



**New Zealand Centre
for Global Studies**

Te Pokapū Akoranga Aorere o Aotearoa

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‘Optimal Balance’:

***Politics & the public good
in considering land-use options***

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Content

1. Use of terms

2. Politics: the 'search for the public good'

(a) Parliament & Govt: 2015-18

(b) Expert studies: 2017-18

3. Issues to decide: 2018-19

4. The balloon as metaphor

Use of terms

(with respect to climate protection policy)

Public good

= maximum wellbeing of all citizens

- Rio '92: Adverse climate change = 'common concern of humankind'
Climate stabilisation but 'food production not to be threatened'
- Paris '15: Net-zero GHGs in 2nd half of 21st c. 'food production not to be threatened'
- NZ: Paris: As developed country, 'continue to take the lead'
Food security (global) within national climate goals
NZ Goal = 'Net-zero' on or about 2050

Conclusion: NZ food production (incl. exports) \leq NZ national emissions

Politics

= search for the 'public good' = constructive interaction:

1. Between private & public sectors
2. Within private sector: between economic sectors
3. Within public sector: cross-party consensus

Politics: the ‘search for the public good’
(a) Parliament & Govt. 2015-18

NZ *Parliament*

2015	(July)	GLOBE-NZ (national chapter of GLOBE-International) 35 MPs: Nat. (11); Green (9); Labour (8); NZ First (4); UF (1); MP (1) ACT (1)
2016	(Aug.)	Commissioned Vivid Economics = an independent report on GHG neutrality
2017	(March)	Report launched in Beehive: “Net Zero in New Zealand”
	(Apr.)	Special debate in Parliament
	(July)	Statement of Collaborative Purpose
2018	(Feb.)	GLOBE-NZ reconstituted (GLOBE-NZ 52)

Politics: the 'search for the public good'

(a) Parliament & Govt. 2015-18

Govt.

- 2017 (April) Productivity Commission (Prod-Com)
 = '*Low Emissions Economy*' report
- 2018 (Sept.) Report released.

Therefore:

Parliament + Govt.

1. Foster reasoned discussion across parties on NZ climate policy
2. Co-own information

Realised in 2018: Interaction between Govt. Minister / Opposition over climate policy

See : Australian Op-Ed (13-9-18): 'NZ politicians just came up with a good plan - together'

<http://www.abc.net.au/news/2018-09-13/new-zealand-climate-change-zero-emissions-jacinda-ardern/10207334>

Politics: the 'search for the public good'

(b) *Expert studies: 2017-18*

Aim:

Facilitate informed debate for the public good + cross-party dialogue

Post-Paris studies in NZ:

2 consultancy scenario studies:

2017 (March) Vivid Report

2018 (Sept.) Productivity Commission

2 authoritative papers:

2018 (Sept.) PCE

2018 (Sept.): PM Science Adviser

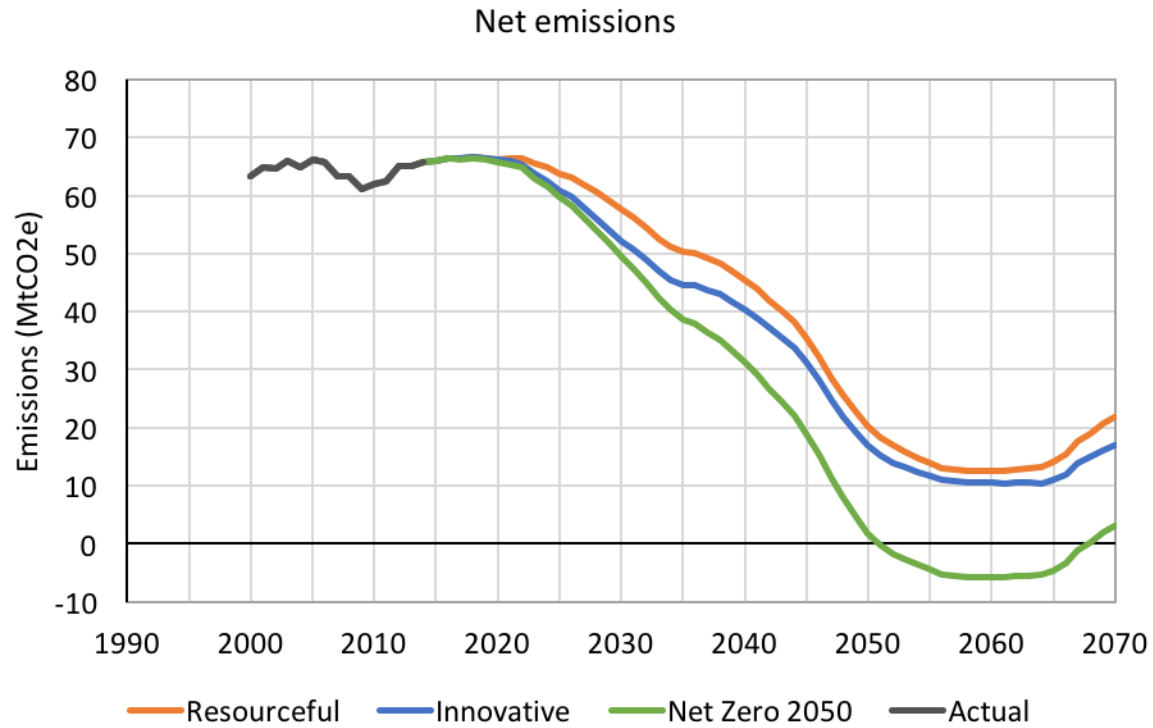
Vivid & Prod-Com 2050 Scenario Studies (Mt. CO2-e = all gases)

	VIVID			PROD-COM.	
	Gross	Net		Gross	Net
Off-track	62	50	PD-25	57	25
Resourceful	57	21	DD-25	50	25
Innovative	44	18	SD-25	58	25
Net-zero	38	2	PD-0	51	4
			DD-0	46	0
			SD-0	52	0

Vivid & Prod-Com on Agriculture
Inter-sectoral optimisation

		1990	2014	2050	
				Vivid <i>Net-zero</i>	Prod-Com <i>SD-0</i>
Energy		24	32	9.4	18.7
Industry		4	5	1.4	0.7
Waste		4	4	2.7	1.0
Agriculture	Ent. Ferm.	26.3	28.6	14.3	
	Man. Mang.	0.7	1.3	0.9	
	Soils. Liming	7.3	9.7	9.5	
	Sub-total	34.4	39.6	24.7	32.0
GROSS		66	81	38.3	52.4
LULUCF		-29	-24	-36.5	-52.0
NET		37	57	1.8	0.4

Pathways for Domestic Emissions based on Vivid Scenarios



Vivid on Agriculture: Policies and Numbers (2014 to 2050)

Conclusion: 50% reduction in agricultural emissions over the next 3 decades is achievable

	Dairy	Beef	Sheep
Stock numbers	80%	70%	65%
Stocking rate	80%	90%	90%
Prodctn. per unit	125%	115%	115%
Emissions intensity reductions:	All stock (different uptakes)		
1. Breeding	15%		
2. Feed	10%		
3. Vaccine inhibitors	30% / 20%		
4. Efficiency	10%		
5. Low-nitrogen food	10%		
6. DCD inhibitors	20%		

Greenhouse Gases & Agriculture

Vivid (March '17, p.3)

“Meeting the Paris Agreement requires steep reductions in all GHG emissions. [LLGs] will need to be reduced to net-zero to reach any temperature goal.

However, in the short-to medium-term, short-term GHGs such as methane (CH₄) also influence global temperature, sometimes potently, and very deep reductions of these gases will also be required to stabilise temperature increases.”

Prod-Com (Aug. '18; Recommendations, p. 525)

1. LLG target of net-zero by specified date (e.g. 2050)
2. Separate emission budgets for SLG & LLG
3. ETS include (a) LLG + (b) Fossil methane + (c) Fluorinated gases
4. Biogenic methane = cut to certain level by certain date (P. A.consistent) = farm-level
5. Separate emission budgets for biogenic methane
6. Separate pricing mechanism for biogenic methane: either
 - (a) dual cap ETS or
 - (b) methane quota.

Two Individual Studies

(a) PM Science Advisor:

'Mitigating agricultural GHG emissions: Strategies for meeting NZ goals' (Sept. '18)

1. Mitigation

(a) Current technology = small gains for mitigation

(b) Potential innovations = significantly greater mitigation [societal acceptance?]

2. 'Farm Plan' approach

- Individual farm plans (auditable; initially voluntary)

 OVERSEER inadequate for general regulatory tool

- Strong advisory mechanism

Arguments for focusing on CO₂ and NOX, and less on CH₄ = 'counter-productive'.

(b) PCE

'A note on NZ methane emissions from livestock' (Sept. '18)

2050		2100	
Emission reduction	Global temp. incr.	Emission reduction	Global tempt. Incr.
0% [stabilization 2016]	15% [10-20%]	0%	33% [25-40%]
16% 10-22% below '16]	0% [climate stability]	24% [20-27% below '16]	0% [climate stability]
Note:	Vivid = 50% Prod.Com = ≤ 25%		

Vivid & Prod-Com on Forestry (mill. ha)

		2050		2100
		VIVID (Net-zero)	PRODCOM (SD-0)	VIVID
Forestry	Sequestration	36.5 Mt	52.0 Mt	
	New planting (ex.)	1.6		2.1
	Regen. (ex. + nat.)	0.7		1.0
	Deforestation	0		
	Total	2.3	2.3 [1.3-2.8]	3.1
Horticulture		1.6		
Total F + H		2.9		
Pastoral		-2.9		

NZG Billion Trees Project

	Trees (m.)			Land (m. ha.)
	Pruning	Mature	Total	
Commercial	330	170	500	500,000
Other	330	170	500	500,000
Total	660	340	1,000	1,000,000

2018	2019	2020	2021-27	Total
55	70	90	770 [110 p.a.]	985

3. Issues to Decide

1. What should 'net-zero carbon' mean in NZ legislation?
2. Should there be separate budgets / instruments for SLG & LLG (agri. In ETS)?

1. Zero net CO2-e in 2050 (= all gases)

2050

Primary Target (UNFCCC) CO2-e = 0 ['zero']

Subordinate targets (NZ internal)

LLG less net forestry = negative

SLG (methane) = 50% Vivid;
25% Prod-Com

2. Any of the following could work effectively:

One basket ETS = energy + industry + waste + agric. + forestry

Two baskets ETS = energy + industry + waste + forestry

Separate quota (levy) for agri.

Three baskets ETS (energy + industry + waste)

Direct Crown-guarantee credit for forestry

Separate quota (levy) for agri.

4. Politics & the Public Good: *Inter-sectoral equivalence* *'The balloon as metaphor'*

Challenge for political leadership, within parties and across parties:

- optimise equitable balance of sectoral contributions.

All sectors: emitters (energy, transport, industry, waste, agriculture)
 net removers (forestry sequestration less forestry emissions).

Perfect balance = balloon perfectly shaped.

One sector contributing more to emission reductions and one less
= balloon 2 countervailing shape differentials: a bulge and a dent.

Vivid & Prod-Com 'net-zero' scenarios' = examples of the balloon:

- Vivid more ambitious gross mitigation (agriculture)
- Prod-Com more ambitious net (forestry)

For 2019 Climate Commission to advise on the Balloon; NZG to decide