



**Long-Term  
Planning**

**Working  
towards a  
sustainable  
future**

**[sustainablefuture.info](http://sustainablefuture.info)**

# A: Background

## Sustainable Future Institute

Is an independent think tank specialising in research and policy analysis.



## *Project 2058*

The strategic aim is to promote integrated long-term thinking, leadership and capacity-building so that New Zealand can effectively explore and manage risks and opportunities over the next 50 years. The method to achieve this aim is to produce a National Sustainable Development Strategy.

## Presentation

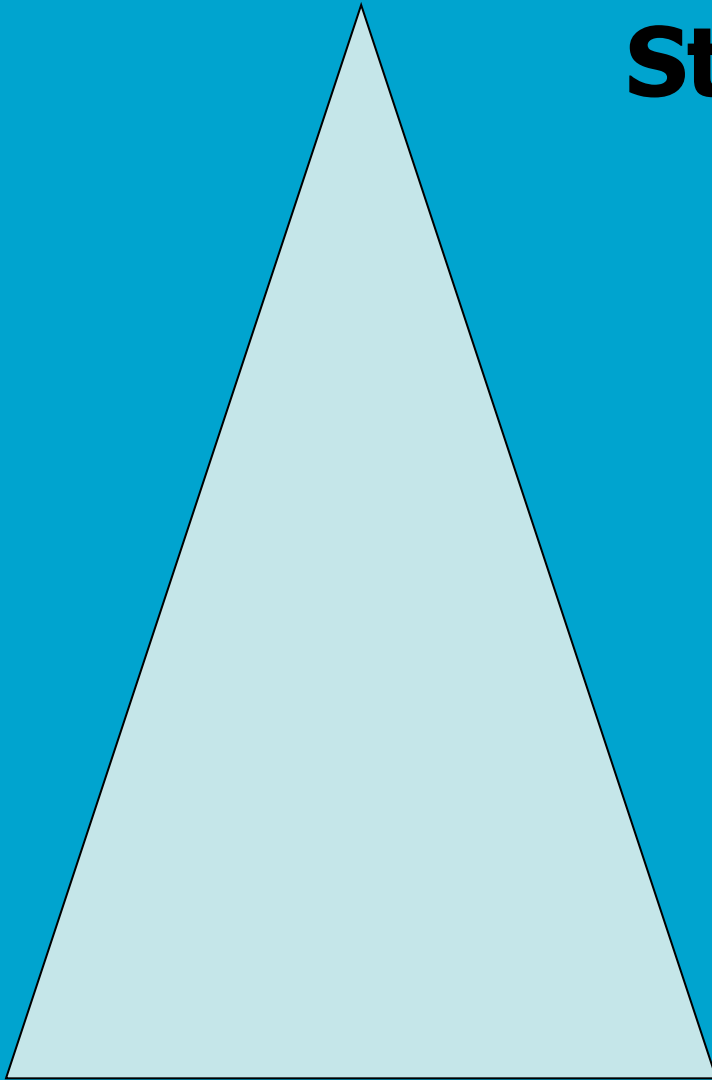
Part A: Background

Part B: The Big Picture

Part C: 21 Drivers of Change

Part D: Scenarios





**Strategic Knowledge**



**Information**



**Data**

# The Law of Large Numbers

**a thousand**      **in a pinch**

**a million**      **in a cup**

**a billion**      **in a bathtub**

**a trillion**      **in a classroom**

**a quadrillion**      **in 10 football fields,  
covered 6 feet deep**



# Futures Studies – The Theory

## **A: Hindsight, Insight and Foresight**

### **B: Probable future**

Forecasting and sometimes prediction (Status Quo)

### **Possible futures**

Scenarios, risks (Explorative)

### **Preferred futures**

Strategies for change, propelled by innovation and leadership (Visionary)

## **C: Four Steps**

1. Define parameters, trends, drivers, assumptions
2. Explore uncertainties and rank
3. Build scenario worlds, write stories, test
4. Use, consider implications, review, communicate

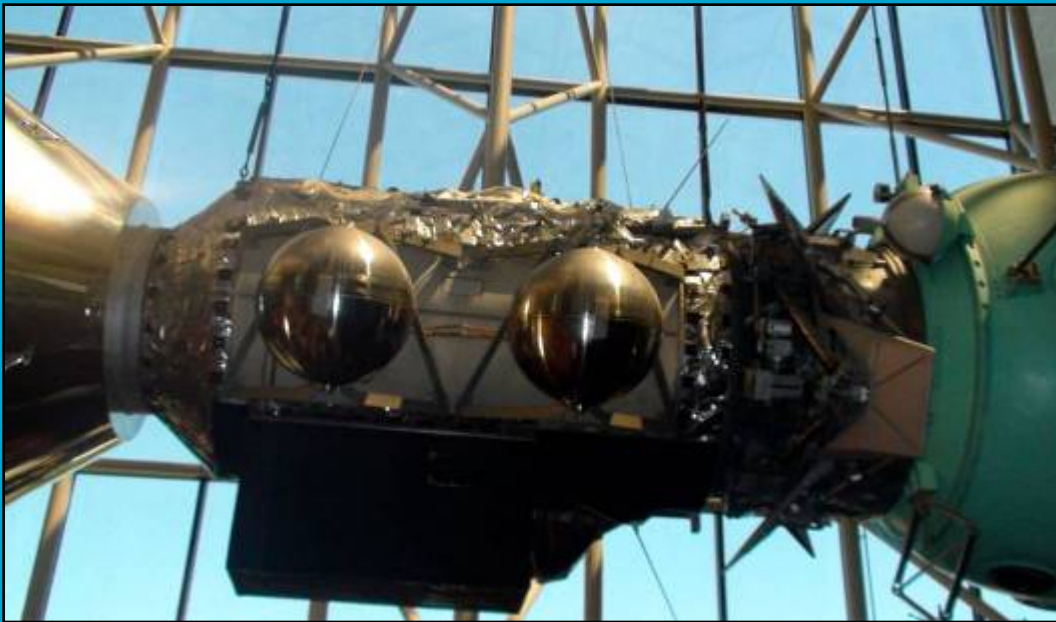
# **Walking Backwards into the Future**

**Many Pakeha detractors have said that the Maori dwell too much on the past. They would probably be right from a Pakeha perspective.**

**The Maori response would probably be that Pakeha do not spend enough time thinking about and learning from their own past. This is why we're in the mess we are today.**

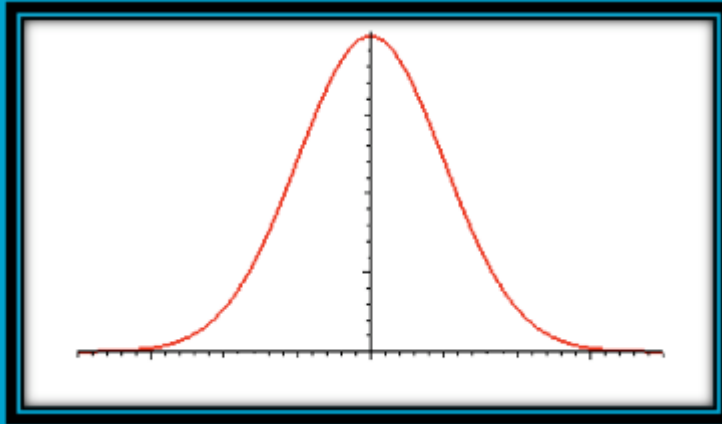
**Justice Joe Williams, 1990**

# Innovation / Invention

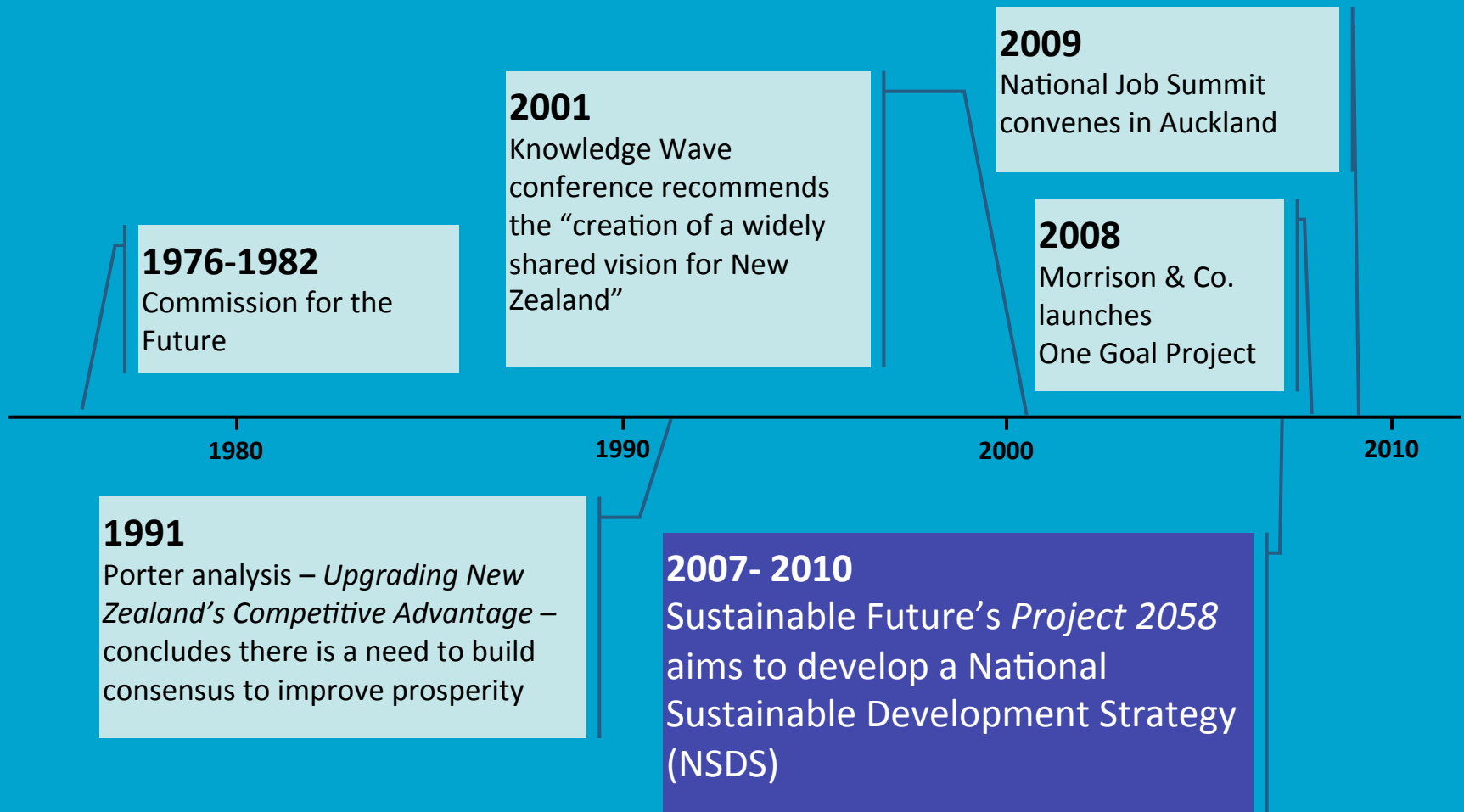




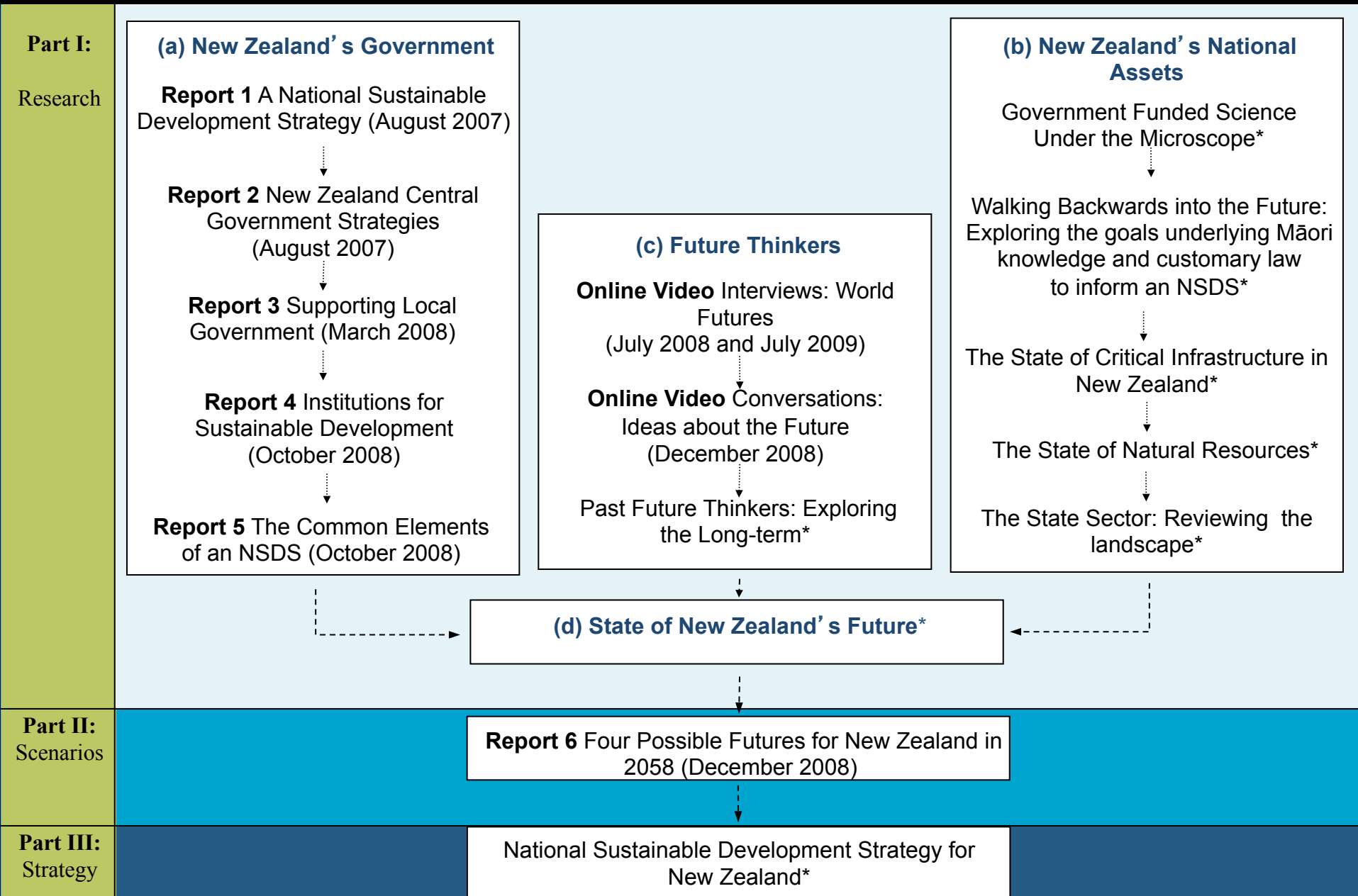
# The Extremes Inform the Middle



# Initiatives to progress long-term thinking in New Zealand



# Project 2058 – The Method



# B: The Big Picture

Of the 97 billion who have lived  
90 billion have died

Of the 7 billion alive

3 billion currently live on \$2 or less a day

Of the 4 billion living on more than \$2

2 billion are financially and physically dependent

So we represent the 2 billion earning, alive and  
able to make a difference

(2 billion divided into 97 – we are the 2%)

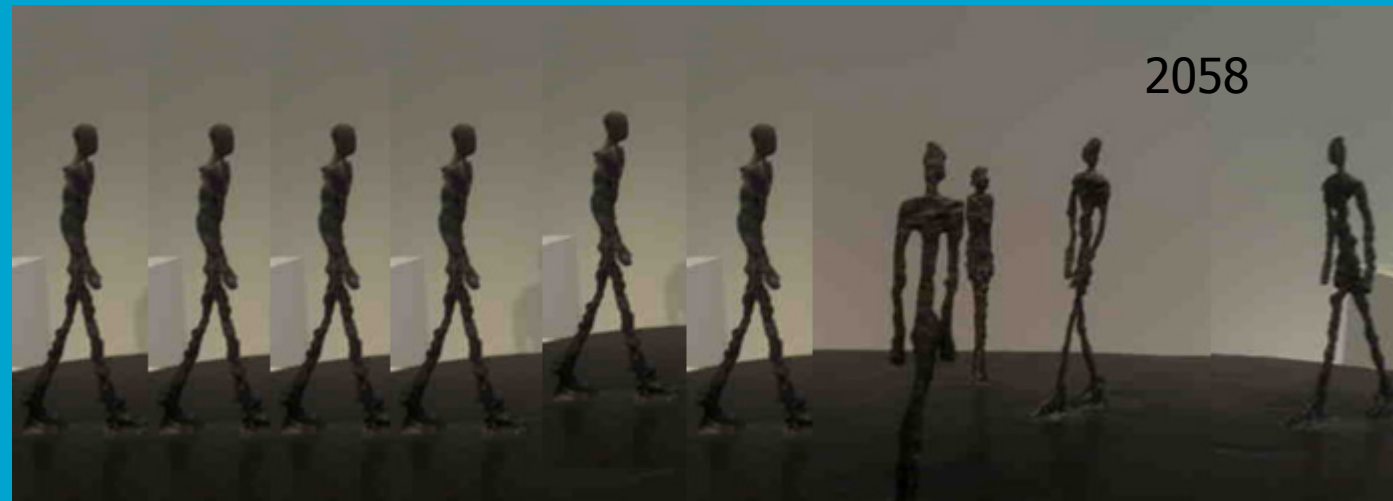
# From 40:60 to 60:40

6

In 2008, 3 billion made \$2 or less per day.



Fifty years later, the developed countries & China grow old – while Africa & India remain young.



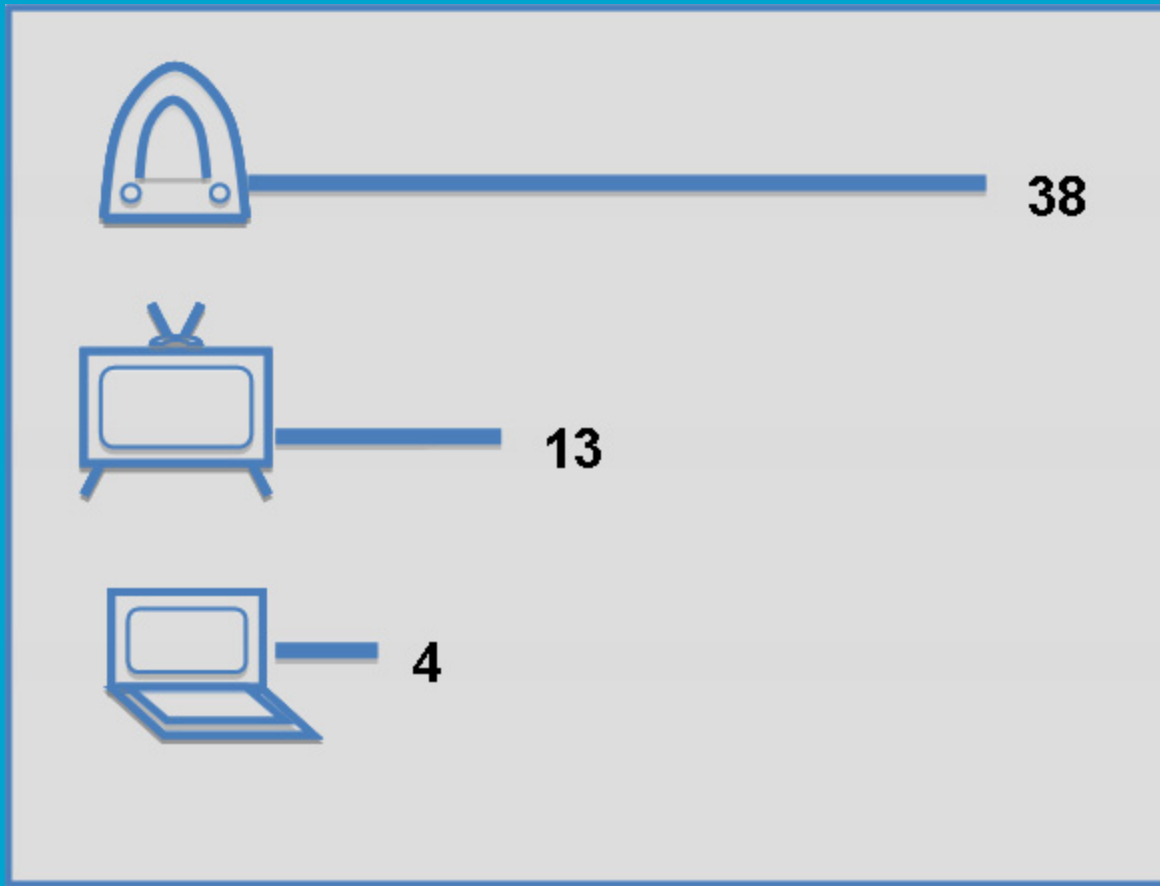
# Ants: One single global mega-colony



- Equal to biomass of humans
- Ants from European, Californian and Japan rub antennae with one another and never became aggressive or try to avoid one another. In short, they act as if they all **belong** to the same colony, despite living on different continents separated by vast oceans.
- ‘They are so much like human beings as to be an embarrassment. They farm fungi, raise aphids as livestock, launch armies for wars, use chemical sprays to alarm and confuse enemies, capture slaves...They exchange information ceaselessly. They do everything but watch television’ – Lewis Thomas

# Communication

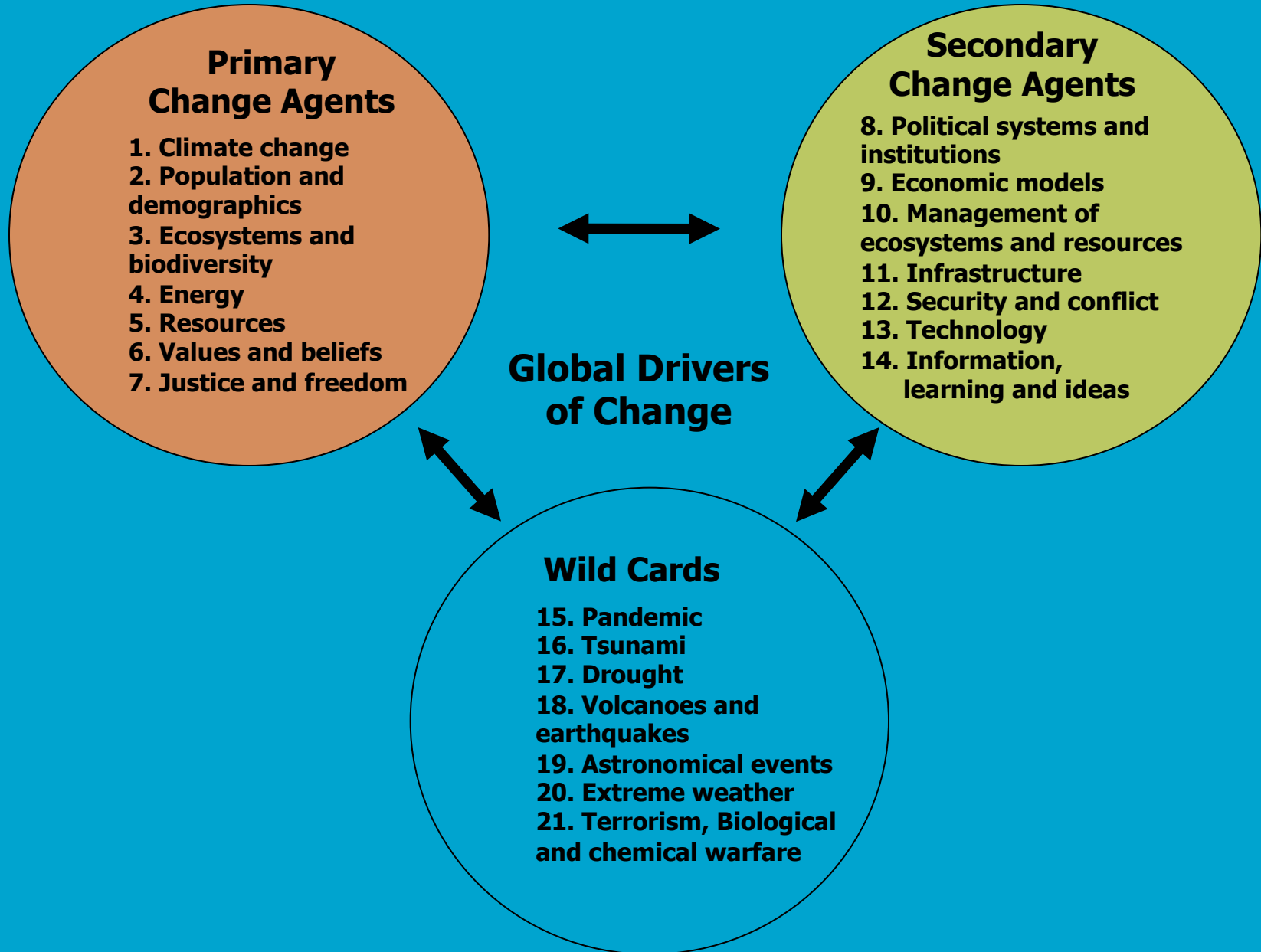
**Years it took to reach a market audience of 50 million**



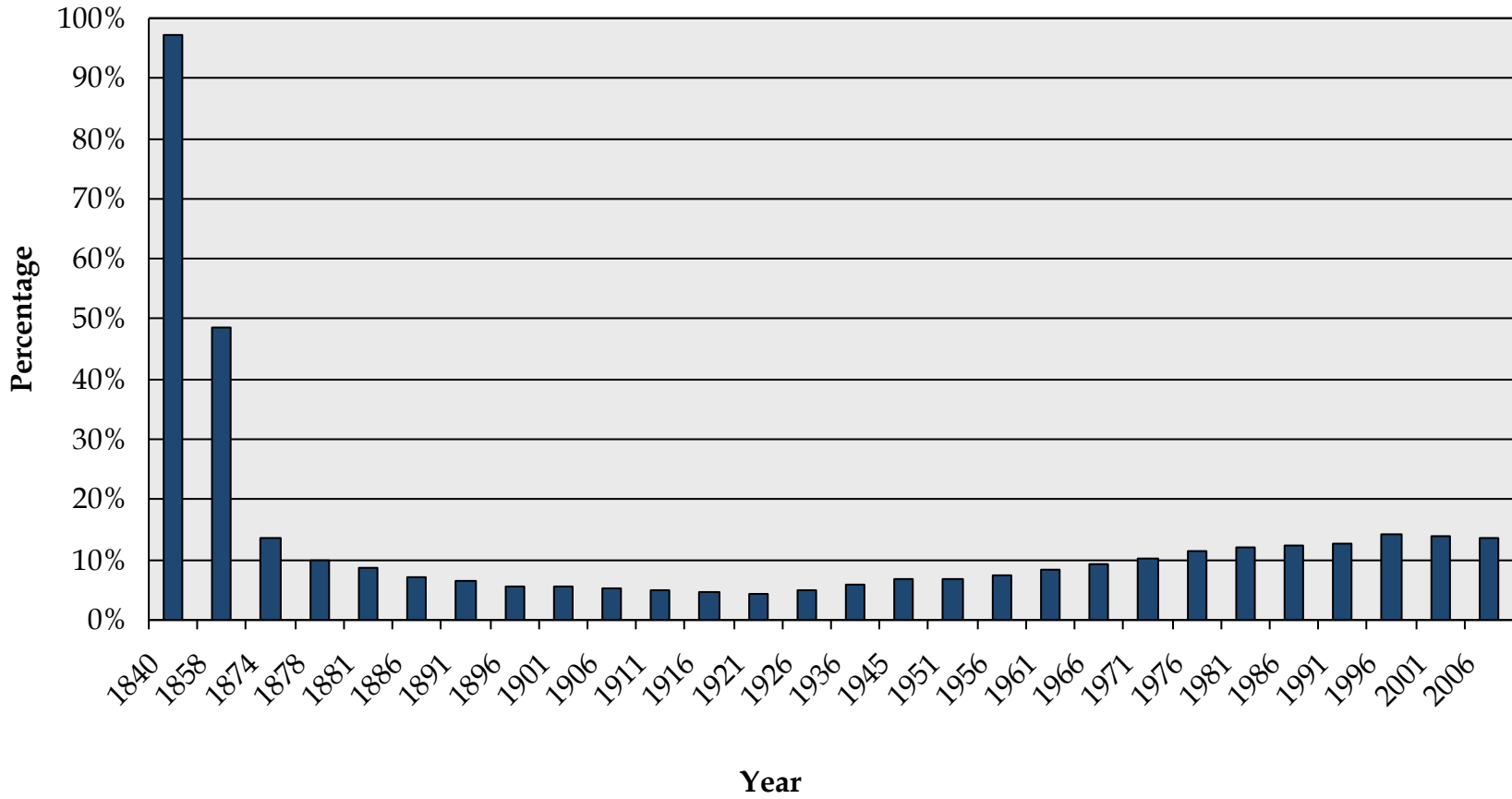




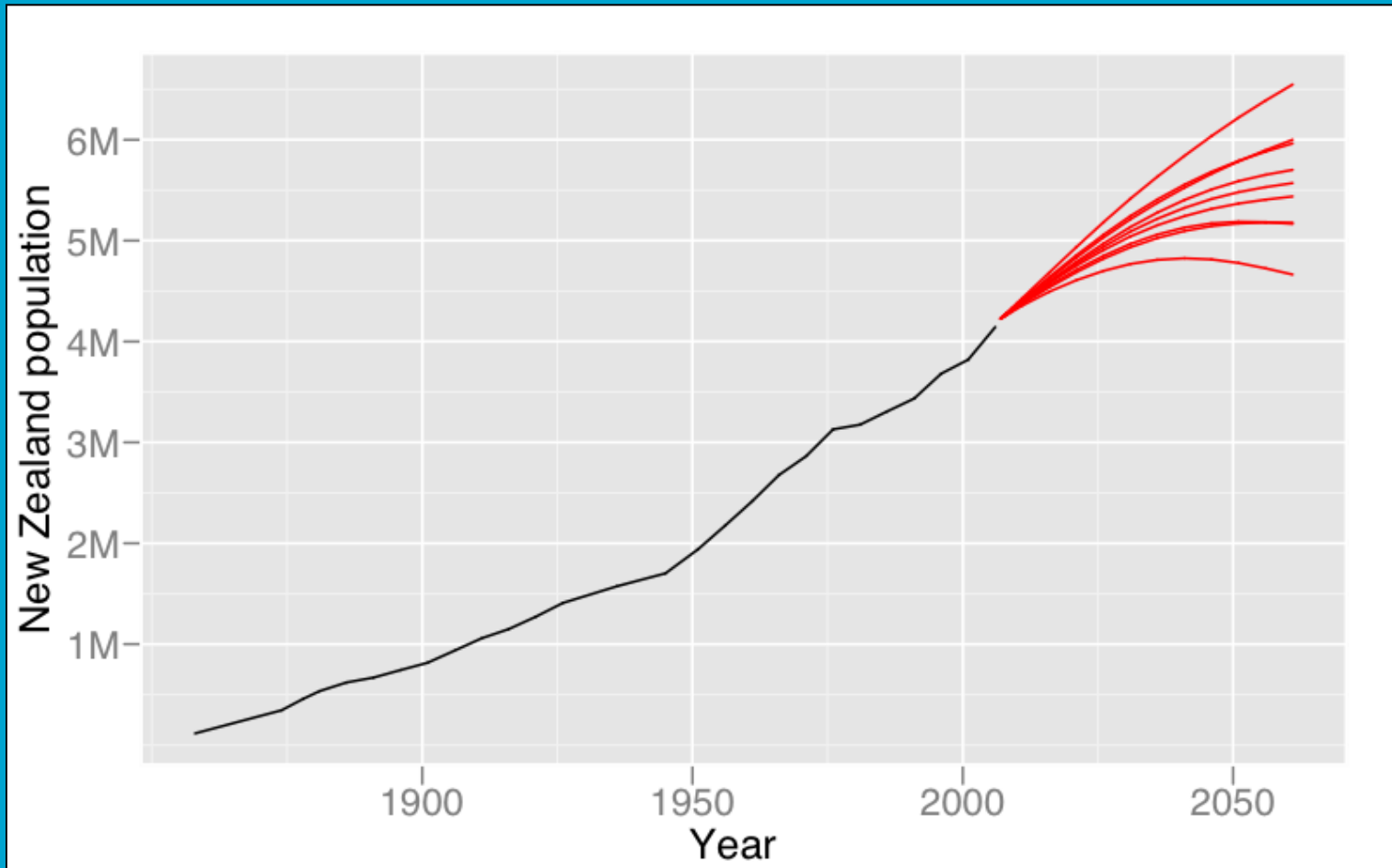
# C: 21 Global Drivers of Change



# Population



# Population

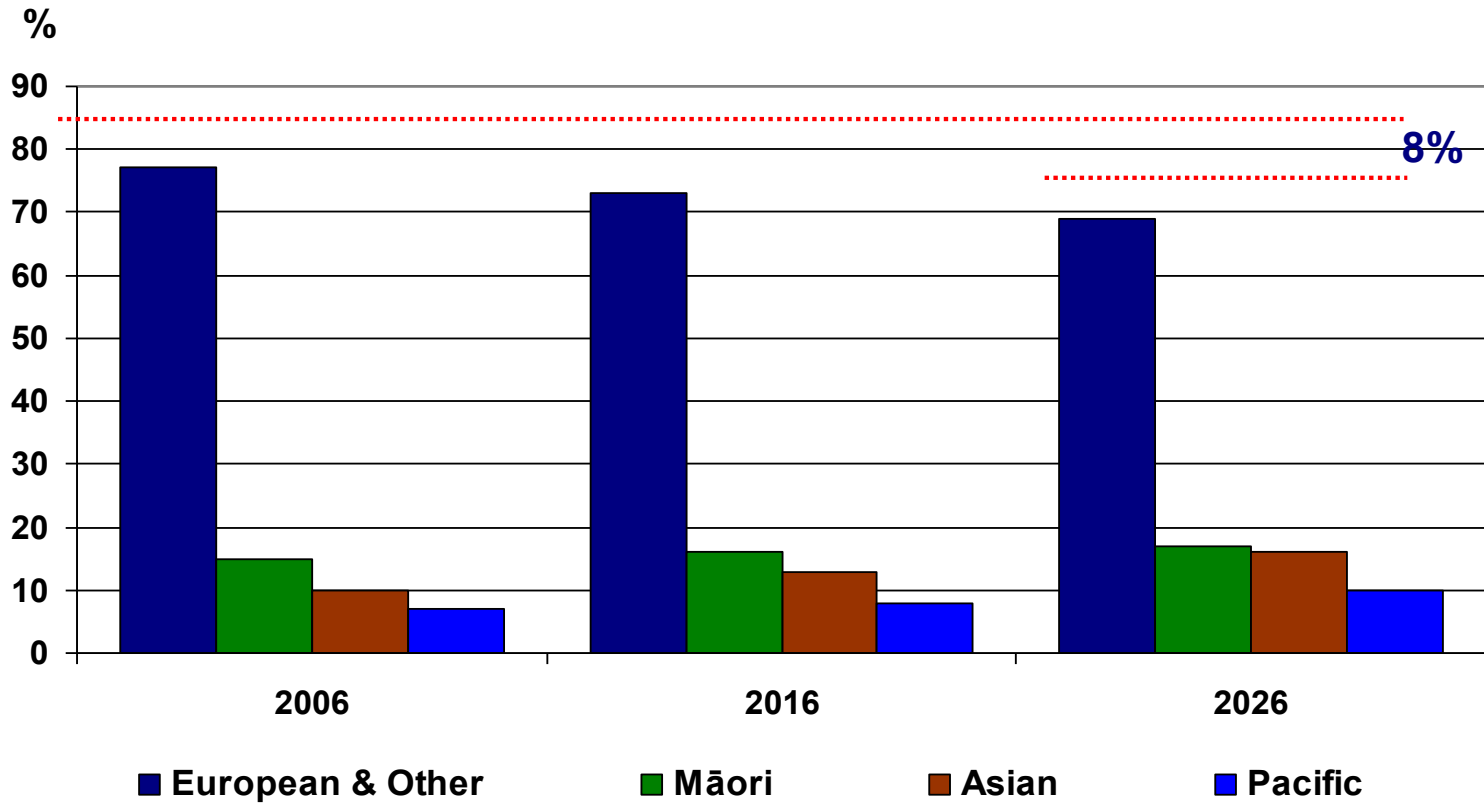


New Zealand has one of the highest rates of combined immigration and emigration (population turnover) in the world.

# Race Relations

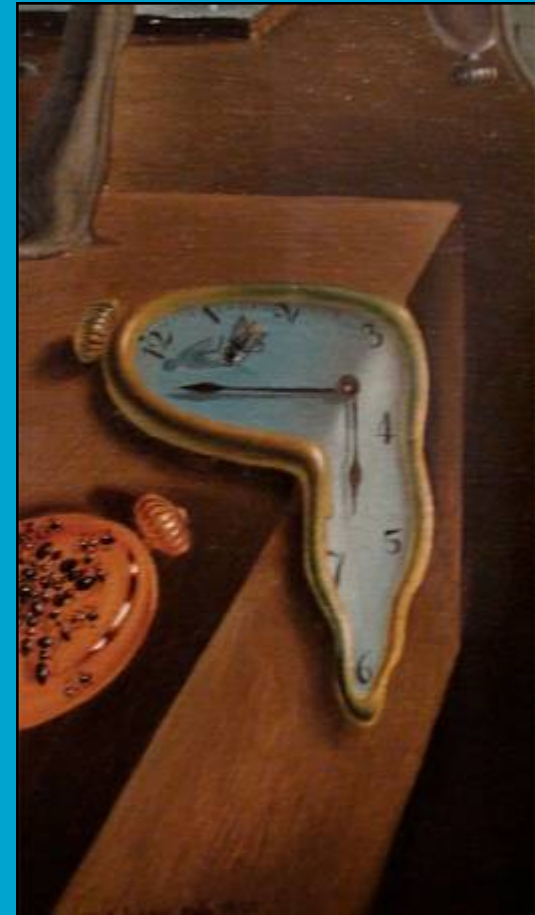
## Ethnic Share Of New Zealand Population (percent)

Adapted from Statistics New Zealand, projections from series 6



# Years of Life

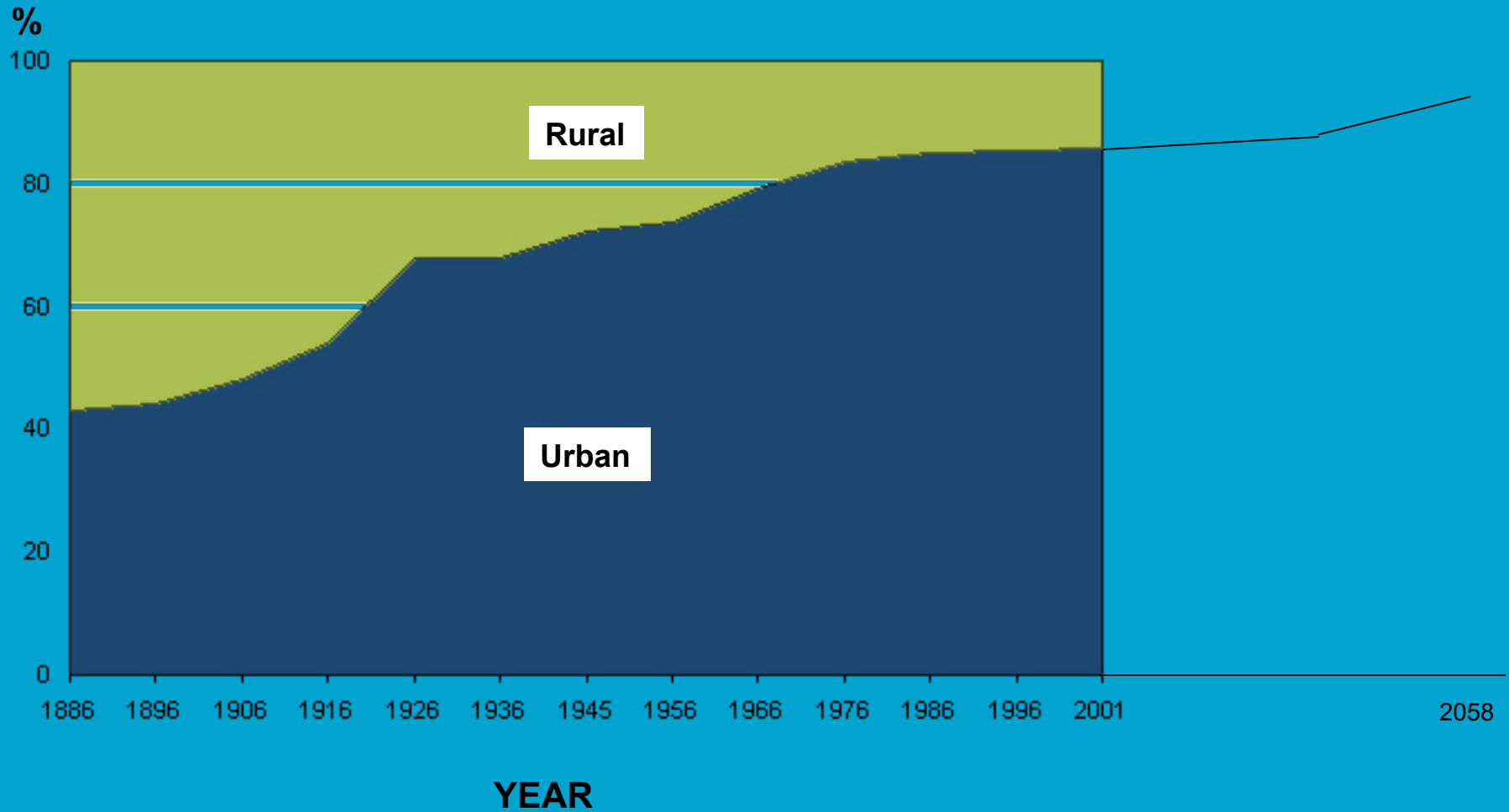
	Male	Female
1876	50 years	54 years
1908	61 years	68 years
1955-57	68 years	73 years
2005-07	77 years	82 years
2055-57	?	?



**Child** | **Teens** | **Parent** | **G/parent**

**Child** | **Teens** |  | **Parent?** |  | **G/parent?**

# Rural/Urban Population Mix

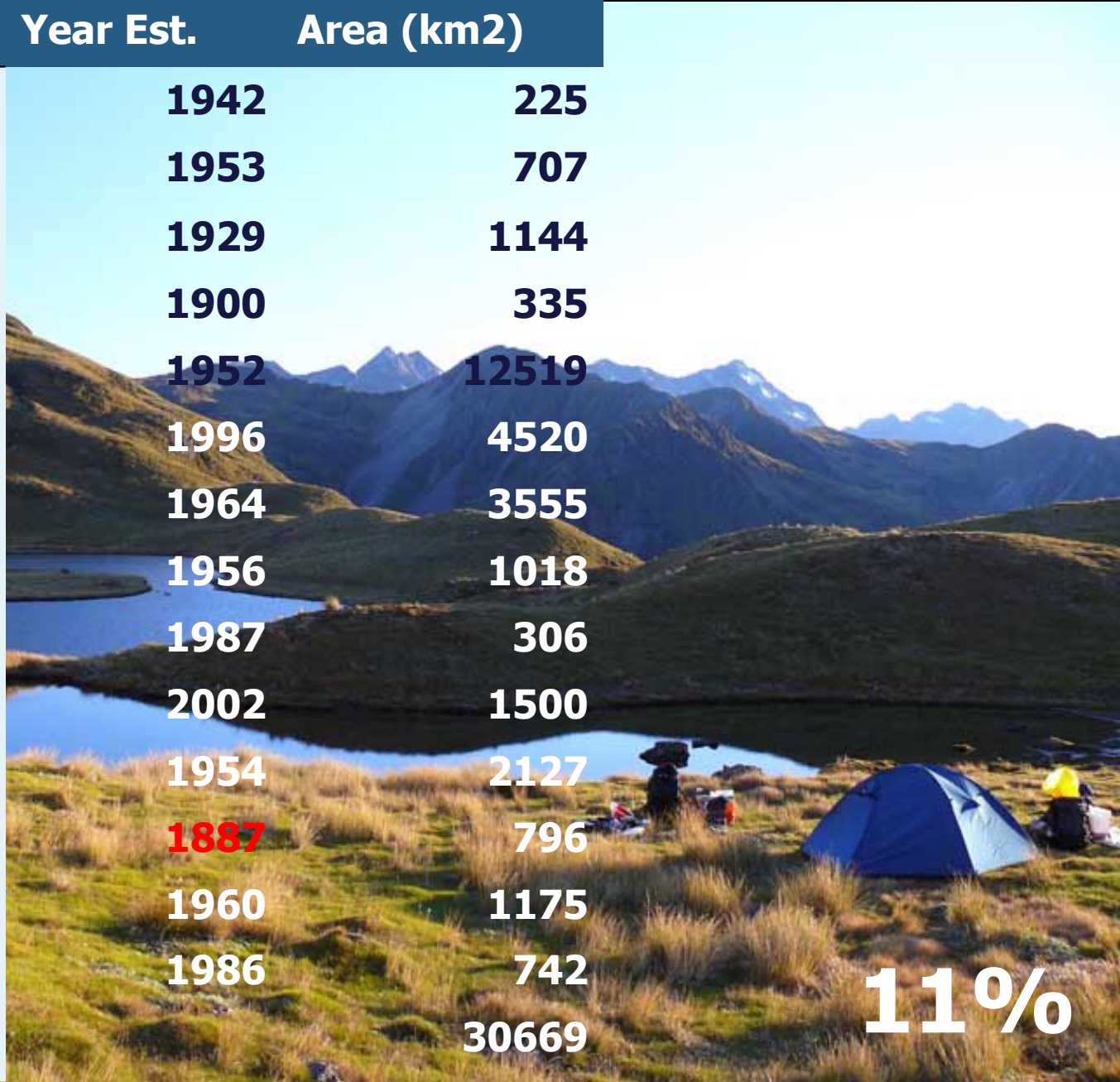


# Ecosystems and Biodiversity

National Park	Year Est.	Area (km2)
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Abel Tasman	1942	225
Mount Cook	1953	707
Arthur's Pass	1929	1144
Egmont	1900	335
Fiordland	1952	12519
Kahurangi	1996	4520
Mount Aspiring	1964	3555
Nelson Lakes	1956	1018
Paparoa	1987	306
Raikiura	2002	1500
Te Urewera	1954	2127
Tongariro	1887	796
Westland Tai Poutini	1960	1175
Whanganui	1986	742
Total Area in Parks		30669

**11%**



# Exports & Imports

A background image showing several sheep resting together. The sheep are white with thick wool, and their heads are visible in the foreground and middle ground. The lighting is soft, and the overall tone is natural and pastoral.

## 2008 Exports

**Dairy 22%**

**Meat 11.7%**

**Mineral Fuels 6.6%**

**Wood 5.0%**

**Machinery 4.8%**

**Aluminium 3.6%**

**Fruit 3.4%**

## 2008 Imports

**Fuels and oils 16%**

**Machinery 13%**

**Motor vehicles 12%**

**Electrical machinery 8.5%**



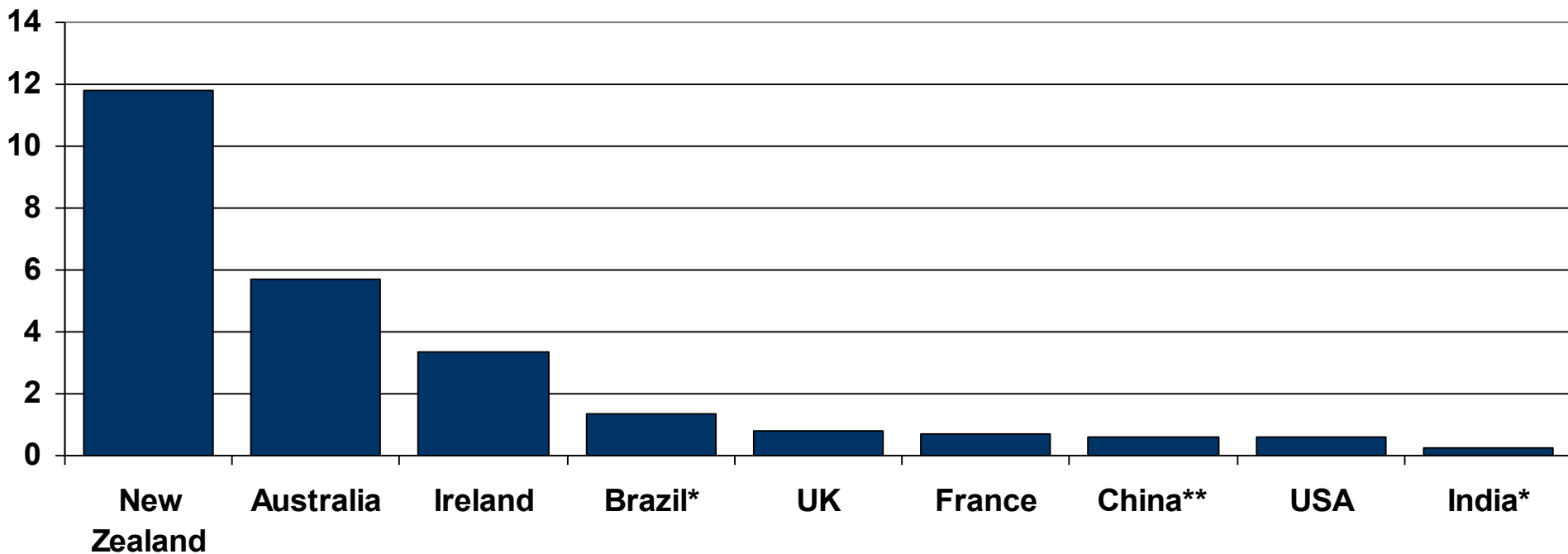
# Resources



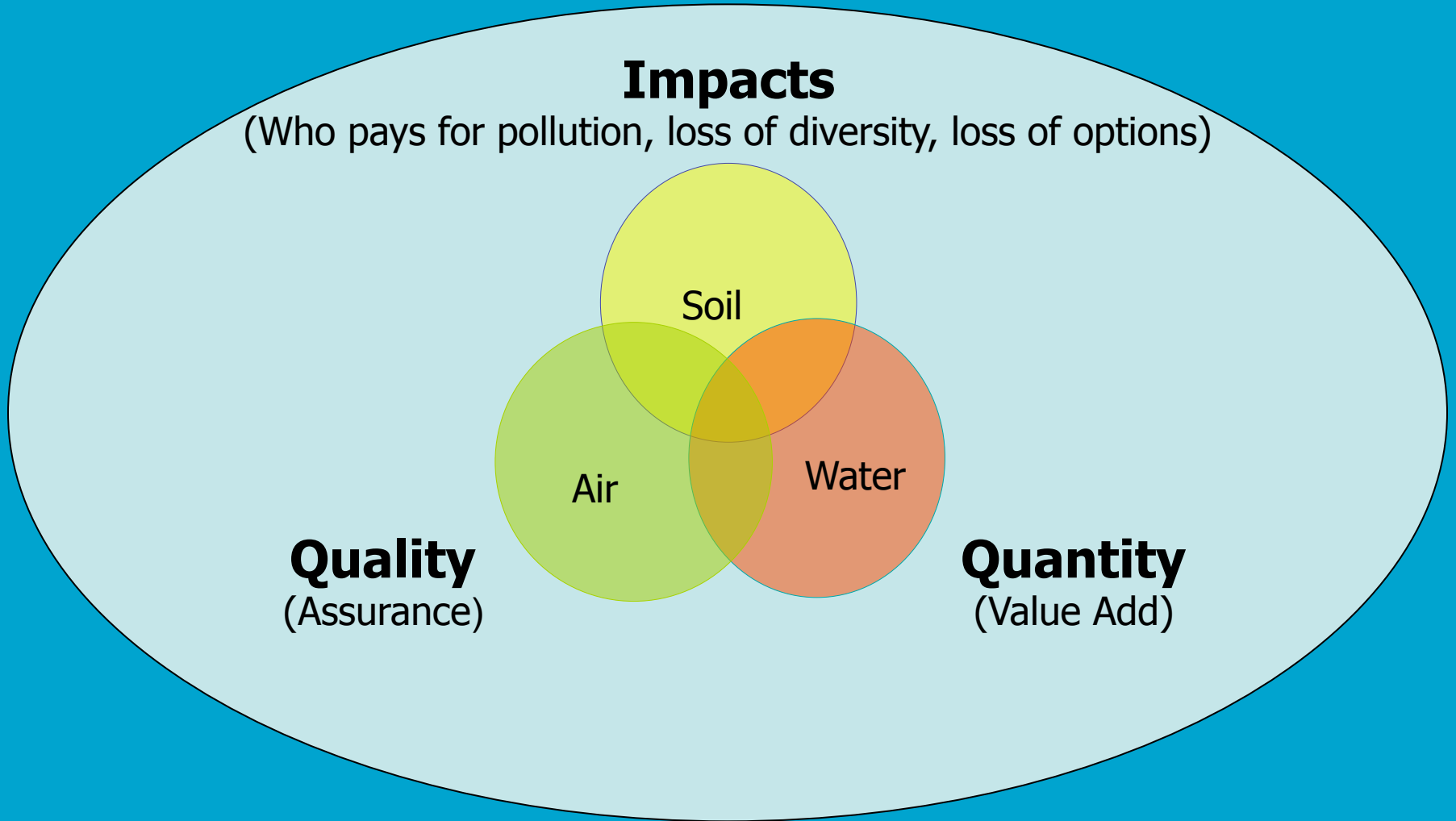
**Total number of livestock per country per person as at  
30 June 2007**

(Includes all cattle, sheep, and pigs)

Total number per  
person



# Agriculture



## Impacts

*(Who pays for pollution, loss of diversity, loss of options)*

Soil

Air

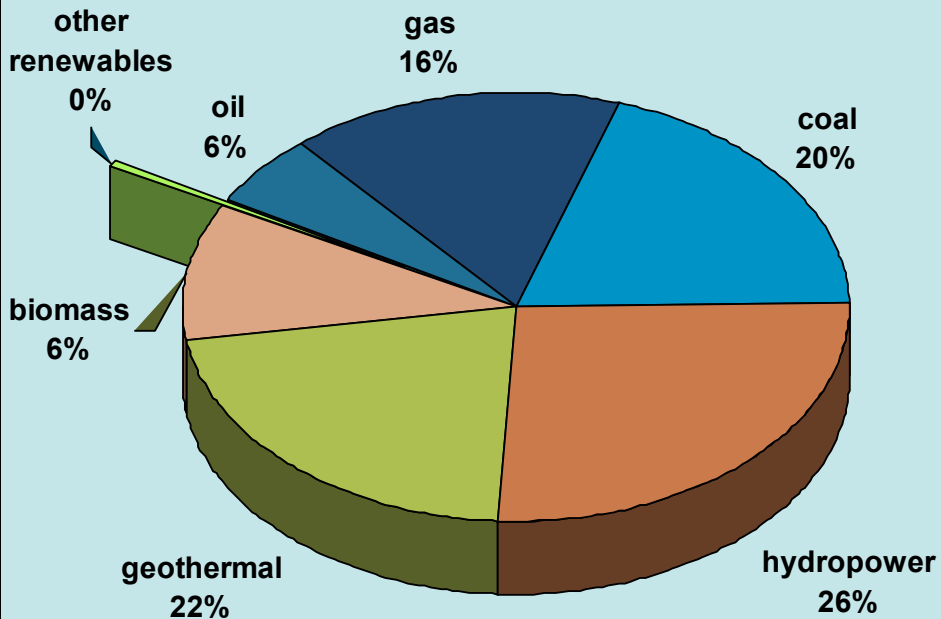
Water

**Quality**  
*(Assurance)*

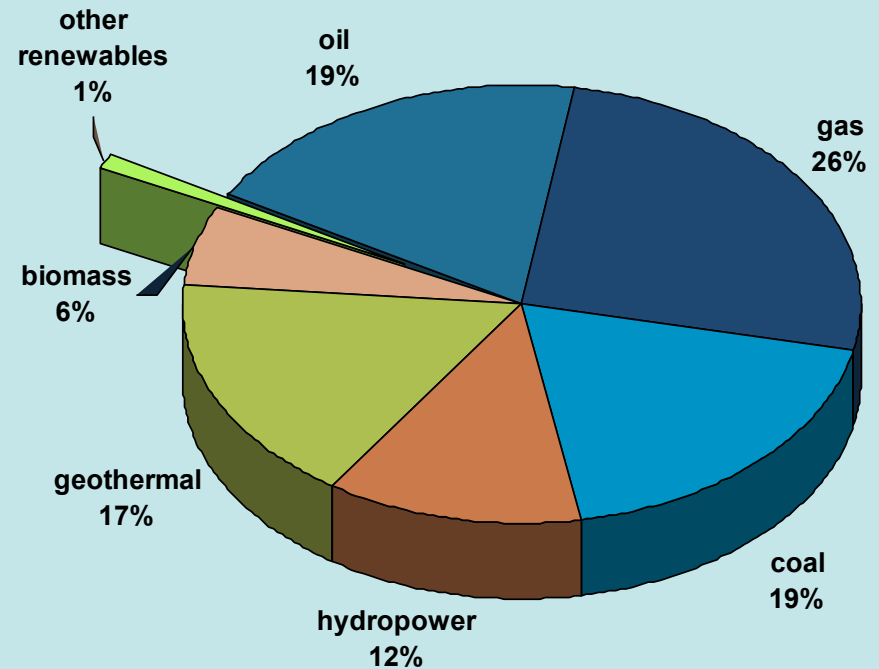
**Quantity**  
*(Value Add)*

# Energy Generation

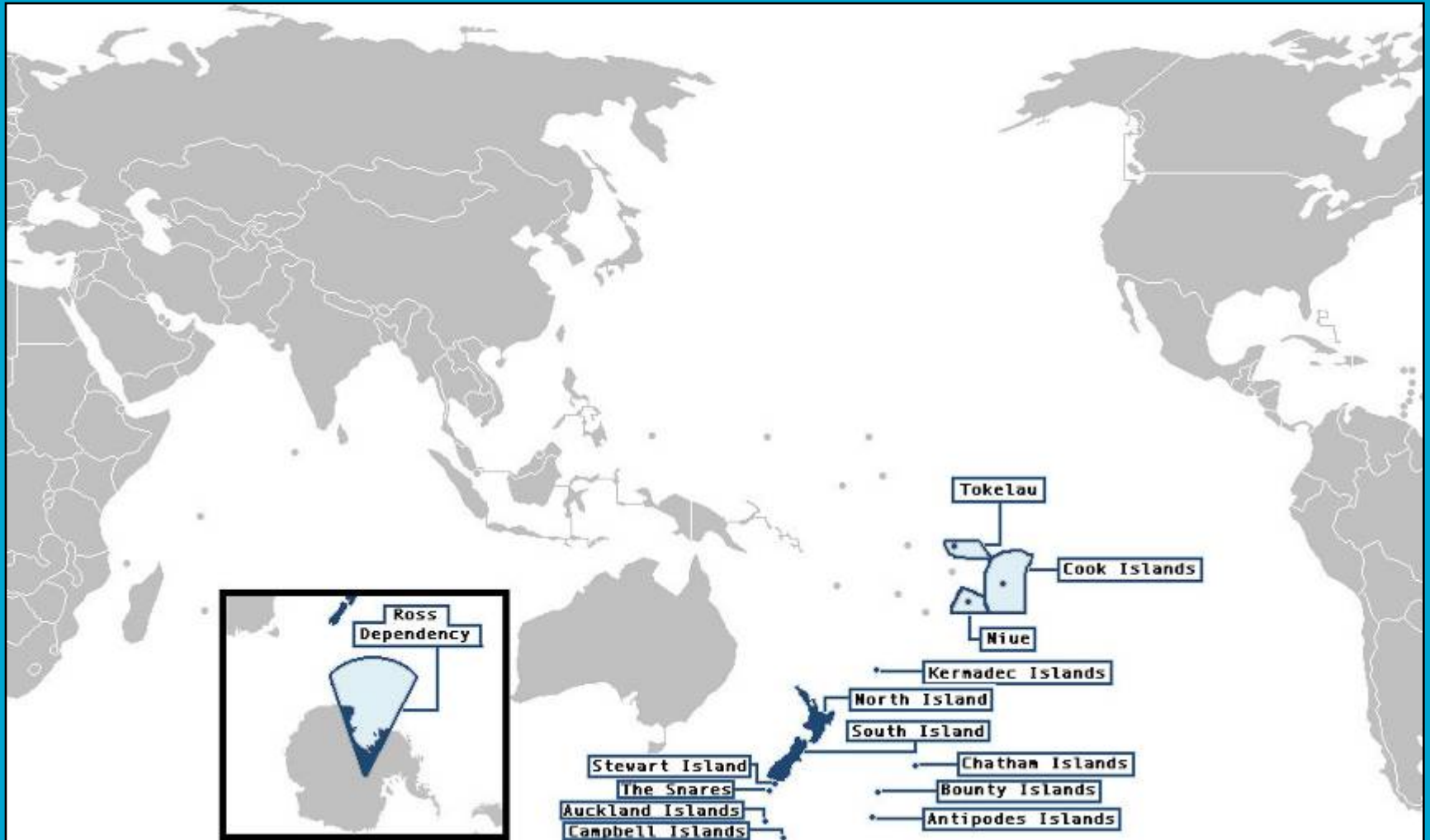
Share of Total Energy Generation in 1980



Share of Total Primary Energy Generation in 2008

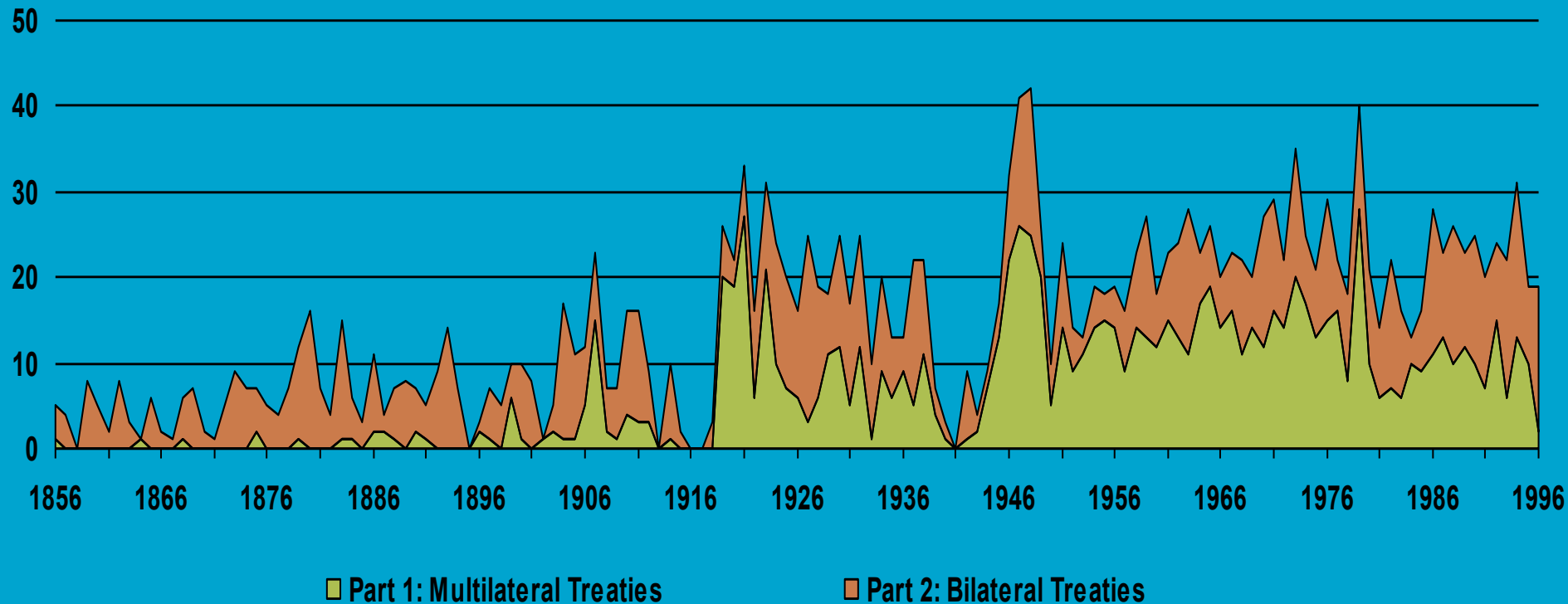


# Not Just Three Islands

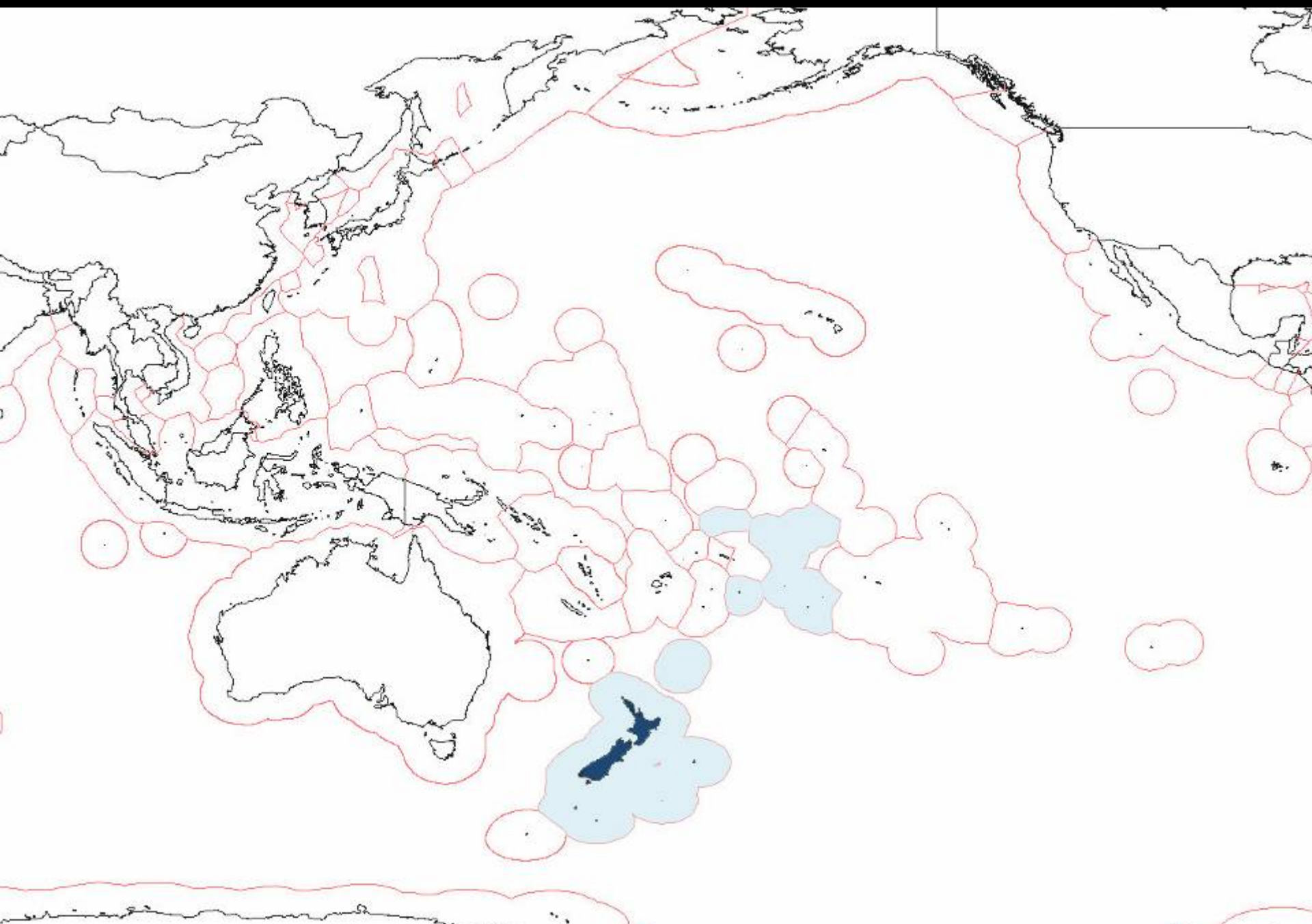


# International Treaties

Number of treaties over time in New Zealand



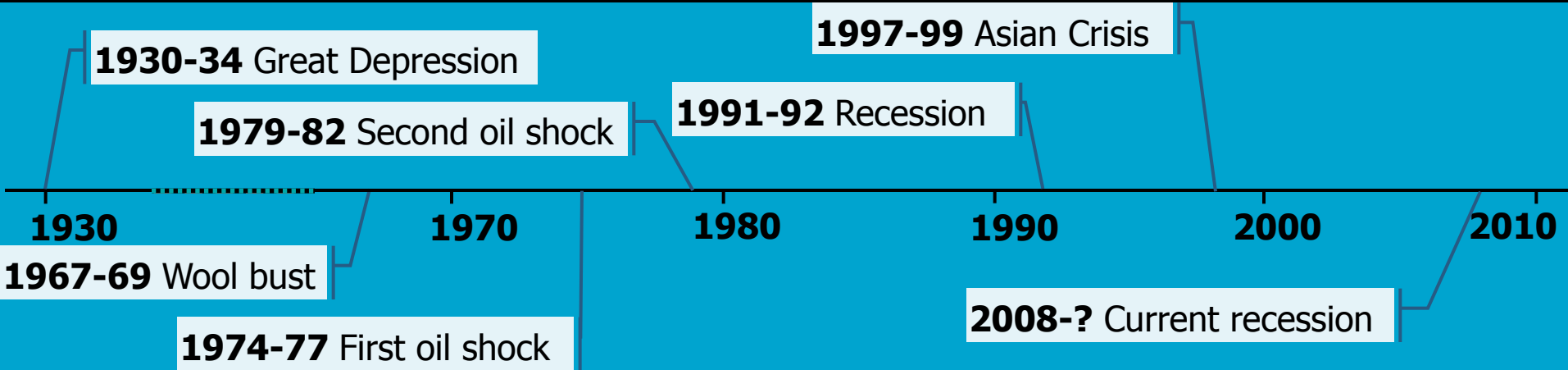
# Exclusive Economic Zone



# Security and Conflict



# Economic Risks





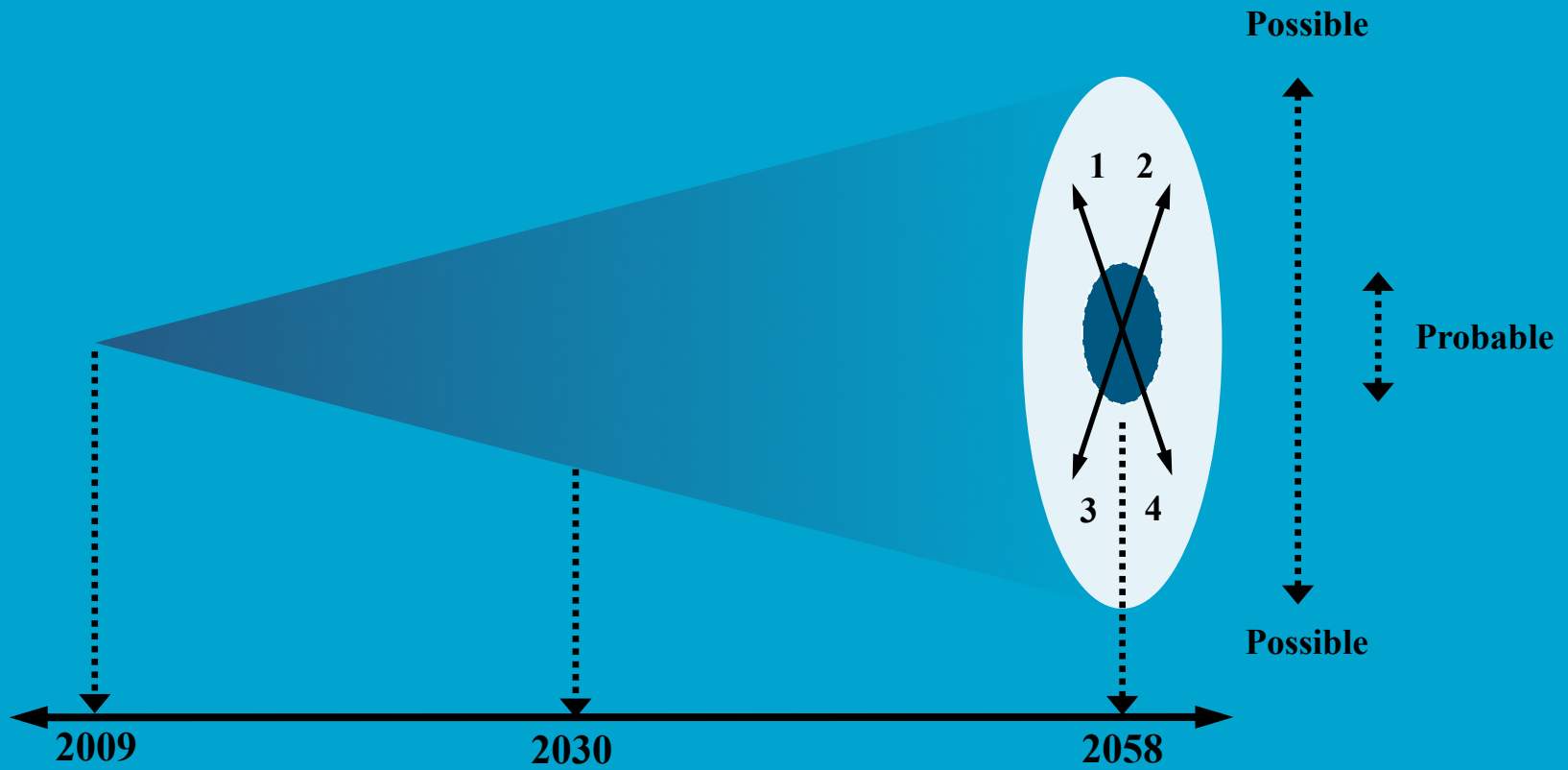
# Benchmarking

## UN Human Development Report 2007/2008 and 2008 Update

Total Human Development Index	Includes Education Index	Includes Disparity of income (ratio of richest 10% to poorest 10%)	Includes RST expenditure (% GDP)	Includes GDP (per capita)
1. Iceland (0.968)	1= Australia (0.993)	1. Japan (4.5)	1. Israel (4.46)	1. Luxembourg (60 228)
3. Australia (0.962)	1= New Zealand (0.993)	42. Ireland (9.4)	20. Australia (1.70)	16. Australia (31 794)
19. Italy (0.945)	6. Norway (0.991)	64. Macedonia (1.25)	25. Russia (1.17)	27. UAE (25 514)
20. New Zealand (0.944)	12. Ireland (0.978)	65. New Zealand (12.5)	26. New Zealand (1.16)	28. New Zealand (24 996)
21. UK (0.942)	18. UK (0.970)	66. Australia (12.5)	27. Ukraine (1.16)	29. Greece (23 381)
177. Sierra Leone (0.336)	177. Burkina Faso (0.255)	126. Bolivia (168.1)	91. Peru (0.10)	174. Malawi (667)

# D: Scenarios

## Scenarios



# The Team



④ World X New Zealand X

lack of ability to manage diplomacy

national reserves empty spreads risk of control

Large scale conflicts

Rapid transformative technological advance

change movements of ppl due to food, water + 300 shortages

no room for long mass trade of water

real pol. life

Making NZ takeover by strongly candidates

massive impacts in Pacific

Opportunities constrained

lack of combat responsibility highly

collapse

popn. has dropped below replacement in NZ, as popn in LDCs globally, but no migration, positive impact of this + all implications

understanding - highest risk of ecosystem collapse

All our

Defensive approach/stances

pressure/scope for increased social institutions

fundamental gaps in the

Food production

we find out DPPX is up to what it's not good.

Large scale rights relations to be

resistance to

"Worst case scenario"

opening

risk of

Food production

runs



Gradual

NZ

Poor

Well



NZ



Well World

Poor




Poor

## Responses of *Powerful* counties

- **Self-sufficient, heavily armed and a fortress mentality**
- **Serious engagement with all the problems of the planet**

## Responses of *Small* counties

- **Disrupt**
- **Ignore**
- **Adapt / Innovate**
  - **Monitor closely what is happening**
  - **Support global leadership (UN, WB, etc)**
  - **Build alliances (e.g. State of Australia, Pacific Union)**
- **Leadership - lead by example**



Small countries like New Zealand might have a limited ability to influence world events...

...but we can still shape the future.



New Zealand will never be the puppeteer...

...but we can be part of the audience, and that means we can decide to give a standing ovation or boo the performance.



We can show  
global players how  
changes should be  
made – not  
because they have  
to listen to us...

...but because  
small countries  
have put in place  
something that  
powerful countries  
want.





**New Zealand  
needs a  
'National Strategy'  
to optimise our future,  
to align our industry,  
to reinforce our national brand and  
to be an example of what is possible**

**- not because we have to, but because we  
want what it can deliver**



THANK YOU



