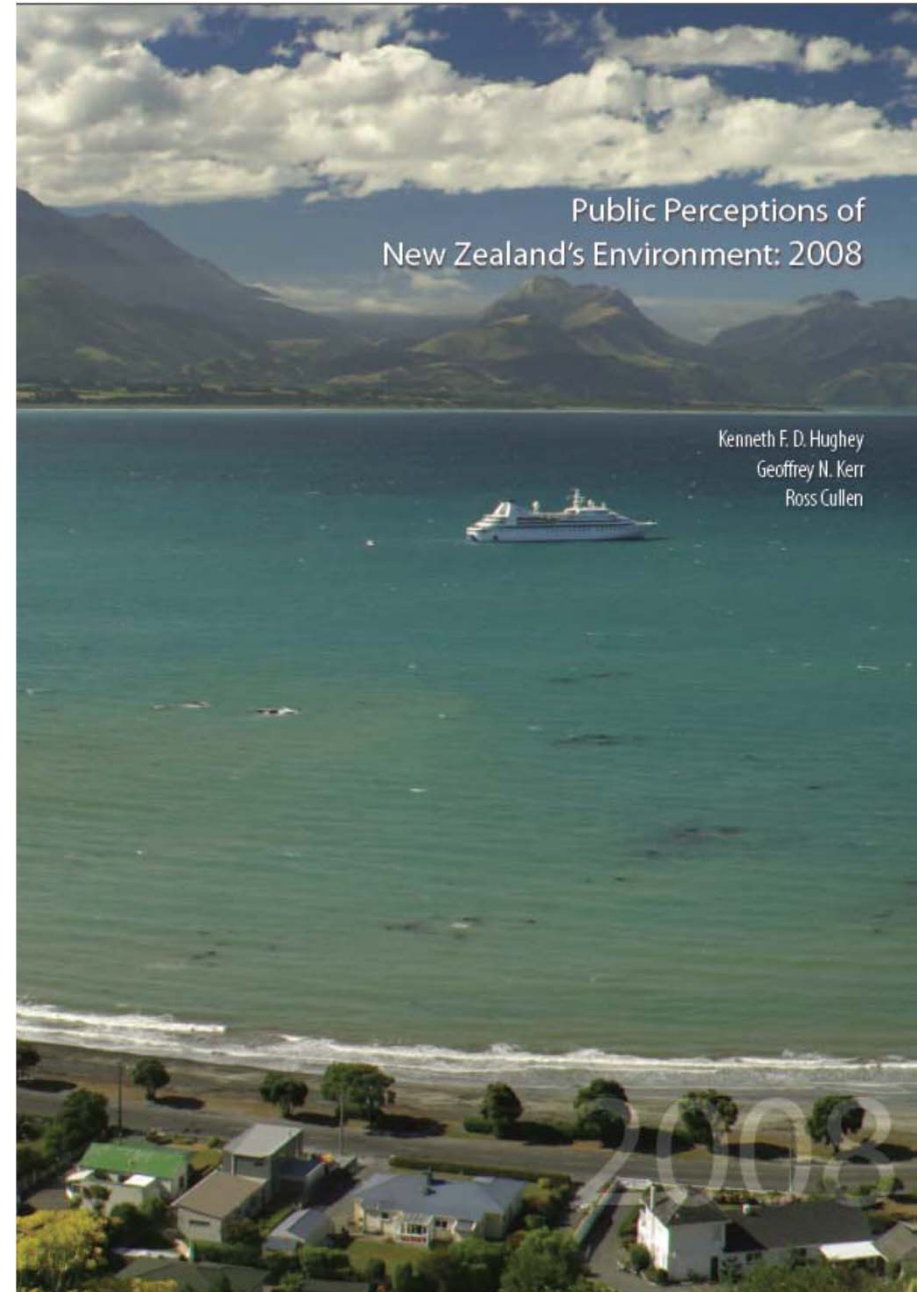


**Perceptions of the
State of New
Zealand's
Environment:
*research approach,
key findings and
ongoing
opportunities***

**Ken Hughey
Geoff Kerr
Ross Cullen**

Lincoln University

MfE, Wellington, 17th March 2009



Outline

- The aims, framework and method
- The key messages:
 - * PSR trends
 - * Results and implications
- The lessons
- Opportunities and Conclusions

Research aims, framework & methods – some reminders

Aims:

- Monitor NZers' perceptions of resources and environmental issues – something increasingly common in other countries;
- Contribute to improved state of environment reporting – matching perceptions to science can identify gaps/issues;
- Inform policy development – understanding perceptions can help with policy initiatives.

Framework:

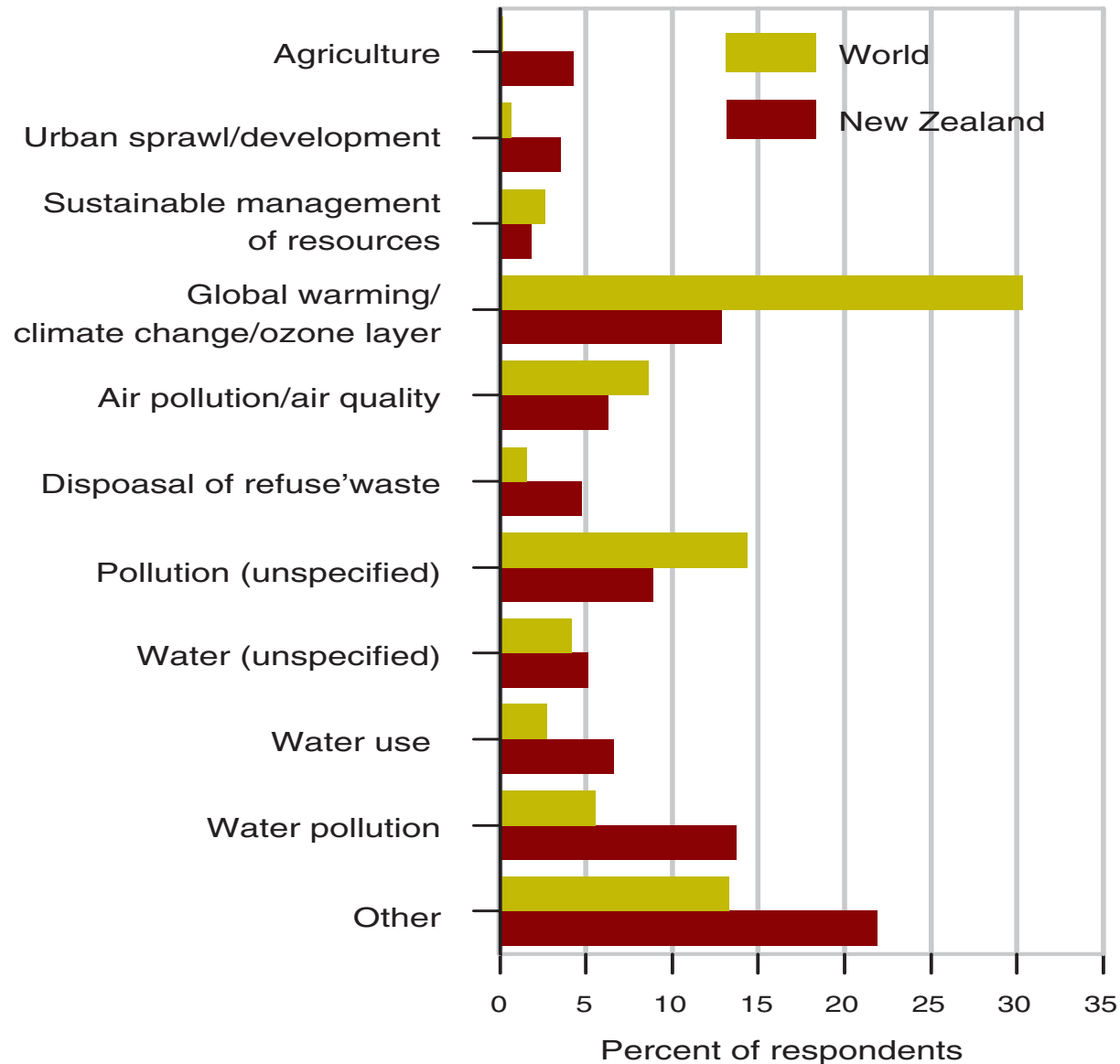
- PSR model used by OECD and in MfE environmental reporting programme

Methods:

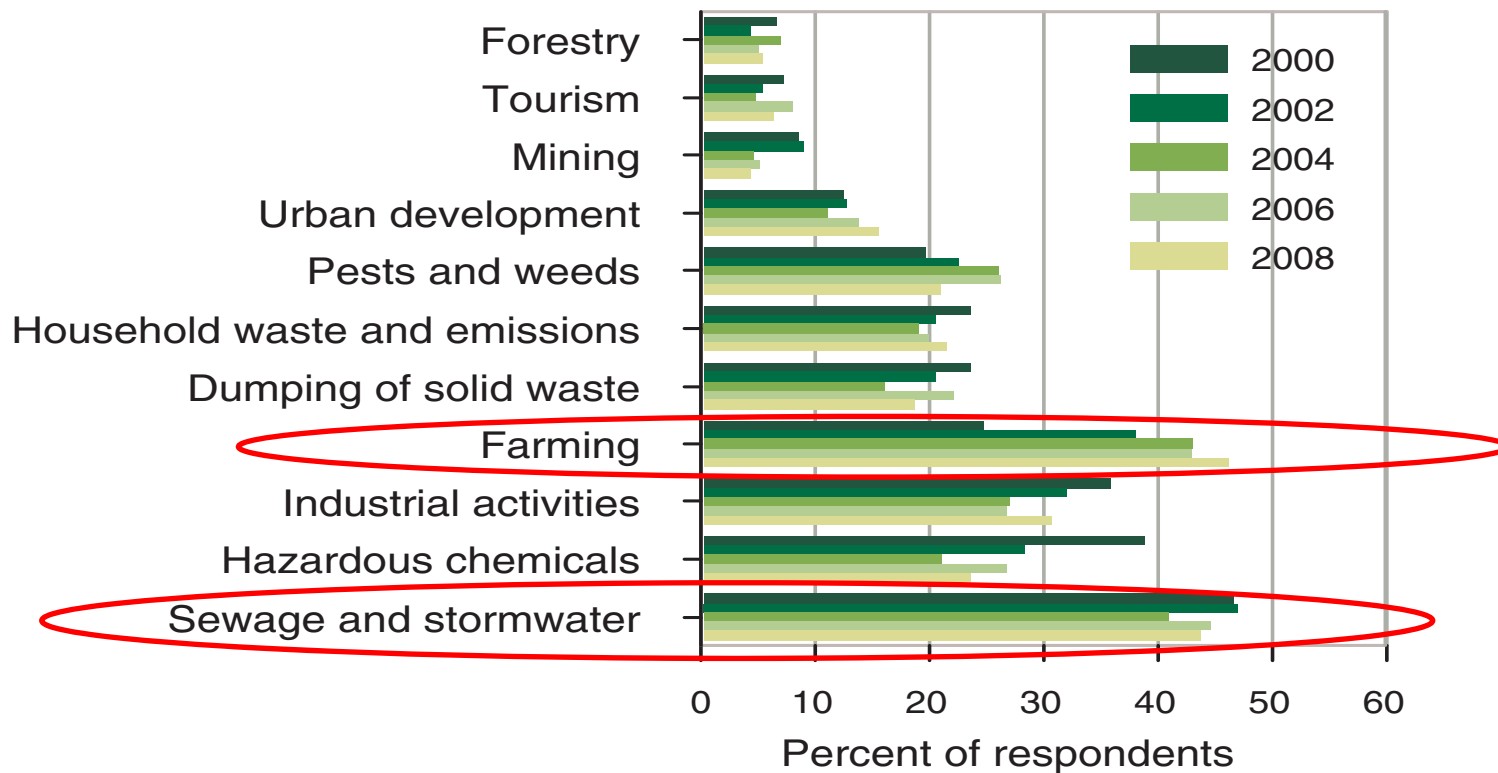
- Postal Questionnaire, biennially since 2000
- Random sample of 2000 from Electoral Roll
- Maintained a c.40-47% effective response rate

PSR trends – *Pressure*:

Most important issues facing NZ and the World - 2008



PSR trends – *Pressure*: Perceived causes of damage to fresh waters



PSR trends – Pressure:

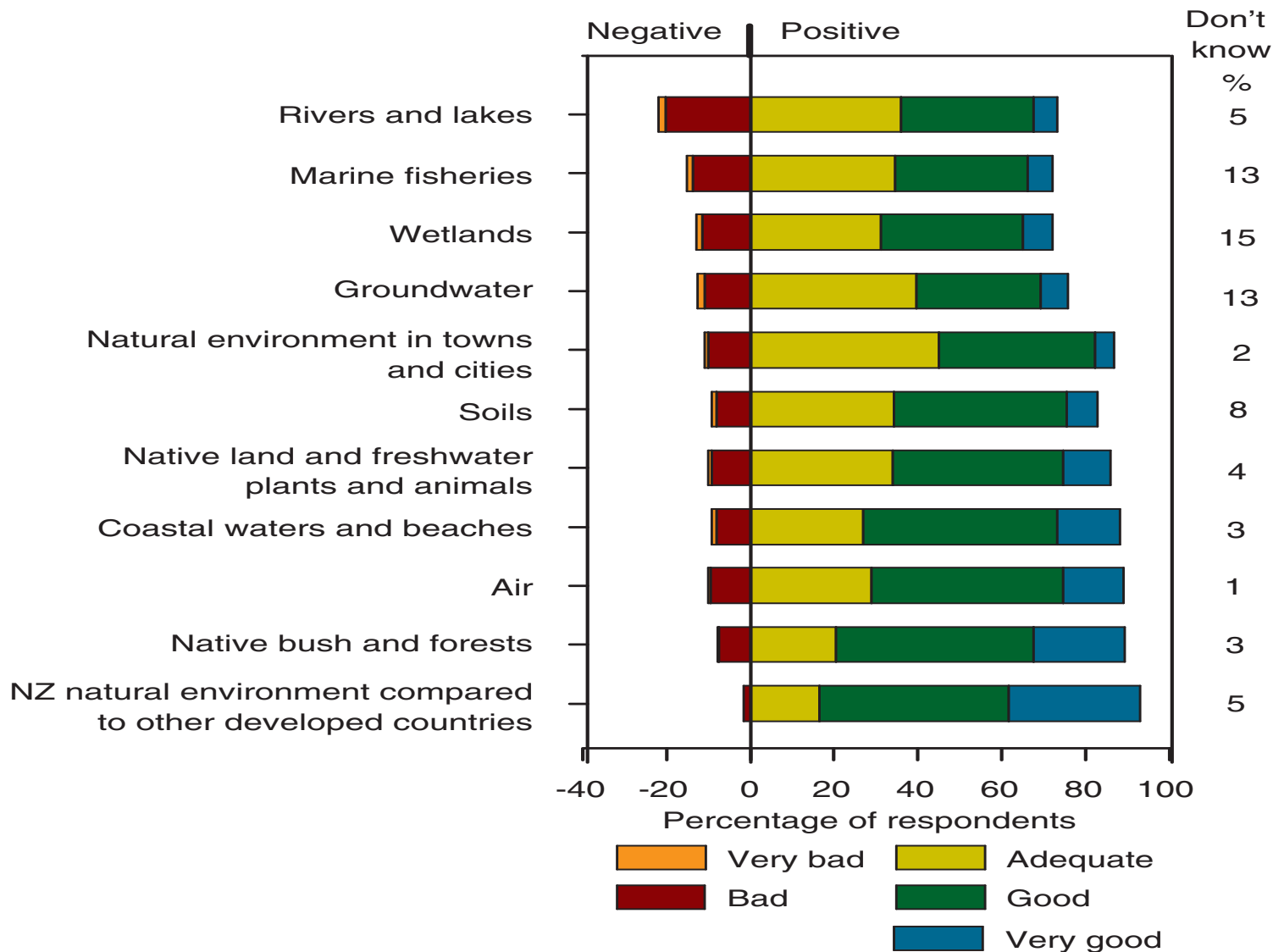
Significant changes in causes of damage over time: 2000-2008

Note that the percent figures refer to percentage points of change, e.g., farming has increased as a cause of damage to freshwater by 22 percentage points (from 24.7 in 2000 to 46.2% in 2008, an increase of 87.1%).

	Air	Native land and freshwater plants and animals	Native forests and bush	Soil	Beaches & coastal waters	Marine fisheries	Marine reserves	National parks	Wetlands	Fresh waters
Motor vehicles and transport	ns 1%	ns -2%	ns -2%		ns 2%			ns -2%		
Household waste and emissions	** -7%	ns 1%		* 4%	** -7%	ns 1%	ns -1%		*** -1%	ns -2%
Industrial activities	ns 0%	ns 1%	ns -3%	ns -1%	* -2%	* -3%	ns -2%	ns 2%	*** -5%	* -5%
Pests and weeds		ns -5%	ns	ns -1%		*** 2%	ns 1%	ns 2%	*** 3%	ns 1%
Farming	*** 8%	*** 17%	*** 9%	*** 12%	*** 4%	*** 2%		ns 0%	*** 5%	*** 22%
Forestry		* -5%	** -8%	ns 3%				*** -7%	ns 0%	ns -1%
Urban development	* 4%	ns 3%	** 7%	ns -2%	** 6%		ns -1%	ns -1%	*** 3%	ns 3%
Mining		ns -2%	ns 3%	n-2%				ns -2%	ns 0%	** -4%
Sewage and storm water	ns 0%	* -5%		ns 1%	ns -3%	ns -1%	ns -3%		ns 0%	ns -3%
Tourism		ns 0%	ns -3%		ns 0%	ns 0%	ns -2%	ns 2%	ns 2%	ns -1%
Commercial fishing					ns 3%	ns 2%	* 6%			
Recreational fishing					ns 1%	ns 4%	* 6%			
Dumping of solid waste	ns 0%	ns -4%	ns 0%	*** -11%	*** -8%	ns -2%	ns -3%	ns -3%	*** -7%	* -5%
Hazardous chemicals	*** -9%	** -7%	* -3%	*** -13%	*** -9%	*** -13%	*** -11%	*** -1%	*** -8%	*** -15%

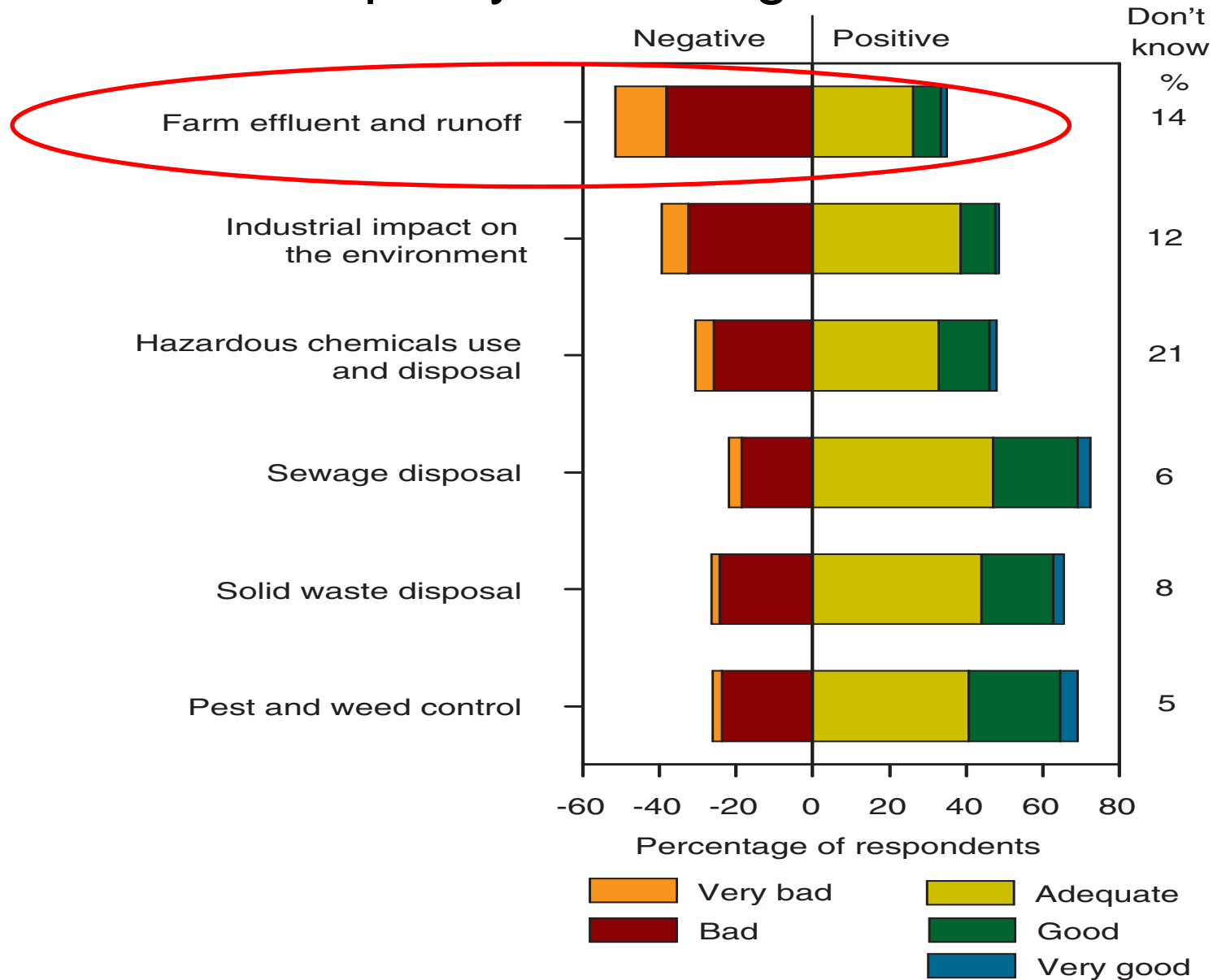
PSR trends – State:

Perceived state of the environment - 2008



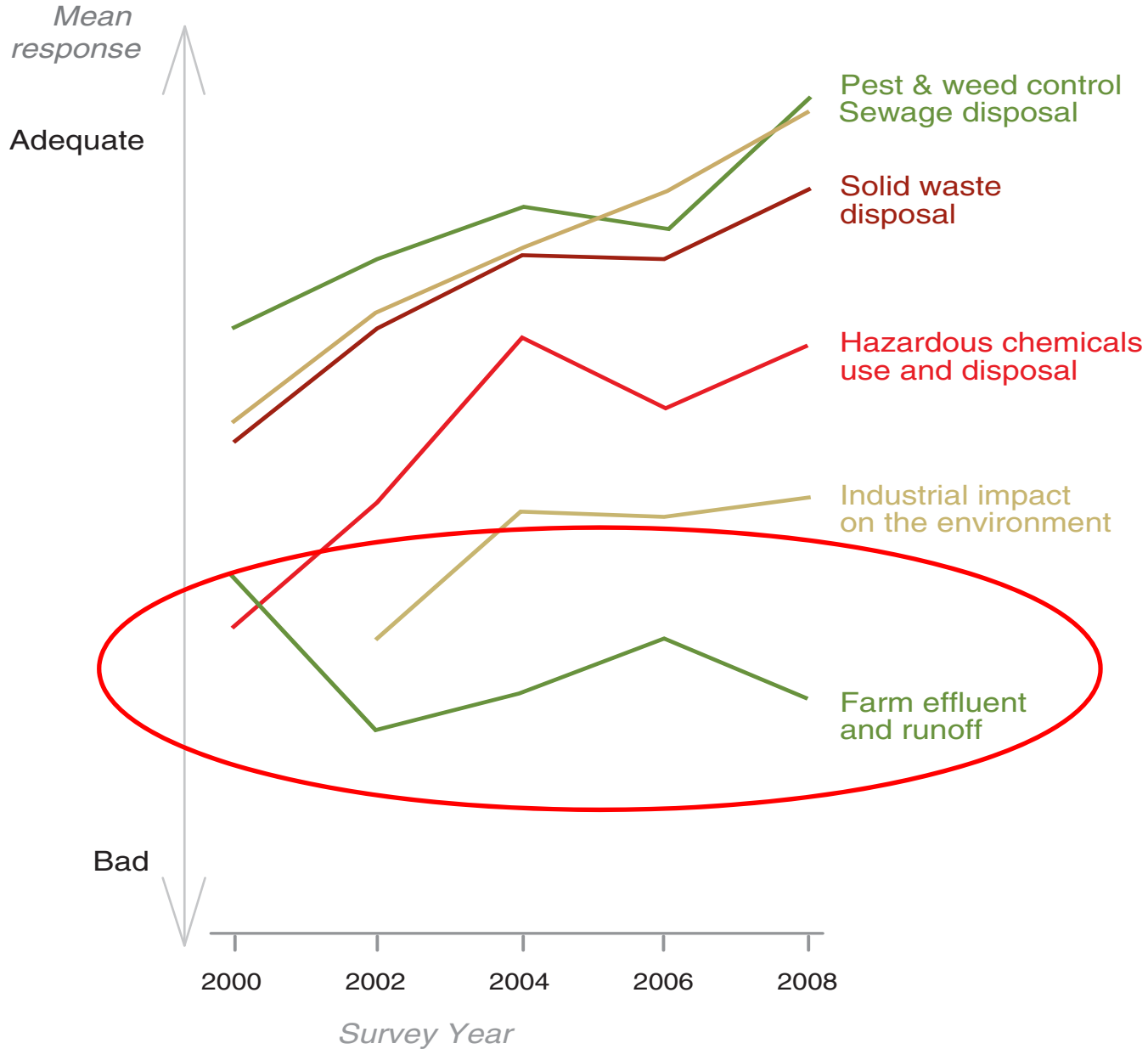
PSR trends – *Response:*

Perceived quality of management activities - 2008



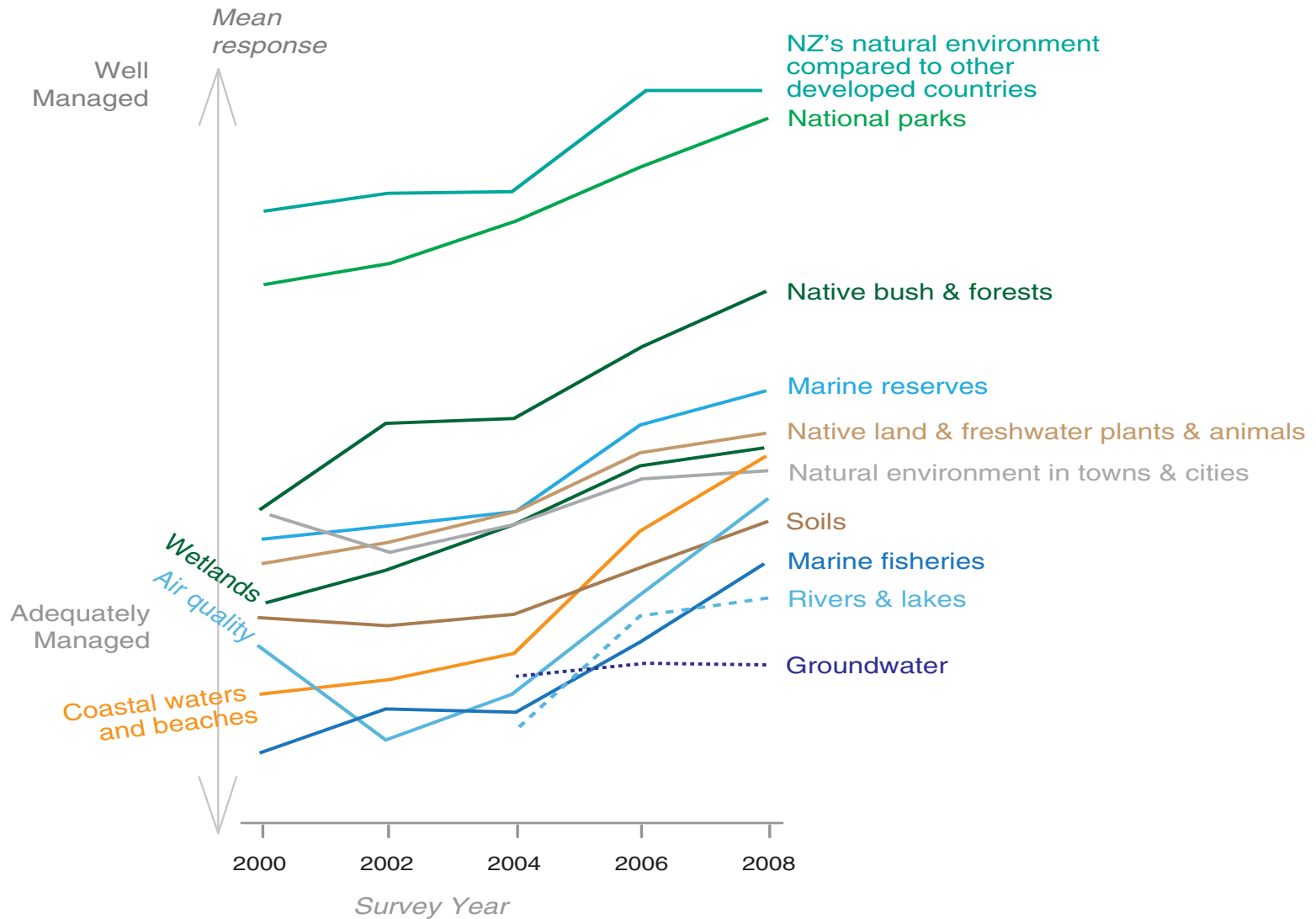
PSR trends – *Response*:

Trends in perceived quality of management activities 2000-2008



PSR trends – *Response*:

Trends in perceived quality of management 2000-2008



PSR trends – *Response:* Changes to participation 2000-2008

Activity and significance of change between surveys	Percent participation 2000	Percent participation 2008
Reduced or limited electricity use ***	62%	83%
Commuted by buses or trains ***	18%	38%
Recycled household waste ***	85%	91%
Bought products that are marked as environmentally friendly NS	86%	84%
Composted garden and/or household waste NS	71%	69%
Grown some of their own vegetables NS	71%	70%
Been involved in a project to improve the natural environment NS	22%	22%
Been an active member of a club or group that restores and/or replants natural environments NS	12%	13%
Obtained information about the environment from any source *	53%	58%
Taken part in hearings or consent processes about the environment NS	14%	13%
Participated in an environmental organisation NS	13%	13%
Visited a marine reserve ***	36%	25%
Visited a national park ***	66%	58%

Significant changes in 'state' and 'response' ratings between the 2000 and 2008 periods (note however that for rivers and lakes, and for groundwater, data are only for 2004-2008).

	State	Availability	Management
Natural environment in towns and cities	**	NA	
Air	*** (↓)	NA	*** (↑)
Native land & freshwater plants & animals			*** (↑)
Native bush and forests	*** (↑)		*** (↑)
Soils	***	NA	* (↑)
Coastal waters & beaches	*** (↑)	NA	*** (↑)
Marine fisheries	***	**	** (↑)
Marine reserves	NA	***	** (↑)
Rivers and lakes		** (↓)	** (↑)
Groundwater		*** (↓)	
National Parks	NA		*** (↑)
Wetlands			*** (↑)
NZ's natural environment compared to other developed countries			*** (↑)

Results suggest

- **Certain pressures increasing in importance**
 - Include farming, water quality as a concern
 - Urbanisation
- **Differences in scientific vs perceived state of environment** – Correct for freshwater but not biodiversity: this can have policy consequences
- **Perception of management of environment varies across resource type and over time** – management is improving, but is this cosmetic given perceptions of state remain mostly the same?
- **‘Cosmetic’ behavioural changes occurring**
- **Demographic differences exist (regional, ethnic)** – there are important implications from these

PSR Survey lessons

For us:

- Scientifically robust, valuable information on perceptions;
- Manageable and of interest to a broad range of users;
- It (the survey) costs! We received a total of \$33000 from MfE and DoC for 2008 – that did not cover operational expenses, but is much appreciated!

For you (and other govt agencies):

- Results provide policy insights
 - lead to better targeting and management of responses, education programmes, etc.
- There are opportunities for further use of the survey findings and for further developments.
- Use survey as public barometer and complement to science
 - For MfE, DoC, RCs, MFish, Treasury, MAF & Statistics NZ, to gauge perceived improvement/decline over time
 - MfE should be using in indicator updates, i.e., here is what the public thinks, but this is what the science is saying.

Opportunities and conclusions

- The biennial perceptions' survey of the state of the environment is the first of its type, anywhere, and is now cited by the OECD.
- Highlights issues, problems, perceptions of response performance, etc., and therefore identifies policy opportunities and information gaps.
- We have a new PhD student working on aspects of the survey – chance to influence topic area.
- Opportunities to include substantial further initiatives for 2010, e.g., will the economic downturn be reflected in changed perceptions? Will the improved perception of management be matched by perceived changes in state?