

State of the environment

Monitoring and reporting in New Zealand

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Ministry for the Environment

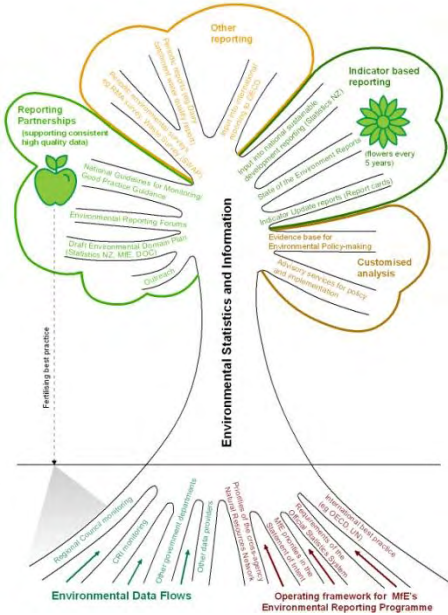


Overview

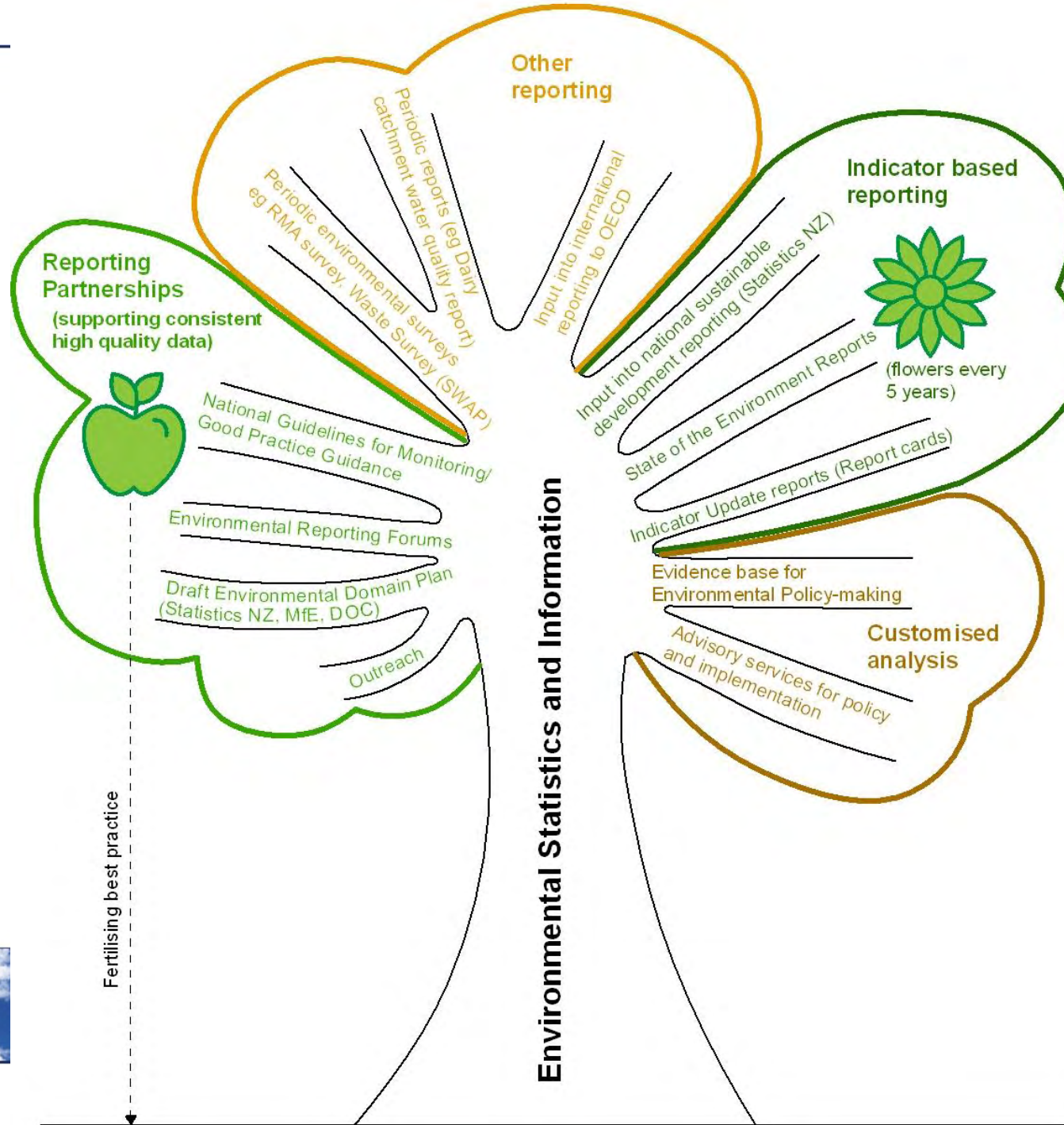
- National environmental reporting programme
- National environmental indicators
- Examples of recent state and trends



National environmental reporting programme



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Programme objectives

- Provide accessible, high-quality information
- Report NZ's environmental performance internationally
- Support sustainable development reporting
- Improve the quality, consistency & coverage of environmental data in NZ



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National state of the environment report - 2007

The national environmental reporting programme uses a core set of environmental indicators to provide cost-effective, practical and meaningful information on high-priority issues for the environment.



National Indicators (1)

Consumption	Household consumption expenditure
Transport	Vehicle-kilometres travelled (VKT)
Energy	Energy supply Energy demand
Waste	Solid waste disposal
Air	Air quality
Atmosphere	Greenhouse gases Stratospheric ozone
Land	Land cover Land use Soil health Erosion risk

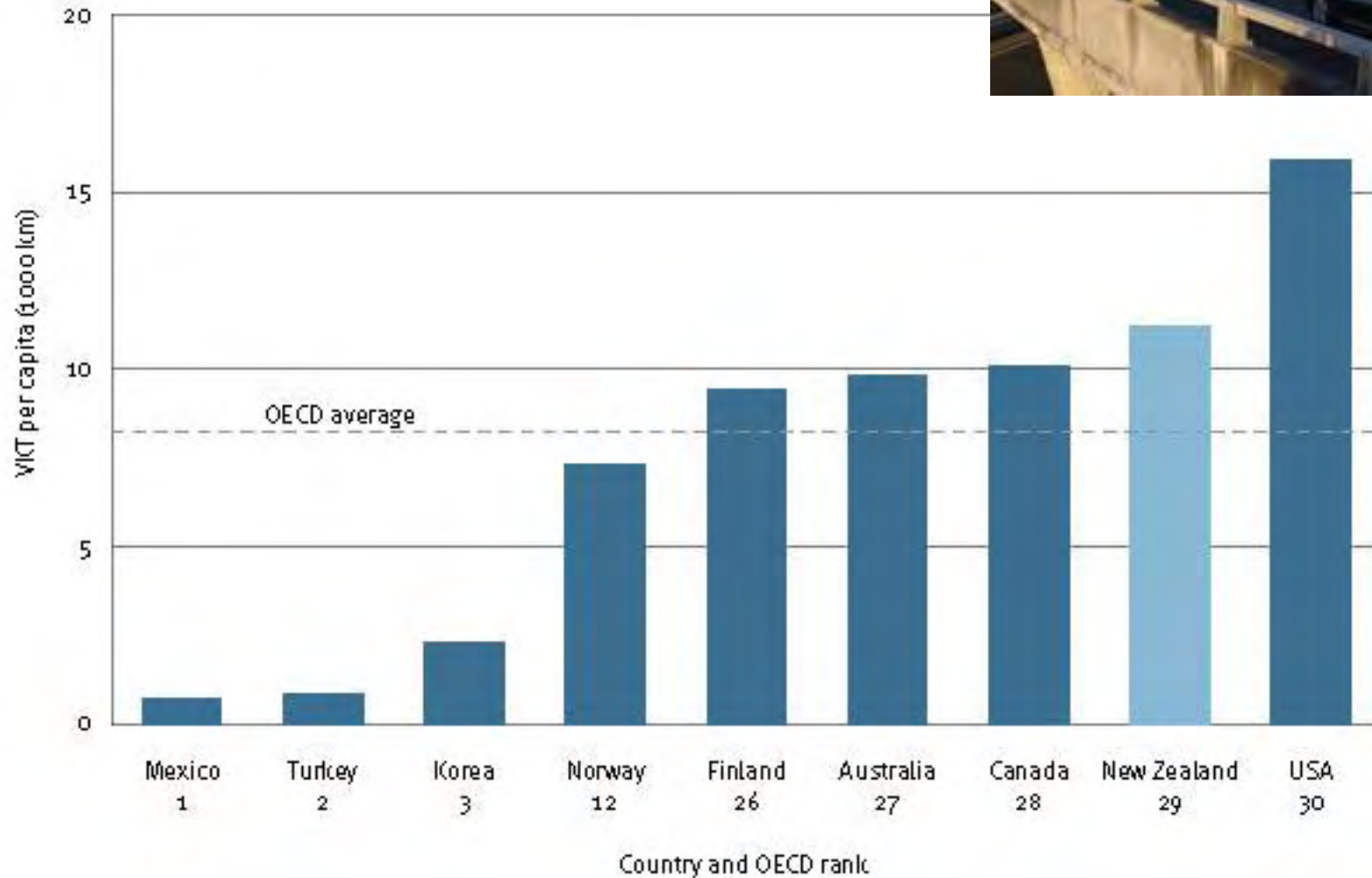


National indicators (2)

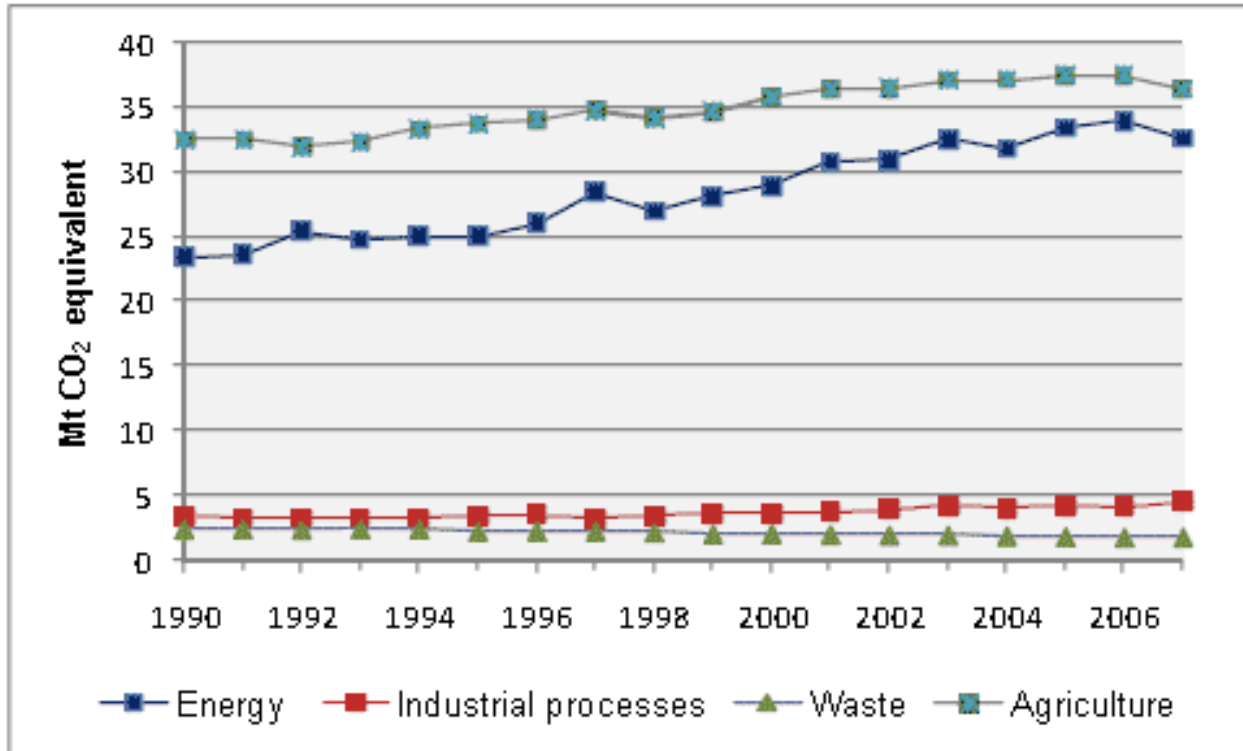
Fresh water	River water quality Lake water quality Groundwater quality Recreational water quality Freshwater demand
Oceans	Marine protected areas Fishing activity Recreational water quality
Biodiversity	Native land cover Indicator species



Vehicle Kilometres Travelled



Greenhouse gas emissions



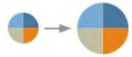
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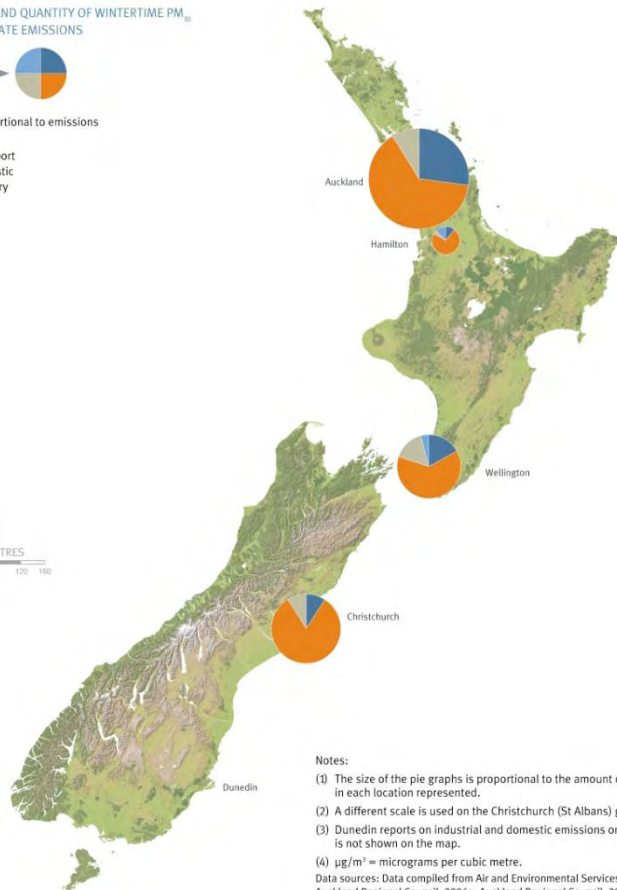
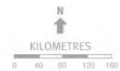
Air Quality – PM₁₀

+ FIGURE 7.6:
PM₁₀ PARTICULATE LEVELS AND EMISSIONS
IN MAIN CENTRES OF POPULATION

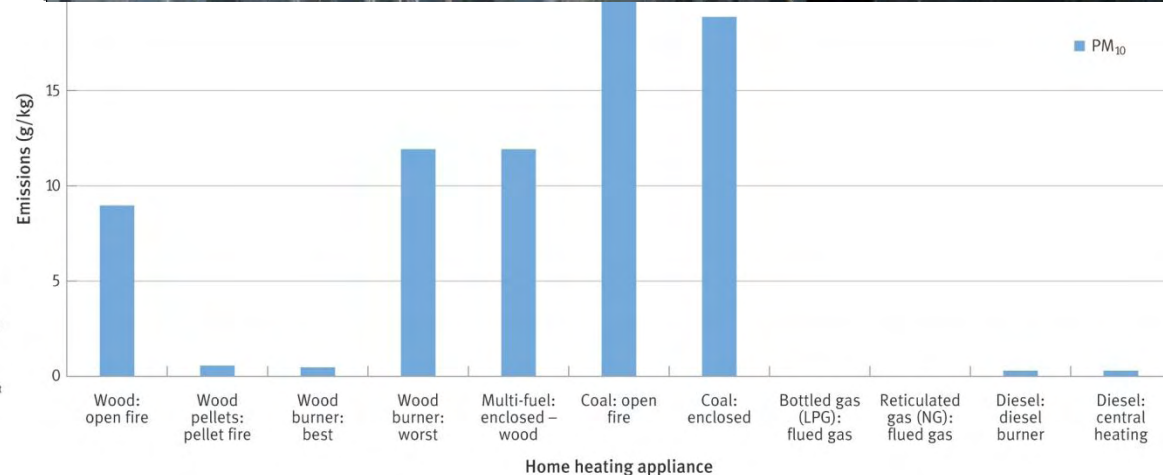
SOURCE AND QUANTITY OF WINTERTIME PM₁₀
PARTICULATE EMISSIONS



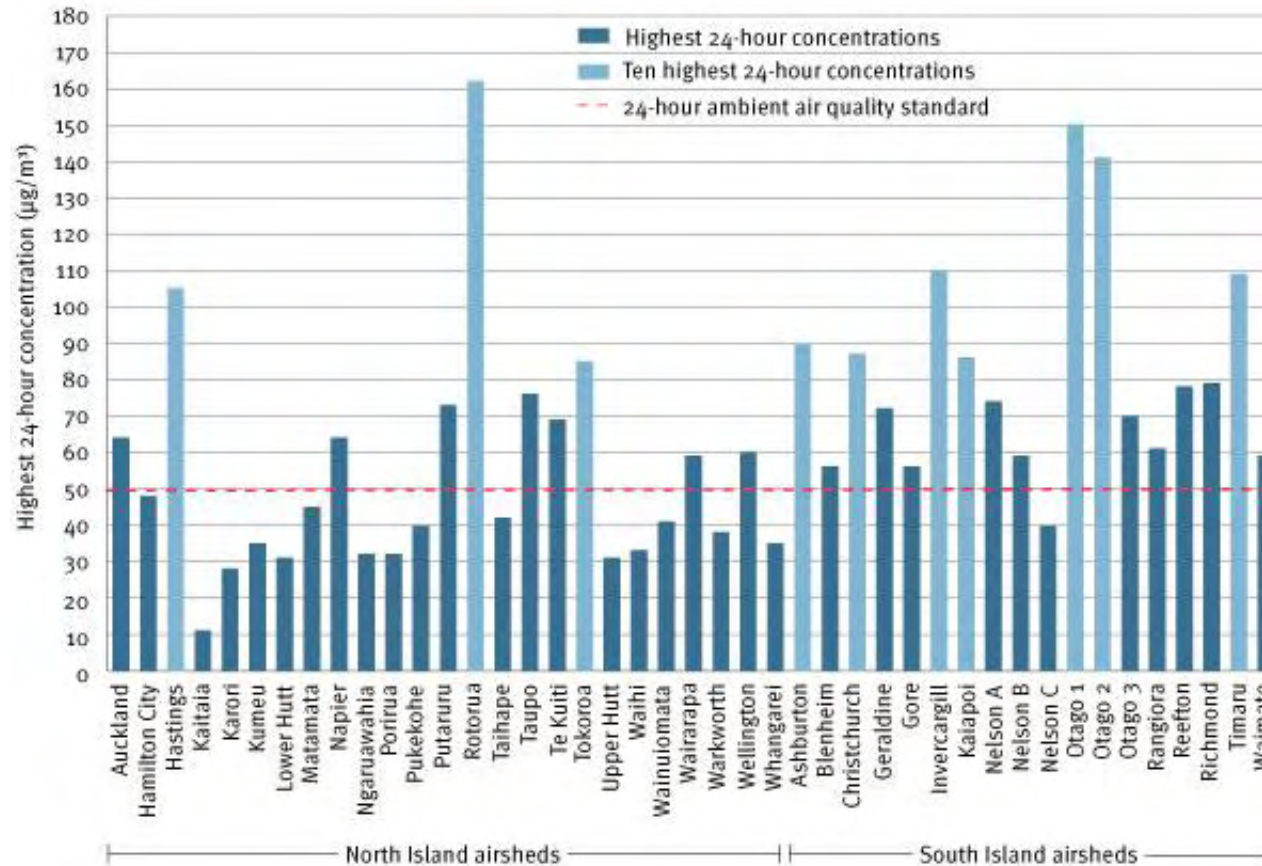
Size proportional to emissions



Notes:
(1) The size of the pie graphs is proportional to the amount of emissions in each location represented.
(2) A different scale is used on the Christchurch (St Albans) graph.
(3) Dunedin reports on industrial and domestic emissions only and therefore is not shown on the map.
(4) $\mu\text{g}/\text{m}^3$ = micrograms per cubic metre.
Data sources: Data compiled from Air and Environmental Services Ltd, 2001; Auckland Regional Council, 2006a; Auckland Regional Council, 2006b; Environment Canterbury, 2004; Environment Canterbury, 2006; Environment Waikato, 2006a; Environment Waikato, 2006b; Greater Wellington Regional Council, 2005; Otago Regional Council, 2005a; Otago Regional Council, 2005b.



Air quality – PM₁₀



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Air Quality - CO

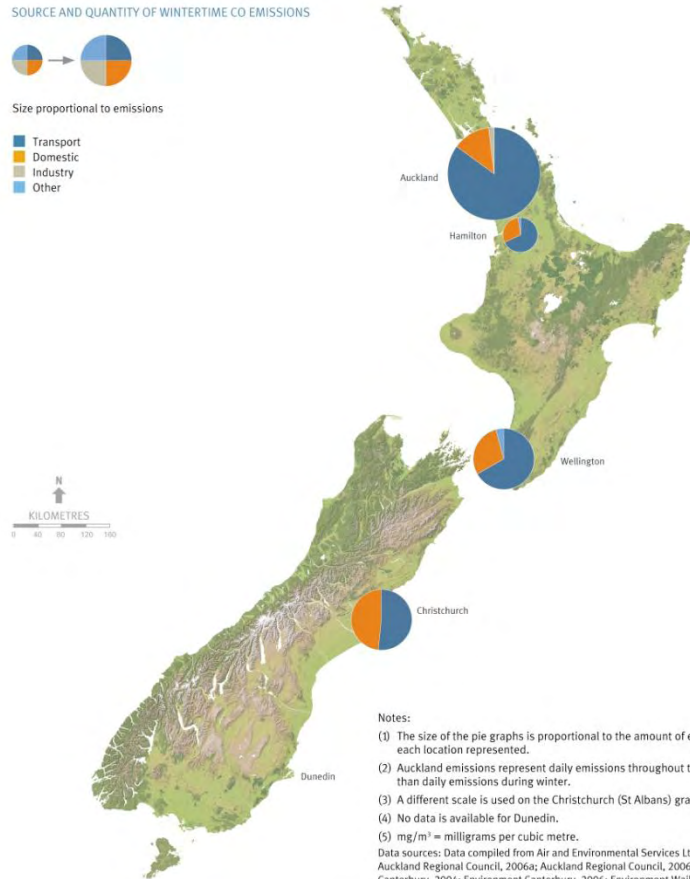


+ FIGURE 7.10:
CARBON MONOXIDE (CO) LEVELS AND EMISSIONS
IN MAIN CENTRES OF POPULATION

SOURCE AND QUANTITY OF WINTERTIME CO EMISSIONS



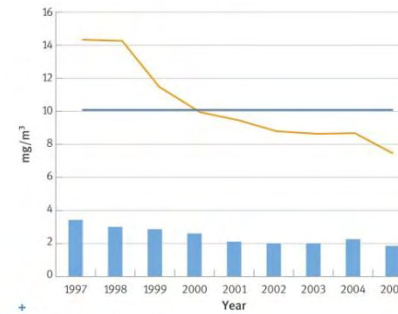
Size proportional to emissions



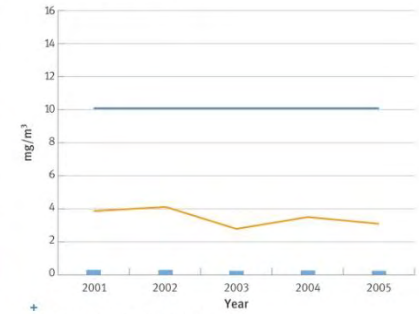
Notes:

- (1) The size of the pie graphs is proportional to the amount of emissions in each location represented.
 - (2) Auckland emissions represent daily emissions throughout the year rather than daily emissions during winter.
 - (3) A different scale is used on the Christchurch (St Albans) graph.
 - (4) No data is available for Dunedin.
 - (5) mg/m³ = milligrams per cubic metre.
- Data sources: Data compiled from Air and Environmental Services Ltd, 2001; Auckland Regional Council, 2006a; Auckland Regional Council, 2006b; Environment Canterbury, 2004; Environment Canterbury, 2006; Environment Waikato, 2006a; Environment Waikato, 2006b; Greater Wellington Regional Council, 2005.

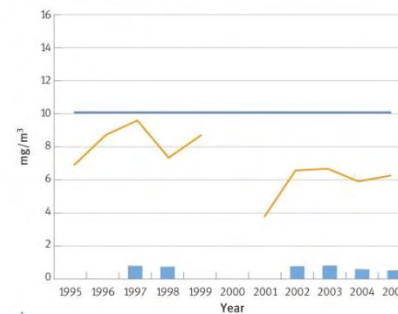
+ AUCKLAND (KHYBER PASS ROAD) CO



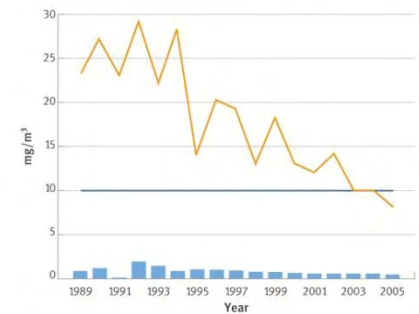
+ WELLINGTON (UPPER HUTT) CO



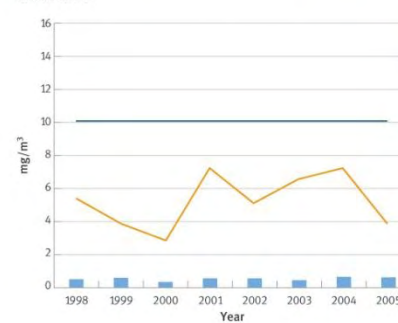
+ AUCKLAND (TAKAPUNA) CO



+ CHRISTCHURCH (ST ALBANS) CO

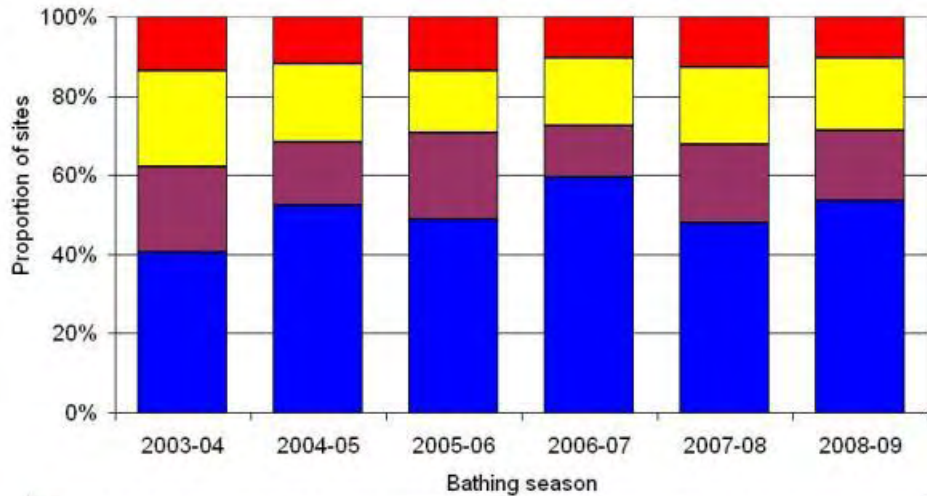


+ HAMILTON CO



■ Annual averages
— 8-hour NES standard
— 8-hour maximum

Freshwater swimming holes



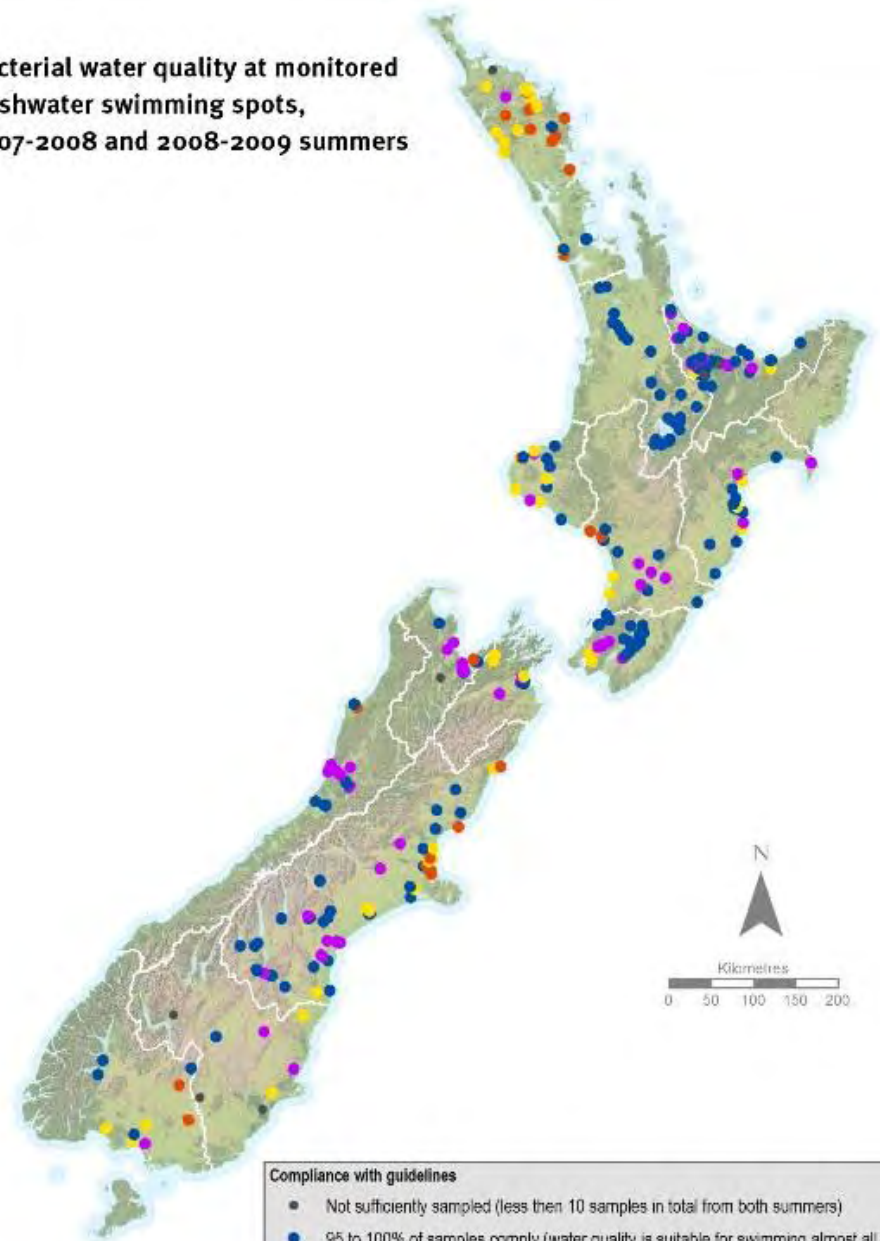
- Less than 75% of samples comply (water quality is often unsuitable for swimming)
- 75 to <90% of samples comply
- 90 to <95% of samples comply
- 95 to 100% of samples comply (water quality is suitable for swimming almost all the time)



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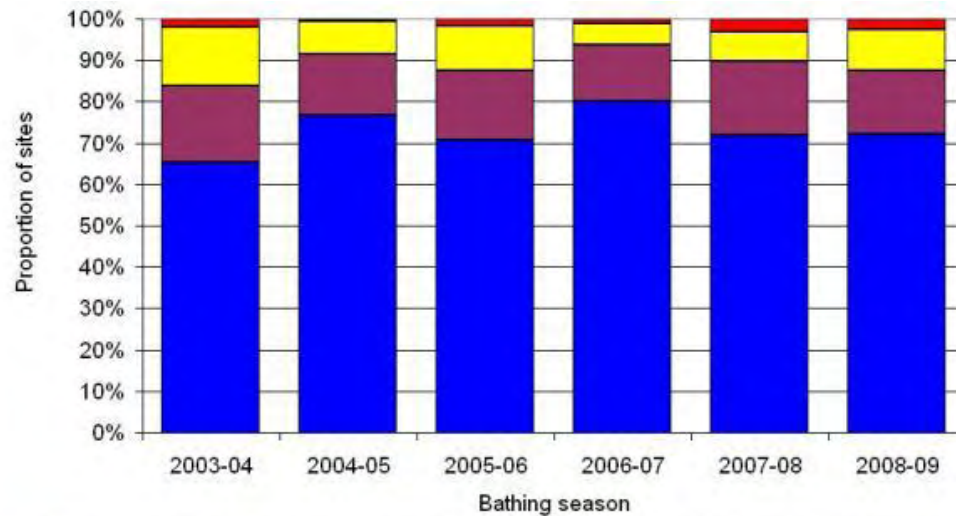
Bacterial water quality at monitored freshwater swimming spots, 2007-2008 and 2008-2009 summers



Compliance with guidelines

- Not sufficiently sampled (less than 10 samples in total from both summers)
- 95 to 100% of samples comply (water quality is suitable for swimming almost all the time)
- 90 to <95% of samples comply
- 75 to <90% of samples comply
- Less than 75% of samples comply (water quality is often unsuitable for swimming)
- Regional Council Boundaries

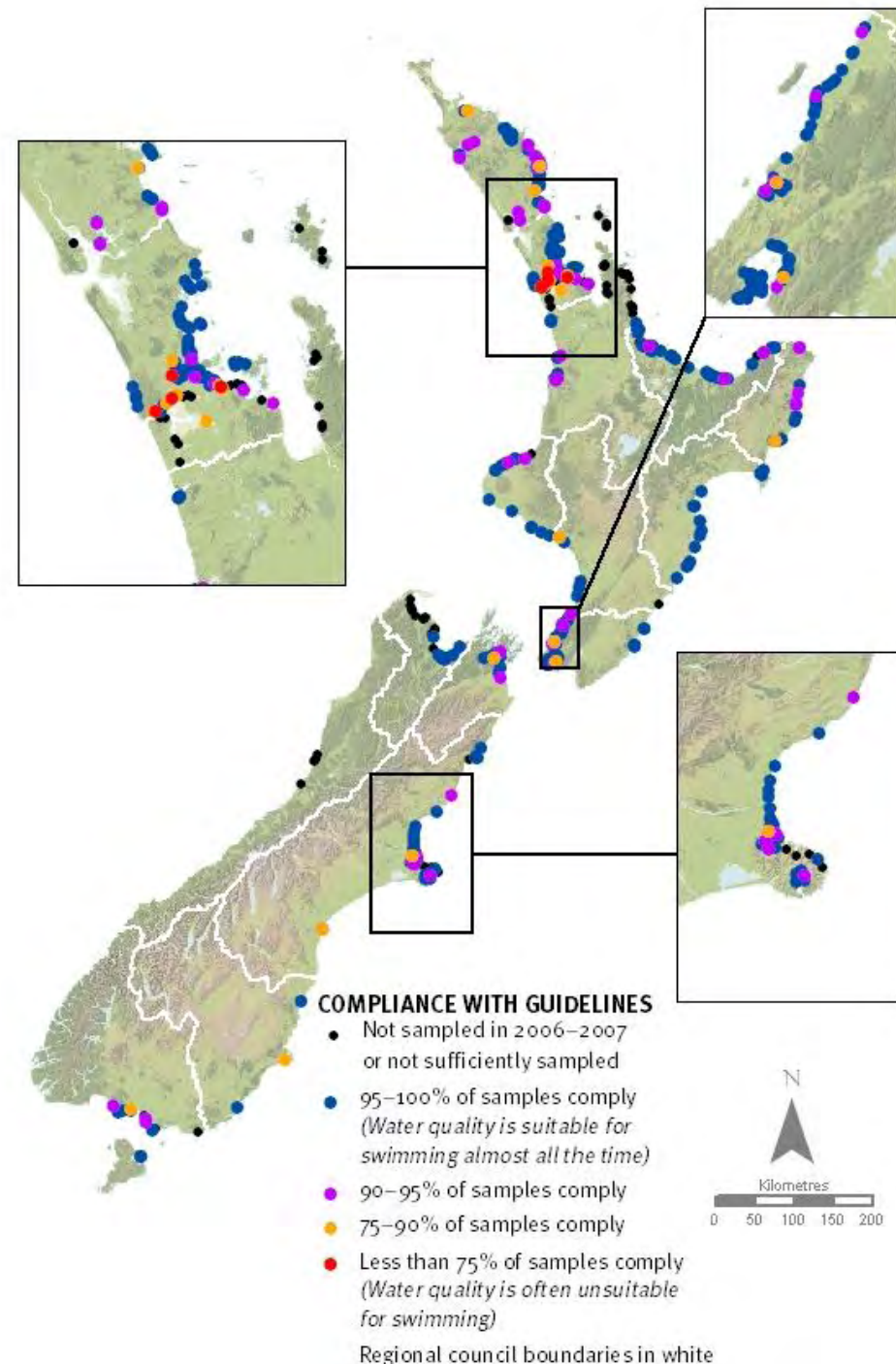
Coastal recreational water quality



- Less than 75% of samples comply (water quality is often unsuitable for swimming)
- 75 to <90% of samples comply
- 90 to <95% of samples comply
- 95 to 100% of samples comply (water quality is suitable for swimming almost all the time)

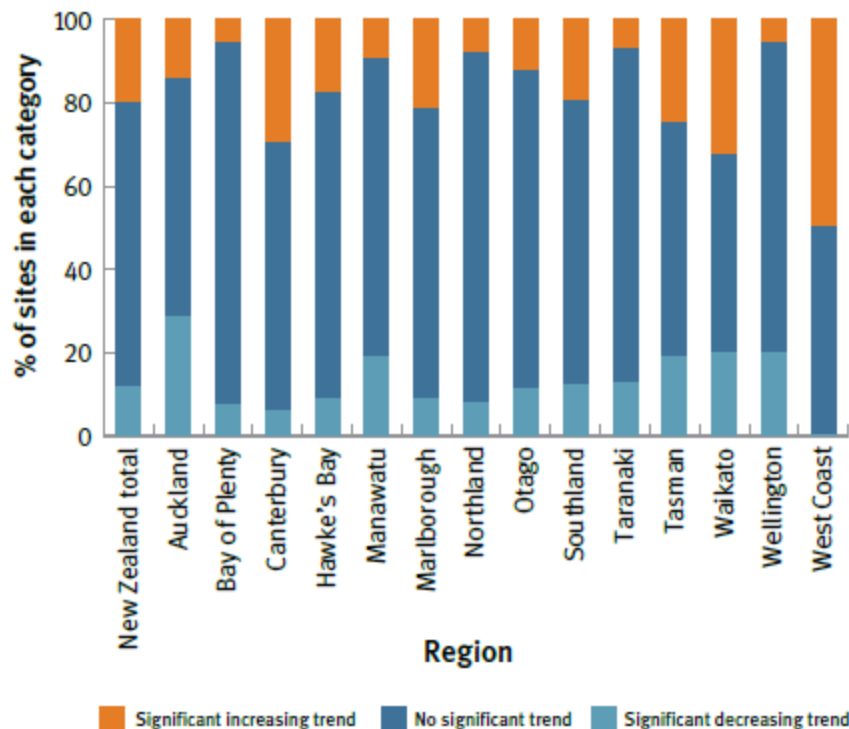


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Groundwater quality

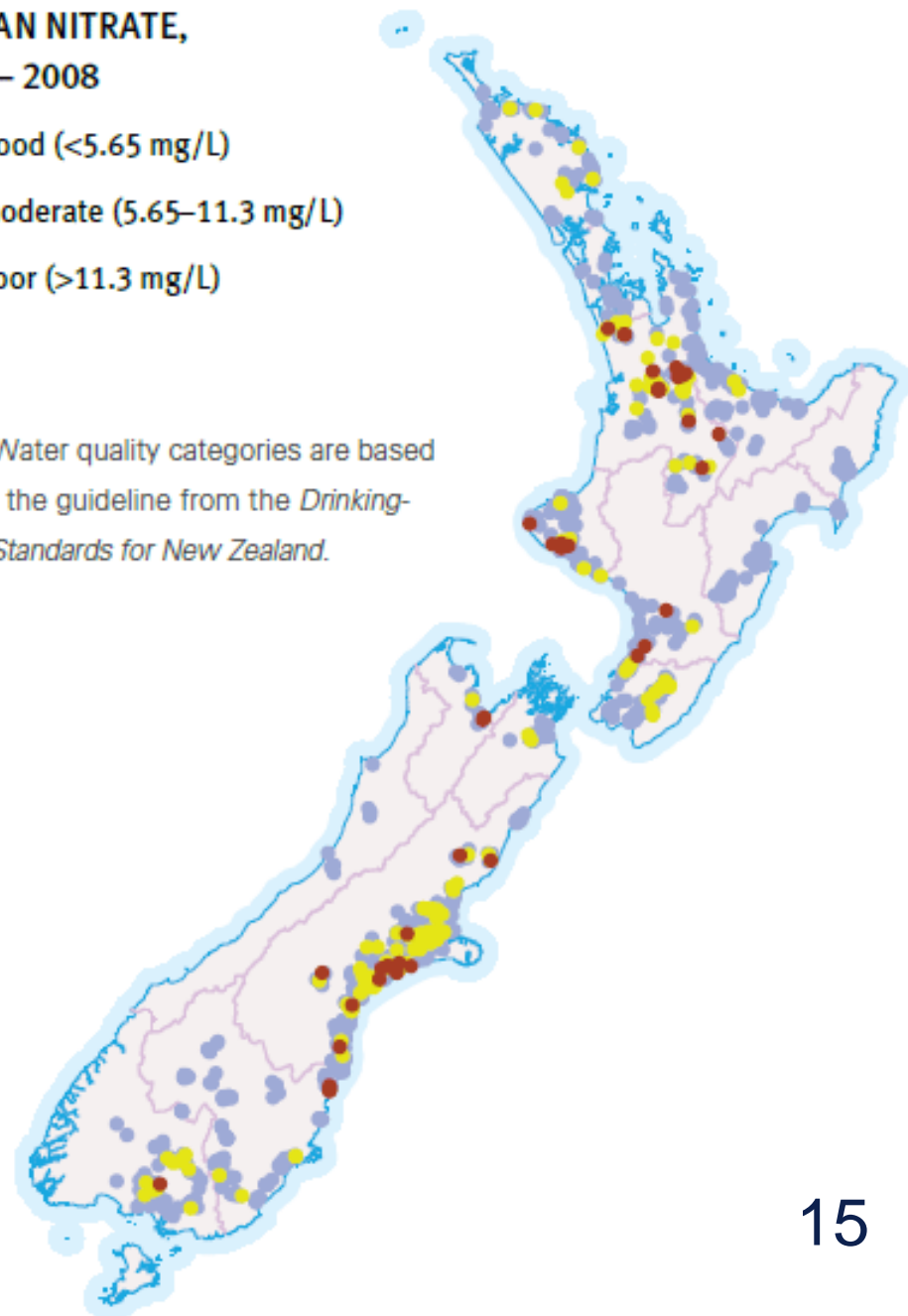
REGIONAL TRENDS IN NITRATE, 1995 – 2008



MEDIAN NITRATE, 1995 – 2008

- Good (<5.65 mg/L)
- Moderate (5.65–11.3 mg/L)
- Poor (>11.3 mg/L)

Note: Water quality categories are based around the guideline from the *Drinking-water Standards for New Zealand*.



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What else?

- Technical guide to the national indicators
- Review of regional-level, national-level and OECD indicator programmes
- Creation of 'family' of reporting products
- 3-monthly newsletters to community of interest
- 6-monthly environmental reporting forums
- Guidelines and best practice guides
- Dependable freshwater monitoring and reporting
- Cultural monitoring



Want to find out more?

- <http://www.mfe.govt.nz/environmental-reporting/index.html>
- <http://www.mfe.govt.nz/publications/ser/>



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