

New Zealand emissions reductions and international agreements

Lessons from the past 20 years

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Policy uncertainty pervades for 2 decades

- Targets but no policy actions 1988-2001
- Carbon tax with recycling and comprehensive support policy and legislation 2002-2005
- Reviewed and ETS emerged with timelines and a comprehensive support policy package and legislation 2005-2008
- Reviewed, support policies dismantled some replaced and new ETS 2008-2009 with timelines pushed out

How did we get to now and what can we learn from the journey?

“We learn from history that we never learn anything from history” Hegel

Is this true for New Zealand’s policy response to climate change?

How long have we known about climate change?

- The greenhouse effect since 1824 – Joseph Fourier
- The link between greenhouse effect and climate variation since 1859 –John Tyndall
- The link between rise in global temperature and increase in CO₂ concentrations in the atmosphere since 1896 - Svante Arrhenius (a doubling of CO₂ levels from 1896 with a 4-5 degree rise in global temperature)
- A steady rise measured in background levels of CO₂ at Moana Loa observatory in Hawaii over time since 1950s - David Keeling
- Vostok Ice Core in the 1950's correlated with the rise in CO₂

The dilemma facing us

Schneider in 1975 summed up;

“We cannot afford to let the atmosphere carry out the experiment before taking action and we should know one or the other by the end of the century. By then if we do not take action it will be too late to remedy the situation on account of the long residence time of CO₂ in the atmosphere.”

When did New Zealand pay attention?

- 1987 PCE brought the issue to MfE after several significant international conferences expressed concern over human-induced climate change e.g. Villach 1985, Bellagio 1987
- UNGA resolved *to protect the global climate for present and future generations* and set up the IPCC in 1988
- 1988 MfE ran workshop *Climate Change the NZ Response*

NZ Climate Change Programme 1988

- The NZ Climate Committee of the Royal Society to assess the scientific basis for climate prediction and provide scenarios of future change
- The Impacts Working Group to report on possible environmental, economic and social impacts of climate change
- The Policy Working Group to investigate and make recommendations for responses to climate change
- The Maori Working Group to advise on matters related to Maori and the Treaty of Waitangi

International framework

- IPCC 1990 1st Assessment Report concluded *that human-induced climate change is a real threat*
- The negotiating process leading up to the UNFCCC being adopted in 1992 by UNGA
- NZ signed 1992, ratified 1993
- UNFCCC came into force 1994 setting out framework for emissions reductions and removals and reporting requirements for GHG inventory

Kyoto Protocol

- The Kyoto Protocol was concluded in 1997 and into force in 2005
- NZ ratified December 2002
- NZ's Kyoto target is to reduce emissions to 1990 levels by 2012 or take responsibility for excess emissions

Principles guiding international policy response

- Precautionary principle
- Developed nations take the responsibility because they produced the historic emissions
- Preference for market instruments
- Adaptation a back seat
- Focus on mitigation
- Country circumstances

Policy characteristics over the first decade in NZ

- Climate change treated like any other policy issue i.e. requires an evidence-basis for action despite the precautionary principle agreed
- Neoclassical economics driven policy which assumed rationale decisions and perfect information
- Science efforts slow to advance and initial funding attempts failed for methane and nitrous oxide
- Much scepticism to agriculture emissions reduction and long time for the research to start
- Opposition to energy efficiency improvements that were least cost and no regrets due to neoclassical economics approach
- Least cost, no regrets policy but little action

New Zealand international policy characteristics

- Advocacy from NZ internationally for carbon sinks being recognised through managed forests
- Landuse and soils not supported by NZ in Kyoto because we couldn't verify the emissions and had a history that suggested we might be a net emitter
- There were various Cabinet agreed “policies” along the way
- Waxing and waning targets and policies either tax based or ETS based
- A theme of mismatch between rhetoric or government goals and achieving policy goals

New Zealand Science effort

- NZ scientists well respected internationally in all the relevant fields- non-CO2 GHGs, landuse change, forestry, forecasting, modelling, Antarctic, clouds
- NZ scientists and policy advisors played an active and ongoing role in the IPCC and the UNFCCC
- Science funding increased
- A research partnership with agriculture sector to find cost effective and efficient solutions to reducing methane and nitrous oxide emissions

Barriers to action

- Difficulties in having a dialogue with the public and sector groups on such a complex issue

The second decade - the influences

- The rapidly evolving science based on a robust peer review of the science through the IPCC
- TAR- [Finding to add]
- AR4 -warming of the climate system is unequivocal ...
- “Very likely” attribution of most of last 50yrs global warming to anthropogenic GHGs
- “Likely” attribution of last 50 yrs warming over individual continents (except Antarctica) to human activity.
- The “evidence”-observations
- The Al Gore factor

Since 2002

- Start, Stop, review, start, review, start again- you get the picture.
- No certainty for the economy
- Now very slow emission reductions likely
- Signal to start the transition weak
- Ability to gear up quickly weak
- Impact of policy in future likely to be more costly

The climate and impact drivers

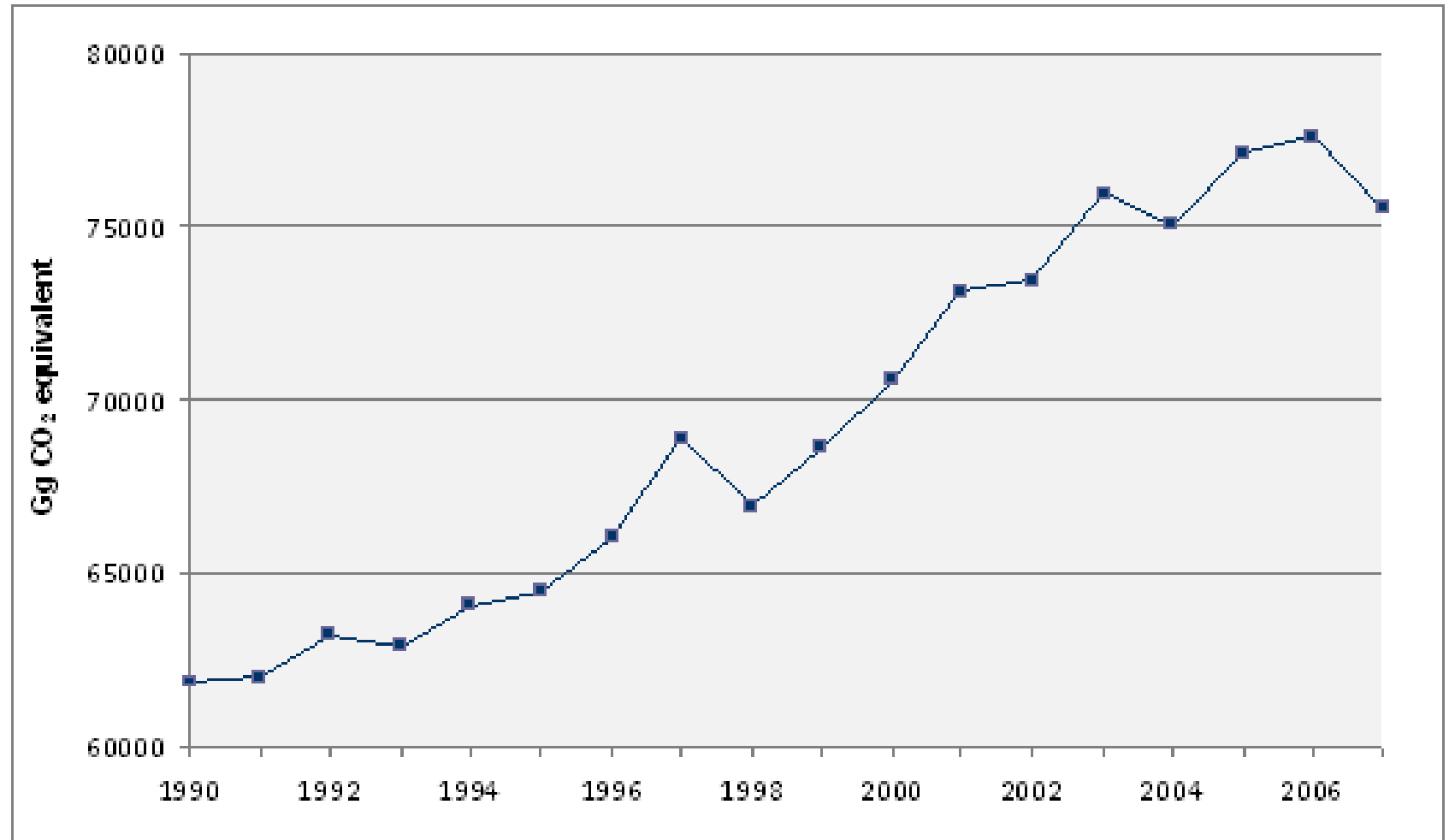
- All the while the science getting more alarming 2nd 3rd and 4th IPCC reports
- Sea level rise estimates doubled in last 2 years;
- Looming adaptation costs on top of infrastructure investment deficit
- Ice sheets melting

Report card

- Getting nowhere fast
- Goals are not matched by the policy, nor the action
- NZ emissions in 2007 22 % higher than 1990 levels and tracking to be 30% higher than 1990 levels in 2012

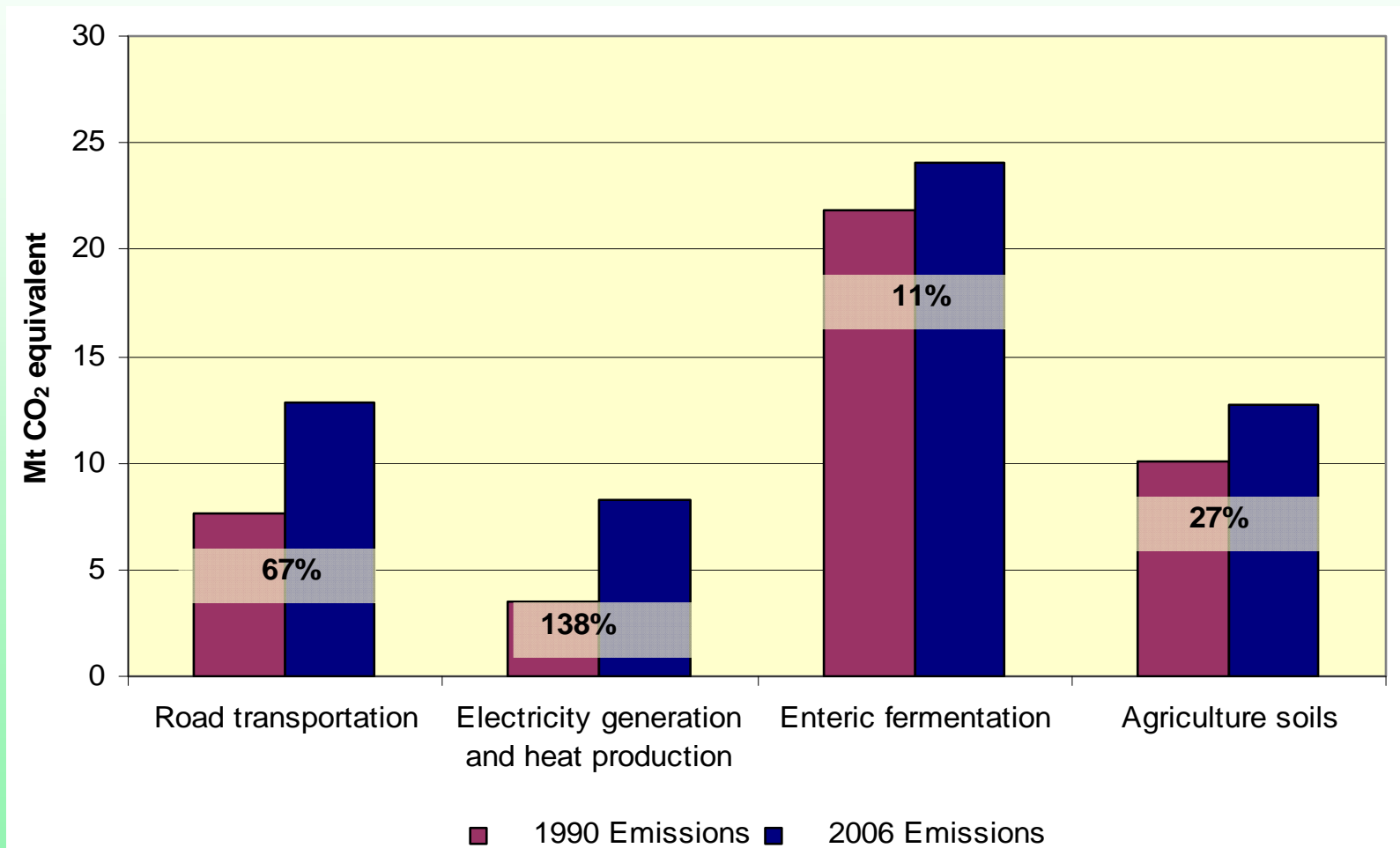
New Zealand's total greenhouse gas emissions from 1990 to 2007

Source: Ministry for the Environment



Growth in NZ's Greenhouse Gas Emissions

Source: Ministry for the Environment



Why are we not reducing emissions?

1 No comprehensive and consistent policy

- Characteristics of other country policies that have reduced emissions e.g. Europe, Japan
- Have a comprehensive package of policies -targets, economic instruments and regulatory framework which are aligned
- Have independent advisors/peer reviewers
- Have addressed transport issues/ car size, efficiency, public transport
- Have addressed energy use through pricing and alternatives

Why are we not reducing emissions?

2 We are different?

- YES in some respects – 50% of our emissions come from the agriculture sector and we rely on exports
- BUT
- We rely on 100% PURE
- Customer preferences and markets MATTER
- We need to be efficient to survive

- Greater options for energy efficiency and conservation, alternative energy sources, efficient technology, efficient farm management practices are available NOW but uptake is slow

Why is uptake slow?

- Requires capital to invest
- Human behaviour avoids costs now
- Human behaviour values what they have and change is seen as a loss
- Climate change policy has been framed in terms of costs e.g. a tax or the cost of the ETS

FRAMING MATTERS

Example of the framing effect

- Economic modelling of climate change impacts show lower but still positive rates of economic growth relative to BAU but is reported as a “cost” of reducing emissions e.g. a \$3000 cost
- This miss-communicates the impact by implying a lowering of living standards relative to current levels which is untrue
- This could be reframed as income in 2020 being \$46,000 instead of \$49,000

Framing matters

- People are generally more willing to sacrifice some future improvement in living standards than a reduction in current living standards
 - 57% of NZ respondents supported action with cost framing while 73% supported action when it communicated incomes will rise, but less than without policy action.
 - The effect of existing communication bias appears large enough to constrain policy formulation, preventing or delaying the development of policies that would attract widespread public support if communicated appropriately
- S.Hatfield -Dodds(CSIRO) and N.Jollands(NZCEE) Report to MfE 2006*

Why are we not making progress?

3 Political factors

- Framing that reflects the flavour of the government in power
- 3 year election cycle leads to rushed policy and changes to previous government policy
- Reassessment of policy 2x recently due to so-called lack of electoral support or to coalition deals under MMP
- Some groups (big emitters) influence Ministers disproportionately

The policy process

- Policy proposals proceed without adequate analysis as a result of the political rush
- Institutional arrangements create complexities for policy development for an issue like climate change-several have been tried - DPMC, NZCCO, project groups, disaggregated groups in departments, coordinating committees, Senior Leadership groups
- We have reviewed the policy several times but have we reviewed how we develop the policy?
- Do we have the tools to answer the right questions?
- Do we have the strategic capability to assess the answers?

Critical missing elements

- We are not good at talking with each other constructively-consultation is not engagement
- We set up communication mechanisms but they are not maintained e.g. the Leadership Forum on Climate Change
- We have no independent peer reviewed analysis like other countries e.g. UK and Australia
- We have poor economic analysis capability
- Mechanisms for technical information to be transferred effectively to the rural community have been dismantled.

Critical lessons

- The 3 year electoral cycle encourages focus on comparisons between governments, rather than on how to achieve a goal and stick to it
- This would require a grand coalition on climate change for broad electoral support to be sustained over time
- Trade negotiations have managed to achieve this sort of approach broadly so why not climate change

Critical lessons

- We abstract ourselves from taking responsibility
- We are sensitised against taking action that costs us now, even though we know that it can reduce risks later
- We are hard wired not to take action that costs us now as individuals even if the costs are small when the benefits are global and in some cases local and personal
- Why do we take out insurance against personal loss, but not for community NZ inc?
- Self interest rules. Individuals and governments are the same.

Solutions?

- Need to draw out the principles that can be agreed
- Create some independent agency that can peer review proposals against the driving principles
- Engage with the public and stakeholders effectively
- Demonstrate what can be done to reduce emissions and how to adapt
- Communicate the science more effectively