Domain Plan for the Environment 2009: *Stocktake Document*

Contents

[Climate Change 7](#_Toc250702704)

[New Zealand Paleontological Database *(A Nationally Significant Collection and Database)* 7](#_Toc250702705)

[New Zealand Fossil Record File *(A Nationally Significant Collection and Database)* 8](#_Toc250702706)

[New Zealand Geomagnetic Database *(A Nationally Significant Database)* 9](#_Toc250702707)

[New Zealand Energy Greenhouse Gas Emissions 10](#_Toc250702708)

[New Zealand Energy Greenhouse Gas Emissions survey 11](#_Toc250702709)

[New Zealand’s National Communications under the United Nations Framework Convention on Climate Change 12](#_Toc250702710)

[New Zealand’s Initial Report under the Kyoto Protocol 13](#_Toc250702711)

[Net Position Report: Projected balance of emission units during the first commitment period of the Kyoto Protocol 14](#_Toc250702712)

[New Zealand’s Greenhouse Gas Inventory 1990-2006 15](#_Toc250702713)

[National land use and land-use change mapping 16](#_Toc250702714)

[Sea Levels 17](#_Toc250702715)

[National Climate Database *(a Nationally Significant Database)* 18](#_Toc250702716)

[Environmental information relevant to monitoring climate change and it’s impacts 19](#_Toc250702717)

[Greenhouse Gas Concentrations Database 20](#_Toc250702718)

[Surface Radiation Measurements 22](#_Toc250702719)

[Permanent Sample Plot Database 23](#_Toc250702720)

[Atmosphere 24](#_Toc250702721)

[Airshed Reporting Framework 24](#_Toc250702722)

[Global Environmental Monitoring System (GEMS) - Air 25](#_Toc250702723)

[The Health of People and Communities – The Effect of Environmental Factors on the Health of New Zealanders 26](#_Toc250702724)

[Total Column Ozone Measurements 27](#_Toc250702725)

[Vertical Ozone Profile Measurements 29](#_Toc250702726)

[WMO/UNEP Scientific Assessments of Ozone Depletion and UNEP Effects Panel Assessments 31](#_Toc250702727)

[Solar UV-B Radiation Database *(A Nationally Significant Database)* 32](#_Toc250702728)

[Fresh Water 33](#_Toc250702729)

[WONI (Waters of National Importance) 33](#_Toc250702730)

[FWENZ (Fresh Water Environments of New Zealand) 34](#_Toc250702731)

[Groundwater and Geothermal (GGW) Database *(A Nationally Significant Database)* 35](#_Toc250702732)

[Didymo Public Awareness and Behaviours Survey 36](#_Toc250702733)

[River Environment Classification 37](#_Toc250702734)

[Snapshot of Lake Water Quality in NZ 38](#_Toc250702735)

[Snapshot of Water Allocation in New Zealand 39](#_Toc250702736)

[State and Trends in the National River Quality Network 40](#_Toc250702737)

[Snapshot of Groundwater Quality in NZ 41](#_Toc250702738)

[Annual Review of Drinking-Water Quality in New Zealand 42](#_Toc250702739)

[Water Resources Archive *(A Nationally Significant Collection and Database)* 43](#_Toc250702740)

[Freshwater Organisms 44](#_Toc250702741)

[River Water Quality 45](#_Toc250702742)

[Water Physical Stock Account 46](#_Toc250702743)

[Marine Environment 47](#_Toc250702744)

[Nearshore Marine Classification and Inventory 47](#_Toc250702745)

[Register of Dumping Permits Issued in New Zealand by MNZ 48](#_Toc250702746)

[New Zealand National Report for Marine Disposal 49](#_Toc250702747)

[Marine Pollution Response Services Database 50](#_Toc250702748)

[“Mainstay” Organizational Database for Maritime New Zealand 51](#_Toc250702749)

[Coastal Resources Database and GIS: A report to the NZ Maritime Safety Authority 52](#_Toc250702750)

[Seasquirt Survey 53](#_Toc250702751)

[Marine Environment Classification 54](#_Toc250702752)

[NIWA Invertebrate Collection and Database *(A Nationally Significant Collection and Database)* 55](#_Toc250702753)

[Recreational Water Quality 56](#_Toc250702754)

[Statistical/Sustainability Information on Fish Stocks 57](#_Toc250702755)

[National Aquatic Biodiversity Information System (NABIS) 58](#_Toc250702756)

[Ministry of Fisheries Marlin Metadata Database 59](#_Toc250702757)

[Fish Monetary Stock Account 60](#_Toc250702758)

[New Zealand’s Marine Economy 61](#_Toc250702759)

[Cawthron Microalgae Collection *(A Nationally Significant Collection and Database)* 62](#_Toc250702760)

[Land 63](#_Toc250702761)

[Digital Geology Database (QMap) 63](#_Toc250702762)

[Geophysical Properties of New Zealand Database 64](#_Toc250702763)

[New Zealand Volcano Database *(A Nationally Significant Database)* 65](#_Toc250702764)

[National Petrology Reference Collection and PETLAB Database *(A Nationally Significant Collection and Database)* 66](#_Toc250702765)

[National Earthquake Information Database *(A Nationally Significant Database)* 67](#_Toc250702766)

[Regional Geological Map Archive and Database *(A Nationally Significant Database)* 68](#_Toc250702767)

[Farm Monitoring Programme 69](#_Toc250702768)

[Sawmill, Panel and Pulp and Paper Surveys 70](#_Toc250702769)

[National Exotic Forest Description (NEFD) 72](#_Toc250702770)

[Land Cover Database 73](#_Toc250702771)

[Agriculture Production Surveys/Censuses 75](#_Toc250702772)

[Forestry Monetary Stock Account 76](#_Toc250702773)

[Forestry Physical Stock Account 77](#_Toc250702774)

[Forestry Monetary Flow Account 78](#_Toc250702775)

[Forestry Physical Flow Account 79](#_Toc250702776)

[Soil and Land Management Database 81](#_Toc250702777)

[Nationally Significant Soil Database 82](#_Toc250702778)

[New Zealand Land Resource Inventory (NZLRI) *(A Nationally Significant Database)* 83](#_Toc250702779)

[Forest Service Mapping Series 6 (FSMS6), and Indigenous Forest Class 85](#_Toc250702780)

[Predicted Potential Natural Vegetation of New Zealand 86](#_Toc250702781)

[Vegetation Cover Map of NZ 87](#_Toc250702782)

[EcoSat 88](#_Toc250702783)

[National Soils Database (NSD) *(A Nationally Significant Database)* 89](#_Toc250702784)

[Protected Areas Network - New Zealand (PAN-NZ) 90](#_Toc250702785)

[Soil Fundamental Data Layers (FDLs) 91](#_Toc250702786)

[Underlying Data Layers - Land Environments of New Zealand (LENZ) 92](#_Toc250702787)

[Materials and Waste 93](#_Toc250702788)

[Survey of Territorial Authorities and Regional Councils on their waste activities 93](#_Toc250702789)

[National Landfill Census 94](#_Toc250702790)

[SWAP Baseline programme 95](#_Toc250702791)

[Intractable Agricultural Chemicals in New Zealand 96](#_Toc250702792)

[Electrical and Electronic Equipment Disposal Survey 97](#_Toc250702793)

[The New Zealand Wastewater Information Database 98](#_Toc250702794)

[WasteTRACK 99](#_Toc250702795)

[Non-Municipal and Organic Waste Operators Census 100](#_Toc250702796)

[Energy 101](#_Toc250702797)

[Vehicle Fleet Statistics 101](#_Toc250702798)

[New Zealand Ongoing Household Travel Survey 102](#_Toc250702799)

[Energy and the Economy 103](#_Toc250702800)

[Centralised Dataset (Transmission) 104](#_Toc250702801)

[Energy Audit Database 105](#_Toc250702802)

[Energy Efficiency and Renewable Energy Monitoring Process 106](#_Toc250702803)

[Energy End Use Database (EEUDB) 107](#_Toc250702804)

[IEA Energy Supply and Demand Allocation Trends Template 108](#_Toc250702805)

[Regional Renewable Energy Resource Assessment (RRERA) 109](#_Toc250702806)

[Sector Studies 110](#_Toc250702807)

[Energy Statistics 111](#_Toc250702808)

[Energy Greenhouse Gas Emissions Statistics 112](#_Toc250702809)

[Manufacturing Energy Use Survey 113](#_Toc250702810)

[Mineral Resources 114](#_Toc250702811)

[Mineral Resources of New Zealand 114](#_Toc250702812)

[National Coal Geology Database 115](#_Toc250702813)

[Annual Mining Production Statistics 116](#_Toc250702814)

[Annual Prospecting and Exploration Expenditure Statistics 117](#_Toc250702815)

[Mineral Stock Account 118](#_Toc250702816)

[Ecosystems and Biodiversity 119](#_Toc250702817)

[BioWeb Assets Project 119](#_Toc250702818)

[PestLink 120](#_Toc250702819)

[Biodiversity Data Inventory 121](#_Toc250702820)

[New Zealand Fossil Spores and Pollen Database 122](#_Toc250702821)

[New Zealand Freshwater Fish Database *(A Nationally Significant Database)* 123](#_Toc250702822)

[Aquatic Plants Database 124](#_Toc250702823)

[Crop Germplasm Resources Unit *(A Nationally Significant Collection and Database)* 125](#_Toc250702824)

[National Collections of Fruit Crop Germplasm *(A Nationally Significant Collection and Database)* 126](#_Toc250702825)

[PossumBase – the EST Database for the Brushtail Possum *(A Nationally Significant Database)* 127](#_Toc250702826)

[Margot Forde Germplasm Centre *(A Nationally Significant Collection)* 128](#_Toc250702827)

[Forest Health Database 129](#_Toc250702828)

[National Forestry Herbarium *(A Nationally Significant Collection and Database)* 130](#_Toc250702829)

[National Vegetation Survey Databank (NVS) *(A Nationally Significant Database)* 131](#_Toc250702830)

[Plant Herbarium - Allan Herbarium Collection Database *(A Nationally Significant Database)* 133](#_Toc250702831)

[New Zealand Fungi Herbarium (PDD) *(A Nationally Significant Database)* 134](#_Toc250702832)

[New Zealand Arthropod Collection (NZAC) *(A Nationally Significant Database)* 135](#_Toc250702833)

[National Nematode Collection of New Zealand (NNCNZ) *(A Nationally Significant Database)* 136](#_Toc250702834)

[International Collection of Microorganisms from Plants (ICMP) *(A Nationally Significant Collection and Database)* 137](#_Toc250702835)

[New Zealand Plant Names Database 138](#_Toc250702836)

[Nga Tipu Whakaoranga - Maori Plant Use Database *(A Nationally Significant Database)* 139](#_Toc250702837)

[Environmental Protection Effort 140](#_Toc250702838)

[Biodiversity and Freshwater: A qualitative and quantitative study 140](#_Toc250702839)

[Incidents database 141](#_Toc250702840)

[Chemical Classification Information Database (CCID) 142](#_Toc250702841)

[Part VI Approvals Registers 143](#_Toc250702842)

[Test Certificate Database 144](#_Toc250702843)

[Border Statistics on Biosecurity Risk Goods 145](#_Toc250702844)

[Interception Database - Intercepted organisms and associated pathways or commodities 146](#_Toc250702845)

[Analysis and Profiling Group: Pathway Analysis Annual Report 147](#_Toc250702846)

[New Zealand Mortality Collection 148](#_Toc250702847)

[Annual Survey of Notifiable and Other Diseases in New Zealand 149](#_Toc250702848)

[National Minimum Dataset (Hospital Events) (NMDS) 150](#_Toc250702849)

[Drinking-water Quality Information Management System 151](#_Toc250702850)

[New Zealand Health Survey (Exposure to second-hand smoke) 152](#_Toc250702851)

[Environmental Protection Expenditure Account 153](#_Toc250702852)

[Biological Control Agents introduced to New Zealand (BCANZ) 154](#_Toc250702853)

[Appendix Items 155](#_Toc250702854)

[Environment New Zealand 2007 155](#_Toc250702855)

[Quality of Life: In Twelve of New Zealand’s Cities 156](#_Toc250702856)

[International Visitors Survey (IVS) 157](#_Toc250702857)

[Domestic Travel Survey (DTS) 158](#_Toc250702858)

[Regional Visitor Monitor (RVM) 159](#_Toc250702859)

[Tyre Track programme 160](#_Toc250702860)

[Household Consumption Expenditure (HCE) 161](#_Toc250702861)

[Household Economic Survey (HES) 162](#_Toc250702862)

[Statement of Opportunities 163](#_Toc250702863)

[Building Energy End-Use Project 164](#_Toc250702864)

[Vehicle Fleet Emissions Model 165](#_Toc250702865)

[Petroleum Report Library 166](#_Toc250702866)

# Introduction

The purpose of the stocktake is to provide an overview of the environmental statistics and data that are currently available. This information will be used to undertake an analysis of the gaps, overlaps and deficiencies in the current data so that initiatives to address the issues can be prioritised.

The stocktake should include all national level environmental Official Statistics, and the source data, relevant to the following topics:

1. Climate Change
2. Atmosphere (ozone and air quality)
3. Freshwater
4. Marine Environment
5. Land (cover and use)
6. Materials and Waste
7. Energy
8. Mineral Resources
9. Ecosystems and Biodiversity
10. Environmental Protection Effort

To maintain the manageability of the domain plan the scope of the stocktake will be limited to Official Statistics which have been produced within New Zealand’s Official Statistical System, and the input used in compiling those statistics. Official Statistics are statistics produced by government departments and Crown Research Institutes.

The scope of the stocktake will be limited to statistics that can be used to build a national picture. For example, a database of water quality records from across New Zealand would be included, but a database of water quality records for just the Central Otago region would not.

Research reports, previously compiled stocktakes, lists of databases or metadata in any storage formats, planned or incomplete work and models are out of scope for the stocktake. We are also primarily interested in data that is being actively maintained, however if any valuable dataset is not currently being maintained due to resource constraints a template should be completed for that dataset.

# Climate Change

## New Zealand Paleontological Database (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | 1. Climate change  Also;  4. Marine environment,  5. Land,  7. Ecosystems and biodiversity  8. Freshwater |
| Information Type | Collections and integrated database |
| Data Custodian | GNS |
| Information source | NA |
| Information source type | NA |
| Frequency | Annually |
| Reference period | Collections date from 1865 to the present |
| Objectives  (what the purpose is) | Increase knowledge of past global climate change in order to improve New Zealand's ability to predict the impacts of future climate change and to plan effective responses. Facilitates development of a regional paleoclimate database for Australasia and Antarctica to aid regional paleoclimate reconstructions and validation of climate models. |
| Data collected  (key variables, outputs) | Fossil distributions (plants, insects, microalgae, protists, molluscs, vertebrates, etc.), sediment texture and composition, environmental proxies (temperature, productivity, etc.) |
| Data access | Data shared upon request |
| Further information | <http://www.gns.cri.nz/store/databases/indexb.html#Paleontological> |

## New Zealand Fossil Record File (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | 1 Climate change  9 Ecosystems and biodiversity (past distributions) |
| Information Type | Database |
| Data Custodian | Jointly managed by GNS and the Geological Society of NZ |
| Information source | NA |
| Information source type | NA |
| Frequency | Updated daily |
| Reference period | Observations made from 1860s to present (geological data from Palaeozoic Era to Recent epoch) |
| Objectives  (what the purpose is) | FRED is a computer database for the New Zealand Fossil Record File. This is a recording scheme for fossil localities in NZ and nearby regions including SE Pacific Islands and the Ross Sea region of Antarctica, and is jointly managed by Geological Society of New Zealand and GNS Science. FRED is operated by GNS Science through the FRST National Paleontological Databases Programme, with the assistance of staff at Auckland, Victoria, Canterbury and Otago universities. |
| Data collected  (key variables, outputs) | FRED primarily contains initial registration information about fossil localities:   * geographic coordinates * collecting details, including geological context * initial repository of specimens   For some localities it also provides additional data deposited by government, university, industry, and amateur geoscientists:   * taxonomic determinations * paleontological interpretations of stratigraphic age and paleoenvironment * geological opinions about stratigraphic age |
| Data access | Geographic coordinates can be queried and downloaded by anyone free of charge. Access to detailed information and capability to contribute new site records or other data requires a username and password - registered users agree to abide by accepted Conditions of Use. |
| Further information | <http://www.fred.org.nz/> |

## New Zealand Geomagnetic Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | Climate Change |
| Information Type | Database of Direct Measurements |
| Data Custodian | GNS Science |
| Information source | NA |
| Information source type | NA |
| Frequency | Hourly (e-mails sent to International Repositories) |
| Reference period | c. 1902 - 2009 |
| Objectives  (what the purpose is) | Provision of Magnetic Data to International Science |
| Data collected  (key variables, outputs) | Components of the Earth’s Magnetic field at two observatories (short-term and long-term fluctuations), including induction and the effects of earth moving on its axis. |
| Data access | Freely disseminated for non-Commercial users |
| Further information | <http://www.gns.cri.nz/research/geomagnetism/index.html#magobs>  Tony Hurst: [t.hurst@gns.cri.nz](mailto:t.hurst@gns.cri.nz) |

## New Zealand Energy Greenhouse Gas Emissions

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Report |
| Data Custodian | Ministry of Economic Development |
| Information source | Various reports including:   * NZ Energy Information Handbook (Christchurch, New Zealand: New Zealand Centre for Advanced Engineering) * Review of Climate Change Policies (MfE) * NZ GHG Inventory 1990 – 2007 (MfE) * NZ Energy Data File (MED) * GDP: Quarterly Release (Stats NZ)   References in the back of the Report, found here:  <http://www.med.govt.nz/templates/MultipageDocumentTOC____41212.aspx> |
| Information source type | Reports, derived statistics |
| Frequency | Annual |
| Reference period | 1990-2007 |
| Objectives  (what the purpose is) | To estimate emissions from New Zealand’s energy and industrial processes sectors (at a national level). Estimates contribute to the Ministry for the Environment’s national greenhouse gas inventory |
| Data collected  (key variables, outputs) | * Carbon dioxide, methane and nitrous oxide emissions from the energy sector (thermal electricity generation, transformation industries, manufacturing industries, transport, other sectors and fugitive emissions from fuel). * Carbon dioxide emissions from biomass. * Carbon dioxide from Industrial Processes * Carbon dioxide, methane and nitrous oxide emission factors.   Indirect emissions (carbon monoxide , sulphur dioxide, non-methane volatile organic compounds and oxides of nitrogen) are not included in the hard copy version of the report but are included online at <http://www.med.govt.nz/energy/ghg> |
| Data access | Published on MED’s website |
| Further information | <http://www.med.govt.nz/templates/StandardSummary____10370.aspx> |

## New Zealand Energy Greenhouse Gas Emissions survey

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Survey |
| Data Custodian | Ministry of Economic Development |
| Collection Unit | Enterprise |
| Coverage | 30 Enterprises were surveyed |
| Frequency | Annually |
| Reference period | 1997 to 2009 |
| Objectives  (what the purpose is) | Provides supplementary data to support the annual publication of *New Zealand’s Energy Greenhouse Gas Emissions,* and NZ’s national greenhouse gas inventory. |
| Data collected  (key variables, outputs) | Emissions factors (where available), energy consumption, production volumes, tonnes of CO2 emitted (where available), tonnes of other Greenhouse Gases emitted (where available), |
| Data access | Results of the survey published on MED website in a report  <http://www.med.govt.nz/templates/StandardSummary____10370.aspx> |
| Further information | Tracy Dillimore, Senior Communications Advisor, [tracy.dillimore@med.govt.nz](mailto:tracy.dillimore@med.govt.nz) |

## New Zealand’s National Communications under the United Nations Framework Convention on Climate Change

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information type | Report |
| Data custodian | Ministry for the Environment |
| Information source | Information taken from reports by:   * MAF * MED * Treasury * MFAT * EECA * Landcare * NIWA |
| Information source type | Report |
| Frequency | Periodical report (usually every 4-5 years so next one should be around 2010/11 but final date is decided by the Conference of the Parties to the Convention), 3rd was published in January 2002 |
| Reference period | January 2002 – December 2005 |
| Objectives  (what the purpose is) | Provides a snapshot of New Zealand’s progress with implementing the United Nations Framework Convention on Climate Change (UNFCCC). The document also contains New Zealand’s *Report on the Global Climate Observing System* and the *Report on Demonstrable Progress under the Kyoto Protocol.* |
| Data collected  (key variables, outputs) | * Greenhouse gas inventory (summary data) * Climate change policies and measures. * Projections and total effect of policies and measures. * Vulnerability assessment, climate change impacts, and adaptation measures. * Financial resources and transfer of technology. * Research and systematic observations. * Education, training and public participation. * New Zealand’s Report on Global Climate Observing System (GCOS). * New Zealand’s Report on Demonstrable Progress under the Kyoto Protocol |
| Data access | The report is published on MfE’s website in HTML and PDF format |
| Further information | <http://www.mfe.govt.nz/publications/climate/national-communication-2006/index.html> |

## New Zealand’s Initial Report under the Kyoto Protocol

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | Found in the report in the References section (page 30) |
| Information source type | See above |
| Frequency | One-off |
| Reference period | 2006 |
| Objectives  (what the purpose is) | One-off technical report which describes New Zealand’s inventory and registry systems, institutional and legal arrangements for climate change reporting and includes the calculation of New Zealand’s assigned amount. The report adheres to the requirements as specified in decision 13 of the first Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP.1). |
| Data collected  (key variables, outputs) | The report contains a number of technical definitions, calculations and definitions required to participate in the Kyoto Protocol. These include:   * A complete greenhouse gas inventory (1990-2004). * Calculation of New Zealand’s assigned amount and commitment period reserve. * Identification of 1990 as selected base year for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. * Definitions of land use, land-use change and forestry parameters. * Description of New Zealand’s national inventory system (in accordance with Kyoto Protocol article 5.1) * Technical description of New Zealand’s national registry in accordance with Kyoto Protocol article 7). |
| Data access | The report is published on the United Nations Framework Convention on Climate Change website in PDF format |
| Further information | <http://www.mfe.govt.nz/publications/climate/greenhouse-gas-inventory-overview-apr08/index.html#footnote-2> |

## Net Position Report: Projected balance of emission units during the first commitment period of the Kyoto Protocol

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | References (reports from various agencies) listed here:  <http://www.mfe.govt.nz/publications/climate/net-position-report-projected-balance-emissions-may08/html/page7.html> |
| Information source type | Report |
| Frequency | Annual |
| Reference period | 2006, 2007, 2008  Data in report covers 1990 - 2006 |
| Objectives  (what the purpose is) | To update New Zealand’s projected quantity of emissions and removals of greenhouse gases during the first commitment period (2008-2012) of the Kyoto Protocol. |
| Data collected  (key variables, outputs) | * Projected emissions (carbon dioxide equivalent) from energy (excluding transport), transport, industrial processes, solvent and other product use, agriculture and waste.   Projected removal units (carbon dioxide equivalent) |
| Data access | Published on MfE website |
| Further information | Latest report  <http://www.mfe.govt.nz/publications/climate/net-position-report-projected-balance-emissions-may08/index.html> |

## New Zealand’s Greenhouse Gas Inventory 1990-2006

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | 1. Land Cover Database 2. MED’s energy database (appears in this stocktake as Energy Statistics, Ministry or Economic Development) 3. Climate Change Convention CRF reporter database |
| Information source type | 1. Database – spatial records 2. Database – direct measurements including modelled information 3. Database – direct measurements including modelled information |
| Frequency | Annual |
| Reference period | 1990-2006 |
| Objectives  (what the purpose is) | Fulfilling our reporting obligations under the United Nations Convention on Climate Change and the Kyoto Protocol. |
| Data collected  (key variables, outputs) | Reports emissions from six greenhouse gases (CO2, CH4, N2O, HFCs, PFCs, SFs) under six sectors (energy, industrial processes, solvent and other product use, agriculture, land use, land-use change and forestry and waste). |
| Data access | The report is published on MfE’s website in HTML and PDF format |
| Further information | <http://www.mfe.govt.nz/publications/climate/nz-greenhouse-gas-inventory-apr08/> |

## National land use and land-use change mapping

|  |  |
| --- | --- |
| Topic | 1. Climate change  5. Land |
| Information Type | Spatial map of satellite data and aerial photography stored in a geo-database and data analysis system. |
| Data Custodian | Ministry for the Environment |
| Information source | Ministry for the Environment (Imagery was commissioned, and is held by MfE) |
| Information source type | Data is derived from the automatic classification of satellite imagery. (Landsat imagery for 1990 mapping and SPOT 5 imagery for 2008 mapping) |
| Frequency | 1990, 2008, 2012 |
| Reference period | Baseline in 1990 updates as above |
| Objectives  (what the purpose is) | To map land use change so that carbon (greenhouse gas) stock changes can be determined at the national scale for the land use, land-use change and forestry sector |
| Data collected  (key variables, outputs) | Mapping to 1 ha scale. Mapping classes not exactly the same as LCDB 1 and 2.  Mapped classes will be: natural forests (separated into 9 classes), planted forests (into at least 3 classes); grassland into 3 classes, crop land, settlements, water and other |
| Data access | Potentially available on request |
| Further information | Contact Ministry for the Environment (LUCAS team)  [lucas@mfe.govt.nz](mailto:lucas@mfe.govt.nz) |

## Sea Levels

|  |  |
| --- | --- |
| Topic | 1. Climate Change,  4. Marine environment |
| Information Type | Database of direct measurements (Geo-referenced sea level data) |
| Data Custodian | National Institute of Water and Atmospheric Research |
| Information source | Sea-level data from 21 sites operated by various agencies including NIWA, regional councils, ports, Antarctica NZ and the National Tidal Centre (Australia) |
| Information source type | Sea level at all sites; some sites also measure barometric pressure and sea temperature |
| Frequency | Sea level measured at 1 or 5 minute intervals. Daily updates including storm surges, long waves and tsunami are uploaded to the NIWA web site. Data quality-assured when funding permits. Last quality-assured data was processed up to and including 2006. |
| Reference period | Earliest gauge site was set up in 1971 (Moturiki Island), but most sites commenced in 1994 or later. |
| Objectives  (what the purpose is) | Measure temporal and spatial variability in sea level, storm surge, tsunami & tides around the open coast of New Zealand and at Scott Base. |
| Data collected  (key variables, outputs) | Data collected from: 21 representative stations including Chatham Islands and Scott Base (Antarctica)  Coverage: New Zealand  Key output variables: sea levels, barometric pressure, sea temperature |
| Data access | Daily web site updates (free access): (<http://www.niwa.co.nz/services/free/sealevels>)  QA datasets up to 2006 for NIWA gauges freely available at:  <http://edenz.niwa.co.nz/> |
| Further information | Contact: Dr R. Bell, NIWA |

## National Climate Database (a Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Database of direct measurements |
| Data Custodian | National Institute of Water and Atmospheric Research Limited |
| Information source | NA |
| Information source type | NA |
| Frequency | Sub-hourly, hourly, daily and monthly. |
| Reference period | 1852 – ongoing. |
| Objectives  (what the purpose is) | To understand regional climate and variability; climate change studies, Climate hazards, risks and extremes |
| Data collected  (key variables, outputs) | Data collected from: Voluntary and co-operative observation networks of weather and climate elements throughout New Zealand and the South Pacific. Networks include manual observations and by electronic sensing of climate.  Coverage: see above  Key output variables: Weather and climate elements: rainfall, temperature, dew point, wind speed and direction, sunshine, radiation, barometric pressure, cloud type and amount, significant weather phenomenon, earth temperature, evaporation, snow, soil moisture, upper air observations of temperature, winds and dew point, ship observations of sea-state |
| Data access | Data is available by registration through a web based service |
| Further information | <http://cliflo.niwa.co.nz/> |

## Environmental information relevant to monitoring climate change and it’s impacts

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Database/dataset of direct measurements including modelled information (routine monitoring, satellite remote sensing, surveys) |
| Data Custodian | National Institute of Water and Atmospheric Research Limited |
| Information source | NA |
| Information source type | NA |
| Frequency | Daily or monthly depending on data type and whether automatic station or manually read (auto QA only): annually with QA |
| Reference period | 1860 (few stations) to present (ongoing) |
| Objectives  (what the purpose is) | Measure temporal and spatial variability in NZ’s air and water environment |
| Data collected  (key variables, outputs) | Sea level (various open-coast sites)  River flows (Tideda database)  Water quality (> ten variables)  End of season snowline  Sea surface temperatures (satellite)  Cloud imagery (satellite)  Ocean physical and biological data from ship transects  Ocean colour (satellite)  Multi-wavelength atmospheric radiance data from satellites  Biological and biodiversity data from rivers, streams, lakes, coasts  Climate (rain, temperature, radiation, sunshine, Earth temperature, pressure, wind, evaporation, soil moisture)  Solar radiation  Ocean Waves |
| Data access | Some freely available on web <http://cliflo.niwa.co.nz/> |
| Further information | National Climate Centre: <http://www.niwa.co.nz/ncc>  National Water Resources Centre: <http://www.niwa.co.nz/ncwr> |

## Greenhouse Gas Concentrations Database

*Continued overleaf...*

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Database of direct measurements |
| Data Custodian | NIWA |
| Information source | NA |
| Information source type | NA |
| Frequency | Measurement frequency varies with gas, from every few minutes to weekly, or less frequently.  Updated annually. |
| Reference period | Baring Head  CO2 1970-present  13CO2 1998-present  14CO2 1954-present  CH4 1989-present  13CH4 1990-present  14CH4 1990-present  N2O 1996-present  O2 1999-present  O3 1991-present  CO 1989-present  13CO 1990-present  14CO 1990-present  Arrival Heights  Surface  CO2 1970-present  13CO2 1998-present  CH4 1989-present  13CH4 1992-present  14CH4 1988-1993  N2O 1996-present  O3 2003-present  CO 1989-present  13CO 1991-present  14CO 1991-present  Column  CO2 1998 - present  CH4 1998 - present  CO 1998 - present  N2O 1998 - present  O3 1998 - present |
| Objectives  (what the purpose is) | To measure concentrations and composition of greenhouse gas and related species in the atmosphere. |

|  |  |
| --- | --- |
| Data collected  (key variables, outputs) | The concentration and isotopic composition of greenhouse gases and related species are measured in-situ or by discrete collections at the surface at Baring Head,Wellington(41.42ºS, 174.87ºE); Arrival Heights , Antarctica (77.80ºS, 166.67ºE ); and Lauder, Central Otago (45.03ºS, 169.67ºE ); Measurements of greenhouse gas column concentrations are made at Lauder and Arrival Heights.  Baring Head:  surface (CO2, 13CO2, 14CO2, CH4, 13CH4, 14CH4, N2O, O2, O3, CO, 13CO, 14CO)  Arrival Heights:  surface (CO2, 13CO2, CH4, 13CH4, 14CH4, N2O, O3, CO, 13CO, 14CO)  column (CO2, CH4,CO,N2O,O3 )  Lauder:  Surface (CO2, CH4, N2O, CO, O3,13CO2)  Column (CO2, CH4,CO,N2O,O3 ) |
| Data access | Free dissemination via Media Sharing protocols? |
| Further information | Further information is available from  [g.brailsford@niwa.co.nz](mailto:g.brailsford@niwa.co.nz)  Data and metadata are available by ftp from NIWA at:  <http://www.niwascience.co.nz/rc/prog/greenhouse/info/>  <ftp://ftp.niwa.co.nz/tropac/>  the World data centre for greenhouse gases  <http://gaw.kishou.go.jp/wdcgg/> |

### 

## Surface Radiation Measurements

|  |  |
| --- | --- |
| Topic | 1. Climate change |
| Information Type | Database/dataset – direct measurements  Further information  Spectra of UV irradiances from 285 to 450 nm at a resolution of <1 nm measured at Lauder at 5o steps in solar zenith angle during daylight hours, and at 15 minute steps around noon.  Broadband erythemal UV irradiances measured at 10 minute intervals at 5 sites in New Zealand. Short wave direct, diffuse, and global radiation at Lauder. Network of 70 national climate database radiation sites throughout New Zealand with broadband short wave radiation, and 4 higher quality sites with diffuse, direct, and global irradiances. |
| Data Custodian | National Institute of Water and Atmospheric Research (NIWA) |
| Information source | NA |
| Information source type | NA |
| Frequency | UV summaries updated on Network for Detection of Atmospheric Composition Changes data base annually. Short wavelength data updated on Baseline Station Radiation Network archives annually. Daily updates of UV on NIWA Web pages. All types of solar radiation data via the National Climate Database are updated at least daily |
| Reference period | |  |  |  |  |  | | --- | --- | --- | --- | --- | | Decade | Global | Diffuse | Direct | UV | | 1950-59 | 6 | 0 | 0 | 0 | | 1960-69 | 9 | 0 | 0 | 0 | | 1970-79 | 33 | 1 | 0 | 0 | | 1980-89 | 82 | 6 | 4 | 2 | | 1990-99 | 113 | 8 | 6 | 7 | | 2000-09 | 154 | 6 | 5 | 7 |   *Number of places measuring the various types of solar radiation by decade* |
| Objectives  (what the purpose is) | Characterise the radiation environment in New Zealand, and understand the causes of its variability in time, and how it differs in New Zealand from other locations. |
| Data collected  (key variables, outputs) | Irradiances in W/m2. UVI forecasts on the web to the public. Data inputs to NIWA UV Atlas |
| Data access | All public data held within National Climate Database can be downloaded through CliFlo which is a web interface to the National Climate Database. This can be accessed at <http://cliflo.niwa.co.nz/> . There is no charge for the data but a user must register with NIWA before they can access the data. |
| Further information |  |

## Permanent Sample Plot Database

|  |  |
| --- | --- |
| Topic | 1. Climate change  5. Land (cover and use) |
| Information Type | * Database of direct measurements and * Derived statistics (formal, standardised calculations from the direct measurements) |
| Data Custodian | New Zealand Forest Research Institute Limited (Scion) |
| Information source | N/A |
| Information source type | N/A |
| Frequency | Quarterly (or more often) |
| Reference period | post 1921 to current |
| Objectives  (what the purpose is) | To collect data on the growth and yield of the planted forests of New Zealand as a consequence of experimental treatment or of routine operational forest management. The data is used for a wide variety of scientific studies. It also provides data to derive forest growth models and yield tables that are used to value forest holdings, calculate sustainable timber yields, produce long and short term operational plans, calculate Carbon in forests MAF, (ETS), MfE (LUCAS) or for private companies and individuals. |
| Data collected  (key variables, outputs) | Repeated measurements of trees (species, stem diameters, heights, condition etc) located in permanent fixed-area sample plots. The coverage extends to most of NZ with a large network (thousands) of sites located (mainly) in the exotic planted forests of New Zealand. |
| Data access | Strict protocols in place for sharing of or access to the data |
| Further information | Contact:  [carolyn.andersen@scionresearch.com](mailto:carolyn.andersen@scionresearch.com) (PSP database administrator), or  [Margaret.Horner@scionresearch.com](mailto:Margaret.Horner@scionresearch.com) (Marketing & Communications) |

# Atmosphere

## Airshed Reporting Framework

|  |  |
| --- | --- |
| Topic | 2. Atmosphere |
| Information Type | Direct survey of regional council air quality monitoring data |
| Data Custodian | Ministry for the Environment |
| Collection Unit | Airsheds |
| Coverage | 68 airsheds (maintained by regional councils) across the country |
| Frequency | Annually |
| Reference period | Ongoing, data from 2005 calendar year |
| Objectives  (what the purpose is) | To provide summary air quality data in monitored airsheds (PM10 particulates) and show progress towards meeting National Environmental Standards by 2013 |
| Data collected  (key variables, outputs) | Summary annual statistics in monitored airsheds for   * Number of exceedences of PM10 * Peak concentrations of PM10 (maximum, second highest or 99.7%ile depending on way in which regional council is tracking progress) * Annual average   The survey also collects any updated information on emissions estimates of PM10 and shows the starting point of the region’s Straight Line Path towards compliance with the NES. |
| Data access | Published on MfE website  <http://www.mfe.govt.nz/state/reporting/air/nes/index.html> |
| Further information |  |

## Global Environmental Monitoring System (GEMS) - Air

|  |  |
| --- | --- |
| Topic | 2. Atmosphere |
| Information Type | Derived statistics from air quality monitoring conducted for MfE in Auckland and Christchurch |
| Data Custodian | Ministry for the Environment |
| Information source | Air quality monitoring conducted at sites in Auckland and Christchurch |
| Information source type | NA |
| Frequency | Annual |
| Reference period | Generally continuous since 1964 |
| Objectives  (what the purpose is) | To provide long term air quality data from two sites in Auckland and one site in Christchurch for a number of pollutants covered by the National Environmental Standards (PM10, nitrogen dioxide, carbon monoxide and sulphur dioxide) as well as lead and volatile organic compounds. |
| Data collected  (key variables, outputs) | Annual statistics for PM10, NO2, CO, SO2, lead and VOCS  This includes   * Maximum concentrations * Annual averages |
| Data access | Published on MfE website  <http://www.mfe.govt.nz/publications/air/gems/index.html> |
| Further information |  |

## The Health of People and Communities – The Effect of Environmental Factors on the Health of New Zealanders

|  |  |
| --- | --- |
| Topic | 2. Atmosphere  3. Freshwater |
| Information Type | Report |
| Data Custodian | The Public Health Advisory Committee |
| Information source | Various including council records, epidemiological research, and other publications such as Environment new Zealand 2007 (MfE) |
| Information source type | Admin data, direct measurements and research, reports |
| Frequency | This report was a one-off. |
| Reference period | 2002 - 2003 |
| Objectives  (what the purpose is) | This report focuses on a few significant environmental health issues and makes recommendations on them. For example, indoor and ambient air quality, water quality. |
| Data collected  (key variables, outputs) | Air quality  Indoor air  Ambient air quality – urban environment  Recommendations – Ambient air quality  Water quality  Drinking water  Recommendations – Drinking Water  Surface water and ground water contamination  Pressures on water quality from wastewater  Màori and water quality  Recommendations – Surface/Waste water quality  Other significant and emerging environmental health issues  Climate change  Quality of life in the built environment |
| Data access | Published on the website of the Public Health Advisory Committee |
| Further information | <http://www.phac.health.govt.nz/moh.nsf/indexcm/phac-people-and-communities> |

## Total Column Ozone Measurements

|  |  |
| --- | --- |
| Topic | 2. Atmosphere |
| Information Type | Database of direct measurements |
| Data Custodian | National Institute of Water and Atmospheric Research (NIWA) in collaboration with the European Space Agency, NASA, and Japanese Space Agency. |
| Information source | NA |
| Information source type | NA |
| Frequency | Umkehr vertical profile measurements are made daily using the Dobson spectrophotometers. Direct sun measurements are made manually on days when the sun is above the horizon and not obscured by cloud. The satellite-based combined data set is at daily resolution. |
| Reference period | Total ozone measurements have been made in:  1. Wellington from 1957-1960 and December 1964-June 1970. The data from 1964-1970 have undergone a comprehensive QA review (Nichol and Coulmann, "New Zealand Ozone Database Review", report prepared for Ministry for the Environment, 1990.). However the 1957-60 data were not part of that review, due to insufficient metadata being available.  2. Invercargill from July 1970 - September 1987. These data have also undergone a comprehensive QA review (Nichol and Coulmann, 1990).  3. Lauder (Central Otago) from January 1987 - (ongoing).  4. Arrival Heights (Antarctica) from January 1988 - (ongoing). |
| Objectives  (what the purpose is) | Monitoring total column ozone levels above New Zealand and Antarctica. Validating satellite-based total column ozone measurements. The global satellite-based data set is used to set ozone changes over New Zealand in a global context.  Measurements at Lauder are representative of ozone changes over New Zealand as a whole. Measurements at Arrival Heights are representative of the Antarctic ozone hole when measurements are made within the winter polar vortex. The satellite-based observations provide a global picture of ozone changes. |

*Continued overleaf...*

|  |  |
| --- | --- |
| Data collected  (key variables, outputs) | Total column ozone and ozone partial columns measured in Dobson Units (1DU = 2.69×1016 ozone molecules/cm2).  Dobson spectrophotometer instruments are located at Lauder (45.04oS, 169.68oE), New Zealand, and at Arrival Heights (77.82oS, 166.65oE), Antarctica. Archives of the measurements are maintained at NIWA, Lauder, and in various international data archives. A combined data set of satellite-based total column ozone measurements providing global coverage is maintained at NIWA using measurements from a variety of satellite-based instruments including TOMS, GOME, SBUV, and OMI. |
| Data access | Total ozone data from the above 4 sites are freely available from the World Ozone and Ultraviolet Radiation Data Centre (WOUDC; [www.woudc.org](http://www.woudc.org)). The Lauder and Arrival Heights sites are also part of the Network for Detection of Atmospheric Composition Change (NDACC), so the data are also available by anonymous ftp from [ftp.cpc.ncep.noaa.gov](ftp://ftp.cpc.ncep.noaa.gov) |
| Further information |  |

## Vertical Ozone Profile Measurements

|  |  |
| --- | --- |
| Topic | 2. Atmosphere  1. Climate change |
| Information Type | Database of direct measurements  Balloon-borne ozonesonde flights, microwave radiometer measurements, and ozone lidar measurements, made from Lauder (45.04oS, 169.68oE), New Zealand. Archives of the measurements are maintained at NIWA, Lauder, and in various international data archives. A combined data set of satellite-based vertical ozone profile measurements is maintained at NIWA using measurements from a variety of satellite-based instruments including SAGE I, SAGE II, SAGE III, ILAS I, ILAS II, HALOE, POAM II, POAM III, GOMOS, MIPAS, SCIAMACHY, OSIRIS. |
| Data Custodian | National Institute of Water and Atmospheric Research (NIWA) in collaboration with The National Institute for Public Heath, the Environment (RIVM), The Netherlands, the University of Massachusetts, USA, and international space agencies including European Space Agency, NASA, Japanese Space Agency. |
| Information source | NA |
| Information source type | NA |
| Frequency | Ozonesonde flights are made weekly. Ozone lidar measurements are made approximately 6 times per month (cloudless nights are required for a measurement to be made). Microwave radiometer measurements are made daily. Satellite-based measurements are made at daily frequency or better |
| Reference period | Vertical ozone profile measurements have been made in:   1. Christchurch from March - December 1965. 2. Lauder from August 1986 - (ongoing). |

*Continued overleaf...*

|  |  |
| --- | --- |
| Objectives  (what the purpose is) | Measurements made at Lauder are used to monitor changes in the vertical distribution of ozone above New Zealand and to validate satellite-based vertical ozone profile measurements. The satellite-based measurements are used to provide a global context for the ozone changes over New Zealand and to attribute ozone changes over New Zealand to changes elsewhere e.g. over Antarctic or over the tropics.  Measurements at Lauder are representative of changes in the vertical distribution of ozone over New Zealand as a whole. Satellite-based measurements can be combined to provide a global picture of changes in stratospheric ozone. |
| Data collected  (key variables, outputs) | Ozonesondes: Vertical profiles of temperature, pressure, ozone partial pressure, humidity, wind speed and wind direction.  Lidar: Vertical profiles of ozone number density.  Microwave radiometer: Vertical profiles of ozone number density between 20 and 66km altitude.  Satellite-based measurements: Vertical profiles of ozone. Spatial coverage and vertical resolution is instrument dependent |
| Data access | Total ozone data from the above 2 sites are available from the World Ozone and Ultraviolet Radiation Data Centre (WOUDC; [www.woudc.org](http://www.woudc.org)). The Lauder data are also available by anonymous ftp from **Error! Hyperlink reference not valid.**. |
| Further information |  |

## WMO/UNEP Scientific Assessments of Ozone Depletion and UNEP Effects Panel Assessments

|  |  |
| --- | --- |
| Topic | 2. Atmosphere |
| Information Type | Reports from WMO and UNEP |
| Data Custodian | National Institute of Water and Atmospheric Research (NIWA) |
| Information source | Found in Reference section of the report:  <http://www.unep.ch/ozone/Assessment_Panels/EEAP/index.shtml> |
| Information source type | Reports |
| Frequency | The WMO/UNEP scientific assessments of ozone depletion are prepared at least every 4 years. The UNEP effects panel assessments are also prepared every 4 years but with annual updates. |
| Reference period | The first report was published in 1989 and since then major periodic assessments have been published in 1991, 1994, 1998 and 2002. The next one, for 2006 is expected to be published early in 2007.  (taken from here: <http://www.unep.ch/ozone/Assessment_Panels/index.shtml> ) |
| Objectives  (what the purpose is) | These documents provide the scientific basis for implementation and amendments to the international Montreal Protocol for the protection of the ozone layer |
| Data collected  (key variables, outputs) | Ozone levels versus Global Warming  The Ozone Hole  UV radiation |
| Data access | <http://www.niwa.co.nz/news-and-publications/publications/all/wa/15-1/ozone> |
| Further information | Dr Richard McKenzie and Dr Greg Bodeker (Atmospheric Processes, NIWA, Lauder, Central Otago) |

## Solar UV-B Radiation Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 1. Atmosphere |
| Information Type | Database of solar UVB irradiances at New Zealand centres of population  Automatic data collection from UVB-erythemal radiometers at six locations across New Zealand. |
| Data Custodian | Industrial Research Ltd |
| Information source | Traceably calibrated UVB radiometers  Erythemally weighted irradiances at 10 minute intervals. |
| Information source type | Direct measurements |
| Frequency | 10 minute intervals seven days a week. |
| Reference period | 1989-2009 |
| Objectives  (what the purpose is) | This work, funded under FRST contract C08X0420; Solar UVB Database, contributes to the mitigation of the damaging effects of solar UVB radiation exposure on plants, materials and public health, i.e. sunburn, and non-melanoma skin cancer. The work also contributes to an improved understanding of the atmospheric factors affecting UV insolation. These contributions are achieved by establishing temporal and geographical trends in erythemal / carcinogenic solar UV radiation by continuous radiation measurements during daylight hours at centres of population in New Zealand. The end users of this information are atmospheric scientists, materials manufacturers, the agriculture industry and health professionals, such as epidemiologists and government policy makers. |
| Data collected (key variables, outputs) | Erythemal irradiance (in Watts per metre squared). |
| Data access | Annual report on IRL website ([www.irl.cri.nz/repository/files/solarreport09.doc](http://www.irl.cri.nz/repository/files/solarreport09.doc) ) and data soon to be available on NIWA climate database. |
| Further information | Neil Swift: ([n.swift@irl.cri.nz](mailto:n.swift@irl.cri.nz) ), Kathryn Nield: ([k.nield@irl.cri.nz](mailto:k.nield@irl.cri.nz)).  [www.irl.cri.nz/repository/files/solarreport09.doc](http://www.irl.cri.nz/repository/files/solarreport09.doc) |

# Fresh Water

## WONI (Waters of National Importance)

|  |  |
| --- | --- |
| Topic | 3. Freshwater  9. Ecosystems & biodiversity |
| Information Type | dataset/database of direct measurements including modelled information |
| Data Custodian | Department of Conservation |
| Information source | NA |
| Information source type | NA |
| Frequency | Snapshot, with intention to improve and redo in future. |
| Reference period | Wetlands: 1999 to 2003. Rivers and Lakes: 2008 |
| Objectives  (what the purpose is) | To identify water bodies of national importance for tourism, irrigation, energy generation, industrial uses, recreation, natural and cultural heritage. |
| Data collected  (key variables, outputs) | Working with Catchments, lakes and wetlands, gives (or intends on giving) detail of native biodiversity value, and exotic fish, as well as Water Quality, Cover, Flow etc. |
| Data access | With permission: Freshwater Section, Aquatic and Threats Unit, R&D, DOC |
| Further information | First version: <http://www.doc.govt.nz/upload/documents/science-and-technical/WONI.pdf>  More recent version available on request. |

## FWENZ (Fresh Water Environments of New Zealand)

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Dataset/Database of direct measurements including modelled information |
| Data Custodian | Department of Conservation / NIWA |
| Information source | NA |
| Information source type | NA |
| Frequency | Snapshot. |
| Reference period | 2008 |
| Objectives  (what the purpose is) | To facilitate the implementation of the New Zealand Biodiversity Strategy. To be used in conjunction with the NIWA River Environments Classification (REC) dataset. |
| Data collected  (key variables, outputs) | This database contains a large number of climate, landcover, morphological, topography and geology information for stream and river reaches across New Zealand. Upstream, local, and downstream variables |
| Data access | With permission. |
| Further information | Contact: Freshwater Section, Aquatic and Threats, R&D, DOC |

## Groundwater and Geothermal (GGW) Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Dataset/Database of direct measurements |
| Data Custodian | GNS |
| Information source | NA |
| Information source type | NA |
| Frequency | Quarterly or on an ad hoc basis |
| Reference period | 1990 to present |
| Objectives  (what the purpose is) | To store low frequency water quality and related datasets from groundwater, geothermal and volcano related projects |
| Data collected  (key variables, outputs) | A collection of hydrological, geochemical (sampling and chemistry), geological and geophysical data collected from over 500 sites within NZ for groundwater research purposes. The 112 sites comprising the National Groundwater Monitoring Programme are sampled quarterly. |
| Data access | Access via password-protected internet site. |
| Further information | <http://www.gns.cri.nz/store/databases/indexb.html#Groundwater> |

## Didymo Public Awareness and Behaviours Survey

|  |  |
| --- | --- |
| Topic | 3. Freshwater  9. Ecosystems and biodiversity |
| Information Type | Telephone survey |
| Data Custodian | Biosecurity New Zealand / MAF |
| Collection unit | Individuals over 15 years of age |
| Coverage | Nationally representative sample of 900 recreational users of freshwater areas. Respondents were aged 15 years and over. |
| Frequency | One off data collection |
| Reference period | 2006 |
| Objectives  (what the purpose is) | To ascertain the present level of public awareness of didymo and related biosecurity issues. |
| Data collected  (key variables, outputs) | Public awareness of didymo;  Public awareness and behaviours in regards to stopping the spread of aquatic pests. |
| Data access |  |
| Further information |  |

## River Environment Classification

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Derived Statistics |
| Data Custodian | NIWA |
| Information source | Multiple climate and geographic databases including   * DEM * Land Cover Database 2 |
| Information source type | Classification |
| Frequency | One off |
| Reference period | 2004 |
| Objectives  (what the purpose is) | The REC is an ecosystem-based spatial framework for river management purposes and provides a context for inventories of river resources, and a spatial framework for effects assessment, policy development, developing monitoring programmes and interpretation of monitoring data and state-of-environment reporting. |
| Data collected  (key variables, outputs) | River segments are classified and given an output typology for each of the following features:   * Topography * Climate * Geology * Land Cover * Network Position * Valley Landform |
| Data access | Data is available under license to NIWA. |
| Further information | New Zealand River Environment Classification User Guide (NIWA/MfE)  <http://www.niwa.cri.nz/ncwr/rec> |

## Snapshot of Lake Water Quality in NZ

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | Regional council lake monitoring data |
| Information source type | Direct measurements |
| Frequency | Ad hoc |
| Reference period | 2003-2006 |
| Objectives  (what the purpose is) | State of environment reporting  Present a national picture of lake water quality in NZ. A collation of regional data to classify (by consistent means) the water quality status of all lakes with long term monitoring programmes (there are about 150 in NZ) |
| Data collected  (key variables, outputs) | Trophic (Nutrient) Level Index, comprising:   * Total nitrogen, * Total phosphorus, * chla (algae) * visual clarity   LAKESPI (Submerged Plant Index) |
| Data access | Published on MfE website  <http://www.mfe.govt.nz/publications/ser/snapshot-lake-water-quality-nov06/index.html> |
| Further information | See also, companion report on lake status and trends  <http://www.mfe.govt.nz/publications/ser/lake-water-quality-status-trends-aug07/index.html> |

## Snapshot of Water Allocation in New Zealand

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | Regional council resource consent databases |
| Information source type | Derived statistics |
| Frequency | Ad hoc |
| Reference period | 2006 (referenced against 1999 report – see link below) |
| Objectives  (what the purpose is) | State of environment reporting  Present a national picture of allocated water in NZ. A collation of regional data to assess the amount of water that is being allocated to various consumptive uses (eg irrigation, domestic, industrial) |
| Data collected  (key variables, outputs) | Allocated volume by use and type (ie groundwater, surface water, storage). Regionally and nationally aggregated |
| Data access | Published on MfE website  <http://www.mfe.govt.nz/publications/ser/snapshot-water-allocation-nov06/index.html> |
| Further information | See also previous report (1999) at  <http://www.mfe.govt.nz/publications/water/water-allocation-apr00.html> |

## State and Trends in the National River Quality Network

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | NIWA National River Water Quality Monitoring Network.  The NRWQN includes 77 sites distributed nationally at which river flow is measured continuously and at which 14 physical/chemical parameters are measured monthly. All laboratory analyses are carried out at NIWA's Water Quality Laboratory in Hamilton. Data from January 1989 through until December 2005 were used. |
| Information source type | Database of direct measurements |
| Frequency | Ad hoc |
| Reference period | 1989 to 2005 |
| Objectives  (what the purpose is) | State of environment reporting  Present a national picture of river water quality in NZ. State and trend analysis of data from the National River Water Quality Monitoring Network. |
| Data collected  (key variables, outputs) | Annual medians, percentiles and 15 year trends in:  Nitrogen  Phosphorus  Visual clarity  Water temperature  Dissolved oxygen  Biochemical oxygen demand  pH  Conductivity |
| Data access | Published on MfE website  <http://www.mfe.govt.nz/publications/ser/water-quality-network-nov06/index.html> |
| Further information |  |

## Snapshot of Groundwater Quality in NZ

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | Regional councils and Geological and Nuclear Sciences (GNS) |
| Information source type | Report, database of direct measurements |
| Frequency | Ad hoc |
| Reference period | 1995-2006 |
| Objectives  (what the purpose is) | State of environment reporting  Present a national picture of groundwater quality state and trends in NZ. Assess the impact on water quality of land use. |
| Data collected  (key variables, outputs) | 10 year medians (and other percentiles) and trends in:   * Nitrate * E.coli * pH * Conductivity * Dissolved reactive phosphorus * And numerous other analytes |
| Data access | Published on MfE website (including summary data spreadsheets)  <http://www.mfe.govt.nz/publications/ser/groundwater-quality-trends-aug07/index.html> |
| Further information |  |

## Annual Review of Drinking-Water Quality in New Zealand

|  |  |
| --- | --- |
| Topic | 4. Freshwater |
| Information Type | Report |
| Data Custodian | Ministry of Health |
| Information source | Survey of water suppliers, undertaken through public health units  Results from the survey form the basis of the report |
| Information source type | Survey |
| Frequency | Annual |
| Reference period | Published annually since 1991 |
| Objectives  (what the purpose is) | It lists the extent to which the various community drinking-water supplies in New Zealand:  · are sampled as frequently as is specified in the microbiological compliance requirements of the current DWSNZ  · comply microbiologically with the DWSNZ. |
| Data collected  (key variables, outputs) | The report comprises the following five sections: a   * general overview of the quality of drinking-water of all supplies within New Zealand; * a summary of the nation’s drinking-water quality, with supplies separated into Local Authority (LA)-operated supplies, school- and early childhood centre (ECC)-operated supplies; * an overview of drinking-water quality in each district health board (DHB) area; * a summary of the quality of drinking-water in each LA area; * and, an appendix that shows microbiological and chemical compliance or non-compliance with the DWSNZ at the level of individual water supplies within each LA area. |
| Data access | 2006/07 Review found here: <http://www.moh.govt.nz/moh.nsf/indexmh/drinking-water-quality-in-nz-annual-review-0607> |
| Further information | Information on the review here:  <http://www.mfe.govt.nz/publications/water/guide-moh-drinking-water-standards-nz-jun08/html/page11.html> |

### 

## Water Resources Archive (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Database/dataset of direct measurements including modelled information |
| Data Custodian | National Institute of Water and Atmospheric Research |
| Information source | NA |
| Information source type | NA |
| Frequency | 3 – 6 monthly for QA’d data (some real-time data available on NIWA website, but not QA’d) |
| Reference period | 1905 (few stations) to present (ongoing) (water resource) and 1979 to present (water quality) |
| Objectives  (what the purpose is) | Measure temporal and spatial variability in NZ’s freshwater resources and define flood hazard and drought risk |
| Data collected  (key variables, outputs) | Coverage – most of New Zealand. 160 stations (plus > 140 externally owned data feeds that might be available following client consent). Also 77 sites of water quality data  Key variables: River flows and river and lake levels in a Tideda database, water quality data in relational database |
| Data access | Publicly funded data are freely available on the web.  [edenz.niwa.co.nz](http://edenz.niwa.co.nz/) (water resource)  [wqis.niwa.co.nz](https://secure.niwa.co.nz/wqis/index.do) (water quality) |
| Further information | National Water Resources Centre: <http://www.niwa.co.nz/ncwr> |

## Freshwater Organisms

|  |  |
| --- | --- |
| Topic | 3. Freshwater,  9. Ecosystems and Biodiversity, Biosecurity |
| Information Type | Database/dataset of direct measurements |
| Data Custodian | National Institute of Water and Atmospheric Research |
| Information source | A wide range of freshwater research projects |
| Information source type | Database of direct measurements  Mainly species geospatial locality data |
| Frequency | Variable |
| Reference period | 1960’s - ongoing |
| Objectives  (what the purpose is) | Measure temporal and spatial availability in NZ’s freshwater biota as a function of environmental change. |
| Data collected  (key variables, outputs) | Presence/abundance of algae, macrophytes, invertebrates and fish.  The coverage extends to most of NZ with a large network (thousands) of sites. |
| Data access | Mostly freely available on line. Restricted use available if required for selected data sets. |
| Further information | <https://secure.niwa.co.nz/fbis/index.do> |

## River Water Quality

|  |  |
| --- | --- |
| Topic | 3. Freshwater,  9. Ecosystems & biodiversity |
| Information Type | Dataset/database of direct measurements (monthly survey) |
| Data Custodian | National Institute of Water and Atmospheric Research |
| Information source | NA |
| Information source type | NA |
| Frequency | Monthly sampling |
| Reference period | January 1989 to present (monthly) |
| Objectives  (what the purpose is) | Measure temporal and spatial variability in the water quality of NZ freshwaters (rivers) (state and trends) |
| Data collected  (key variables, outputs) | 1. *Nutrients*. 5 forms: total phosphorus (TP ) and dissolved reactive phosphorus (DRP), total nitrogen (TN), oxidised nitrogen (NOx = nitrate-N plus nitrite-N) and ammoniacal nitrogen (Am-N) 2. *Major cations* (Na, K, Ca, Mg) and *anions* (bicarbonate, chloride, sulphate) were analysed monthly for 1989 only. *Conductivity* measurement (in the laboratory) continues as an index of total ionic content. 3. *Dissolved oxygen* is measured in the field as percent saturation, then converted to ppm by calculation taking into account pressure and altitude corrections as required. 4. *Water temperature* is measured in the field at the same time as dissolved oxygen 5. *Visual clarity* is measured in the field as the visual range of a *black disc target* 6. *Turbidity* is measured by nephelometry in the laboratory - as a backup to field visibility measurement 7. *Biochemical oxygen demand* after 5 days (BOD5) analysis ceased for all but 3 sites (AK2, RO2, WA9) as at August 2002. 8. *Faecal indicator bacteria* testing (Total coliforms & *E. coli*) commenced February 2005. 9. *Benthic algae* (periphyton) are assessed in the field (monthly) on a visual abundance scale 10. *Benthic macroinvertebrates* are collected annually (by Surber sampler) – and analysed to provide an index of overall river ecological ‘health’.   Coverage: most of NZ – 77 representative stations on rivers draining about half of the New Zealand land area. |
| Data access | Via NIWA website using the Water Quality Information System (WQIS) once a signed End User Licensing Agreement (EULA) form is on file. |
| Further information | Refer to NRQWN publications, particularly -  1. Smith, D. G.; McBride, G. B. 1990: New Zealand's national water quality monitoring network - Design and first year's operation. *Water resources bulletin 26*: 767-775.  2. Smith, D. G.; Maasdam, R. 1994: New Zealand's National River Water Quality Network 1. Design and physico-chemical characterisation. *New Zealand Journal of Marine and Freshwater Research 28*: 19-25. |

## Water Physical Stock Account

|  |  |
| --- | --- |
| Topic | 3. Freshwater |
| Information Type | Environment and Economic Account |
| Data Custodian | Statistics New Zealand |
| Information source | The information source for this report was datasets supplied by NIWA and GNS. The following reports accompanied the datasets (supplied for both releases of the account) and a available at StatNZ’s website. The majority of the fields in the original datasets were reproduced in a series of downloadable tables also available on the StatsNZ website.  **Reports prepared for the Statistics New Zealand water accounts**  Surfacewater components of New Zealand’s National Water Accounts, 1995–2005 (NIWA)  Surfacewater components of New Zealand’s National Water Accounts, 1995–2001 (NIWA)  The volume of groundwater in New Zealand 1994 to 2001 – report by Institute of Geological & Nuclear Sciences Ltd (GNS)  Snow Accounts for New Zealand 1995-2001(Professor Blair Fitzharris (University of Otago)  Annual Glacier Ice Volumes in New Zealand 1993-2001 (Salinger & Willsman – NIWA)  Annual Glacier Ice Volumes in New Zealand 1995-2005 (Salinger & Willsman – NIWA)  <http://www.stats.govt.nz/analytical-reports/water-physical-stock-account-1995–2001.htm>  <http://www.stats.govt.nz/analytical-reports/water-physical-stock-account-1995–2005.htm> |
| Information source type | Dataset – compiled from NIWAs hydrological databases of direct measurements and modelled information. |
| Frequency | This report has been produced in 2004 and 2007; it is likely that it will be released in the future on a five yearly basis. |
| Reference period | 1995-2005 |
| Objectives  (what the purpose is) | * Provides information on quantities of water in the inland part of the hydrological system at national and regional levels * Shows the amount of inflows and outflows of water and changes in the amount of water held in soil, lakes, glaciers and groundwater * Provides baseline estimates for long term trend analysis |
| Data collected  (key variables, outputs) | Components of the Account: precipitation, inflow from other regions, total inflows, evapotranspiration, outflow to other regions, abstraction for hydroelectricity generation, discharge from hydroelectricity generation, outflow to sea and net abstraction, total outflows, changes in soil moisture, changes in lakes and reservoirs, changes in groundwater, changes in snow, changes in ice, total change in storage. |
| Data access | Published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/environment/environmental-accounts/water.htm> |

# Marine Environment

## Nearshore Marine Classification and Inventory

|  |  |
| --- | --- |
| Topic | 4. Marine environment |
| Information Type | dataset/database of direct measurements including modelled information |
| Data Custodian | Department of Conservation |
| Information source | NA |
| Information source type | NA |
| Frequency | One off |
| Reference period | 2006 |
| Objectives  (what the purpose is) | A planning tool to help identify potential marine protected areas |
| Data collected  (key variables, outputs) | While this is possibly more of an SOP than a data source, its appendices do have extensive detail on the nearshore marine environment, classifying the coastal environment into units with similar characteristics. More descriptive than being hard data.  General  ● The locality  ● Natural features of the coastline and/or embayment  ● Natural features of the subtidal area  Oceanography  ● Exposure of the coast (where relevant)  ● Predominant oceanographic features (e.g. currents)  ● Water temperature  ● Tidal range  ● Other  Biota (where information is available)  ● Intertidal habitats  ● Subtidal habitats  ● Intertidal and subtidal invertebrate assemblages  ● Intertidal and subtidal algal assemblages  ● Fish fauna  ● Marine mammals |
| Data access | With permission |
| Further information | DOC Marine Conservation Manager, Aquatic and Threats Unit |

## Register of Dumping Permits Issued in New Zealand by MNZ

|  |  |
| --- | --- |
| Topic | 4. Marine Environment,  6. Materials and Waste |
| Information Type | Table containing Administrative Data – a register of Dumping Permits issued in New Zealand by Maritime New Zealand. Includes lat/long information on dumping locations. |
| Data Custodian | Maritime New Zealand |
| Information source | NA |
| Information source type | NA |
| Frequency | Regularly updated in response to applications |
| Reference period | 1999 - ongoing |
| Objectives  (what the purpose is) | It records details of dumping operations (including the name of the permit holder, type and quantity of waste and coordinates of disposal sites), within the EEZ under permits issued under the Maritime Transport Act 1994. It does not cover dumping permitted in the coastal marine area under the authority of regional councils working with the Resource Management Act 1991. |
| Data collected  (key variables, outputs) | Date of application, name of applicant, geographic location of activity (lat/long), waste properties, dumping frequency, maximum approved quantity, period of permit |
| Data access | Available on request from Maritime New Zealand |
| Further information | Environmental Research and Analysis team ([rules.coordinator@maritimenz.govt.nz](mailto:rules.coordinator@maritimenz.govt.nz) ) |

## New Zealand National Report for Marine Disposal

|  |  |
| --- | --- |
| Topic | 4. Marine Environment,  6. Materials and Waste |
| Information Type | Report – contains tables that summarize national marine disposal activity, including information by region |
| Data Custodian | Maritime New Zealand |
| Information source | Reports from regional authorities and data from MNZ’s Register of Dumping Permits |
| Information source type | Administrative data |
| Frequency | Annual |
| Reference period | 1999 - ongoing |
| Objectives  (what the purpose is) | Fulfil obligations as party to the 1996 Protocol of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (London Convention) |
| Data collected  (key variables, outputs) | Categories of waste, deposit sites, dredging operation type, weight of waste |
| Data access | [International Maritime Organisation](http://www.imo.org) website or from Maritime New Zealand |
| Further information | Environmental Research and Analysis team ([rules.coordinator@maritimenz.govt.nz](mailto:rules.coordinator@maritimenz.govt.nz) ) |

## Marine Pollution Response Services Database

|  |  |
| --- | --- |
| Topic | 4. Marine Environment,  10. Environmental Protection Effort |
| Information Type | Integrated Database – records oil spill incidents, details of trained oil spill responders, response exercises and financial records |
| Data Custodian | Marine Pollution Response Services (MPRS) team from Maritime New Zealand |
| Information source | Oil spills recorded by the Oil Spill Duty Officer (MPRS) – from observations by regional authorities, public and maritime operators. Database also contains MPRS operational data for activities funded by the Oil Pollution Fund |
| Information source type | NA |
| Frequency | Regularly updated |
| Reference period | 2007 – ongoing |
| Objectives  (what the purpose is) | Part 332 of the Maritime Transport Act requires an expenditure budget to be prepared in order for marine pollution response services to be funded by the Oil Pollution Fund. The database records all activities undertaken by this service and all spills that occur nationally. |
| Data collected  (key variables, outputs) | Oil spills by location, volume, source, oil type. Details for people trained in response, spill response exercises and training programmes are recorded. |
| Data access | Databases for oil spill equipment and oil spill responses are kept internally and for own use at Maritime NZ. |
| Further information | [operations.mprs@maritimenz.govt.nz](mailto:operations.mprs@maritimenz.govt.nz) |

## “Mainstay” Organizational Database for Maritime New Zealand

|  |  |
| --- | --- |
| Topic | 4. Marine Environment,  10. Environmental Protection Effort |
| Information Type | Integrated Database – records oil spill incidents, vessel inspections and ship registration data |
| Data Custodian | Maritime New Zealand |
| Information source | Oil spills recorded by the Oil Spill Duty Officer (MPRS) – from observations by regional authorities, public and maritime operators. Database also contains MNZ Operational data and Ship registration data for commercial New Zealand vessels |
| Information source type | NA |
| Frequency | Regularly updated but oil spill data now collected in the Marine Pollution Response Service Database |
| Reference period | 1991 - 2007 |
| Objectives  (what the purpose is) | Organizational database for Maritime New Zealand. Soon to be replaced. |
| Data collected  (key variables, outputs) | Oil spills by location, volume, source, oil type. |
| Data access | Environmental Research and Analysis team ([rules.coordinator@maritimenz.govt.nz](mailto:rules.coordinator@maritimenz.govt.nz) ) |
| Further information | Note that the organisational Mainstay (now being superseded by a new system), does not contain environmental information as such. It does, however, indicate the survey and inspection status of ships, including compliance with applicable marine protection rules.  Note marine oil spill data is also collected by MNZ in a discrete database. |

## Coastal Resources Database and GIS: A report to the NZ Maritime Safety Authority

|  |  |
| --- | --- |
| Topic | 4.Marine Environment |
| Information Type | Derived statistics  Report |
| Data Custodian | Ministry for the Environment/Maritime NZ |
| Information source | * A review for the Ministry of Fisheries of data sets that may be incorporated into the National Aquatic Biodiversity Information System (NABIS) - a centralised decision-making tool containing layers of aquatic biodiversity information * Marine Research in New Zealand: A survey and analysis (Chapman and Lough, 2003) * Setting Course for a Sustainable Future: The management of New Zealand's marine environment' (Parliamentary Commissioner for the Environment, 1999) * Review of National Databases Relating to the New Zealand Marine Environment (Froude, 2000) * Review of Existing Coastal and Estuarine Monitoring (excluding Regional Council monitoring) (Froude, 1998) * Coastal Resources Database and GIS: A report to the NZ Maritime Safety Authority (Tortell, 2001) * an inventory of data sets listed in Shining a Spotlight on the Biodiversity of New Zealand's Marine Ecoregion (WWF-New Zealand, 2004), a report on the results of an experts workshop held in May 2003 to conduct an independent assessment of marine biodiversity in the New Zealand region. |
| Information source type | Reports |
| Frequency | One off |
| Reference period | 1999-2005 |
| Objectives  (what the purpose is) | This report looks at the information and tools that will be needed to make smart decisions about the best future uses of our ocean. It assesses the range of information and decision-making tools that we have available now, identifies opportunities to improve requirements, and outlines a way forward. |
| Data collected  (key variables, outputs) | Summarises data sets that might comprise a GIS-based tool to provide comprehensive coastal and marine resource information for the purpose of oil spill response, oil spill contingency planning and oil spill risk assessment. |
| Data access | This report is widely available from the Ministry's website. |
| Further information | [http://www.mfe.govt.nz/publications/oceans/getting-priorities-right-jun05/index.html](http://www.mfe.govt.nz/publications/oceans/getting-priorities-right-jun05/index.html%20%20) |

## Seasquirt Survey

|  |  |
| --- | --- |
| Topic | 4. Marine environment  9. Ecosystems and biodiversity |
| Information Type | Survey |
| Data Custodian | Biosecurity New Zealand / MAF |
| Collections Unit |  |
| Coverage |  |
| Frequency | One off collection |
| Reference period | 2006 |
| Objectives  (what the purpose is) | To ascertain the present level of awareness among marine users (including boat owners) of seasquirt and related biosecurity issues. |
| Data collected  (key variables, outputs) | Levels of awareness among marine users of seasquirt and related marine biosecurity issues |
| Data access |  |
| Further information |  |

## Marine Environment Classification

|  |  |
| --- | --- |
| Topic | 4. Marine environment |
| Information Type | Derived Statistics |
| Data Custodian | NIWA |
| Information source | Multiple physical, biological and climate databases |
| Information source type | Classification |
| Frequency | One off |
| Reference period | 2004 |
| Objectives  (what the purpose is) | The MEC provides a spatial framework for inventories of marine resources, environmental effects assessments, policy development and design of protected area networks. |
| Data collected  (key variables, outputs) | Marine areas are classified and given an output typology for each of the following features:   * Depth * Annual mean solar radiation * Winter solar radiation * Wintertime sea surface temperature * Annual amplitude of sea surface temperature * Spatial gradient annual mean sea surface temperature * Summertime sea surface temperature anomaly * Mean orbital velocity * Extreme orbital velocity * Tidal current * Sediment type (categorical variable) * Seabed rate of change of slope (profile) * Seabed curvature * Seabed planform curvature * Freshwater fraction |
| Data access | Data is available under license with NIWA |
| Further information | New Zealand River Environment Classification User Guide (NIWA/MfE)  <http://www.niwa.co.nz/ncco/mec> |

## NIWA Invertebrate Collection and Database (A Nationally Significant Collection and Database)

aka Marine Benthic Biology Collection

|  |  |
| --- | --- |
| Topic | 4.Marine environment  9.Ecosystems and biodiversity |
| Information Type | Database of direct measurements  However, note that none of the provided categories clearly fits this database. This entity is a huge physical collection of marine invertebrate specimens from all over the NZ EEZ, the Ross Sea and other areas in the SW Pacific region **plus** a large database of all information associated with each of the specimens in the collection. |
| Data Custodian | National Institute of Water & Atmospheric Research (NIWA) |
| Information source | NA |
| Information source type | NA |
| Frequency | Daily to weekly – high frequency |
| Reference period | ~1955 - present (2009) |
| Objectives  (what the purpose is) | Purpose is to maintain a large representative physical collection of marine invertebrate specimens from all over the NZ EEZ, the Ross Sea and other areas in the SW Pacific region plus a database of all information associated with each of the specimens in the collection. The specimens and data underpin a wide range of aspects of the marine environment such as distribution, (which species have been located where), biodiversity (how many species are known from each location), type &/or holotype status(do the specimens represent individuals used for original descriptions of the species) |
| Data collected  (key variables, outputs) | Species name(Genus, species, author/year, family, Order, Phylum), Cruise/station number, locality (latitude, longitude) of collection, method of collection (gear type), depth of collection, date of collection, Register number, name of identifier, number of specimens |
| Data access | For information about access to the NIWA Invertebrate Collection see: <http://www.niwa.co.nz/our-science/aquatic-biodiversity-and-biosecurity/tools/marine-databases>  This will provide a link for searching “Type” specimens, i.e. data on specimens that represent the original description of a species. This is only a small section of the specimens and data held on marine species in this collection. Details about the NIC on the NIWA website are currently being updated. |
| Further information | For access to all other data associated with the NIC contact Dr Kareen Schnabel [k.schnabel@niwa.co.nz](mailto:k.schnabel@niwa.co.nz) |

## Recreational Water Quality

|  |  |
| --- | --- |
| Topic | 3. Freshwater  4. Marine |
| Information Type | Report (online) |
| Data Custodian | Ministry for the Environment |
| Information source | Regional, district and city councils |
| Information source type | NA |
| Frequency | Ad hoc (generally updated every two years) |
| Reference period | 2003 to 2007 |
| Objectives  (what the purpose is) | State of environment reporting  Present a national picture of recreational water quality in NZ. Assess overall levels of compliance of beaches around the country with national guidelines for recreational water quality |
| Data collected  (key variables, outputs) | Summaries of single sample data for:   * E.coli (freshwater) * Enterococci (marine)   Individual beaches categorised according the percentage of samples each season that are non-compliant. |
| Data access | Published on MfE website  <http://www.mfe.govt.nz/state/reporting/recreational-water/index.html> |
| Further information | National guidelines  <http://www.mfe.govt.nz/publications/water/microbiological-quality-jun03/> |

## Statistical/Sustainability Information on Fish Stocks

|  |  |
| --- | --- |
| Topic | 3.Marine environment  9.Ecosystems and Biodiversity |
| Information Type | Report |
| Data Custodian | Ministry of Fisheries |
| Information source | Ministry of Fisheries stock assessment research projects |
| Information source type | Statistical dataset |
| Frequency | Ad hoc  The data is updated yearly when the Plenary document is completed |
| Reference period | From 2006 onwards |
| Objectives  (what the purpose is) | To inform *Environment ’07* report and updated to inform Ministry of Fisheries website |
| Data collected  (key variables, outputs) | Number of commercial fish stocks above/below BMSY (biomass that supports sustainable yield) |
| Data access | Freely disseminated here:  <http://fs.fish.govt.nz/Page.aspx?pk=16&tk=478> |
| Further information | [info@fish.govt.nz](mailto:info@fish.govt.nz) |

## National Aquatic Biodiversity Information System (NABIS)

|  |  |
| --- | --- |
| Topic | 4.Marine Environment  9.Ecosystems and biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | Ministry of Fisheries |
| Information source | NA |
| Information source type | NA |
| Frequency | Ongoing |
| Reference period | Started in 2003, updated frequently up to 2009 |
| Objectives  (what the purpose is) | NABIS is an interactive web-based mapping tool. Users can map and display information about New Zealand's marine environment, species distributions and fisheries management. |
| Data collected  (key variables, outputs) | NABIS makes available over 450 maps describing:   * The distribution of New Zealand's marine species. * The New Zealand coastline, marine environment and bathymetry * New Zealand cities, towns, lakes and rivers * Marine reserves, Customary areas, and areas where fishing is restricted * And fisheries management areas |
| Data access | Freely disseminated |
| Further information | [Ministry of Fisheries NABIS](http://www.nabis.govt.nz/Pages/default.aspx)or[nabis@fish.govt.nz](mailto:nabis@fish.govt.nz) |

## Ministry of Fisheries Marlin Metadata Database

|  |  |
| --- | --- |
| Topic | 4. Marine Environment |
| Information Type | Administrative data (67 marine scientific data sources) |
| Data Custodian | Ministry of Fisheries |
| Information source | NA |
| Information source type | NA |
| Frequency | Daily |
| Reference period | 1986 to present |
| Objectives  (what the purpose is) | To outline all the data collected by the Ministry of Fisheries from fishers and our research projects and how to request the data from the Ministry of Fisheries |
| Data collected  (key variables, outputs) | There are four main components to MARLIN:   1. A searchable catalogue of the data sets, originating from Ministry contracted scientific research projects that are now stored in Ministry data repositories. The Ministry contracts for over 100 scientific research projects each year and many of these projects generate more than one type of data. There are over 1000 records of such datasets stored in MARLIN and these records are searchable by a variety of fields including data type, species code and project code. 2. A searchable catalogue of otoliths, length frequency samples, and conversion factor tests, collected by fisheries observers. These records are searchable by species code, area and date (and processed state in the case of conversion factor tests). 3. A description of other types of scientific/research data held by the Ministry that are not catalogued elsewhere within MARLIN. 4. A list of the codes used within New Zealand to describe species and areas. Note that the Ministry does not use the same species codes as the United Nation's Food and Agriculture Organisation (FAO). |
| Data access | Assess on case by case basis – some data is confidential |
| Further information | <http://marlin.niwa.co.nz/EXEC/0/0d84xlc0fui033174ublt0ooe1f0> |

## Fish Monetary Stock Account

|  |  |
| --- | --- |
| Topic | 4. Marine Environment |
| Information Type | Report |
| Data Custodian | Statistics New Zealand |
| Information source | FishServe’s quota register  <http://www.fishserve.co.nz/> |
| Information source type | Administrative data collected by FishServe on the transfers of fisheries quota. Data used:   * Quota trades: quota (species), quota management area, average weighted value of trade, number of trades. * ACE transfers: quota (species), quota management area, average weighted value of trade, number of trades. * Total allowable commercial catch (TACC) for all species and species management areas. * Landed catch for all species and species management areas. |
| Frequency | Annual |
| Reference period | 1996-2008 and ongoing |
| Objectives  (what the purpose is) | Estimating the asset value of New Zealand’s commercial fish resource |
| Data collected  (key variables, outputs) | The asset value of species managed under the QMS by species |
| Data access | The report is published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/environment/environmental-accounts/fish.htm> |

## New Zealand’s Marine Economy

|  |  |
| --- | --- |
| Topic | 4. Marine environment |
| Information Type | Report |
| Data Custodian | Statistics New Zealand |
| Information source | Statistics New Zealand Annual Enterprise Survey |
| Information source type | Survey  <http://www.stats.govt.nz/datasets/business/annual-enterprise-statistics.htm> |
| Frequency | This work has been produced once in 2006. It may be updated in the future. |
| Reference period | 1997–2002 |
| Objectives  (what the purpose is) | To value the contribution of marine based industries to the national economy |
| Data collected  (key variables, outputs) | Value added (contribution to GDP) and employment numbers by marine industry group (as defined in the report) |
| Data access | The report is published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/environment/environmental-accounts/marine.htm> |

## Cawthron Microalgae Collection (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | 4.Marine Environment  9.Ecosystems/Biodiversity |
| Information Type | Living (including cryopreserved) collection of marine micro-algae and cyanobacteria; integrated database |
| Data Custodian | Cawthron Institute |
| Information source | NA |
| Information source type | NA |
| Frequency | Quarterly |
| Reference period | 1990-2009 (web-site database is current only) |
| Objectives  (what the purpose is) | Information on isolates for end-users; traceability of micro-algae cultures to original source |
| Data collected  (key variables, outputs) | CICCM code of each isolate; isolation and site details, identification methods, culturing requirements, references |
| Data access | Available on Cawthron’s website |
| Further information | [www.cultures.cawthron.org.nz](http://cultures.cawthron.org.nz/) |

# Land

## Digital Geology Database (QMap)

|  |  |
| --- | --- |
| Topic | 5. Land  8. Mineral resources  7. Energy |
| Information Type | GIS database |
| Data Custodian | GNS |
| Information source | NA |
| Information source type | NA |
| Frequency | Ad hoc |
| Reference period | Started in late 1994, maps have been completed at a rate of between one and two years since then |
| Objectives  (what the purpose is) | The quarter million mapping (QMAP) programme is the national 1:250 000 digital geological mapping project. It is building national digital coverage of New Zealand's geology. The database is being created using Geographic Information Systems software (ArcGIS).  Completed maps are available in traditional [paper map and book](http://www.gns.cri.nz/research/qmap/qmapproducts.html#published) form, as [digital images](http://www.gns.cri.nz/research/qmap/qmapproducts.html#digital), [GIS data](http://www.gns.cri.nz/research/qmap/qmapproducts.html#data) , and as [downloadable images](http://www.gns.cri.nz/research/qmap/qmapproducts.html#downloads). |
| Data collected  (key variables, outputs) | The map layers include:   * Geological map units * Geological boundaries * Metamorphism * Faults * Folds * Horizons * Veins * Dikes * Lineaments * Structural measurements |
| Data access | Completed maps are available in traditional [paper map and book](http://www.gns.cri.nz/research/qmap/qmapproducts.html#published) form, as [digital images](http://www.gns.cri.nz/research/qmap/qmapproducts.html#digital), [GIS data](http://www.gns.cri.nz/research/qmap/qmapproducts.html#data) , and as [downloadable images](http://www.gns.cri.nz/research/qmap/qmapproducts.html#downloads). Seamless GIS map data will be available via the web from 2010. |
| Further information | <http://www.gns.cri.nz/store/databases/indexb.html#Digital>  or email: [qmap@gns.cri.nz](mailto:qmap@gns.cri.nz) |

### 

## Geophysical Properties of New Zealand Database

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Integrated database |
| Data Custodian | GNS |
| Information source | NA |
| Information source type | NA |
| Frequency | Ad-hoc |
| Reference period | Since 1950 for some measurements |
| Objectives  (what the purpose is) | Five datasets related to geophysical properties of the solid earth |
| Data collected  (key variables, outputs) | 1. Land Gravity - Over 37,000 digital records covering mainland New Zealand and the offshore islands.  2. Magnetic surveys and measurements - A collection of digital aeromagnetic and radiometric data and measurements, primarily in the Taupo Volcanic Zone. Several modern low-altitude helicopter magnetic and radiometric surveys are also held in computer files, both as raw data and gridded files.  3. Marine Geophysics - Over 1,500,000 digital gravity, magnetic and bathymetric records covering the New Zealand and Antarctic regions of the Southwest Pacific. The data are growing by 20,000-50,000 records per year and are stored as internationally standard MGD77+ files. The database contains 390 sonobuoy solutions which provide information on the structure of rocks beneath the sea floor, and includes 137,000 high altitude aeromagnetic measurements. The database also contains approximately 150 swath bathymetry surveys comprising approximately 200 GB of mostly binary data. Approximately 30 GB of new swath bathymetry data is being added every year.  4. Geophysical rock properties - More than 11,500 measurements of density, magnetic susceptibility, remnant magnetisation, permeability, thermal conductivity, electrical resistivity, seismic velocity and the age of rock specimens from New Zealand, South Pacific Islands, and Antarctica. Measurements have been made since 1950 with 200-500 new measurements made annually |
| Data access | Get in touch with contacts (for each of the 5 datasets):   1. Ray Wood 2. Vaughn Stagpoole 3. Bryan Davy 4. Ray Wood 5. Derek Woodward |
| Further information | <http://www.gns.cri.nz/store/databases/indexb.html#Geophysical> |

## New Zealand Volcano Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Database of direct measurements |
| Data Custodian | GNS Science ( Volcanology Section) |
| Information source | NA |
| Information source type | NA |
| Frequency | Ad hoc |
| Reference period | 1880’s - present |
| Objectives  (what the purpose is) | To assess the status of New Zealand’s active volcanoes to make successful hazard and risk assessments, and support science. |
| Data collected  (key variables, outputs) | Geophysical, chemical, observational data on the activity of the active volcanoes.  Primary outputs, Volcano Alert Bulletins, volcano alert levels.  Stratigraphic dataset of field sheets, published maps, theses and drill logs.  Historical and bibliographic collection of paper files, including newspaper articles, diary transcripts, reports, reprints and photographs. |
| Data access | Available on request |
| Further information | [www.gns.cri.nz](http://www.gns.cri.nz), [www.geonet.org.nz](http://www.geonet.org.nz) |

## National Petrology Reference Collection and PETLAB Database (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | 5.Land |
| Information Type | Database of direct measurements |
| Data Custodian | GNS Science |
| Information source | NA |
| Information source type | NA |
| Frequency | Quarterly (or more often) |
| Reference period | 1865-now |
| Objectives  (what the purpose is) | NPRC: to maintain a national research collection of rocks and minerals.  PETLAB: to provide a single, accessible database of New Zealand rock and mineral information from the NPRC and university collections.  NPRC and PETLAB are tools that, by capturing past data**,** enhance the efficiency and effectiveness of present and future geoscience research. |
| Data collected  (key variables, outputs) | PETLAB contains locations, descriptions and analyses of rock and mineral samples collected from onland and offshore New Zealand and Antarctica by government, university and industry geologists. Information has been sourced from journal articles, theses, and open file reports. |
| Data access | Free and unrestricted access to basic sample PET data. LAB data are available free to those individuals and institutions who agree to contribute data to PETLAB on an ongoing basis (e.g. NZ universities). LAB data licences are available for non-contributors. |
| Further information | <http://pet.gns.cri.nz> |

## National Earthquake Information Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 5.Land (cover and use)  4.Marine Environment |
| Information Type | NA |
| Data Custodian | GNS Science |
| Information source | Dataset/database of direct measurements including modelled information |
| Information source type | NA |
| Frequency | Near real-time update |
| Reference period | 1460 to present time |
| Objectives  (what the purpose is) | To establish the patterns of New Zealand’s earthquakes, spatially, in magnitude and in time. It is the common starting point for research into New Zealand’s earthquakes. |
| Data collected  (key variables, outputs) | Earthquake times, locations and magnitudes. Currently over 400,000 held in the database, increasing by about 15,000 per annum. |
| Data access | Data is freely available through the GeoNet website [www.geonet.org.nz](http://www.geonet.org.nz) as CSV files, maps or IMS 1.0 format, a standard earthquake exchange format. |
| Further information | Contact [info@geonet.org.nz](mailto:info@geonet.org.nz) |

## Regional Geological Map Archive and Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 5.Land,  7.Energy,  8.Mineral resources |
| Information Type | Dataset/database of direct measurements including modelled information |
| Data Custodian | Institute of Geological and Nuclear Sciences Limited  (GNS Science) |
| Information source | NA |
| Information source type | NA |
| Frequency | One off |
| Reference period | 1865 - 2009 and ongoing |
| Objectives  (what the purpose is) | Information collected and compiled onto paper or film contributing to the geological mapping of New Zealand. |
| Data collected  (key variables, outputs) | Field observation and interpreted data including one or more of structural measurements, rock type and stratigraphic occurrence and description, fossil and mineral occurrence, fault and fold location and many other geology-related data |
| Data access | Maps or groups of maps have records on GNS in house database, with published maps only on publicly searchable database. Maps available for viewing on request and coying at cost. |
| Further information | [m.rattenbury@gns.cri.nz](mailto:m.rattenbury@gns.cri.nz)  We currently just have the physical map collection and are starting the project planning exercise to set up the RGMAD database. |

## Farm Monitoring Programme

|  |  |
| --- | --- |
| Topic | 5. Land  1. Climate change  3. Freshwater |
| Information Type | Survey – face to face collection |
| Data Custodian | Ministry of Agriculture and Forestry (MAF) |
| Collection Unit | Owner operator units: dairy, deer, and arable farmers and kiwifruit, pipfruit and grape growers. (Approx 250 units surveyed) |
| Coverage | Approx 250 units surveyed (In 2007 we stopped surveying sheep and beef farmers and obtained the data from Meat & Wool NZ). The 2007 farm monitoring programme covers Pastoral and Horticultural activities only. |
| Frequency | Annual |
| Reference period | Annually since 2000 |
| Objectives  (what the purpose is) | To monitor the production and financial status of farms and orchards in NZ and farmers/growers expectations for the year ahead. The survey also collects information on sector issues and trends. The surveyed data is used to create models of specific farm and orchard types. |
| Data collected  (key variables, outputs) | Farm budget for different sectors; climate and production information; trends and issues for different sectors. |
| Data access | <http://www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/farm-monitoring/> for the reports |
| Further information | Farm Monitoring Programme Manager Monitoring and Evaluation MAF Policy  PO Box 2526 Wellington NEW ZEALAND Phone: +64 4 894 0623 Fax: +64 4 894 0741 |

## Sawmill, Panel and Pulp and Paper Surveys

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Direct survey |
| Data Custodian | Ministry of Agriculture and Forestry |
| Collection Unit | Sawmills, Pulp and Paper and Panel Mills |
| Coverage | All units ;  Pulp and paper – 8  Panel – 20  Sawmills – 370  Pulp and paper, panel quarterly and annual census’  Sawmills – annual census, quarterly – 137 |
| Frequency | Quarterly and annual surveys |
| Reference period | Technically, sawmills have been surveyed since ~1921; Pulp, Paper and Paperboard mills since ~1940; and Panel mills since ~1946. (Ref: <http://www.statisphere.govt.nz/statistics-by-agency.aspx?mode=ba&aid=1> ). |
| Objectives  (what the purpose is) | To provide timely and authoritative statistics and commentary for the ministry, the government, industry and the wider community.  These statistics support:   * Monitoring trends in forestry production (and trade) for the forecasts that are used in the Treasury’s budgetary processes. * Providing information to support international reporting requirements. * Monitoring the impact of government policies affecting the forestry sector. * Roundwood removal statistics are derived from the sawmill survey) |

*Continued overleaf...*

|  |  |
| --- | --- |
| Data collected  (key variables, outputs) | **Quarterly:** Production and stocks of indigenous and exotic sawn timber, wood pulp and paper and paperboard, and panel products including fibreboard, plywood, veneer and particleboard.  **Annual:** Production and stocks of indigenous and exotic sawn timber by species, mechanical capacity of saw- and chip mills, and production of woodchips.  Capacity for manufacture, production and consumption of wood-based panel products.  Production and stocks of wood pulp and paper and paperboard.  Wood use in production |
| Data access | The mill production surveys are 'Tier 1' statistics and as such we follow the protocols as detailed in the statisphere website.  In short, we won’t release information that could identify an individual or organisation, and only staff here directly involved in the survey analyses can access the information. Also, the information is held in a secure folder and will only be used for survey purposes.  On our website, we provide statistics at an aggregated level, down to 'Wood Supply Region'. For general enquiries, we may undertake special analyses and provide data aggregated at a different level (for example, 'by Port') - as long as confidentiality and the above protocols are maintained. |
| Further information | [stats\_info@maf.govt.nz](mailto:stats_info@maf.govt.nz)  The information requested in the surveys has become more closely aligned to the current format with each significant departmental change, ie: the establishment of the Forests Act 1949, the Ministry of Forestry in 1987, and then the merger into MAF in 1998. However, the surveys are constantly under review, often in conjunction with Statistics NZ, to improve the questions asked, the information received and reduce respondent burden etc.  Please also note: we conduct both a quarterly survey and an annual survey (a more detailed/complete survey). |

### 

## National Exotic Forest Description (NEFD)

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Direct survey |
| Data Custodian | Ministry for Agriculture and Forestry |
| Information Source | Forest owners with more than 40 hectares of plantation forest.  Each year all owners with more than 1000 hectares of forest are surveyed. Owners with more than 40 hectares are surveyed biannually.  There are approximately 2000 owners of which approximately 100 have more than 1000 hectares of forest. |
| Information Source Type | NA |
| Frequency | Annual |
| Reference period | Annually since 2000 |
| Objectives  (what the purpose is) | To provide information on New Zealand’s plantation forests suitable for resource and policy planning. The information is used to develop policy advice, to meet a range of international reporting requirements and to assist with infrastructure planning decisions. The information is also suitable as a starting point for investigating wood processing options. |
| Data collected  (key variables, outputs) | Forest area by year of planting, species group, tending regime and local authority. In addition to forest area the survey collects data on planting and harvesting. |
| Data access | MAF website: <http://www.maf.govt.nz/mafnet/publications/nefd/> |
| Further information | Monitoring and Evaluation MAF Policy Ministry of Agriculture and Forestry PO Box 2526 Wellington NEW ZEALAND  Tel:  +64 4 894 0100 Fax: +64 4 894 0741 |

## Land Cover Database

|  |  |
| --- | --- |
| Topic | 5. Land (cover and use)  9. Ecosystems and biodiversity |
| Information Type | Derived Statistics |
| Data Custodian | Terralink International |
| Information source | Satellite Imagery |
| Information source type | Classification |
| Frequency | Ad hoc |
| Reference period | 1996-97 (LCDB1), 2001-02 (LCDB2) |
| Objectives  (what the purpose is) | To provide a national base dataset of land cover, which is used for a variety of purposes. |

*Continued overleaf…*

|  |  |  |
| --- | --- | --- |
| Data collected  (key variables, outputs) | |  | | --- | | Built-up Area  Urban Parkland / Open Space  Surface Mine  Dump  Transport Infrastructure  Coastal Sand and Gravel  River and Lakeshore Gravel and Rock  Landslide  Alpine Gravel and Rock  Permanent Snow and Ice  Alpine Grass-/ Herbfield  Lake and Pond  River  Estuarine Open Water  Short-rotation Cropland  Vineyard  Orchard and Other Perennial Crops  High Producing Exotic Grassland  Low Producing Grassland  Tall Tussock Grassland  Depleted Grassland  Herbaceous Freshwater Vegetation  Herbaceous Saline Vegetation  Flaxland  Fernland  Gorse and or Broom  Manuka and or Kanuka  Matagouri  Broadleaved Indigenous Hardwoods  Sub Alpine Shrubland  Mixed Exotic Shrubland  Grey Scrub  Minor Shelterbelts  Major Shelterbelts  Afforestation (not imaged)  Afforestation (imaged, post LCDB 1)  Forest - Harvested  Pine Forest - Open Canopy  Pine Forest - Closed Canopy  Other Exotic Forest  Deciduous Hardwoods  Indigenous Forest  Mangrove | |
| Data access | Data is available under license with Terralink International. |
| Further information |  |

## Agriculture Production Surveys/Censuses

|  |  |
| --- | --- |
| Topic | 5. Land  1. Climate  3. Freshwater |
| Information Type | Direct survey of farmers and foresters |
| Data Custodian | Statistics New Zealand (Agriculture team), conducted as a joint collection funded by MAF) |
| Collection unit | The unit about which data was collected (the "unit of interest") comprises one or more blocks of land, managed as a single operation, that either   * holds domesticated livestock and/or * could be used for cropping and/or growing planted production forest and which is:   - utilised with the intent of financial gain or  - farmed for research and/or educational purposes or  - associated with prisons. |
| Coverage | National, results are available at the regional level |
| Units surveyed | In Agricultural Census years (five yearly) the entire population is surveyed (the full 80,000).  In recent sample survey years the sample size has been 30,000  (In 2006 the sample size was 30,600 statistical units) |
| Frequency | Survey: yearly. Census: 5-yearly |
| Reference period | This survey has existed in various formats since the early 1900s |
| Objectives  (what the purpose is) | The Ag production surveys are designed to collect up-to-date robust official agricultural statistics, covering land use, livestock and arable farming, horticulture, forestry, farm practices (incl fertiliser, irrigation).  Data is used by government agencies for monitoring, forecasting and policy formulation (esp MAF), climate change reporting, input into National Accounts and trade negotiations; by ag sector organisations for monitoring and forecasting; by private organisations for monitoring, research and service provision. Full coverage agricultural censuses provide the benchmark for design of the sample surveys. |
| Data collected  (key variables, outputs) | Agricultural production statistics covering land use (grassland, grazing, crops, horticultural, trees, bush, native scrub, other uses), livestock (sheep, beef, dairy, deer, poulty, other livestock) and arable farming (grain, seed, silage, harvest), horticulture (fruit, veggies, nursery crops, indoor, outdoor), forestry (production, exotic plantings and harvestings), farm practices (incl fertiliser, irrigation, burning, cultivating).  The data collected varies between surveys (not all variables are covered in all surveys). |
| Data access | Results are published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/datasets/primary-production/agriculture-production.htm> or email <mailto:info@stats.govt.nz> |

## Forestry Monetary Stock Account

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Report/derived statistics |
| Data Custodian | Statistics New Zealand |
| Information source | Ministry of Agriculture and Forestry (MAF) – National exotic forest description (NEFD) survey, (recoverable annual increment and current annual increment).  Statistics New Zealand - National Accounts supply use tables |
| Information source type | Administrative and survey data  Derived statistics |
| Frequency | Ad hoc |
| Reference period | 1995-2000 |
| Objectives  (what the purpose is) | This report presents a monetary stock account valuation of New Zealand’s forestry resources. The account is currently restricted to providing valuations of standing timber available for wood supply from exotic forests. The concepts and methodology used to derive the forestry stock valuations are also included in the report. Stock valuations are presented as for balance sheets, with opening and closing stocks, and stock change valuations. The data is provided as a time series to enable the analysis of changes in the asset valuation over time. |
| Data collected  (key variables, outputs) | ANZIC96 (forestry related) Industries  Commodities supply use data (value)  Exotic timber  Opening monetary stock  Natural growth  Harvested timber  Closing monetary stock |
| Data access | Published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/environment/environmental-accounts/forests-and-forest-poducts.htm>  or email: [environment@stats.govt.nz](mailto:environment@stats.govt.nz) |

## Forestry Physical Stock Account

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Report/derived statistics |
| Data Custodian | Statistics New Zealand |
| Information source | MAF - National Exotic Forest Description survey; - New Zealand Forestry Statistics 2000, - Indigenous Forestry Unit administration records  Land Cover Database (LCDB)  National Rural Fire Authority  Temperate and Boreal Forest Research Assessment 2000  Statistics New Zealand - National Accounts supply use tables |
| Information source type | Administrative and survey data  databases |
| Frequency | Ad hoc |
| Reference period | 1995–2000 |
| Objectives  (what the purpose is) | This report provides information on the physical stock of forestry resources in New Zealand for the period 1995 to 2000. It provides estimates of the annual quantity of the forestry estate in New Zealand both in hectares and cubic metres. The account shows the changing level of forestry resources in New Zealand over time and provides reasons for the changes. |
| Data collected  (key variables, outputs) | ANZIC96 (forestry related) Industries  Commodities supply use data (Volume)  Total Timber Available for Wood Supply  Total Timber Not Available for Wood Supply  Total Timber Available from Plantations  Total Timber Available for Wood Supply from Indigenous Forests  Total Indigenous  Natural Extension Adjustment  Indigenous Forestry Time Series  Protected originally Under DOC  Additional Protected via Purchases (cumulative)  Additional Protected via Covenants (cumulative)  Opening Area  *Man-made changes:* New plantings, Restocking, Harvesting, Other man-made changes  *Natural events:* Natural extension, Fires, Other natural events,  *Degradation:* Balancing item, Changes in classifications, Reassessment of stocks, Closing Area |
| Data access | Published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/environment/environmental-accounts/forests-and-forest-poducts.htm>  or email: [environment@stats.govt.nz](mailto:environment@stats.govt.nz) |

## Forestry Monetary Flow Account

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Report/derived statistics |
| Data Custodian | Statistics New Zealand |
| Information source | Statistics New Zealand (administrative data) – Monetary Trade Statistics;,- 1996 Inter-Industry (input-output) Study, - National Accounts supply use tables  MAF – Situation Outlook for New Zealand Agriculture and Forests 2002 (production exports) |
| Information source type | Administrative data  Derived statistics |
| Frequency | Ad hoc |
| Reference period | 1996-1999  flow tables are available for 1996-2003 |
| Objectives  (what the purpose is) | This is the third report in the forestry series, and introduces monetary information for the first time to complement the physical information in the previously released *Physical Flow Account for Forestry Resources in New Zealand.* The tables in the report present both physical and monetary data together for each commodity’s supply and use in volume and value by the industries involved. This format is consistent with the concept of hybrid accounts promoted in the SEEA. Hybrid accounts enable comparisons to be made between the volumes and values involved in transactions taking place within the economy for the identified commodities. |
| Data collected  (key variables, outputs) | ANZIC96 (forestry related) Industries  Commodities supply use data (volume and value)  Imports  Exports  Consumption  Sawn Timber Production by Species  Logs and Poles  Wood Chips (chipped logs)  Sawn Timber  Veneer  Plywood  Particleboard  Fibreboard  Chemical Pulp  Mechanical Pulp  Newsprint  Other Paper and Paperboard  Forestry Residuals  Wood Chip Residuals  Black Liquor  Other Chemical Residuals |
| Data access | Published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/environment/environmental-accounts/forests-and-forest-poducts.htm> or email: [environment@stats.govt.nz](mailto:environment@stats.govt.nz) |

## Forestry Physical Flow Account

|  |  |
| --- | --- |
| Topic | 5. Land |
| Information Type | Report/derived statistics |
| Data Custodian | Statistics New Zealand |
| Information source | MAF - Forestry Production Statistics, - NEFD (volume data)  Statistics New Zealand - Physical Trade Statistics, - 1996 Inter-industry (output-input) Study - 1995 Census of Manufacturing - National Accounts supply use tables. |
| Information source type | Administrative data  Derived statistics |
| Frequency | Ad hoc |
| Reference period | 1995-2000  flow tables are available for 1996-2003 |
| Objectives  (what the purpose is) | This report provides physical information on the flow of forestry products in New Zealand from 1995 to 2000. The main tables in the report are presented in cubic metres of roundwood equivalent. The account shows the supply and use in volume for forestry commodities/products throughout the economy by industry. This work is linked to the forestry physical stock account, published by Statistics New Zealand, because the harvested volume from the physical stock account is the source of wood that is analysed in the forestry flow account. The flow account also estimates the further processing and consumption flows of harvested wood. |

*Continued overleaf...*

|  |  |
| --- | --- |
| Data collected  (key variables, outputs) | ANZIC96 (forestry related) Industries  Commodities supply use data (volume and value)  Imports  Exports  Consumption  Sawn Timber Production by Species  Logs and Poles  Wood Chips (chipped logs)  Sawn Timber  Veneer  Plywood  Particleboard  Fibreboard  Chemical Pulp  Mechanical Pulp  Newsprint  Other Paper and Paperboard  Forestry Residuals  Wood Chip Residuals  Black Liquor  Other Chemical Residuals |
| Data access | Published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/publications/nationalaccounts/environmental-accounts/forests-and-forest-products.aspx>  or email: [environment@stats.govt.nz](mailto:environment@stats.govt.nz) |

## Soil and Land Management Database

|  |  |
| --- | --- |
| Topic | Land, Environmental protection effort |
| Information Type | Direct information |
| Data Custodian | Plant & Food Research |
| Information source | NA |
| Information source type | NA |
| Frequency | Ad hoc |
| Reference period | Data collected between 2002 and 2006, however information may go as far back as 1992 |
| Objectives  (what the purpose is) | The database was originally created for use in developing the Land Management Index but has been expanded for applications in the Land Use Change and Intensification and Sustainable Land Use Research Initiative FRST Programmes and elsewhere. |
| Data collected  (key variables, outputs) | Soil and land use management info for >800 sites across 7 major agricultural regions in NZ. Includes soil type and soil order, land use, location, and detailed management history information (crop/pasture type, tillage practices used, fertiliser types and rates, residue management practices, irrigation type, grazing practices etc) for at least 10 yrs proceeding each collection date. Also aligned to other data on soil properties. |
| Data access | Proprietary |
| Further information | Contact Mike Beare: [mike.beare@plantandfood.co.nz](mailto:mike.beare@plantandfood.co.nz) |

## Nationally Significant Soil Database

|  |  |
| --- | --- |
| Topic | 5. Land (cover and use) |
| Information Type | Database of soil measurements |
| Data Custodian | Ag Research Limited |
| Information source | Soil analysis data measured by NZ Labs Ltd and its predecessors from two sites. |
| Information source type | Soil analyses; pH, Olsen P, MAF QT K, MAF QT Mg, MAF QT Ca, MAF QT Na, sulphate S. Some years have also measured total C and Organic S. (Most soil samples have been retained) |
| Frequency | Mainly annually, but not always. |
| Reference period | 1952 – present; 1980 – present; 1972 – present. |
| Objectives  (what the purpose is) | To understand changes in soil fertility due to differing applications of nutrients |
| Data collected  (key variables, outputs) | Data from soil samples collected from: two long term fertiliser trial sites  Winchmore Research Station, Canterbury, South Island, New Zealand (1952 – present); Whatawhata Research Station, Waikato, North Island, New Zealand (1980 – present);  Coverage: Waikato and Canterbury, New Zealand  Key output variables:  Soil pH, Olsen phosphorus, MAF QT Potassium, MAF QT Calcium, MAF QT Sodium, MAF QT Magnesium, Sulphate sulphur, plus total C Organic and other variables at varying intervals on a site by site basis. |
| Data access | Restricted |
| Further information | Contact: Ian Power ([ian.power@agresearch.co.nz](mailto:ian.power@agresearch.co.nz)), AgResearch |

## New Zealand Land Resource Inventory (NZLRI) (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 5.Land |
| Information Type | Dataset/database of direct measurements including modelled information.  Spatial data, vector polygons, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Field work, published maps and extended legends, inventory factor descriptive bulletins, Regional Land Use Capability descriptive bulletins, booklets, brochures, scientific papers, computer generated analyses, plots and tabulations, digital data subsets. |
| Information source type | (1) Slope, erosion, vegetation and land use capability - from air photos and fieldwork. (2) Rock, soil - adapted from existing surveys, air photos, and field work. (3) Stock carrying capacity - compiled in conjunction with Ministry of Agriculture and Fisheries. (4) Exotic forest suitability - compiled in conjunction with New Zealand Forest Service (Now Scion) and private companies. (5) Phosphate requirements - modelled using Cornforth - Sinclair Phosphate model. |
| Frequency | One off across NZ but data collected over a number of years, with some regions updated once (see below) |
| Reference period | Date of field work 1973-1979 (1st Ed, national), 1981-83 (2nd Ed N Waikato), 1984-1987 (2nd Ed, Northland), 1988-92 (2nd Ed, Wellington), XXXX (2nd Ed Marlborough). Vegetation and erosion most transient of the factors mapped. |

*Continued overleaf...*

|  |  |
| --- | --- |
| Objectives  (what the purpose is) | A national physical resource inventory designed for the promotion of sustainable land use. The New Zealand Land Resource Inventory (NZLRI) is a multi-factor compilation of information about land resources, derived from a re-interpretation of available single factor information, air photo interpretation and limited field work. It shows the distribution of the mapped factors at the time of compilation (1973 through to 1980's) within constraints imposed by the classifications, scale, and time-frames. |
| Data collected  (key variables, outputs) | National coverage including Stewart Island. Data recorded for 100, 000 polygons. Second edition mapped to 1:50 000 scale. Data available in ESRI shapefile format in New Zealand Map Grid or New Zealand Transverse Mercator projection. Data comprises an inventory of five physical factors including: rock type, soil unit, slope, erosion (type and degree) and vegetation cover, using a multi-factor homogeneous unit area approach, and a land use capability assessment which is an interpretation of inventory factors for the capability of land to sustain production. The NZLRI is also used as a database repository for soil survey data (soil names, boundaries and attributes) for stand-alone district and local soil surveys which have not been integrated in the NZLRI digital database. |
| Data access | Data access changed recently July 1st 2009 to be unrestricted to users. It is a nationally significant database as identified by FRST. |
| Further information | Contact: Peter Newsome [Newsomep@landcareresearch.co.nz](mailto:Newsomep@landcareresearch.co.nz) |

## Forest Service Mapping Series 6 (FSMS6), and Indigenous Forest Class

|  |  |
| --- | --- |
| Topic | 5.Land  9. Ecosystems and Biodiversity |
| Information Type | Dataset/database of direct measurements including modelled information.  Spatial data, vector polygon data, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Compiled initially within New Zealand Forest Service. Aerial photographs 1948 to 1955 supplemented by ground truthing and National Forest Survey and Ecosurvey plots, were used to determine forest class boundaries. These then transferred to topographic maps. Most maps were completed by the NZ Forest Service, with final ones by the Ministry of Forestry and Landcare Research |
| Information source type | Forest vegetation records, aerial photography, National Forest survey and Ecosurvey plots |
| Frequency | One off |
| Reference period | 1948 to 1987 |
| Objectives  (what the purpose is) | Spatial database describing forest composition and the dataset provides spatial information of the distribution of indigenous vegetation for the North Island, South Island, and Stewart Island. |
| Data collected  (key variables, outputs) | Indigenous forest vegetation distribution for New Zealand, including North, South, and Stewart Islands. There are 18 forest classes described in the FSMS6 map series. These are Kauri, Kauri-softwoods-hardwoods, Kauri-softwoods-hardwoods-beeches, Softwoods, Rimu-Matai-hardwoods, Rimu-Taraire-Tawa, Rimu-Tawa, Rimu-general hardwoods, Lowland steepland and highland softwoods-hardwoods, Rimu-Tawa-Beeches, Rimu-General hardwoods-beeches, Highland softwood-beeches, Taraire-Tawa, Tawa, General hardwoods, Tawa beeches, General hardwoods-Beeches, Beeches, and the data also has IPCC Class Definitions C- Conifer, B- Broadleaf, M-Mixed. |
| Data access | Licence agreement needed, restricted data to private good agencies, unrestricted access to published material for internal use only, and no access to third party organisations. |
| Further information | Contact: Mark Smale [SmaleM@landcareresearch.co.nz](mailto:SmaleM@landcareresearch.co.nz) |

## Predicted Potential Natural Vegetation of New Zealand

|  |  |
| --- | --- |
| Topic | 5.Land  9. Ecosystems and biodiversity |
| Information Type | Derived statistics.  Spatial data, grid 100m resolution, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Derived from National Forest surveys, Land Environments of New Zealand (LENZ) climate data, Land Resource Inventory (LRI) soil drainage data |
| Information source type | Dataset/database of direct measurements |
| Frequency | One off |
| Reference period | 2003, but based on data from a range of years since 1940s |
| Objectives  (what the purpose is) | Knowledge of New Zealand’s historic biodiversity assets is an essential pre-requisite for understanding and managing the value of our surviving indigenous ecosystems. It is particularly important in highly modified landscapes, where it provides a context for assessing the conservation value of surviving forest remnants, or can guide the setting of realistic objectives in ecosystem restoration projects. Prediction of the potential composition of New Zealand's forests was achieved using multiple regression models to couple an extensive set of plot based descriptions of current forest composition with functionally based environmental predictors |
| Data collected  (key variables, outputs) | National coverage of predicted pre-human vegetation for New Zealand, available in ESRI 100m grid and shapefile, NZMG projection, 24 vegetation classes are represented, these include 1; Kauri/northern broadleaved forest, 2; Rimu/tawa-kamahi forest, 3; Kahikatea-pukatea-tawa forest, 4; Matai-kahikatea-totara forest, 5; Kahikatea-matai/tawa-mahoe forest, 6; Matai-totara-kahikatea-rimu/broadleaf-fuchsia forest, 7; Hall’s totara/broadleaf forest, 8; Hall’s totara/silver beech–kamahi–southern rata forest, 9; Hall’s totara-miro-rimu/kamahi-silver beech-southern rata forest, 10; Hall’s totara-miro/kamahi-southern rata-broadleaf forest, 11; Kahikatea-totara forest, 12; Rimu-miro/kamahi-red beech-hard beech forest, 13; Rimu-miro/tawari-red beech-kamahi-tawa forest, 14; Rimu-matai-miro-totara/kamahi forest, 15; Rimu-miro-totara/kamahi forest, 16; Silver beech forest, 17; Red beech-silver beech forest, 18; Black/mountain beech-red beech forest, 19; Mountain beech forest, 20; Matai-totara/black/mountain beech forest, 21; Scrub, tussock-grassland, and herbfield above treeline, 22; Low forest, woodland and shrubland below treeline, 23; Wetland, 24; Dunelands |
| Data access | Restricted only to cost of supply. Data is available from <http://www.landcareresearch.co.nz/databases/LENZ/products_poster.asp> |
| Further information | Contact: Craig Briggs [Briggsc@landcareresearch.co.nz](mailto:Briggsc@landcareresearch.co.nz) <http://www.landcareresearch.co.nz/databases/LENZ/products_poster.asp> |

## Vegetation Cover Map of NZ

|  |  |
| --- | --- |
| Topic | 5.Land  9. Ecosystems and Biodiversity |
| Information Type | Derived statistics.  Spatial data, vector polygon data, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research NZ Ltd |
| Information source | Existing source maps, surveys, and reports. |
| Information source type | Existing maps, surveys, and field checking, the primary source the Land Resource Inventory (LRI) using vegetation as one of the five physical factors recorded. |
| Frequency | One off |
| Reference period | Date of field work 1981-1987 |
| Objectives  (what the purpose is) | A database constructed from a national vegetative cover map depicting vegetation in terms of broad structural groups, communities and selected components, for regional and national level applications of vegetation cover and land use, e.g. regional planning . |
| Data collected  (key variables, outputs) | Geographic extent - New Zealand. The dataset has three levels of classification, the vegetative cover group, vegetative cover class, and the vegetative cover element. There are 47 vegetative cover classes, 17 cover elements, and 8 Vegetative cover groups. The vegetative cover groups are Cropland, Grassland, Grassland-scrub, Scrub, Grassland-forest, Forest-scrub, Forest, Miscellaneous. The spatial dataset is in New Zealand Map Grid (NZMG) projection, nominal scale 1:1,000,000, but compiled on Infomap 262 1:250,000 sheets |
| Data access | Data accessed through data custodian, Peter Newsome. |
| Further information | Contact: Peter Newsome [Newsomep@landcareresearch.co.nz](mailto:Newsomep@landcareresearch.co.nz) Reference: The Vegetative Cover of New Zealand, P F J Newsome, 1987, Water and Soil Miscellaneous Publication No.112, 1987, 153p, . Wellington New Zealand. |

## EcoSat

|  |  |
| --- | --- |
| Topic | 5.Land  9. Ecosystems and Biodiversity |
| Information Type | Dataset/database of direct measurements including modelled information.  Spatial data, grid data 15m resolution, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Multi-spectral satellite imagery Landsat ETM+ data, digital elevation model (DEM), New Zealand Land Resource Inventory (NZLRI), vegetation cover maps, and NVS data. |
| Information source type | Database/dataset of direct measurements including modelled data |
| Frequency | One off |
| Reference period | 2004 to present |
| Objectives  (what the purpose is) | Ecosat is a series of 1:50,000 scale landscape image products based on layers of land and and cover based information. |
| Data collected  (key variables, outputs) | Ortho-rectified imagery, standardised spectral reflectance, woody vegetation layer, basic land cover (15 classes), ecosystem energy absorbtion, water courses and riparian vegetation, indigenous forest composition, and wetlands, all to 15m resolution. |
| Data access | Contact data custodian for access |
| Further information | Contact: John Dymond [Dymondj@landcareresearch.co.nz](mailto:Dymondj@landcareresearch.co.nz) [Sheppardj@landcareresearch.co.nz](mailto:Sheppardj@landcareresearch.co.nz) [Ausseila@landcareresearch.co.nz](mailto:Ausseila@landcareresearch.co.nz)  <http://www.landcareresearch.co.nz/services/informatics/ecosat/about.asp> |

## National Soils Database (NSD) (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 5.Land |
| Information Type | Dataset/database of direct measurements including modelled information.  Integrated database. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Data originates from soil surveys, research projects and accompanying laboratory analysis, some soil surveys data back to 1930 to present. |
| Information source type | Soil data, database, electronically generated reports. The NSD is a relational database consisting of 11 related tables that together form a detailed record of landscape setting, morphological descriptions and analytical properties of generally representative New Zealand soil profiles. |
| Frequency | Ad hoc |
| Reference period | 1930 to present |
| Objectives  (what the purpose is) | A record of the landscape setting, morphological description and analytical properties of representative New Zealand soil properties. The soil surveys were initially carried out by the New Zealand Soil Bureau because of the importance of agriculture to the New Zealand economy and the need to understand the capabilities and limitations of soils on which agriculture depended.  Data is applied to land use research, planning and decision making where soil type has important implications, eg, drainage and irrigation systems, fertiliser regimes, and erosion risk. It is also increasingly used for ecosystem research and management.  The database is a collection of location referenced soil descriptions, site descriptions, and chemical, physical and mineralogical analyses for about 1500 New Zealand soils. |
| Data collected  (key variables, outputs) | National coverage, data is in the form of a relational database, soil surveys, research projects and laboratory analysis data. Data covers soil profile descriptions, and chemical, physical and mineralogical characteristics.  Point data can be linked with other databases for spatial use, e.g. New Zealand Land Resource Inventory (LRI). |
| Data access | <http://soils.landcareresearch.co.nz>. Check with custodian regarding current data access. |
| Further information | Contact: Janice Willoughby [Willoughbyj@landcareresearch.co.nz](mailto:Willoughbyj@landcareresearch.co.nz) Peter Newsome [NewsomeP@landcareresearch.co.nz](mailto:NewsomeP@landcareresearch.co.nz) |

## Protected Areas Network - New Zealand (PAN-NZ)

|  |  |
| --- | --- |
| Topic | 5.Land |
| Information Type | Database of direct measurements.  Spatial data, vector polygon data, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Nga Whenua Rahui, Department of Conservation - conservation estate, Nature Heritage Fund, Queen Elizabeth II (QEII) National Trust covenanted land, Regional Councils where available |
| Information source type | Includes for information on source of data, and size (hectares) of protected area. |
| Frequency | Biennially |
| Reference period | 2000 - present |
| Objectives  (what the purpose is) | To establish a national wide spatial database of protected areas throughout New Zealand to aid in the protection of New Zealands biodiversity and conservation. |
| Data collected  (key variables, outputs) | Spatial datasets from organisations including Nga Whenua Rahui, Department of Conservation - conservation estate, Nature Heritage Fund, Queen Elizabeth II (QEII) National Trust convenanted land, Regional Councils where available, for year period 2000 until present. Data format is ESRI shapefile. Dataset includes for all of New Zealand. |
| Data access | Non restrictive, but need agreement from information sources for use. |
| Further information | Contact: Daniel Rutledge [Rutledged@landcareresearch.co.nz](mailto:Rutledged@landcareresearch.co.nz) [Briggsc@landcareresearch.co.nz](mailto:Briggsc@landcareresearch.co.nz) [Pricer@landcareresearch.co.nz](mailto:Pricer@landcareresearch.co.nz) |

## Soil Fundamental Data Layers (FDLs)

|  |  |
| --- | --- |
| Topic | 5.Land |
| Information Type | Database of direct measurements.  Integrated database.  Spatial data, vector point data, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research NZ Ltd |
| Information source | Data originates from soil surveys, research projects and accompanying laboratory analysis. |
| Information source type | Database, reports, and laboratory analysis |
| Frequency | Ad hoc |
| Reference period | Unknown |
| Objectives  (what the purpose is) | Fundamental data layers (FDLs) contain spatial information for 16 key soil attributes. FDLs are particularly useful in computer modelling and have enabled researchers and resource management decision makers to make the most of GIS technology for soil and land resource research and assessments. |
| Data collected  (key variables, outputs) | The data is based around 16 key attributes in three groups: soil fertility/toxicity, soil physical properties particularly those related to soil moisture, and topography or climate. Attributes are slope, potential rooting depth, topsoil gravel content, proportion of rock outcrop, pH, salinity, cation exchange capacity, total carbon, phosphorus retention, flood interval, soil temperature, total profile available water, profile readily available water, drainage, and macropores (shallow and deep).  (Data is linked to soil polygons in the NZLRI.) |
| Data access | <http://soils.landcareresearch.co.nz>. Check with custodian regarding current data access. Data linked to soil polygons in the NZLRI. |
| Further information | Contact: Janice Willoughby [Willoughbyj@landcareresearch.co.nz](mailto:Willoughbyj@landcareresearch.co.nz) Peter Newsome [NewsomeP@landcareresearch.co.nz](mailto:NewsomeP@landcareresearch.co.nz) Website: <http://soils.landcareresearch.co.nz> |

## Underlying Data Layers - Land Environments of New Zealand (LENZ)

|  |  |
| --- | --- |
| Topic | 5.Land |
| Information Type | Dataset/database of direct measurements including modelled information.  Spatial data, grid data 100m resolution, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research NZ Ltd |
| Information source | Meteorological Service climate data, Land Resource Inventory (LRI). |
| Information source type | Underlying climate and soil layers used to derive the Land Environments of New Zealand (LENZ) classification data layers. |
| Frequency | One off |
| Reference period | 01/12/2002 |
| Objectives  (what the purpose is) | Land Environments of New Zealand (LENZ) is a classification of fifteen climate, landform, and soil variables chosen for their relevance to biological distributions. Classification groups were derived by automatic classification using a multivariate procedure. Four levels of classification detail have been produced from this analysis, containing 20,100,200 and 500 groups respectively. |
| Data collected  (key variables, outputs) | Mean annual temperature, mean minimum temperature of the coldest month (July), mean annual solar radiation, winter solar radiation, October vapour pressure deficit, annual water deficit and monthly water balance ratio, slope layer, soil drainage, soil parent materia, soil acid soluble phosphorous classes, soil exchangeable calcium classes, soil induration classes, soil particle size, soil age class, and soil chemical limitations to plant growth. |
| Data access | Contact data custodian |
| Further information | Contact: Craig Briggs [Briggsc@landcareresearch.co.nz](mailto:Briggsc@landcareresearch.co.nz) Robbie Price [Pricer@landcareresearch.co.nz](mailto:Pricer@landcareresearch.co.nz)  Leathwick et al. 2003. LENZ Technical Guide, Ministry for the Environment. |

# Materials and Waste

## Survey of Territorial Authorities and Regional Councils on their waste activities

|  |  |
| --- | --- |
| Topic | 6. Materials and waste |
| Information Type | Direct survey |
| Data Custodian | Ministry for the Environment |
| Collection unit | All 73 territorial authorities and 13 regional councils |
| Coverage | National |
| Frequency | One off survey. However the Ministry for the Environment intends to redo the survey in 2011 and then every 3 years |
| Reference period | 2006 |
| Objectives  (what the purpose is) | To obtain information from Territorial Authorities and Regional Councils about their waste activities. Questions included things like:   * Types of materials/recyclables collected by local authorities * Quantities of materials diverted * Access to services * Hazardous waste management   Information was used in the review of progress against the New Zealand Waste Strategy. |
| Data collected  (key variables, outputs) | tonnes of material diverted  % of community with access to kerbside recycling |
| Data access | Report available:  <http://www.mfe.govt.nz/publications/waste/waste-strategy-review-progress-mar07/index.html> |
| Further information |  |

## National Landfill Census

|  |  |
| --- | --- |
| Topic | 6. Materials and waste |
| Information Type | Census |
| Data Custodian | Ministry for the Environment |
| Collection Unit | Landfill operators |
| Coverage | 60 Landfill operators in 2006 |
| Frequency | 1995, 1998 and 2006 |
| Reference period | 1995-2006 |
| Objectives  (what the purpose is) | Used to provide information on landfill operations in New Zealand |
| Data collected  (key variables, outputs) | * Landfill siting – low permeability underlying material * Landfill design – leachate prevention/collection/treatment, gas treatment * Landfill operation – quantifying waste, disposal charges, hazardous waste acceptance/documentation |
| Data access | Latest report available <http://www.mfe.govt.nz/publications/waste/2006-07-national-landfill-census-oct07/index.html> |
| Further information |  |

## SWAP Baseline programme

|  |  |
| --- | --- |
| Topic | 6 Materials and waste |
| Information Type | Database of direct measurements |
| Data Custodian | Ministry for the environment |
| Information source | NA |
| Information source type | NA |
| Frequency | Regularly updated over the 2002 – 2004 period; resurveyed in 2007/08 |
| Reference period | 2002–2008 (additional information available for the period 1995-2002) |
| Objectives  (what the purpose is) | The Ministry for the Environment has instituted a [Solid Waste Analysis Protocol](http://www.mfe.govt.nz/publications/waste/solid-waste-analysis-mar02/index.html) (SWAP) Baseline Programme to provide solid waste composition information at four indicator sites from around New Zealand. The objective of the programme is to establish generic waste composition data for New Zealand and to provide a basis for designing and interpreting SWAP surveys throughout New Zealand.  The indicator sites to date are:   * Silverstream Landfill - Hutt City Council * Green Island Landfill - Dunedin City Council * Matamata Transfer Station - Matamata Piako District Council * Kaikoura Landfill - Innovative Waste Kaikoura/Kaikoura District Council   In addition to the SWAP Baseline data from the four indicator sites, SWAP data has been made available to the Ministry from:   * Wellington City Council SWAP survey programme, two SWAP surveys at the Northern and Southern landfills, survey of rubbish bag and wheelie bin collections and recycling collection system (survey dates August 2002 and February 2003) * Gisborne District Council - annual survey programme * Westland District Council - annual survey programme * Marlborough District Council |
| Data collected  (key variables, outputs) | * Waste composition by type (12 primary SWAP categories) * Seasonal variation of waste composition * Annual variation of waste composition * Waste composition by rural vs urban landfill * Waste composition by location * Waste composition by activity source |
| Data access | Key information is available in a downloadable format, see link below. |
| Further information | <http://www.mfe.govt.nz/issues/waste/waste-data/swap-baseline.html> |

## Intractable Agricultural Chemicals in New Zealand

|  |  |
| --- | --- |
| Topic | 6 Materials and waste |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | 2002 estimate prepared for MfE by Tredi NZ Ltd  revised estimate based on council information and the 2003–2005 rural agricultural chemical collection programme |
| Information source type | Administrative records |
| Frequency | Ad hoc |
| Reference period | Information exists for the period 2002–2006 |
| Objectives  (what the purpose is) | To determine volume of agricultural chemicals on farms in regions of New Zealand. This data was used to assess the need for Ministry-regional council run agricultural chemical programme to remove unwanted, obsolete agricultural chemicals from rural properties. The rural agricultural chemical collection programme has been used to produce an updated estimate of the volumes of chemicals remaining in New Zealand. |
| Data collected  (key variables, outputs) | * Volume of agricultural chemicals on farms in regions. * Volume of chemicals collected and exported as part of the rural agricultural chemical collection programme |
| Data access | The report is available from the Ministry for the Environments website |
| Further information | <http://www.mfe.govt.nz/publications/hazardous/intractable-agricultural-chemicals-feb06/html/index.html> |

## Electrical and Electronic Equipment Disposal Survey

|  |  |
| --- | --- |
| Topic | 6. Materials and waste |
| Information Type | Telephone survey by UMR |
| Data Custodian | Ministry for the Environment |
| Collection Unit | Individuals (18 years and over) |
| Coverage | 750 Individuals in New Zealand |
| Frequency | One off |
| Reference period | 2006 |
| Objectives  (what the purpose is) | The Ministry for the Environment commissioned two surveys, to give us more information about electrical and electronic equipment and how New Zealanders deal with them at the end of the product life cycle. The results were used in our work with the computer and television industry to help them take responsibility for the environmentally friendly disposal of waste electrical and electronic equipment. |
| Data collected  (key variables, outputs) | The broad objectives of the research were to determine:   * whether households are willing to pay for the safe disposal of electronic and electrical items * how much households are willing to pay * the preferred timing of any fee (at time of disposal or when purchasing a new item) * preferences for collection options |
| Data access | The report of the survey findings is available at:  <http://www.mfe.govt.nz/publications/waste/eee-disposal-apr06/index.html> |
| Further information | See above or email: [information@mfe.govt.nz](mailto:information@mfe.govt.nz) |

## The New Zealand Wastewater Information Database

|  |  |
| --- | --- |
| Topic | 6 Materials and waste |
| Information Type | Database |
| Data Custodian | New Zealand Water and Waste Association |
| Information source | Database updated annually by territorial authorities via the website [www.winfo.org.nz](http://www.winfo.org.nz) |
| Information source type | Administrative records |
| Frequency | Annual, or more frequently depending on council |
| Reference period | Began in 2005/2006, data collected is current |
| Objectives  (what the purpose is) | To gather information on wastewater treatment in New Zealand |
| Data collected  (key variables, outputs) | Data on a number of areas of wastewater treatment including volume treated, population served, treatment processes used, effluent quality |
| Data access | via the website [www.winfo.org.nz](http://www.winfo.org.nz) |
| Further information | For more information regarding the WINFO database, Please contact: Jeff Page  ([Jeff.page@mfe.govt.nz](mailto:Jeff.page@mfe.govt.nz)) |

## WasteTRACK

|  |  |
| --- | --- |
| Topic | 6 Materials and waste |
| Information Type | Internet based database |
| Data Custodian | Ministry for the Environment |
| Information source | Direct updates from industry |
| Information source type | Administrative records |
| Frequency | Updated daily |
| Reference period | March 2006 to current |
| Objectives  (what the purpose is) | WasteTRACK is an internet based database which consolidates manifest, facility and carrier data to track liquid and hazardous wastes from generation, through transport to treatment or disposal. WasteTRACK is administered under contract to the Ministry for the Environment and is available to those businesses that are operating in accordance with the Liquid and Hazardous Waste Code of Practice or are required to use it to meet council requirements. |
| Data collected  (key variables, outputs) | Data can be used to identify where waste is generated and by who, where it is transported and where it is treated and/or disposed of |
| Data access | Built into the operating system are significant degrees of access control. This ensures that any one waste contractor for instance cannot access data of another contractor or data for waste generators not assigned to their business. Confidentiality is therefore assured for all parties using WasteTRACK. Within each business there are different levels of access with managers allowed full access to their information, while other staff such as administrative staff and drivers, have restricted access. |
| Further information | <http://www.wastetrack.co.nz/default.asp?id=1> |

## Non-Municipal and Organic Waste Operators Census

|  |  |
| --- | --- |
| Topic | 6. Materials and waste |
| Information Type | Census |
| Data Custodian | Ministry for the Environment |
| Collection unit | Cleanfill and compost facility operators |
| Coverage | National |
| Units surveyed | All 73 territorial authorities and 13 regional councils, and subsequently all cleanfills and compost facilities identified through councils. |
| Frequency | One off survey. |
| Reference period | 2008 |
| Objectives  (what the purpose is) | To generate an up to date and accurate picture of number, location and particulars of non-municipal solid waste disposal sites (cleanfills) and organic waste processing (composting) facilities in New Zealand. Municipal Waste disposal sites have been excluded as these are already well documented. |
| Data collected  (key variables, outputs) | * The Resource Management Act controls for cleanfills, other non municipal waste disposal sites and organic waste processing sites around New Zealand * An estimate of the number of non municipal waste disposal sites * An estimate of the quantity of material disposed of at non municipal waste disposal sites * An estimate of the number of organic waste processing operations * An estimate of the quantity of organic waste handled by the sites identified |
| Data access | Freely disseminated, contact MfE for more information |
| Further information | Cleanfills – [david.wilson@mfe.govt.nz](mailto:david.wilson@mfe.govt.nz)  Composting – [ken.bouma@mfe.govt.nz](mailto:ken.bouma@mfe.govt.nz) |

# Energy

## Vehicle Fleet Statistics

|  |  |
| --- | --- |
| Topic | 7. Energy, also 1. Climate change, 2. Atmosphere |
| Information Type | Report |
| Data Custodian | Ministry of Transport |
| Information source | Motor vehicle register, Road user charges |
| Information source type | Administrative data |
| Frequency | There is a full annual report with quarterly updates |
| Reference period | 2000 - 2008 |
| Objectives  (what the purpose is) | The statistics presented in this publication have been categorised differently to the traditional Motor Vehicle statistics produced by the Transport Registry Centre of the New Zealand Transport Authority (NZTA). The objective was to produce a categorisation better suited to estimation of fuel use and levels of emissions. |
| Data collected  (key variables, outputs) | Fleet composition, turnover, travel and energy efficiency trends |
| Data access | Available on the Ministry of Transport website |
| Further information | <http://www.transport.govt.nz/research/NewZealandVehicleFleetStatistics/>  <http://www.transport.govt.nz/research-2/> |

## New Zealand Ongoing Household Travel Survey

|  |  |
| --- | --- |
| Topic | 7. Energy,  1. Climate change,  2. Atmosphere |
| Information Type | Survey |
| Data Custodian | Ministry of Transport |
| Information Source | 2800 households per annum approached; full data obtained from approx 4500 people per year. From 2009, sample size increased to 4600 households per year. |
| Information Source Type | Households |
| Frequency | Survey is continuous; data updates published annually based on most recent 4-year dataset. |
| Reference period | As far back as 1989 |
| Objectives  (what the purpose is) | To measure household travel, primarily travel on public roads, including mode, purpose, distance, duration and time of day of travel. Travel data can be tabulated by demographics and household characteristics. |
| Data collected  (key variables, outputs) | Distance and duration of travel by travel mode, travel purpose/ destination type, time of day of travel, age and gender, number of passengers carried in driver trips, vehicle type, fuel type.  Survey produces estimates of cycling and walking activity; provides a basis for monitoring trends in mode share; estimates of vehicle occupancy. |
| Data access | Available on the Ministry of Transport website |
| Further information | <http://www.transport.govt.nz/research/LatestResults/>  <http://www.transport.govt.nz/research/TravelSurvey/> |

## Energy and the Economy

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Environmental and Economic Account |
| Data Custodian | Statistics New Zealand |
| Information source | •MED’s Energy Data File – page NN  •EECA’s Energy End Use Database – page NN  •StatNZ's quarterly GDP  •StatsNZ population estimates |
| Information source type | •MED’s Energy Data File – Report  •EECA’s Energy End Use Database – Database of modelled information  •StatNZ's quarterly GDP – Statistical dataset  •StatsNZ population estimates – Statistical dataset based on the Census of Population and Dwellings |
| Frequency | TBD, Previously annually |
| Reference period | 1997-2006 |
| Objectives  (what the purpose is) | To identify where and how efficiently energy is being used in New Zealand’s economy |
| Data collected  (key variables, outputs) | Energy end use in petajoules by industrial activity (including households) and energy type. |
| Data access | Published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/analytical-reports/energy-and-the-economy-1997-2006.htm> |

## Centralised Dataset (Transmission)

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Database |
| Data Custodian | Electricity Commission |
| Information source | Data from systems operators |
| Information source type | NA |
| Frequency | Varies – 6 months for published DDs, monthly on the Commission website for ‘raw’ data |
| Reference period | Since 1986 |
| Objectives  (what the purpose is) | The Commission is required to establish, maintain, and publish a Centralised Dataset (CDS) under Part F of the Electricity Governance Rules. The purpose of the centralised Dataset is to support efficient planning processes by ensuring the collection and maintenance of historical information required to make decisions on transmission and transmission alternatives. The Dataset is freely available upon request and contains a wide range of data of interest to market participants. |
| Data collected  (key variables, outputs) | Half - Hourly Data  Meter data   * HVDC flows * Active power by grid exit point * Reactive power by grid exit point * Generation by grid injection point   Bids and offers  Prices   * Final prices   Binding constraints  Hydrology data  [Historic hydro inflows](http://www.electricitycommission.govt.nz/opdev/modelling/centraliseddata/inflows) (New Spectra Update to end of June 2008 now available)  [Historic lake levels](http://www.electricitycommission.govt.nz/opdev/modelling/centraliseddata/hydro) (new report)  [Report discussing reconciliation of hydro inflow datasets](http://www.electricitycommission.govt.nz/opdev/modelling/centraliseddata/recon-hydro-inflow)  Network configuration data   * Transmission network   + System load flow models     - PSS/E     - DigSilent   + Line diagrams   + Circuit breaker information     - Circuit breaker ratings     - Bus fault levels |
| Data access | Email to [info@electricitycommission.govt.nz](mailto:info@electricitycommission.govt.nz) with the words “CDS registration” in the title. A simplified version is also available through a [web interface](http://www.electricitycommission.govt.nz/opdev/modelling/wip/cdswebinterface/index.html). |
| Further information | <http://www.electricitycommission.govt.nz/opdev/modelling/centraliseddata> |

## Energy Audit Database

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Database |
| Data Custodian | **Energy Efficiency and Conservation Authority (EECA)** |
| Information source | Data from Energy audits (Quick run through observed numbers) |
| Information source type | Audits |
| Frequency | Collation of key data from energy audits is ongoing |
| Reference period | Database was created around 1999, but some data may go back to 1996. |
| Objectives  (what the purpose is) | This database that captures commercially confidential information from Energy Audits. Technical processes and opportunities can be benchmarked to determine wider applicability and cost effectiveness across other businesses. |
| Data collected  (key variables, outputs) | Where and how energy is used; and from where energy use can be cost effectively saved |
| Data access | Individual company data is confidential but the aggregate level information could be requested |
| Further information | <http://www.med.govt.nz/templates/MultipageDocumentPage____39777.aspx> |

## Energy Efficiency and Renewable Energy Monitoring Process

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Report |
| Data Custodian | **Energy Efficiency and Conservation Authority (EECA)** |
| Information source | MED's Energy Data File, economy-wide and sectoral GDP from Statistics NZ, hydro data, EECA monitoring base year report, residential data from HEEP, Quotable value NZ dwellings and building areas data, various sector data sets. |
| Information source type | Reports, databases, derived statistics |
| Frequency | Annual |
| Reference period | Annually since 2001 |
| Objectives  (what the purpose is) | This report provides a detailed analysis of the performance of energy efficiency and renewable energy in a NZ- wide and a sector context. |
| Data collected  (key variables, outputs) | If you are talking about our yearly reports on energy efficiency and renewable performance then it is more of economy-wide and sector energy use information analysis showing energy efficiency and renewable energy progress and their key drivers. |
| Data access | Available upon request from [harbans.aulakh@eeca.govt.nz](mailto:harbans.aulakh@eeca.govt.nz) |
| Further information |  |

## Energy End Use Database (EEUDB)

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Database of measurements including modelled information |
| Data Custodian | EECA |
| Information source | Energy Data File, sector studies (which will gradually be replaced by energy end-user surveys recommended by the Energy Domain Plan), and Statistics NZ's GDP data to regional and TLA level. |
| Information source type | Database of direct measurements, derived statistics |
| Frequency | Updated periodically -- currently undergoing update to March 2007 data series (last done in 2004). |
| Reference period | For the year ending March 2002 |
| Objectives  (what the purpose is) | Provide basic data to support NZ efforts to improve energy efficiency. Results are based on an economy wide top down energy end-use model |
| Data collected  (key variables, outputs) | Energy use split by:  11 fuels,  32 sectors,  20 end uses,  25 technologies,  And by all local authority geographical areas |
| Data access | Available here: <http://enduse.eeca.govt.nz/> |
| Further information |  |

## IEA Energy Supply and Demand Allocation Trends Template

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Very detailed set of macro-economic and sectoral data we compile from different sources including energy demand and supply data from EDF (MED Publication; energy end-use data from EECA's End-Use Database; GDP, population, dwellings number from Stats New Zealand; floor area pure estimates or modelled |
| Data Custodian | EECA |
| Information source | EECA Energy End Use Database, MED's Energy Data File and Statistics NZ's data on population, dwellings, employment, and home occupancy. |
| Information source type | Reports, databases, derived statistics |
| Frequency | Annual |
| Reference period | 1990 + |
| Objectives  (what the purpose is) | To log NZ energy consumption and output data within an internationally consistent template and benchmark key energy indicators against international trends. |
| Data collected  (key variables, outputs) | Macro and sector level activity data e.g. GDP, population, physical quantity output; energy supply sources; energy demand by sector, sub sector, end-uses  The aim here is to compile energy efficiency indicators, energy reduction potential. As you will see from the attached file it computes and illustrates a set of such indicators  Coverage and collections unit:  Economy-wide, 5 sectors, sub sectors, end-use. The units are both economic and physical. |
| Data access | Available upon request from [harbans.aulakh@eeca.govt.nz](mailto:harbans.aulakh@eeca.govt.nz) |
| Further information |  |

## Regional Renewable Energy Resource Assessment (RRERA)

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Report |
| Data Custodian | EECA |
| Information source | Available historical and potential renewable energy data, hydro and wind energy data, marine energy technology data from New And Renewable Energy Centre, Sinclair Knight Merz's best estimates and data from councils and generation companies. |
| Information source type | Reports |
| Frequency | Ad hoc |
| Reference period | 2006, coverage varies: some data goes back to 1971 |
| Objectives  (what the purpose is) | To assist regional councils with their policy and plan reviews and their new infrastructure responsibilities for renewable energy under the RMA by outlining the availability and distribution of renewable energy resources by region.  13 of 16 Regional Councils' have had RRERAs' done. West Coast, Hawke's Bay and Nelson City remain |
| Data collected  (key variables, outputs) | Information around renewable energy resources:  Wind, Solar, Biomass, Geothermal, Marine  Includes research on energy potential, current trends, technology |
| Data access | [August 2006 report: http://www.eeca.govt.nz/node/2940](August%202006%20report:%20http://www.eeca.govt.nz/node/2940) |
| Further information | EECA website |

## Sector Studies

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Reports and Database |
| Data Custodian | **Energy Efficiency and Conservation Authority (EECA)** |
| Information source | Sub-sectoral energy end-use by activity |
| Information source type | More of sector level energy use information, assessment of energy savings potential and the factors affecting energy use growth |
| Frequency | Mostly one-off initiated as per Energy Statistics Review Recommendations 1996 and now Energy Statistics Domain Plan |
| Reference period | Has not been done for the past few years, focus is on getting EDP Stats energy use surveys underway. |
| Objectives  (what the purpose is) | Investigate and identify the energy end-use activities, energy consumptions and energy efficiency potentials of particular sectors.  Previous studies are listed below.   * Farming – focus on dairy * Commercial Accommodation * Banking Local Government * Meat Processing * Forestry * Metal Processing * Small and Medium Enterprises * Heavy Vehicle Fleet * Light Vehicle Fleet |
| Data collected  (key variables, outputs) | Energy intensity indicators |
| Data access | Public good, contact EECA for more information |
| Further information | [harbans.aulakh@eeca.govt.nz](mailto:harbans.aulakh@eeca.govt.nz) |

## Energy Statistics

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Statistical Reports and datasets |
| Data Custodian | Ministry of Economic Development |
| Information source | Surveys and data collected by MED and Statistics NZ |
| Information source type | Surveys, datasets |
| Frequency | Mostly annual data series beginning in the 1970's and continuing to the present. Some more recent data is quarterly. |
| Reference period | Annually since 1970 |
| Objectives  (what the purpose is) | Provide a basic source of essential historical energy data for New Zealand. Meet international reporting requirements for IEA, APEC, and other international organisations.  Data are published quarterly on MED's website and each calendar year in MED's New Zealand Energy Data File publication |
| Data collected  (key variables, outputs) | Historical data on energy supply, demand, and prices for New Zealand. |
| Data access | Energy statistics available on MED website |
| Further information | <http://www.med.govt.nz/templates/StandardSummary____37.aspx> |

## Energy Greenhouse Gas Emissions Statistics

|  |  |
| --- | --- |
| Topic | 7.Energy  1.Climate Change |
| Information Type | Database |
| Data Custodian | Ministry of Economic Development |
| Information source | Surveys and data collected by MED and Statistics NZ |
| Information source type | Surveys |
| Frequency | The database is updated annually and published each August as *New Zealand Energy Greenhouse Gas* *Emissions*. Data is used in the preparation of MfE's *Projected Balance of Emissions Units During the First*  *Commitment Period of the Kyoto Protocol,* published each May. |
| Reference period | Mostly annual data series beginning in 1990 and continuing to the present. |
| Objectives  (what the purpose is) | Provide a basic source of essential historical energy greenhouse gas emissions data for New Zealand. Meet international reporting requirements for IEA, APEC, and other international organizations. Results are published annually in MED’s *New Zealand’s Energy Greenhouse* *Gas Emissions.* |
| Data collected  (key variables, outputs) | Historical data on greenhouse gas emissions by gas and sector. |
| Data access | Available on MED website |
| Further information | <http://www.med.govt.nz/energy/ghg/2007/> |

## Manufacturing Energy Use Survey

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Dataset |
| Data Custodian | Statistics New Zealand |
| Information source | Postal Survey sent to manufacturing sites. |
| Information source type | Survey |
| Frequency | This was a one-off; however, it has paved the way for a whole economy project, stated in 2008, called the New Zealand Energy Use Survey (NZEUS). NZEUS will be carried out on a 4-5 year cycle. |
| Reference period | Year ended March 2006 |
| Objectives  (what the purpose is) | Collected energy use by fuel type from the manufacturing sector for the year ended in March 2006. The results of this survey a freely available from the web. |
| Data collected  (key variables, outputs) | Information on energy use (energy type use) and energy management practices in the manufacturing industry. |
| Data access | [Latest Release of Manufacturing Energy Use Survey](http://www.stats.govt.nz/browse_for_stats/environment/manufacturing_energy_use/ManufacturingEnergyUseSurvey_HOTPYeMar06.aspx)\_ |
| Further information | <http://www.stats.govt.nz/methods_and_services/information-releases/manufacturing-energy-use-survey.aspx> |

# Mineral Resources

## Mineral Resources of New Zealand

|  |  |
| --- | --- |
| Topic | 8 Mineral resources |
| Information Type | Integrated database |
| Data Custodian | GNS |
| Information source | Published literature, unpublished reports and databases |
| Information source type | Published literature, unpublished reports and databases |
| Frequency | GERM has not been updated since 1994. REGCHEM updated quarterly. Mining company report library available online from Crown Minerals and updated quarterly |
| Reference period | 1970-present |
| Objectives  (what the purpose is) | To provide information on New Zealand’s mineral resources and mineral potential for minerals research and exploration |
| Data collected  (key variables, outputs) | This database consists of two digital datasets and a library collection of mining company exploration reports. The individual digital databases are integrated into a Geographic Information System (GIS) and available online at http://data.gns.cri.nz/minerals/.  **Digital databases**   1. GERM - The GEological Resource Map of New Zealand is an inventory of more than 10,000 sites for mineral, rock aggregate, building stone, coal, oil, gas, thermal water, and cold-water spring occurrences, with information on their location, geology, geochemistry, exploration, production and use. The datasets are published as a 1:125 000 map series and accompanying reports. 2. REGCHEM - A compilation of REGional stream-sediment geoCHEMical analyses from open-file mining company reports, with more than 6000 sites and 30,000 elemental analyses.   **Mining Company Report Library**  More than 2000 open-file mineral exploration reports submitted under the Mining Act 1971. |
| Data access | GERM and REGCHEMM can be accessed via <http://data.gns.cri.nz/minerals/>  The Mining Company Report library is available online from Crown Minerals web site <https://data.crownminerals.govt.nz/MEDM/system/mainframe.asp> |
| Further information |  |

## National Coal Geology Database

|  |  |
| --- | --- |
| Topic | 8. Mineral resources,  7. Energy |
| Information Type | Database |
| Data Custodian | GNS |
| Information source | NA |
| Information source type | NA |
| Frequency | Currently not regularly updated. Digital data has not been updated since 1994. |
| Reference period | 1898-1994 |
| Objectives  (what the purpose is) | A comprehensive computer and paper file database of the results of coal exploration drilling programmes undertaken in New Zealand. It includes information on the locations of drillholes, coalfields, and coal mines; drillhole lithological and geophysical logs, and the results of coal analyses |
| Data collected  (key variables, outputs) | Drillhole location, date, etc  Drillhole stratigraphy  Coal thickness and depth  Coal analysis  Coal exploration reports, maps, drillhole logs and analyses |
| Data access | Data available at cost of retrieval. |
| Further information | <http://www.gns.cri.nz/store/databases/indexb.html#Coal> |

## Annual Mining Production Statistics

|  |  |
| --- | --- |
| Topic | 8 Mineral resources |
| Information Type | Database containing annual production and sales information collected from individual mine and quarry operators (Metallics/Coal/Industrial Minerals) by the Crown Minerals Group. |
| Data Custodian | Ministry of Economic Development – Crown Minerals Group |
| Information source | NA |
| Information source type | NA |
| Frequency | annually |
| Reference period | 1999 + |
| Objectives  (what the purpose is) | To identify trends in production, extraction rates, and value of the commodities sold |
| Data collected  (key variables, outputs) | Commodity, Region, Quantity of commodity extracted, quantity of commodity sold, value of commodity sold,  Information is collected from all holders of a minerals or coal mining privilege with the Crown (statutory requirement to report), and all those mines or quarries operating in privately owned minerals or coal (voluntary). |
| Data access | Available here: [New Zealand Long Term Data Series (LTDS)](http://www.stats.govt.nz/methods_and_services/access-data/tables/long-term-data-series/~/media/Statistics/Methods%20and%20Services/Tables/Long-term%20data%20series/I%20Production/table-i3-2.ashx) |
| Further information |  |

## Annual Prospecting and Exploration Expenditure Statistics

|  |  |
| --- | --- |
| Topic | 8 Mineral resources |
| Information Type | Derived Statistics |
| Data Custodian | Ministry of Economic Development – Crown Minerals Group |
| Information source | Industry-wide survey (Variations in yearly production may be due to information not being supplied during the survey period) |
| Information source type | Survey |
| Frequency | Annual (1 April – 31 March) |
| Reference period | Annually since 1970, latest done in 2008 |
| Objectives  (what the purpose is) | To identify costs associated with prospecting and exploration activities with the Crown Mineral Estate, including a breakdown into the following categories:  **Prospecting and exploration expenditure**  Includes all expenditure on prospecting and exploration activities within permits, other than expenditure on consents and agreements, legal fees, the purchase of plant and equipment, office and administrative expenses, or the amount of any fees related to the permit.  **Consents and agreements expenditure**  Includes expenditure on legal fees in obtaining and maintaining access arrangements and resource consents relating to prospecting and exploration.  **Other expenditure**  Includes expenditure on plant and equipment, office and administrative expenses, fees, restoration costs and other expenditure related to permits. |
| Data collected  (key variables, outputs) | Annual expenditure on prospecting and exploration activities by prospecting, exploration and mining permit holders.  It is a requirement in accordance with the Crown Minerals (minerals & coal) Regulations to supply this information which is then collated by the Crown Minerals Group. |
| Data access | Crown Minerals website |
| Further information | <http://www.crownminerals.govt.nz/cms/minerals/facts-and-figures> |

## Mineral Stock Account

|  |  |
| --- | --- |
| Topic | 8 Mineral resources |
| Information Type | Report |
| Data Custodian | Statistics New Zealand |
| Information source | Monetary data from Statistics New Zealand’s National Accounts. The Crown Minerals website and from Statistics New Zealand’s Official Yearbooks.  Physical data from the GNS report “The mineral Potential of New Zealand” (Christie and Braithwaite, 1999), the Ministry of Commerce report “Mineral Resources of New Zealand”. |
| Information source type | Administrative data  Derived statistics |
| Frequency | Ad-hoc |
| Reference period | 1989 – 2002 |
| Objectives  (what the purpose is) | The aim of the mineral resource accounts is to provide an overview of the existing mineral stocks, their estimated value and rates of consumption. Energy minerals such as coal, oil and natural gas are not included in this account, but are discussed in detail in the energy resource account. |
| Data collected  (key variables, outputs) | Mineral Stocks   * physical stocks * monetary stocks   Metallic minerals  Other metallic minerals  Non-metallic minerals and rocks |
| Data access | The report and its tables are available on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/Publications/NationalAccounts/environmental-accounts/minerals/interpretation-of-the-mineral-stock-account.aspx>  or email: [info@stats.govt.nz](mailto:info@stats.govt.nz) |

# Ecosystems and Biodiversity

## BioWeb Assets Project

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity |
| Information Type | Database: records of species observations |
| Data Custodian | Department of Conservation |
| Information source | NA |
| Information source type | NA |
| Frequency | Ongoing |
| Reference period | Some records from 1800s, through present. |
| Objectives  (what the purpose is) | System to allow DOC to record facts and figures on flora, fauna and archaeological sites of interest to DOC on a national basis. |
| Data collected  (key variables, outputs) | The BioWeb Assets Project currently contains the following sub applications or sub projects:   * Weeds (separate metadata entry) * Threatened Plants (separate metadata entry) * Casual observation input for any organism or place   The following sub-applications are in the process of development:   * Archaeological sites * Birds - the blue duck component and the bird banding data is operational. * Herpetofauna * Invertebrates   It is intended to also develop sub-applications for:   * Fish/aquatic life (scope to be determined) * Mammals (scope to be determined) * Wetlands |
| Data access | Memorandum of understanding required for external (to DOC) use. |
| Further information | Contact Ecosystems Management, R&D, DOC |

## PestLink

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and biodiversity |
| Information Type | Database: storage of operational Pest management Reports from around the country |
| Data Custodian | Department of Conservation |
| Information source | NA |
| Information source type | NA |
| Frequency | ongoing |
| Reference period | From 1995 onwards. Some data on island eradication goes as far back as 1915. |
| Objectives  (what the purpose is) | Allows users to find out what works and what doesn’t. Develop management histories of sites. Identify best practice, what’s happening around country, provide responses to national queries. |
| Data collected  (key variables, outputs) | Treatment Area, Pest Spp, Operators, Conservation outcomes, Targets, consultation, consents, notification, environmental effects, costs, recommendations |
| Data access | Available in-house. Memorandum of understanding required for external (to DOC) use |
| Further information | [www.doc.govt.nz](http://www.doc.govt.nz) |

## Biodiversity Data Inventory

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and biodiversity |
| Information Type | Integrated database |
| Data Custodian | Department of Conservation |
| Information source | Various data sources held by DoC |
| Information source type | Databases |
| Frequency | Ongoing |
| Reference period | Varies. Current. 2007 |
| Objectives  (what the purpose is) | To collect and collate all the biodiversity data held by DOC |
| Data collected  (key variables, outputs) | Current and historic location records. Reliable indices of threatened spp abundance for all threatened, as well as indicator species.  Also, animal pest and weed distributions/extents |
| Data access | To be made available in near future. |
| Further information | Contact Ecosystems Management, R&D, DOC |

## New Zealand Fossil Spores and Pollen Database

|  |  |
| --- | --- |
| Topic | 9 Ecosystems and biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | GNS |
| Information source | NA |
| Information source type | NA |
| Frequency | ad hoc, +/-annually |
| Reference period | publications from 1948 to present |
| Objectives  (what the purpose is) | This web-based catalogue presents an entry for each of the approximately 830 species of fossil spore or pollen from the New Zealand regions that are recorded in the scientific literature. It has been compiled primarily as a reference tool for palaeontologists engaged in biostratigraphic work in New Zealand pre-Pleistocene strata, and provides a snapshot of the present state of nomenclature for this group of fossils. Taxa are arranged according to a morphological classification, to which there is a key in the introductory text. For each species, a detailed synonymy lists significant nomenclatural changes, all published records from New Zealand strata, some important illustrated records from elsewhere, and records which are regarded as misidentifications. The web pages are comprehensively illustrated with previously published images of New Zealand specimens, where possible reproduced from original photographs. Brief notes on natural phylogenetic relationships are also included. |
| Data collected  (key variables, outputs) | The catalogue aims to present a single page for each fossil taxon matching the following three criteria:   * from the New Zealand landmass and surrounding sea floor; * from early Pleistocene or older strata; * listed in published records. |
| Data access | Available online: <http://www.gns.cri.nz/what/earthhist/fossils/spore_pollen/catalog/index.htm> |
| Further information | <http://www.gns.cri.nz/store/databases/indexb.html#Digital>  or email: [i.raine@gns.cri.nz](mailto:i.raine@gns.cri.nz) |

## New Zealand Freshwater Fish Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and biodiversity  4. Marine environment |
| Information Type | Nationally Significant Database |
| Data Custodian | NIWA |
| Information source | From a wide variety of NZ freshwater research projects |
| Information source type | database of direct measurements  Mainly species geospatial locality data |
| Frequency | variable |
| Reference period | 1960s - ongoing |
| Objectives  (what the purpose is) | The New Zealand Freshwater Fish Database (NZFFD) records the occurrence of fish in fresh waters of New Zealand, including major offshore islands. |
| Data collected  (key variables, outputs) | Data stored include the site location, the species present, their abundance and size, as well as information such as the fishing method used and a physical description of the site. The latter includes an assessment of the habitat type, substrate type, available fish cover, catchment vegetation, riparian vegetation, water widths and depths, and some water quality measures. |
| Data access | Access to the data requires registration and users are encouraged to contribute data |
| Further information | <http://www.niwa.co.nz/services/free/nzffd>  <https://secure.niwa.co.nz/fbis/index.do> |

## Aquatic Plants Database

|  |  |
| --- | --- |
| Topic | 9 Ecosystems and Biodiversity & Biosecurity  3 Freshwater |
| Information Type | Database |
| Data Custodian | NIWA |
| Information source | From a wide variety of NZ freshwater research projects |
| Information source type | database of direct measurements  Mainly species geospatial locality data |
| Frequency | As new data becomes available |
| Reference period | 1978 – ongoing |
| Objectives  (what the purpose is) | The database contains over 12,000 plant records from 113 different lakes. To identify surveyed lakes, the database includes unique codes for 988 New Zealand water-bodies. A visit number is assigned for each survey date. Records are then entered by code for each plant species, at each lake site, and associated ecological data are listed. This information can then be retrieved and analysed based on any combination of the identity codes. |
| Data collected  (key variables, outputs) | For each aquatic plant species the following are measured:   * minimum depth and maximum depth * maximum cover within a 2x2m square from anywhere within its range * average cover within its range (cover is measured on a 6 point scale) * maximum height of the species in the profile * estimated average height of species in the profile.   Site information (e.g. length of profile, sediment composition) is also collected  For each lake the following are calculated:   * depth range for each species * total number of profiles with each species * minimum, maximum and typical depths for each species * maximum and average cover for each species * % dominance of exotic versus native species * relative % cover of different species * the stability of the plant communities * stylised profiles of lake plant communities |
| Data access | Usually the data are made available by way of an interpreted report, rather than as raw data. Some raw data freely available via FBIS (see url below) |
| Further information | <https://secure.niwa.co.nz/fbis/index.do> |

## Crop Germplasm Resources Unit (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | Ecosystems and biodiversity |
| Information Type | Administrative data |
| Data Custodian | Plant & Food Research |
| Information source | NA |
| Information source type | NA |
| Frequency | Ongoing – additions made regularly |
| Reference period | 1992 - present |
| Objectives  (what the purpose is) | Description of crop and fruit germplasm available for use in breeding programmes |
| Data collected  (key variables, outputs) | Descriptive data such as shape, colour, yield etc appropriate for the germplasm |
| Data access | Proprietary  (Held at Lincoln) |
| Further information | [Maryann.Robson@plantandfood.co.nz](mailto:Maryann.Robson@plantandfood.co.nz) |

|  |  |
| --- | --- |
| Topic | Ecosystems and biodiversity |
| Information Type | Administrative data |
| Data Custodian | Plant & Food Research |
| Information source | NA |
| Information source type | NA |
| Frequency | Ongoing – additions made regularly |
| Reference period | 1992 - present |
| Objectives  (what the purpose is) | Description of crop and fruit germplasm available for use in breeding programmes |
| Data collected  (key variables, outputs) | Descriptive data such as shape, colour, yield etc appropriate for the germplasm |
| Data access | Proprietary |
| Further information | [Maryann.Robson@plantandfood.co.nz](mailto:Maryann.Robson@plantandfood.co.nz) |

## National Collections of Fruit Crop Germplasm (A Nationally Significant Collection and Database)

## PossumBase – the EST Database for the Brushtail Possum (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9 Ecosystems and biodiversity |
| Information Type | Database |
| Data Custodian | AgResearch Limited |
| Information source | NA |
| Information source type | NA |
| Frequency | Ad hoc |
| Reference period | Started in 2005 - ongoing |
| Objectives  (what the purpose is) | This contract was awarded after an open tender process for "The establishment and operation of an expressed sequence tag (EST) database for the brush-tail possum (Trichosurus vulpecular)" The outcome of this contract is the provision of a large EST database (150,000 EST sequences) of genes expressed by the brush-tailed possum. The database will be primarily constructed for the use of NZ scientists engaged in research to control the pest in NZ however it will be placed in the public domain so all researchers have access to the data. EST cDNA clones will also be freely available from AgResearch  To date contracts have been let for the preparation of 8 normalised cDNA libraries (BD Biosciences Ltd), and the sequencing of 150,000 clones from these libraries (The Institute for Genome Research -TIGR). Four of the eight RNA preparations from Possum tissue have safely arrived at BD Biosciences in the USA. The remaining preparations are awaiting tissue collection at the appropriate time in the possum breeding cycle but we expect all RNA preparations to be in the USA by December 2005. The contractor has successfully normalised the cDNA from 3 of the RNA preparations and is now making a library for forwarding to the DNA sequencing contractor. We expect sequencing to begin in September 2005. The project is on target to meet its first milestone. The coming year will see the establishment of a website with the EST sequence data publicly available. This will be widely advertised within the NZ research community when it is launched |
| Data collected  (key variables, outputs) | [AgResearch](http://www.agresearch.co.nz/) created a database of 150,000 expressed sequence tags (ESTs) for the Brushtail possum ([*Trichosurus vulpecula*](http://animaldiversity.ummz.umich.edu/site/accounts/information/Trichosurus_vulpecula.html)). The ESTs stem from 8 different libraries:   * Ovarian pooled various ovarian tissue and cycle-stages * Immune * Gut small/large intestine, [Peyers patch](http://wordnet.princeton.edu/perl/webwn?s=peyer's%20patch) * Kidney * Liver * Reproductive tract (female) * Brain/[Pituitary](http://wordnet.princeton.edu/perl/webwn?s=pituitary%20gland) * Embryonic/developmental |
| Data access | <http://www.possumbase.org.nz/home_contents.htm> |
| Further information | [rudiger.brauning@agresearch.co.nz](mailto:rudiger.brauning@agresearch.co.nz) |

## Margot Forde Germplasm Centre (A Nationally Significant Collection)

|  |  |
| --- | --- |
| Topic | Ecosystems/Biodiversity |
| Information Type | A database is maintained of all seed holdings and samples issued. |
| Data Custodian | AgResearch Limited |
| Information source | Collectors / Other genebanks / breeders |
| Information source type | Direct measurements/databases |
| Frequency | New lines being added constantly |
| Reference period | Last 50 years |
| Objectives  (what the purpose is) | The Margot Forde Forage Germplasm Centre is New Zealand's national gene-bank of grassland plants and also hosts the New Zealand Endangered Species Seed-bank. It is also Australia's gene-bank for perennial grasses and legumes. Plant germplasm consists of seeds of genetically diverse plant populations that are conserved for use in plant breeding and to ensure the survival of groups of plants. The roles of the Centre are to obtain germplasm, to conserve it, replenish it and distribute it for research and product development. |
| Data collected  (key variables, outputs) | The Centre holds seeds from about 100 countries representing 1,800 species from 350 genera and over 70 plant families. Included are extensive wild collections of useful species, samples of foreign and domestic cultivars, breeders lines and genetic stocks.  The collection includes over 65,000 seed samples stored at 0°C and 30% relative humidity (RH) to prolong viability. Under these conditions, grass seeds will live for 20-30 years and legumes 20-50 years. Seed stocks are replenished using specialised facilities.  Key variables and outputs shown in database. |
| Data access | [Margot Forde Germplasm Centre](https://secure.agresearch.co.nz/seeds/(S(1rzkzviqit2qpm55aqwb2r45))/frmquery.aspx) |
| Further information | <http://www.agresearch.co.nz/seeds/default.aspx> |

## Forest Health Database

|  |  |
| --- | --- |
| Topic | Ecosystems and biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | New Zealand Forest Research Institute Limited |
| Information source | NA |
| Information source type | NA |
| Frequency | Weekly |
| Reference period | 1960-2009 |
| Objectives  (what the purpose is) | To store information on forest pests for use with risk analysis, area of pest freedom, and forest health status reporting. |
| Data collected  (key variables, outputs) | Data are collected from throughout NZ from forest health and pest detection surveys in plantation forests and other locations where there is a high risk of new pests establishing. Key variables are locations inspected, pest damage detected, and pests formally identified from material send to Scion’s diagnostic laboratory. |
| Data access | By request to Scion. Web-based access is being developed. |
| Further information | Contact: [Lindsay.bulman@scionresearch.com](mailto:Lindsay.bulman@scionresearch.com) |

## National Forestry Herbarium (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | Ecosystems & Biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | New Zealand Forest Research Institute Limited |
| Information source | NA |
| Information source type | NA |
| Frequency | Sub-hourly, hourly, daily and monthly. |
| Reference period | 1899-2009 |
| Objectives  (what the purpose is) | Increased understanding of trees present in New Zealand, and of the flora of the Bay of Plenty and central North Island. |
| Data collected  (key variables, outputs) | Presence/location of vascular plants in New Zealand |
| Data access | Available in an online database |
| Further information | [www.scionresearch.com/herbarium](http://www.scionresearch.com/herbarium) |

## National Vegetation Survey Databank (NVS) (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity |
| Information Type | Database of direct measurements.  Spatial data, vector point data, includes metadata, New Zealand geographic extent. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | The National Vegetation Survey Databank (NVS - 'Nivs') is a physical archive and computer databank containing records from approximately 77,000 vegetation survey plots--including data from over 19,000 permanent plots. NVS provides a unique record, spanning more than 50 years, of indigenous and exotic plants in New Zealand's terrestrial ecosystems, from Northland to Stewart Island and the Kermadec and Chatham islands. A broad range of habitats are covered, with special emphasis on indigenous forests and grasslands. The physical archive includes plot sheets, maps, and photographs from many years of vegetation surveys. DOS-based software that was specifically prepared for summarising data and statistical analysis is available, and development of a new software package is underway. |
| Information source type | Physical archive and database |
| Frequency | Ad hoc |
| Reference period | 1950's to present |

*Continued overleaf...*

|  |  |
| --- | --- |
| Objectives  (what the purpose is) | NVS provides a record, spanning > 50 years, of indigenous and exotic plants in terrestrial ecosystems, throughout New Zealand, especially indigenous forests and grasslands. The databank contains datasets from a range of sources and survey types, including catchment ‘condition and trend’ surveys, the National Forest Survey (NFS) conducted in the 1950s, and protected natural area programme surveys (PNA), and is a recognised data repository for organisations such as DoC, and regional and district councils as well as Landcare Research.  Survey data archived in NVS is used for a range of biodiversity research and management purposes including vegetation description, studies of species descriptions, vegetation change assessment, assessing ecosystem ‘values’ and forest carbon assessment. |
| Data collected  (key variables, outputs) | The databank contains datasets from a range of sources and survey types, including catchment ‘condition and trend’ surveys, the National Forest Survey (NFS) conducted in the 1950s, and protected natural area programme surveys (PNA), and is a recognised data repository for organisations such as DoC, and regional and district councils as well as Landcare Research.  (1)General survey data, from plots that are usually not permanently marked. These data include reconnaissance descriptions ('Recces') and Protected Natural Areas data..  (2)More than 57,000 survey plots in NVS comprise; point based compositional (and usually) structural description of vegetation, relative abundance in fixed structural tiers, location information. Permanent plot data where fixed area plots or transects have been established, and the vegetation has been measured precisely (e.g. tagged trees, sapling and seedling counts, species lists). Fixed area plots may be circular, square quadrat, rectangular, or cruciform. Assessments of about 19,000 permanent plots in NVS are ideal for monitoring vegetation changes and the effects of management. Nearly all follow standard methods, e.g. in forests all trees within a fixed quadrat area (usually 400 m2) are permanently tagged to allow repeat measurements. Most forest plots contain permanently marked seedling subplots to determine changes in seedling and herbaceous composition with time. Most are along objectively located transect and more than 80% have NZMS grid references (for forest plots, >95%). |
| Data access | A nationally significant database as identified by FRST. Access to individual datasets may require approval of the lodger of that dataset. In some cases access is constrained to protect the rights of landowners. |
| Further information | <http://nvs.landcareresearch.co.nz/> email: [Broadbenth@landcareresearch.co.nz](mailto:Broadbenth@landcareresearch.co.nz) [Wisers@landcareresearch.co.nz](mailto:Wisers@landcareresearch.co.nz) |

## Plant Herbarium - Allan Herbarium Collection Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity |
| Information Type | Database of direct measurements. |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Label data attached to physical reference plant specimens. |
| Information source type | NA |
| Frequency | Ad-hoc |
| Reference period | 1928 to present |
| Objectives  (what the purpose is) | The Allan Herbarium is the largest herbarium in New Zealand and is part of the New Zealand National Herbarium Network. Its function is to collect and record the flora of New Zealand. Its 600 000 specimens cover all groups of native and introduced plants found in New Zealand, as well as collections from the Sub-Antarctic Islands and the Pacific Islands. The specimen database used to store and retrieve specimen information currently contains records of about 20% of the specimens in the herbarium. |
| Data collected  (key variables, outputs) | There are about 600 000 specimens in the Allan Herbarium with 5000-8000 being added annually. 20% of these are databased. Specimens cover all groups of native and introduced plants found in New Zealand, as well as collections from the Sub-Antarctic Islands and the Pacific Islands. Specimen data includes: species name and reference, location (grid ref), habitat (type, altitude, and aspect), abundance (at collecting site), general features/description, collector, date. |
| Data access | A subset of specimen’s data is available at: <http://nzflora.landcareresearch.co.nz/>, or contact data custodian. It is a nationally significant database as identified by FRST. |
| Further information | Contact: Ines Schoenberger [SchoenbergerI@landcareresearch.co.nz](mailto:SchoenbergerI@landcareresearch.co.nz) |

## New Zealand Fungi Herbarium (PDD) (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Label data from collection of physical reference specimens |
| Information source type | NA |
| Frequency | Ad hoc |
| Reference period | 1940s - ongoing |
| Objectives  (what the purpose is) | New Zealand Fungal Herbarium, PDD is the world's foremost collection of New Zealand fungi, housing 65,000 specimens, about 42,000 from New Zealand and many from the South Pacific. With its associated nomenclatural and bibliographic databases (NZFungi) it provides the authoritative source of information on the fungi of New Zealand |
| Data collected  (key variables, outputs) | The database currently contains six related categories of information: names, literature, herbarium collections, cultures, hosts and lists. Point distribution maps are dynamically generated for all georeferenced records with public access. It also contains dot distribution maps based on specimen records in the database, and for sample taxa, identification photographs, attribute descriptions and identification keys. |
| Data access | Database is publicly accessible at <http://nzfungi.landcareresearch.co.nz/html/mycology.asp> . It is a nationally significant database as recognised by FRST. |
| Further information | Contact: Eric McKenzie [McKenzieE@landcareresearch.co.nz](mailto:McKenzieE@landcareresearch.co.nz) website: <http://nzfungi.landcareresearch.co.nz/html/mycology.asp> |

## New Zealand Arthropod Collection (NZAC) (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Derived from a collection of physical reference specimens collected from all over New Zealand. |
| Information source type | Label data from collection of physical reference specimens. |
| Frequency | Ad hoc |
| Reference period | Collection started in 1920 to present |
| Objectives  (what the purpose is) | NZAC has the most complete coverage of terrestrial invertebrates of all the collections held in New Zealand. In addition to its fundamental systematics value, the collection underpins quarantine and border control decisions e.g., verifying the presence or absence of species in New Zealand. The collection makes important contributions to conservation, helping identify species-rich areas to target for protection. |
| Data collected  (key variables, outputs) | NZAC is the foremost collection of insects, mites and related arthropods in New Zealand, including about 6.5 million specimens from New Zealand (6 million) and Pacific Island countries (0.5 million), and a database of 5000 names. Most records are currently held on card files, with computer databasing starting in 2001.6.5 Million specimens, Geographic Coverage: Most specimens are from the New Zealand subregion (about 6 million) and neighbouring Pacific Island Countries (0.5 million). |
| Data access | Contact data custodian for access or <http://www.landcareresearch.co.nz/research/biosystematics/invertebrates/nzac/>  It is a nationally significant database as identified by FRST. |
| Further information | Contact: Trevor Crosby [CrosbyT@landcareresearch.co.nz](mailto:CrosbyT@landcareresearch.co.nz) website: <http://www.landcareresearch.co.nz/research/biosystematics/invertebrates/nzac/> |

## National Nematode Collection of New Zealand (NNCNZ) (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity  5. Land |
| Information Type | Database of direct measurements |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Derived from a collection of physical reference specimens collected from all over New Zealand. Only ‘type’ material is electronically databased at this stage. |
| Information source type | Database, published papers |
| Frequency | Ad hoc |
| Reference period | 1904 to present |
| Objectives  (what the purpose is) | The collection and associated database is the national reference collection for the nematode group of organisms. It is used for species identification, taxonomic studies, biodiversity assessment, soil biology, and ecosystem and agricultural research and plant protection. |
| Data collected  (key variables, outputs) | Taxonomic studies of nematodes, published records  The nematode collection comprises types, holotypes (150) and paratypes (5000); identified voucher specimens, and unidentified slides and mass collections. It includes almost all nematode species described for New Zealand, and is the primary source for New Zealand nematodes. The dataset contains biosystematic, geographic and field trial nematode data as references to over 100 published papers. |
| Data access | Contact data custodian |
| Further information | <http://www.landcareresearch.co.nz/research/research_details.asp?Research_Content_ID=236> |

## International Collection of Microorganisms from Plants (ICMP) (A Nationally Significant Collection and Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity  5. Land  10. Environmental protection effort |
| Information Type | Database of direct measurements |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Derived from a collection of physical reference specimen collected from all over New Zealand. |
| Information source type | Database |
| Frequency | Ad hoc |
| Reference period | n/a |
| Objectives  (what the purpose is) | ICMP is an international collection of plant bacteria, and a repository for micro-organisms of plant and animal origin of the New Zealand Reference Culture Collection. It also contains cultures of the world’s bacterial and fungal plant pathogens and of other micro-organisms closely associated with plants. It is used for species identification, taxonomic studies, biodiversity assessment, and ecosystem and agricultural research and plant protection. |
| Data collected  (key variables, outputs) | It contains over 12,000 strains of micro-organisms, including 6238 strains of bacteria (1765 from New Zealand) and 4717 strains of fungi (3521 from New Zealand). The database is a catalogue of the collection. Data for each specimen includes name, where and when collected, associated (e.g. host) plant, general features, collector. |
| Data access | Website: <http://nzfungi.landcareresearch.co.nz/icmp/search_cultures.asp> |
| Further information | Contact: Peter Buchanan [BuchananP@landcareresearch.co.nz](mailto:BuchananP@landcareresearch.co.nz) website: <http://nzfungi.landcareresearch.co.nz/icmp/search_cultures.asp> |

## New Zealand Plant Names Database

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Plant names from the scientific literature. |
| Information source type | Database collections and specimen collections |
| Frequency | Ad Hoc. As new treatments, taxa and naturalisations are published these are added to the database. |
| Reference period | 1928 to present |
| Objectives  (what the purpose is) | Ngā Tipu o Aotearoa - New Zealand Plants website provides access to information on plant taxa that occur in New Zealand. This information is derived from the New Zealand Plant Names Database (described here) and the Allan Herbarium Specimen database. |
| Data collected  (key variables, outputs) | The Plant Names Database lists over 36,000 names, including synonyms and incorrectly applied names, and biostatus and the authorship of the taxa, for lichens, liverworts, mosses, ferns, freshwater algae and seed plants in New Zealand. Additional information provides users with a more complete list of scientific names and descriptions from recent taxonomic revisions, relevant key and bibliographic information on the use of names in publication. It also provides vernacular and Maori names, and images. |
| Data access | <http://nzflora.landcareresearch.co.nz/>, or contact data custodian [wiltona@landcareresearch.co.nz](mailto:wiltona@landcareresearch.co.nz) |
| Further information | <http://nzflora.landcareresearch.co.nz/> |

## Nga Tipu Whakaoranga - Maori Plant Use Database (A Nationally Significant Database)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems and Biodiversity |
| Information Type | Database of direct measurements |
| Data Custodian | Maanaki Whenua Landcare Research |
| Information source | Information is taken from the written record, mostly published (books, articles, newspapers) and some unpublished (such as manuscripts and letters).  Sources are noted for each item. Information is generally recorded as written in the source material, without interpretation. Editorial comment is sometimes made for clarification |
| Information source type | Database, published documents |
| Frequency | Ad hoc |
| Reference period | Records extend back to early written history |
| Objectives  (what the purpose is) | The database contains fully referenced, detailed information on how Māori used plants to survive in New Zealand, particularly before the arrival of Europeans. Material relating to later economic uses of some native plants is also recorded. |
| Data collected  (key variables, outputs) | A record refers to a bibliographic reference, or a block of information relating to a plant. All plants are listed under their botanical name (where known), with Māori and English common names, and can be searched on any known name. There is often more than one record relating to a particular plant. Within each record, information is organised into categories, references which include the author, title, date, publisher, and notes, plant names are recorded in these fields, family, botanical names, previous names, Maori name and English common name.  Also included are pertinent references on traditional resource rights and intellectual property claims relating to plant uses by indigenous peoples. |
| Data access | Data accessed through website: <http://maoriplantuse.landcareresearch.co.nz> |
| Further information | <http://maoriplantuse.landcareresearch.co.nz/WebForms/default.aspx> |

# Environmental Protection Effort

## Biodiversity and Freshwater: A qualitative and quantitative study

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort  9. Ecosystems and biodiversity  3. Freshwater |
| Information Type | Derived Statistics |
| Data Custodian | DOC |
| Information source | NA |
| Information source type | NA |
| Frequency | Ad hoc |
| Reference period | 2005 |
| Objectives  (what the purpose is) | To learn about New Zealanders' levels of understanding and values for biodiversity and freshwater; explore motivational triggers and possible avenues for any awareness-raising or behaviour change programmes and activities to be undertaken on biodiversity and freshwater; establish a benchmark against which future measurements can be taken to identify any shifts due to government programmes and/or activities, or due to wider social shifts. |
| Data collected  (key variables, outputs) | * Important issues for New Zealanders and importance of the environment personally; * Understanding and awareness of the environment; * Biodiversity and ecosystems; * Importance of specific environmental areas; * Current status and threats to environment; * Environmental behaviour; * Communication issues; * Segmentation analysis. |
| Data access | Available on request, some (freshwater) information available on the NIWA Freshwater Fish Database |
| Further information | This was a market research report undertaken by UMR Research Ltd |

### 

## Incidents database

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort  6. Materials and Waste;  9. Ecosystems and biodiversity; |
| Information Type | Database |
| Data Custodian | ERMA New Zealand |
| Information source | data is sourced from media reports and reports from enforcement agencies, e.g. Department of Labour, NZ Fire Service, Police, PHUs, etc. |
| Information source type | Reports |
| Frequency | Information is entered into the database daily (as incident reports are received) and reviewed approximately fortnightly |
| Reference period | July 07 to present day. Older data also available |
| Objectives  (what the purpose is) | To identify the number and nature of incidents that are occurring which involve harm to the environment from hazardous substances or new organisms. Data is used to analyse trends and identify areas where substances/organisms need to be better regulated. |
| Data collected  (key variables, outputs) | * The hazardous substance or new organism involved in the incident * Incident location * Reporting agency * Cause of incident * Adverse effects on human health (including injury and mortality figures and exposure pathway) * Adverse effects on the environment (and part of the environment: water, land or air effected) * Incident level (degree of impact or adverse effect) * If the incident resulted in a prosecution under the HSNO Act * If the incident was a result of non-compliance with the HSNO Act * Enforcement action details |
| Data access | Summaries of data are publicly available. |
| Further information | <http://www.ermanz.govt.nz/no/compliance/incidents0708.html>  <http://www.ermanz.govt.nz/hs/incidents.html> |

## Chemical Classification Information Database (CCID)

aka HSNO Register

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort;  9. Ecosystems and Biodiversity |
| Information Type | Administrative |
| Data Custodian | ERMA New Zealand |
| Information source | NA |
| Information source type | NA |
| Frequency | Ongoing |
| Reference period | 1998 to present day |
| Objectives  (what the purpose is) | Record of substances/organisms applications made under the HSNO Act and their relevant controls. Substances/organisms must be approved in order to be used in NZ. |
| Data collected  (key variables, outputs) | * Applicant’s details * Description of substance/organism * Purpose of application * If application approved or declined * Controls applied * Details of low risk organisms |
| Data access | Publicly available on ERMANZ website |
| Further information | <http://www.ermanz.govt.nz/search/registers.html> |

## Part VI Approvals Registers

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Administrative |
| Data Custodian | ERMA New Zealand |
| Information source | NA |
| Information source type | NA |
| Frequency | Ongoing |
| Reference period | 1996 to present day |
| Objectives  (what the purpose is) | Registers of approvals issued under part VI if the HSNO Act – requirements for controls on hazardous substances |
| Data collected  (key variables, outputs) | Details of applications for the following approvals:   * Tank Wagon Designs * Gas Cylinders * Gas Cylinder Fittings * Dispensers * Vaporisers * Burners * Stationary Container Systems * Reduction of Separation Distances * Non-removal of disused tanks * Pyrotechnics/fireworks * Containers for Class 1 substances |
| Data access | Most data are publicly available |
| Further information | <http://www.ermanz.govt.nz/search/index.html#other> |

## Test Certificate Database

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Administrative |
| Data Custodian | ERMA New Zealand |
| Information source | NA |
| Information source type | NA |
| Frequency | daily |
| Reference period | 1996 to present day |
| Objectives  (what the purpose is) | Register of all test certificates issued by Test Certifiers.  The purpose of a test certificate is to provide positive verification that the person in charge of the handling, storage and use of hazardous substances, and the facilities where the substances are held, comply with specified requirements of HSNO. |
| Data collected  (key variables, outputs) | * Date of issue and expiry * Name of issuing Test Certifier * Reason for issue * Details of requirements * Location/name details * Substances present/approved for |
| Data access | Limited access available to enforcement officers. Mostly confidential. |
| Further information | <http://www.ermanz.govt.nz/hs/compliance/abouttc.html> |

## Border Statistics on Biosecurity Risk Goods

|  |  |
| --- | --- |
| Topic | 10 Environmental protection effort |
| Information Type | Database |
| Data Custodian | MAFBNZ (MAF Biosecurity New Zealand) |
| Information source | NA |
| Information source type | NA |
| Frequency | Daily (entered as seized). |
| Reference period | Can get data out of database from 2002. May have data as far back as 1960’s but may not be accessible |
| Objectives  (what the purpose is) | To track volumes of biosecurity risk goods entering New Zealand, and any associated seizures at the border |
| Data collected  (key variables, outputs) | Data is collected during clearance of risk goods, mail, containers and passengers at the border.  Key variables: Biosecurity risk goods entering New Zealand. Includes information on product type, quantity, importer information, source country, and any seizures made. |
| Data access | Statistics are summarized in a report annually. Individual queries about specific pathways or risk goods can be run on request. |
| Further information | REP Pathway Analysis Report 2008/2009 (this report was sent to us in an email) |

## Interception Database - Intercepted organisms and associated pathways or commodities

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Database |
| Data Custodian | MAFBNZ (MAF Biosecurity New Zealand) |
| Information source | NA |
| Information source type | NA |
| Frequency | In response to organism interceptions |
| Reference period | Can get data out of database from 2003. May have data as far back as 1960’s but may not be accessible |
| Objectives  (what the purpose is) | To assess associations between commodities or pathways and interceptions of organisms.  Database of intercepted organisms found in association with particular commodities/pathways. Based on organism finds by MAFBNZ staff, and also public reporting. Not to be used for trends over time as policies for what is sent for identification and reporting have changed substantially. Only to demonstrate associations between various organisms and pathways. |
| Data collected  (key variables, outputs) | Organisms intercepted, and the pathways or commodities with which they are associated. |
| Data access | Statistics are summarized in a report annually. Individual queries about specific pathways or risk goods can be run on request. |
| Further information | REP Pathway Analysis Report 2008/2009 (Has been emailed to Stats NZ) |

## Analysis and Profiling Group: Pathway Analysis Annual Report

|  |  |
| --- | --- |
| Topic | 10 Environmental protection effort |
| Information Type | Report |
| Data Custodian | MAFBNZ (MAF Biosecurity New Zealand) |
| Information source | Quantum databases (Quancargo, Quanpax, Quanmail), together with a database we call NatStats. The NatStats database contains data  collected at work-sites which is not easily captured in Quantum -  examples are the number of containers cleared per month, the number of vessels arriving, etc). |
| Information source type | Databases |
| Frequency | Annual |
| Reference period | Annually since 2002 |
| Objectives  (what the purpose is) | To summarise main trends in biosecurity risk pathways |
| Data collected  (key variables, outputs) | Information on the Interception Database, and Border statistics on biosecurity risk goods  Also, information on:  Arrivals  Seizures  Infringement notices  Inspections |
| Data access | [Victoria.Allison@maf.govt.nz](mailto:Victoria.Allison@maf.govt.nz)  [Christopher.Waite@maf.govt.nz](mailto:Christopher.Waite@maf.govt.nz) |
| Further information | Latest annual Pathway Analysis Report 2008/09 was sent to us in an email |

## New Zealand Mortality Collection

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Database |
| Data Custodian | Ministry of Health |
| Information source | Each month Births, Deaths, and Marriages (BDM) sends NZHIS electronic death registration and electronic stillbirth information data (for the previous month’s registrations), Medical Certificates of Causes of Death (BDM 50 and BDM 167), and Coroners’ reports. Additional information on underlying cause of death is obtained from electronic hospital discharge data from the National Minimum Dataset (NMDS) and private hospital discharge returns, the New Zealand Cancer Registry (NZCR), the Department for Courts, the Police, the Land Transport Safety Authority, Water Safety NZ, Media Search, and from writing letters to certifying doctors, coroners, and medical records officers in public hospitals. |
| Information source type | Administrative data. |
| Frequency | Electronic files of new death registration data are received monthly from BDM. Manual updates from other sources are ongoing. |
| Reference period | Deaths registered in New Zealand from 1988 onwards are held in the Mortality database. Data from 1970 to 1987 is also available on request. |
| Objectives  (what the purpose is) | The Mortality Collection has been established to provide data for public health research, policy formulation, development and monitoring, and cancer survival studies. A complete dataset of each year’s mortality data is sent to the World Health Organization each year to be used in international comparisons of mortality statistics. |
| Data collected  (key variables, outputs) | The NZHIS Mortality Collection classifies the underlying cause of death for all deaths registered in New Zealand, including all registered fetal deaths (stillbirths), using the ICD-10-AM 2nd Edition and the WHO Rules and Guidelines for Mortality Coding. Fetal and infant data is a subset of the mortality collection. |
| Data access | NZHIS publishes two annual report series: [Mortality and Demographic Data](http://www.nzhis.govt.nz/moh.nsf/pagesns/71?Open) and [Fetal and Infant Deaths.](http://www.nzhis.govt.nz/moh.nsf/pagesns/72?Open) The latter publication contains detailed information on numbers and rates of livebirths, fetal deaths, and neonatal and post-neonatal deaths. The Chief Analyst reports interim updates of provisional mortality data of interest to various groups within the Ministry of Health. The data in the Mortality Collection is accessed by authorised NZHIS staff for maintenance, data quality, audit and analytical purposes. Customised datasets or summary reports are available on request, either electronically or on paper. |
| Further information | <http://www.nzhis.govt.nz/moh.nsf/pagesns/57>  For further information about this collection or to request specific datasets or reports, contact the NZHIS Analytical Services team, on ph 04 816 2882, fax 04 816 2898, or e-mail [data-enquiries@moh.govt.nz](mailto:data-enquiries@moh.govt.nz) |

## Annual Survey of Notifiable and Other Diseases in New Zealand

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Report |
| Data Custodian | ESR on contract from the Ministry of Health |
| Information source | Reported through EpiSurv - the national notifiable disease surveillance system |
| Information source type | N/A |
| Frequency | Data is available near real-time. Quarterly and annual summaries are produced. Ad hoc reports are able to be produced. |
| Reference period | 1996-2009 |
| Objectives  (what the purpose is) | Reports provide a summary of 51 diseases currently notifiable under the Health Act 1956 and the Tuberculosis Act 1948. Information about other non-notifiable diseases and organisms of public health importance under surveillance in New Zealand are also reported.  Systematic collection, analysis and interpretation of outcome-specific data is used for the planning, implementation and evaluation of public health practice.  A number of notifiable diseases are associated with environmental factors since they can be waterborne/foodborne in nature. |
| Data collected  (key variables, outputs) | Case demography, risk factors, nature of organism |
| Data access | Summary reports available online |
| Further information | [www.esr.cri.nz](http://www.esr.cri.nz) |

## National Minimum Dataset (Hospital Events) (NMDS)

|  |  |
| --- | --- |
| Topic | 10 Environmental protection effort |
| Information Type | Database |
| Data Custodian | Ministry of Health |
| Information source | Data is provided by public and the larger private hospitals in an agreed electronic file format. Paper forms and a cut-down electronic file format are also forwarded by other private hospitals. |
| Information source type | Administrative data |
| Frequency | Publicly funded hospital events are required to be loaded into the NMDS within 21 days after the month of discharge. Electronic files are received and processed almost every day at NZHIS. NZHIS has a team of staff who manually process private hospital electronic and paper reports. |
| Reference period | The current NMDS was introduced in 1999. The original NMDS was implemented in 1993 and back-loaded with public hospital discharge information from 1988. |
| Objectives  (what the purpose is) | The NMDS is used for policy formation, performance monitoring, research and review. It provides statistical information, reports, and analyses about the trends in the delivery of hospital inpatient and day patient health services both nationally and on a provider basis. It is also used for funding purposes. |
| Data collected  (key variables, outputs) | The NMDS is a national collection of public and private hospital discharge information, including clinical information, for inpatients and day patients. Unit record data is collected and stored. All records must have a valid NHI number. Data has been submitted electronically in an agreed format by public hospitals since 1993. The private hospital discharge information for publicly funded events, eg, birth events and geriatric care, has been collected since 1997. Other data is being added as it becomes available electronically. |
| Data access | NZHIS publishes an annual report [Selected Morbidity Data for Publicly Funded Hospitals.](http://www.nzhis.govt.nz/moh.nsf/pagesns/67?Open) This publication contains summary NMDS information for a financial year.  Customised datasets or summary reports are available on request, either electronically or on paper.  The NMDS is accessed by authorised NZHIS staff for maintenance, data quality, audit and analytical purposes. Authorised members of the Ministry of Health and DHBs have access to the NMDS for analytical purposes, via the Business Objects reporting tool and the secure Health Information Network. Business Objects contains a subset of the data described in the Data Dictionary. |
| Further information | For further information about this collection or to request specific datasets or reports, contact the NZHIS Analytical Services Team, on ph 04 816 2882, fax 04 816 2898, or e-mail [data-enquiries@moh.govt.nz](mailto:data-enquiries@moh.govt.nz)  <http://www.nzhis.govt.nz/moh.nsf/pagesns/62> |

## Drinking-water Quality Information Management System

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Database - (WINZ 5 Desktop Database) and WINZ 6 (Web Database) |
| Data Custodian | ESR on contract from the Ministry of Health |
| Information source | Reported through the Water Information New ZealandWINZ |
| Information source type | N/A |
| Frequency | Data is available near real-time. |
| Reference period | Since late 1990s |
| Objectives  (what the purpose is) | WINZ is central to the drinking-water reporting and policy advising roles of the Ministry of Health. WINZ is used to maintain the national community drinking-water register, to capture and validate the national micro-survey and is increasingly providing an up to date picture of the water supplies in New Zealand.  Many Local Authorities (city and district councils) in NZ currently use WINZ. These users enter their monitoring results, calculate compliance and complete the annual microbiological survey.  The public health units of DHBs monitor the community drinking-water supplies in their area and to ensure that appropriate water quality is maintained. All regional health authorities and a number of water suppliers e.g. local authorities in New Zealand use WINZ extensively. Their use includes the registration and description of new supplies, the entering of surveillance sampling results, auditing water suppliers’ management of supplies and completing the microsurvey. |
| Data collected  (key variables, outputs) | Risk factors, demography, geospatial |
| Data access | Summary reports e.g. *Register of Community Drinking-water Supplies in NZ* and *Annual Review of Drinking-water Quality in NZ* available online |
| Further information | [www.esr.cri.nz](http://www.esr.cri.nz) |

## New Zealand Health Survey (Exposure to second-hand smoke)

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Survey |
| Data Custodian | Ministry of Health |
| Collection Unit | Individuals |
| Coverage | National (people usually resident in permanent private dwellings) |
| Units surveyed | 12,488 adults (aged 15 years and over), and 4921 children (aged 0–14 years) |
| Frequency | Approximately every 4 years |
| Reference period | September 2006 – September 2007 (previous New Zealand Health Surveys were carried out in 1996/97 and 2002/03) |
| Objectives: | The five objectives of the New Zealand Health Survey were to:   1. measure the health status of New Zealanders, and the prevalence of selected health conditions 2. measure the prevalence of risk and protective factors associated with these health conditions 3. measure the use of health services, including barriers to accessing health services 4. examine differences between population groups (as defined by age, gender, ethnicity and socioeconomic position) 5. examine changes in key New Zealand Health Survey data over time. |
| Data collected: | The content of the 2006/07 New Zealand Health Survey includes five modules: chronic health conditions, health service utilisation, health risk and protective factors, health status, and sociodemographic.  The questionnaire includes questions on exposure to second-hand tobacco smoke in the respondent’s house and in their car. |
| Data access | Results are available in the publication ‘A Portrait of Health: Key Results of the 2006/07 New Zealand Health Survey’ (Ministry of Health, 2008). More detailed results are available on webtables, [www.moh.govt.nz/moh.nsf/indexmh/portrait-of-health](http://www.moh.govt.nz/moh.nsf/indexmh/portrait-of-health)  There are protocols in place for researchers who wish to access the survey microdata (unit record files) to carry out research. More details on data access are available online: [www.moh.govt.nz/hdi/dataaccess](http://www.moh.govt.nz/hdi/dataaccess) |
| Further information | Results are available in the publication ‘A Portrait of Health: Key Results of the 2006/07 New Zealand Health Survey’ (Ministry of Health, 2008). More detailed results are available on webtables, [www.moh.govt.nz/moh.nsf/indexmh/portrait-of-health](http://www.moh.govt.nz/moh.nsf/indexmh/portrait-of-health) |

## Environmental Protection Expenditure Account

|  |  |
| --- | --- |
| Topic | 10. Environmental protection effort |
| Information Type | Report |
| Data Custodian | Statistics New Zealand |
| Information source | Annual reports (for local government figures). The Supplementary Estimates of Appropriations for the Government of New Zealand, published by the Minister of Finance. |
| Information source type | Administrative data |
| Frequency | Ad hoc – likely to be published on a five yearly basis |
| Reference period | 2001–2003 |
| Objectives  (what the purpose is) | To measure the amount of expenditure made by the public sector to protect the environment |
| Data collected  (key variables, outputs) | ***Environmental Protection Activities***  Waste management  Wastewater management  Pollution abatement  Biodiversity and landscape  Research and development  EPE not elsewhere classified (nec)  ***Natural Resource Management***  Regulatory control  Inland water management  Land management  Other resource management |
| Data access | The report is published on Statistics New Zealand’s website |
| Further information | <http://www.stats.govt.nz/environment/environmental-accounts/environmental-protection-expenditure.htm>  or email:  [info@stats.govt.nz](mailto:info@stats.govt.nz) |

## Biological Control Agents introduced to New Zealand (BCANZ)

|  |  |
| --- | --- |
| Topic | 9. Ecosystems/Biodiversity,  10. Environmental protection effort |
| Information Type | Database |
| Data Custodian | Better Border Biosecurity Research Collaboration |
| Information source | NA |
| Information source type | NA |
| Frequency | One off (added to ad hoc) |
| Reference period | 1870s to present |
| Objectives  (what the purpose is) | Details of Biological Control Agents released into New Zealand, primarily used for ERMA applications |
| Data collected  (key variables, outputs) | Biological Control Agents – names, reason for release |
| Data access | <http://www.b3nz.org/bcanz/> |
| Further information | [bcanz@b3nz.org](mailto:bcanz@b3nz.org) |

# Appendix Items

## Environment New Zealand 2007

|  |  |
| --- | --- |
| Topic | Covers all topics across the domain for the environment |
| Information Type | Report |
| Data Custodian | Ministry for the Environment |
| Information source | Environment New Zealand 2007 reports on the core set of national environmental indicators developed by MfE. It is not feasible to record all the data sources used to report on the indicators within this template form so they are included in appendix 2 below. |
| Information source type | See above |
| Frequency | This report updates the previous *State of the Environment 1997* report. Planning is currently underway for the third national-scale state of the environment report which is scheduled for 2012. |
| Reference period | The report presents a compilation of data from a wide range of sources in order to report on the national environmental indicators and these data sources are available over differing time series. In general the information covers the periods mid to late eighties to the mid to late 2000s, but this varies by information source. |
| Objectives  (what the purpose is) | Environment New Zealand is New Zealand’s second national state of the environment report. It uses the set of national environmental indicators to report on key aspects of the New Zealand environment and track how these aspects have changed over time. |
| Data collected  (key variables, outputs) | Section one discusses environmental reporting in New Zealand and provides cotextual information  Section two focuses on environmental pressures   * Household consumption * Transport * Energy * Waste   Section three reports on the state aspects   * Air * Atmosphere * Land * Freshwater * Oceans * And biodiversity |
| Data access | The report is published on the Ministry for the Environment’s website. |
| Further information | <http://www.mfe.govt.nz/publications/ser/>  or email: [information@mfe.govt.nz](mailto:information@mfe.govt.nz) |

### 

## Quality of Life: In Twelve of New Zealand’s Cities

|  |  |
| --- | --- |
| Topic | 2. Atmosphere,  3. Freshwater,  4. Marine environment,  5. Land,  6. Materials and Waste |
| Information Type | Report |
| Data Custodian | Wellington City Council (team made from other cities) |
| Information source | Quality of Life Survey, Census of population and dwellings, derived statistics from various agencies. |
| Information source type | Survey/Census, derived statistics from administrative datasets |
| Frequency | See below |
| Reference period | Quality of Life Report: 2001, 2003 and 2007  Quality of Life Survey: 2003, 2004, 2006 |
| Objectives  (what the purpose is) | The Quality of Life Project was initiated in response to growing pressures on urban communities, concern about the impacts of urbanisation and the effects of this on the well being of residents.  The key purpose of the Project is to:  Provide information to decision-makers to improve the quality of life in major New Zealand urban areas.  Objectives of the Project include:   * Consistency of indicator use and monitoring methods among participating cities * Provision of data to support advocacy on urban issues * Raising the profile of urban issues within central government * Collaborative working of bigger cities to monitor and address quality of life issues. * Monitoring across the cities enables participating councils to develop a consistent set of indicators, identify urban issues and trends, and provide a platform to develop comprehensive responses to these. |
| Data collected  (key variables, outputs) | Indicators reported on: People, knowledge and skills, economic standard of living, economic development, housing, health, natural environment, built environment, safety, social connectedness, civil and political rights  Natural Environmental data includes: solid waste and recycling, biodiversity, air quality, water quality – recreational and drinking. |
| Data access | Quality of life report: 12 cities joint report is released once every five years following release of new census data.  Quality of life survey: A report on Quality of life Survey results is released every two years. |
| Further information | <http://www.bigcities.govt.nz/> |

## International Visitors Survey (IVS)

|  |  |
| --- | --- |
| Topic | 5. Land (Cover and Use)  3. Fresh Water |
| Information Type | Survey |
| Data Custodian | Ministry of Tourism |
| Collection unit | Individual – international visitors aged 15 and above |
| Coverage | Data collected from departing visitors at Auckland, Wellington and Christchurch international airports |
| Units surveyed | 5,000 units per annum |
| Frequency | Quarterly. It can be broken into months |
| Reference period | From YE Dec 1997 |
| Objectives  (what the purpose is) | To measure expenditure and trends of international visitors in New Zealand |
| Data collected  (key variables, outputs) | Expenditure  Places/regions visited  Purpose of travel  Activities undertaken (water and land based)  Visitor demographics including origin and length of stay  Transport and accommodation used  Flight and Road travel distances |
| Data access | Data is available from the Ministry of Tourism if caution is taken with smaller sample sizes. It can be accessed with permission. |
| Further information | See [www.tourismresearch.govt.nz/ivs](http://www.tourismresearch.govt.nz/ivs) |

## Domestic Travel Survey (DTS)

|  |  |
| --- | --- |
| Topic | 5. Land (Cover and Use)  3. Fresh Water |
| Information Type | Survey |
| Data Custodian | Ministry of Tourism |
| Collection unit | Individuals – New Zealand residents aged 15 and above |
| Coverage | Nationwide telephone survey |
| Units surveyed | 15,000 New Zealand residents per annum |
| Frequency | Data is released quarterly. It can be broken into months |
| Reference period | From YE Dec 1999 |
| Objectives  (what the purpose is) | This survey was set up to measure the expenditure and travel patterns of domestic tourists within New Zealand |
| Data collected  (key variables, outputs) | Expenditure  Number of Day trips and Night trips  Nights spent in individual regions  Regions/places visited  Purpose of travel  Activities undertaken (freshwater and land based)  Information on transport types and travel distances  Traveller demographics |
| Data access | Data is available from the Ministry of Tourism if caution is taken with smaller sample sizes. It can be accessed with permission. |
| Further information | See [www.tourismresearch.govt.nz/dts](http://www.tourismresearch.govt.nz/dts) |

## Regional Visitor Monitor (RVM)

|  |  |
| --- | --- |
| Topic | 5. Land (Cover and Use)  3. Fresh Water |
| Information Type | Survey |
| Data Custodian | Ministry of Tourism |
| Collection unit | Individuals –international and domestic tourists aged 15 and above |
| Coverage | Data is collected in Auckland, Rotorua, Wellington, Christchurch, Queenstown and Dunedin. The data is collected at key locations within these regions. |
| Units surveyed | 1,200 units per region per annum |
| Frequency | Data is released quarterly. Time series data cannot be broken down further |
| Reference period | From Dec 2005. Environmental information from April 2008 |
| Objectives  (what the purpose is) | This survey monitors motivations, expectations and satisfaction levels of domestic and international visitors to New Zealand’s main tourist destinations. |
| Data collected  (key variables, outputs) | Motivations  Expectations  Satisfaction  Methods of Research and bookings  Activities and Attractions (land/water based)  Traveller Demographics  Attitudes to environmental issues such as:   * If they choose environmental products * Most important environmental signs * And environmental ratings for accommodation, activities and attractions, transport, overall. |
| Data access | National data is freely available from the Ministry of Tourism. It can be accessed with permission. Regional data is confidential to the regions |
| Further information | See [www.tourismresearch.govt.nz/rvm](http://www.tourismresearch.govt.nz/rvm) |

## Tyre Track programme

|  |  |
| --- | --- |
| Topic | 6 Materials and waste |
| Information Type | Database of administrative records |
| Data Custodian | Ministry for the Environment/The Motor Trade Association |
| Information source | Responses/updates from participants in the programme such as tyre collectors, retailers and recyclers |
| Information source type | Administrative records |
| Frequency | monthly |
| Reference period | 2006–2008 |
| Objectives  (what the purpose is) | Tyre Track has been set up to support the responsible management of old tyres, to discourage illegal dumping, and to get better information about where old tyres are going. |
| Data collected  (key variables, outputs) | Numbers of end-of-life tyres in the Tyre Track system  Invoices received monthly from tyre collectors and tyre retailers  – this information is supplied on a monthly basis to the Ministry for the Environment |
| Data access | Team has also disbanded so data access may be limited |
| Further information | MTA (contact is Gary Williams) |

(Has now been disbanded)

## Household Consumption Expenditure (HCE)

|  |  |
| --- | --- |
| Topic | 6. Materials and waste |
| Information Type | Derived statistics |
| Data Custodian | Statistics New Zealand |
| Information source | Derived from a range of sources within the National Accounts data |
| Information source type | Mainly survey and administrative data |
| Frequency | Quarterly. |
| Reference period | Jun 1987 - ongoing |
| Objectives  (what the purpose is) | Calculated as part of the National Accounts Gross Domestic Expenditure measure |
| Data collected  (key variables, outputs) | Expenditure ($) by NZ households on a variety of groups of products/services |
| Data access | Published on Statistics NZ’s website quarterly as part of the quarterly GDP release |
| Further information | <http://www.stats.govt.nz/products-and-services/info-releases/gdp-info-releases.htm>  <mailto:info@stats.govt.nz> |

### 

## Household Economic Survey (HES)

|  |  |
| --- | --- |
| Topic | 6. Materials and waste |
| Information Type | Survey |
| Data Custodian | Statistics New Zealand |
| Collection unit | Households |
| Coverage | National |
| Units surveyed | Visit 4,500 households and aim to achieve 3,000 household responses. |
| Frequency | Every 3 years |
| Reference period |  |
| Objectives  (what the purpose is) | The three main objectives for conducting the HES are:   * to provide expenditure statistics for the re-weighting of the Consumers Price Index (CPI) - New Zealand's official measure of household inflation * to supply expenditure statistics to feed into the Household Consumption Expenditure component of the Gross Domestic Product (GDP) - New Zealand's measure of economic activity * to provide selected socioeconomic statistics of households and their members, as an overall indicator of the living standards of New Zealanders. |
| Data collected  (key variables, outputs) | Household expenditure (by various goods and services)  Household and personal income (and by detailed income sources)  Household and personal demographic characteristics  Ownership or access to household and IT items  Material standard of living |
| Data access | Survey results are published on Statistics New Zealand’s website. Access to confidentialised unit record files (CURFs) may be available on application see: <http://www.stats.govt.nz/products-and-services/microdata-access/confidentialised-unit-record-files/default.htm> |
| Further information | <http://www.stats.govt.nz/datasets/work-income/household-economic-statistics.htm>  <mailto:info@stats.govt.nz> |

## Statement of Opportunities

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Report |
| Data Custodian | Electricity Commission |
| Information source | Consultants reports, media and Stats NZ |
| Information source type | Reports, derived statistics |
| Frequency | Biennial 2005, 2008, 2010 |
| Reference period | To 2040 approx. |
| Objectives  (what the purpose is) | The Electricity Commission is required to publish Statements of Opportunities (SOO) under Part F of the Electricity Governance Rules. The SOO sets out a set of possible futures for electricity supply and demand, and is intended to signal opportunities for investment in transmission upgrades and transmission alternatives. |
| Data collected  (key variables, outputs) | Demand forecasts, generation scenarios, transmission analysis. |
| Data access | <http://www.electricitycommission.govt.nz/opdev/transmis/soo> |
| Further information |  |

## 

## Building Energy End-Use Project

|  |  |
| --- | --- |
| Topic | 7. Energy |
| Information Type | Database |
| Data Custodian | Energy Efficiency and Conservation Authority  (EECA) |
| Information source | Statistics NZ and BRANZ survey data and specific technology based surveys are planned. |
| Information source type | Survey data |
| Frequency | Just started, an ongoing research project. |
| Reference period | July 2008 - ongoing |
| Objectives  (what the purpose is) | Under development. Project will investigate the energy end-use in the commercial sector, that is, energy used in commercial buildings. Although there is currently little reliable data, evidence suggests energy demand is growing very quickly in this sector.  Results will provide a publicly available database that will feed into the Energy End-Use Database and Monitoring reports.  Building Research are currently scoping and developing this project with other stake holders. Careful consideration is required to select a robust sample as the sector is very heterogeneous. |
| Data collected  (key variables, outputs) | Reports and building energy end-use data |
| Data access | - |
| Further information |  |

(in progress)

## Vehicle Fleet Emissions Model

|  |  |
| --- | --- |
| Topic | 7. Energy, also  1. Climate change,  2. Atmosphere |
| Information Type | Model |
| Data Custodian | Ministry of Transport |
| Information source | * Fleet data from Transport NZ’s Motor Vehicle Register * Estimates of vehicle kilometres travelled (VKT) derived from the fleet data, by MoT * Road lengths by type sourced from Transit NZ and local authorities * Regional travel breakdown derived from Transit NZ and local authority roading data * Economic series and projections including GDP, population, and oil price sourced from Statistics NZ and MED * Projection of vehicle technology, and the resulting emissions and fuel use, related to road type and congestion levels. Source was the consultants who developed the model * Estimates of cold-start running derived from Ministry of Transport Household Travel Survey |
| Information source type | Mainly administrative data |
| Frequency | Annual |
| Reference period | From 2000 (Motor Vehicle Register)  From 2001 (Inspections data) |
| Objectives  (what the purpose is) | Estimating and projecting fleet makeup, travel, fuel use, greenhouse and toxic emissions |
| Data collected  (key variables, outputs) | Input   * Numbers of vehicles, broken down by vehicle type, fuel and age * Travel, broken down similarly * Travel split by road type and geographically * Congestion levels split by road type and geographically * Fleet dynamics : entry of vehicles into the fleet, scrappage of vehicles from the fleet   Output   * Projected numbers of vehicles to 2040 * Projected travel to 2040 * Projected fuel use   Projected emissions |
| Data access | Contact Ministry of Transport |
| Further information | Sarah Wheaton ([s.wheaton@transport.govt.nz](mailto:s.wheaton@transport.govt.nz) )  This model can be inaccurate. Auckland Regional Council has a similar model called VEPM. |

## Petroleum Report Library

|  |  |
| --- | --- |
| Topic | 8. Mineral resources  7. Energy |
| Information Type | Database |
| Data Custodian | GNS |
| Information source | NA |
| Information source type | NA |
| Frequency | Ad hoc |
| Reference period | 1906 to present |
| Objectives  (what the purpose is) | This library is a subset of the master library of all data lodged to the Crown which is held by Crown Mineral, Ministry of Economic Development. There are computer indexes to this library along with digital databases of well logs, seismic lines and shot point location data. |
| Data collected  (key variables, outputs) | A comprehensive collection of some 2000 open-file reports, mainly lodged under legislation by oil exploration companies, dating from 1906. It includes the results of geological and geophysical surveys (including seismic reflection surveys) and the completion reports and electric logs from all open-file exploration and development wells. |
| Data access | The collection held at GNS is for in-house use only; all external enquiries please contact [Crown Minerals](http://www.crownminerals.govt.nz). |
| Further information |  |