology, extent of coastal habitats, coastline ownership, protected coastal areas)
- geothermal resources (geysers and sinter springs, visitor numbers to geothermal areas)
- land and soil (biodiversity: extent of native vegetation, forest fragmentation; land: land use, stock density, rural subdivision; soil: fertiliser use on farms, soil quality)
- transport (transportation: transport to work)
- community and economy (communities and their views: people's environmental attitudes, environmental concerns, personal environmental actions, attitudes to environmental regulations, environmental knowledge, environmental actions; community characteristics: educational qualifications, population structure, population growth, unemployment rate; community participation: Landcare groups, pollution incidents; economy and resource use: total energy consumption).

Some indicators are used for both reporting on the community outcomes process and for State of the Environment reporting purposes.

### *Canterbury*

56. Environment Canterbury has identified 11 topics for analysis.

- biodiversity, soil quality and soil erosion (invasive plant species, indigenous bird habitat, soil quality, soil contamination, soil erosion, land use change)
- surface water quantity and quality (surface water quantity, surface water allocation, climate and flow variations, flow trends and extremes, low flows, surface water quality, microbiological water quality, high country lakes, inorganic chemical water quality, organic chemicals, biological monitoring – benthic macroinvertebrates)

<sup>10</sup> (<http://www.ew.govt.nz/Environmental-information/Environmental-indicators/>)

- groundwater quantity and quality (Canterbury groundwater resources, climate, recharge, allocation, levels and pressures, aquifer summaries (10), case studies, Canterbury groundwater quality, drinking-water standards, inorganic chemicals (nitrate, ammonia, pH and conductivity) microbial contamination, organic chemicals (hydrocarbons, pesticides, and case study: arsenic))
- beds of rivers (monitoring river bed levels, case studies of various rivers (3), gravel extraction)
- coastal environment (wave climate, sea level, shoreline movement trends, case studies (3), coastal water quality (microbiological water quality, water quality at recreational sites, sediment contamination, inorganic chemical quality), access to the coast)
- air quality (monitoring sites, monitoring data, particulate matter, carbon monoxide, nitrogen dioxide and sulphur dioxide, lead, ozone, hazardous air pollutants, emissions inventory, results of an airshed study, visibility, issues associated with motor vehicles)
- energy (energy production and supply, renewable energy potential in Canterbury, energy use and effects, environmental effects: land use and atmospheric emissions)
- transport (transport systems, network use, motor vehicle availability, land travel patterns, environmental effects, travel behaviour case study)
- natural hazards (flooding, storm event case study, natural hazard mitigation case study, flood plain management case study, hydrologic droughts, drought impacts, earthquakes)
- hazardous substances and contaminated sites (the state of hazardous substance management, underground storage tanks, contaminated site management, site registration, contaminated site audits and investigations, case studies)
- solid and hazardous waste (landfills, quantity of solid waste, contaminant incidents, hazardous waste management and management strategy, and a regional landfill case study).

## ECONOMIC

### Economic data and indicators – national level

57. Information about New Zealand's economic performance at a national level is published by the Ministry of Economic Development, Treasury and Statistics New Zealand (the latest of which is *Economic Development Indicators 2007*). The purpose of the joint publication is to provide a shared understanding of the New Zealand economy, its drivers and performance, for use in policy making, and in particular economic transformation. High economic growth and a high income economy is expected to increase the resources available to finance better-quality public services, and environmental care and maintenance. Information provided at the national level enables the New Zealand economy to be compared with those of other OECD countries.

#### *Content*

58. The indicators used vary in quality and robustness. They were selected on the basis of their relevance to economic development and include:
- well-being and prosperity
    - quality of life (derived from life expectancy, education {adult literacy, enrolment at primary, secondary and tertiary levels}, and purchasing power parity; environmental sustainability and performance)
    - income and production (income per head: gross national income per capita and gross domestic product per capita; patterns of development by industry sector)

- household wealth and income distribution (home equity, net household housing wealth, total household financial assets; disposable income inequality)
- immediate drivers of income growth
  - labour utilisation (the number of paid hours worked per head of population, per year – NB New Zealand’s high rate of labour utilisation results from a large share of the working population being of working age, high participation rates, low unemployment and a high average number of hours worked per person relative to other OECD countries)
  - labour productivity (the amount of output {goods and services} produced for each unit of paid work) [this excludes the agriculture sector as data is not available]
- underlying determinants of productivity growth – firm and market performance
  - investment
  - saving
  - financial market development
  - innovation and entrepreneurship
  - international linkages (trade and foreign investment, migration)
- underlying determinants of productivity growth – business environment
  - skills and talent (management and leadership skills, % of population with a degree and with tertiary qualifications; basic literacy and numeracy; hours of continuing education or training)
  - Infrastructure (levels of public capital stock per capita; perception about quality of ICT infrastructure; road transport, energy and water)
- New Zealand’s economic relationship with Australia and its states
- Auckland – an internationally competitive city. It includes the main economic performance indicators, statistics about business, industry, primary production, innovation and science, labour market, imports and exports, and government finance.

*Social report*

59. The Ministry of Social Development’s *Social Report* includes two domains that provide economic information. They are:
- Paid work (Unemployment; Employment; median hourly earnings; Workplace industry claims; Satisfaction with work-life balance)
  - Economic standard of Living (Market income per person; Income inequality; population with low incomes; Housing affordability; Household crowding).

*Transport*

60. The [Transport Monitoring Indicator Framework \(TMIF\)](#) provides a national and, where possible regional, framework for the monitoring of the New Zealand transport system. Led by the Ministry of Transport in collaboration with the wider transport sector, the framework is also a tool for informing and evaluating transport-related policies and other work.

Indicator Set	Description
Transport volume	Shows the volumes of people and freight using the transport system, reflecting the intensity of use of both motorised and non-motorised modes. It also shows how the age of the transport fleet is changing and indicates the make up of the road vehicle fleet by fuel type. This contributes to the efficiency and effectiveness of the transport system.
Network reliability	Describes the performance and reliability of the transport network in terms of people and freight movements. It includes road congestion and travel time variability, traffic flows and reliability of the transport network.

Economy and Transport	Shows the relationship between freight demand (domestic and international) and Gross Domestic Product (GDP), and the contribution of the transport and storage industry to GDP in New Zealand.
Access to the transport system	Shows how accessible the transport system is to a range of transport users. It includes indicators relating to the affordability of transport, social connectivity, access to motor vehicles, travel perceptions and accessibility of public transport.
Travel behaviour	Relates to the use of various transport modes – including active modes such as walking and cycling – for journeys to work and school, and the use of travel plans in workplaces. It also relates to the transport modes available to people and how the various modes are perceived by the public.
Transport safety and security	Shows how transport safety is performing in terms of deaths, injuries, accidents and the social cost of accidents, personal security, resilience and the security of the transport system.
Public health effects of transport	Shows how transport contributes to the noise levels and air quality that impact on public health. Monitoring the transport components of environmental noise and ambient air quality indicates whether transport is decreasing its negative effects on public health.
Lifecycle management of vehicles and infrastructure	Shows how resources are used and managed during their life and how they are disposed of at the end of their life.
Environmental impact of transport	Includes climate change related emissions, road water run-off and oil spills.
Transport system resource use	Shows the energy and land-use demands of the transport sector.

### *Business information*

61. The Business Activity Indicator is derived from Goods and Services Tax (GST) data from the Department of Inland Revenue. It is designed to provide indicators of business activity by industry. The regular release of this series was suspended in early 2002, however the data is available on request, free of charge from Statistics NZ. The latest release (2001) contains tables on:

- total sales and purchases (based on GST returns)
- monthly GST sales (by industry) - actual, seasonally adjusted and trend
- monthly GST purchases (by industry) - actual, seasonally adjusted and trend
- monthly net GST sales (by industry) - actual, seasonally adjusted and trend
- seasonally adjusted quarterly GST sales (by industry)
- seasonally adjusted quarterly GST purchases (by industry).

### **Economic data and indicators – sub-national level**

62. Economic information sought by councils for planning purposes includes indicators for innovation, business growth through exports and knowing which tourism/visitor indicators to use.

63. Some economic data is available at the sub-national level. The following indicators are taken from the *Linked Indicators Project*, a project led by Statistics New Zealand in 2006. The project developed an indicator approach and framework. It aimed to identify a set of high level core indicators that would be linked at the national and sub-national levels and would cover the social, economic, environmental and cultural dimensions of well-being. The indicators were selected from the current range of available indicators in reports regularly published by central government agencies and were developed over a period of 18 months in close consultation with local government representatives. The indicator set was designed to assist local government with their reporting requirements under their Long Term Community Council Plans (LTCCPs)

and the aim was to allow comparisons to be made between regions as well as nationally and internationally.

64. There are several areas of well-being where suitable measures of performance are either not yet available, insufficient in terms of reliability, timeliness or frequency, or not available regionally. Indicators are included here only where data is available at a sub-national level.

### Economic Growth

Indicator	Explanation	Representative measure	Availability of measure
Tourism	The number of short-term visitor arrivals in New Zealand and the number of bed nights purchased by tourists (both domestic and foreign) indicate the level of growth in a significant component of domestic economic activity.	Number of guest nights purchased.	Available monthly by regional tourism organisation and territorial authority from <a href="#">Statistics New Zealand</a> .
Building	Building and construction activity is a significant early indicator of overall economic activity. The level of residential building reflects population growth, interest rates, house price inflation and household income growth. Non-residential building relates to government spending and business investment.	Building consents.	Available monthly <a href="#">at all levels</a> from Statistics New Zealand

### International Connection:

Indicator	Explanation	Representative measure	Availability of measure
Migration flows	These indicators measure movements of usually resident population between given areas. These indicators show the change in the potential source of environmental pressure, resource need and pollutant source. Without human influence, there would only be natural processes occurring within the environment. People create the social and economic processes that impact on the environment.	Skilled migration.	Available monthly <a href="#">at all levels</a> through contact with Statistics New Zealand.

### Standard of Living:

Indicator	Explanation	Representative measure	Availability of measure
Income	Income is a key indicator of individual, family and community well-being. Income levels indicate the ability of people to purchase essential and non-essential goods and services including food, housing, health, education, leisure and transport. It is the single most important changeable factor related to health and quality of life in general.	Median household income.	Available five-yearly <a href="#">at all levels</a> through contact with Statistics New Zealand.

Social deprivation	The economic and social circumstances of our cities' residents impact significantly on their ability to provide for their everyday needs and to participate fully as members of their communities. Deprivation scores generally reflect the ability of households in New Zealand to achieve positive outcomes in areas such as health, income, education and employment.	Social deprivation index.	Available five-yearly at all levels through contact with <a href="#">Ministry of Health</a> .
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### Work:

Indicator	Explanation	Representative measure	Availability of measure
Unemployment	This is a key indicator of labour market outcomes and lack of access to employment. The unemployment rate is an important reflection of overall economic conditions and of the ease with which people are able to move into employment.	Unemployment rate.	Available quarterly at regional level, and five-yearly at territorial authority level, through contact with <a href="#">Statistics New Zealand</a> <sup>(1)</sup> .
Employment	The employment rate is the best available indicator of the prevalence of paid employment. It captures trends in both unemployment and labour force participation (the proportion of the working-age population that is either employed or unemployed).	Employment rate.	Available quarterly at regional level, and five-yearly at territorial authority level, through contact with <a href="#">Statistics New Zealand</a> .

(1) Sample size great enough to produce regional indicators, but insufficient to produce indicators at territorial authority level.

### Business information

65. Statistics New Zealand's Business Demography Statistics provide an annual snapshot (as at February) of the structure and characteristics of New Zealand businesses at a regional level. Data is provided on the basis of the Australian and New Zealand Standard Industrial Classification. The series covers economically significant individual, private sector and public sector enterprises that are engaged in the production of goods and services in New Zealand. The data set covers structural (counts of businesses by industry, size, region, etc) and the dynamic (births, deaths, survival rates, etc) business demography statistics. The data is released on a provisional basis and includes a revised time series back to 2000.

### Quality of Life report

66. The *Quality of Life* report measures progress of the 12 cities in the following economic wellbeing domains:

- Economic standard of living (Income; Work/Life balance; Cost of living; Social deprivation; Net worth)
- Economic development (Economic growth; Employment; Research and development; Local business; Retail sales; Non-residential building consents; Tourism; Skilled migrants)

## Waikato

67. MARCO has identified the following economic indicators for the Waikato region:

- Genuine Progress Indicator (currently Ecological Footprint is used as a proxy)
- Regional Gross Domestic Product (GDP)
- Unemployment rate
- Real median weekly income
- Number of businesses and employees by industry
- Building consents
- Drinking water quality
- Residents' confidence in councils' decision-making
- Residents' satisfaction with councils' approach to planning and providing services
- Regional GDP contributed by primary industries
- Visitor nights in commercial accommodation
- International visitors
- Income from tourism (international and domestic)
- Employment in the tourism industry
- Total research funding
- Enrolments at tertiary education institutes.

## Other local govt

68. ....

## CULTURAL

### Cultural data and indicators – national level

69. In 2006, Statistics New Zealand published a report on the key indicators for the cultural sector as a joint initiative between Statistics New Zealand and the Ministry of Culture and Heritage. Statistics collected relate to:

- employment trends (employment in cultural activities)
- cultural experiences
- cultural spending by individuals and households
- government spending on culture.

70. In June 2009, the Ministry of Culture and Heritage produced its own compilation *Cultural Indicators for New Zealand*. Indicators were grouped within a framework of five theme areas broadly reflecting the key goals of the New Zealand cultural sector and those involved in it. The theme areas included around 20 indicators:

- Engagement (cultural employment; employment in creative occupations; median income from creative occupation; frequency of experience of cultural activities; barriers to cultural experiences; household expenditure on cultural items<sup>11</sup>; heritage protection; access to arts, culture and heritage activities and events)
- Cultural identify (speakers of te reo Māori; Māori TV ratings; local content on television; the importance of culture to national identity; New Zealand events)
- Diversity (cultural grants to minority ethnic groups; attendance at and participation in ethnic cultural activities; minority cultural activities)
- Social cohesion (no indicators were populated for this area)
- Economic development (income of the cultural industries; value-added contributed by the creative industries; the creative industries' proportion of total industry value-added).

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<sup>11</sup> Cultural items include: broadcasting, literature, community and government activities (includes cultural education and training and community cultural activities), film and video, visual arts, performing arts, heritage, library services, and Taonga Tuku Iho.

71. Information on the frequency of experience of cultural activities and barriers to experiences were taken from the 2002 Cultural Experiences Survey. This survey was undertaken as a supplement to the Household Labour Force Survey, and involves information on the most popular cultural activities such as purchases of books, music, handcrafts, going to movies, visits to public libraries, attendance at theatre/opera/ballet, museums, participation in the performing arts, etc.

*Cultural Indicators in the Social report:*

72. Three cultural indicators are identified in the Social Report. They are:
- local content programming on New Zealand television (provides one way of measuring the strength of New Zealanders’ sense of national identity)
  - people identifying as Māori who can speak in Māori (measures the current health of the Māori language: language is a central component of culture and a necessary skill for full participation in Māori society)
  - the retention of their first language (other than English and Māori) by identified ethnic groups (this is an indicator of the degree to which people are able to retain their culture and traditions and to pass them on to subsequent generations).

**Cultural data and indicators – sub-national level**

73. At a sub-national level information available from the *Linked Indicators Project* currently includes the following under the heading of ‘Expression of Identity’:

Indicator	Explanation	Representative measure	Availability of measure
Employment in cultural industry	Arts and cultural activities are an integral part of our lives and help to define who we are as New Zealanders. People participate in the arts for a wide variety of reasons: for enjoyment and entertainment, for personal growth and development, as a means of expression, to learn new skills and meet new people, to pass on cultural traditions, and to earn an income.	Number of full-time equivalents in cultural employment as a percentage of total employment.	Available five-yearly at all levels through contact with <a href="#">Statistics New Zealand</a> .

74. MARCO has identified the following cultural indicators for the Waikato region:
- Residents’ rating of their sense of pride in the way their city/town looks and feels
  - Number of Māori speakers (in Māori and total population)
  - Proportion of population that speak the ‘first language’ of their ethnic group
  - Number of buildings and places listed on Historic Places Trust register
  - Number and proportion of heritage buildings demolished or removed from heritage records
  - Design of new developments
  - Residents’ satisfaction with cultural facilities provided
  - Participation in cultural and arts activities
  - Proportion of council’s spending on cultural activities and events
  - People employed in the cultural sector
75. These indicators provide an ethnic picture of census and other statistics, but do not reflect Maori Indicators using a matauranga (traditional knowledge) framework. The regional council (EW) currently develops Maori indicators in a separate process to MARCO.

## SOCIAL

### Social data and indicators – national level

76. In addition to Paid Work, Economic Standard of Living, Physical Environment and Cultural Identity there are eight further domains listed in the Social Report, as follows:
- Health (health expectancy; Life expectancy; Suicide; Cigarette smoking; Obesity; Potentially hazardous drinking)
  - Knowledge and Skills (Participation in early childhood education; School leavers with higher qualifications; Participation in tertiary education; Educational attainment of the adult population)
  - Civil and Political Rights (Voter turnout; Representation of women in government; Perceived discrimination; perceived corruption)
  - Leisure and Recreation (Satisfaction with leisure time; Participation in physical activity; Participation in cultural and arts activities)
  - Safety (Assault mortality, Criminal victimisation, Fear of Crime; Road casualties)
  - Social Connectedness (Telephone and internet access in the home; Regular contact with family/friends; Trust in others, Loneliness,; Contact between young people and their parents).

### Social data and indicators – sub-national level

77. The *Quality of Life* report measures progress of the 12 cities in the following social and cultural domains:
- People (Population growth; Ethnicity; Age; Families and Households; Disability; Maori wellbeing)
  - Knowledge and skills (Participation in early childhood education; School participation; Qualification levels; Skill and job match; Career training)
  - Health (Life expectancy; Low birth weight babies; Infant mortality; teenage parents; Communicable diseases; Access to GPs; Mental health and emotional wellbeing; Self-reported health status; Modifiable risk factors; Recreation and leisure)
  - Safety (perceptions of safety; Child safety; Injuries; Road safety; Workplace safety; Crime levels)
  - Housing (Housing tenure; Housing costs and affordability; household crowding; Urban housing intensification; Government housing provision; Housing accessibility)
  - Social connectedness (Overall quality of life; Diversity and identity; Community strength and spirit; Access to telecommunications; Arts and culture))
  - Civil and political rights (Te Tiriti o Waitangi; Community involvement in council decision making; Voter turnout; Representation on local decision making bodies).

## GENUINE PROGRESS INDICATOR

78. Domains include:

- Air Quality Loss of air quality - calculated by weighing the cost of loss of life years and reduced activity days for 2004 by an air pollution index.
- Climate Change Covers all greenhouse gas emissions (GGE) from NZ, calculated by multiplying annual GGE by an estimate of the marginal social cost of emitting an additional tonne of CO<sub>2</sub> into the atmosphere.
- Wetlands Estimating number of hectares of wetlands drained and the ecosystem
- Terrestrial Loss and damage to terrestrial ecosystems, which is mainly caused by invasive pests
- Water Quality Loss of water quality calculated by cost of riparian planting lowland river margins and planned restorative work on eutrophic lakes

- Solid Waste & Contaminated Sites Based on estimated costs of remediation of contaminated sites in NZ and tonnes of waste going to landfills
- Soil Tonnes of annual soil loss (mainly from erosion), valued at 1998 costing.
- Noise Pollution Increase in number vehicle kilometres travelled and associated noise used as proxy for loss of amenity from noise exposure.
- Non-Renewable Loss of non-renewable resources - calculated using El Safary method.
- Ozone Depletion Loss of life years from death from melanoma cancer (due to higher exposure New Zealanders have to impact of damage in ozone layer).
- Public Capital Services rendered by government-owned capital stocks, with allowances for non-defensive and non-market services. Estimated as depreciation of capital stocks and opportunity cost of such investment.
- Overwork Loss of leisure time - calculated as hours overworked per week multiplied by total employment and average wage rate.
- Unemployment Indirectly values involuntary leisure time that unemployment brings. Total unemployed hours per week, x cost per hour (min wage rate \ 40 hours). Allowances made for full and part-time employment.
- Underemployment Indirectly values involuntary leisure time that underemployment brings. Total part-time employees seeking full time jobs, x average hours wanted to work per work, x average hourly rate.
- Household & Community Work Non-leisure time spent on household and community work; time-series estimates converted to dollars using median wage rate.
- Personal Consumption Personal consumption (household spending on consumer goods and services, and non-capital items by private non-profit organisations serving households), adjusted for income inequality.
- Public Consumption Non-defensive public expenditure - using a time series of input-output tables to establish public consumption by category.
- Commuting Incorporates the direct (e.g. vehicle purchase, bus/train fares) and time costs of commuting to work.
- Health Cost of private defensive expenditure on health, from Statistics New Zealand time series data.
- Crime Private-sector property loss, property damage, and preventive expenditure including associated administration costs borne by insurance companies.