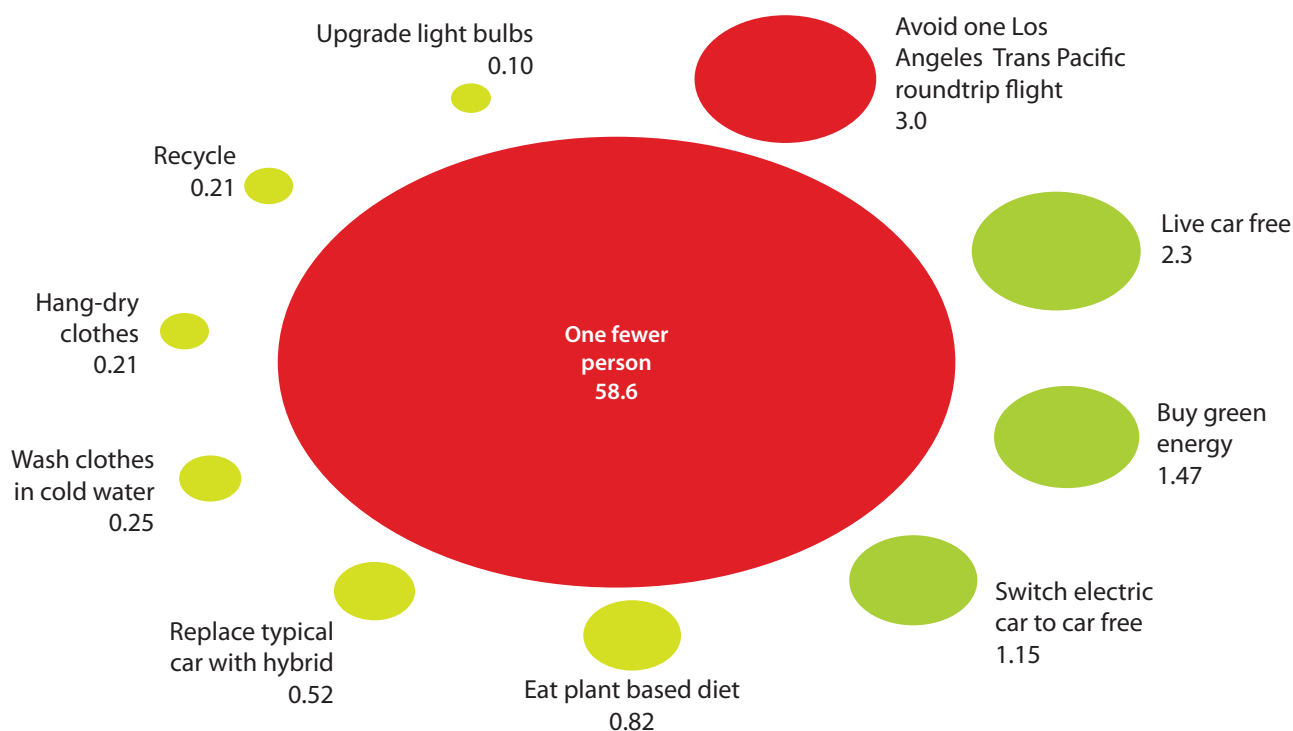


Inconvenient Truths

What are the most effective individual steps to tackle climate change?



The New Zealand government speaks with a forked tongue. It has no population policy, with a 44% increase in people since 1990. And current policy promotes long distance tourism for visitors and New Zealanders. Planting trees to offset our extravagant lifestyle is a short term band aid.

Where does NZ's money come from?

Manufacturing? Mining? Global finance centre? Scale? Location? No, no, no, no and no.

Category	Percentage	Notes
TOTAL PASTORAL	44.6%	Merchandise exports
Total Horticulture & Arable	6.7%	
Wine	3.2%	
Total Forestry	11.8%	
Fish	3%	

	1991	2018	Sunset Industry?
Pastoral % of Total	45.4%	44.6%	But 24% less overall pastoral area.
Agriculture % of Total	57%	59.2%	
Primary % of Total	72.4%	73.9%	

But farming under attack

- "Dirty dairying".
- Poverty Commission – "Let's plant 1.3 to 2.8 million more hectares in trees".
- Government subsidies? Unintended consequences.
- "We can save the world by becoming vegetarians".
- Tourism is New Zealand's biggest export industry?
- Pastoral farming: a sunset industry?
- Farming covers only 8% of the world's surface area. 92% is ocean, ice, forest, desert, lakes, rivers, cities.

Assumptions we all make

- We will never be hungry.
- We will always have cheap energy.
- We will continue to export profitably to the other side of the world.
- We don't need a population policy.
- No one will invade New Zealand.
- Sustainability means sustainable for my lifetime.

The Con Game

- What is New Zealand's biggest import? Outbound tourism! \$10.5 billion, 2.9 million Kiwis.
- "Invisibles" that politicians don't talk about
- Inbound tourism, \$14.5bn, 3.7 million visitors. NET size of tourism industry \$4bn
- "We want only wealthy tourists". Means test at Auckland airport?
- Tourism creates jobs, but low level: Tourism average value created per job \$84,000. Dairying average value created per job \$360,000.

New Zealand the way we want it?

New Zealand 18,000 years ago

- More Land
- Ice caps
- No ferry required
- Average temperature 6 degrees lower than today



The Haurangi mountains in the background were cleared of bush and farmed with sheep for eighty years.



Our dependence on oil

- Oil is HUGE in our lives: 93 million barrels per day - transport - fibre - plastics - fertiliser - heating/cooling - electricity generation
- Farmers would feed only 3 billion people without nitrogen fertiliser. 4.7 billion people would die
- Norway's sovereign wealth fund, 5 x NZ's GDP. Pragmatic view of oil resource.

Where do babies come from?

Where does electricity come from?

- Global electricity: 41% from coal, 24% from natural gas, 14% from nuclear ...79%. Clean energy?
- Where do batteries come from? Cobalt? Lithium? "Democratic" Republic of Congo
- Where do solar panels and windmills come from?
- Where do waste batteries, panels and windmills go to?
- New Zealand now importing coal!

Ban ruminants?

- Sheep numbers are down, 63% from the peak, 70m to 26m
- Beef cattle down 42% from the peak, 6.4m to 3.7m
- Deer down 55% from the peak, 1.8m to .8m
- Dairy cattle down 3% from the peak, 6.5m to 6.2m
- But production per head has risen markedly, so GHG down 23% (beef), 30% (sheep) to 43% (dairy) per kg product.

Farmers as scapegoats

- Area farmed with animals down 33% from the peak. 60% land area to 40% land area of NZ.
- Add 7% of land area in plantations, 2% in horticulture, 2.3% urban
- 49% of New Zealand is "natural state".
- Ruminants evolved 90 million years ago. Their emissions have a GHG balance, and should be omitted from Paris Accord.
- But farmers are only half a percent of the population.... Easy target.

"Dirty dairying"

- Really? Dairying was the main engine room of export led growth. 1995 - 2015.
- Gave all New Zealanders a higher standard of living.
- But now one third of dairy farmers have less than 30% equity.
- Dairying occupies 7% of NZ's land area, cities cover 2.35%. How eco-friendly are cities?

"Dirty cities"

- 80% of cities and towns in New Zealand are non-compliant with sewage and stormwater regulations.
- Cities cause problems: Wellington streams are barren. Don't swim in the Waikato downstream from Hamilton.
- "Come to Auckland: swim in your own sewage".
- "Let's plant houses on our best land".

NZ's virtuous agriculture

- Pastoral farming builds organic matter in soil. Contrast to monoculture cash cropping, pesticides/herbicides.
- Ballance Farm Environment Awards showcase excellent stewardship.
- QE2 Trust. 180,000 hectares, with 500 more potential covenants.
- Land use change. Planting of Manuka.
- Dairy farmers have spent \$1 billion to date on protecting the environment. Auckland is way behind.



Water Quality

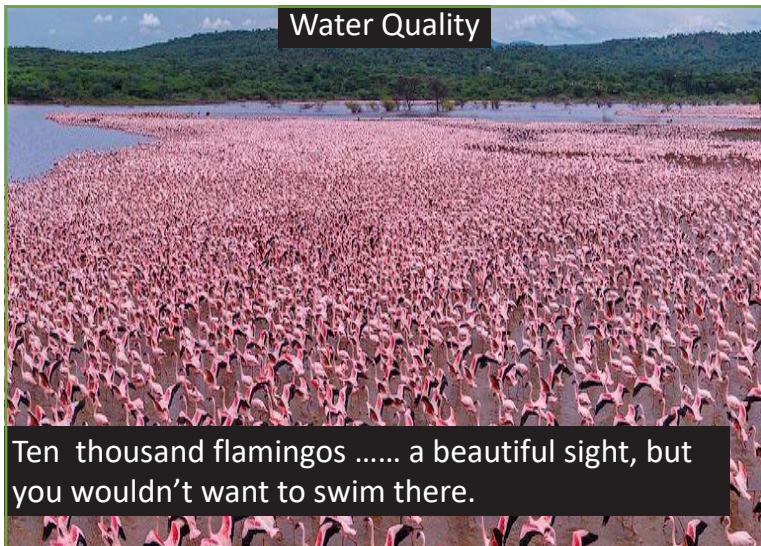
River's aren't fenced in Africa

The elephant in the room

Clean streams for Africa? Fence the rivers?

- In 1800 there were 26 million elephants in Africa.
- In 2018 there are 400,000 elephants in Africa.
- In 1800 there were 120 million people in Africa. In 2018 there are 1.2 billion people in Africa. In 2100 there is predicted to be 4 billion people in Africa.
- Which is the ecological disaster, elephants or humans?
- Support the ivory trade?

Water Quality



Ten thousand flamingos a beautiful sight, but you wouldn't want to swim there.

Too many people

- NZ population in 2018 is 44% higher than 1990.
- NZ population in 2030 is on track to be 65% higher than 1990.
- Do we want a crowded country?
- How to meet Paris Accord target compared to countries with nil or low population growth?
- Building houses, infrastructure, false GDP, but good for politicians... jobs, "growth".
- Global population growth is the biggest problem, but no one tackles it.

The wall of wood

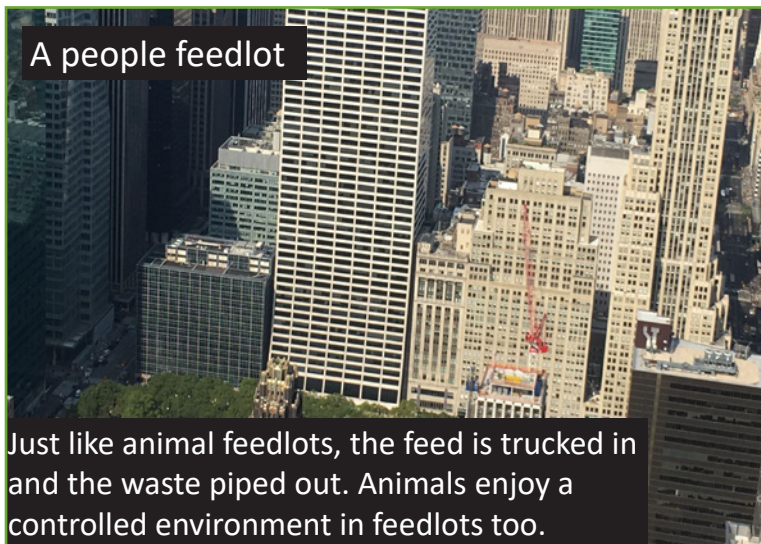


Twenty years ago New Zealanders were promised an era of prosperity when the wall of wood was harvested.

Plant more trees?

- You can't eat wood.
- The "wall of wood" provides only 12% of NZ's merchandise export receipts. What will wood be worth in 2050?
- How sustainable is logging over 500 years? Sediment is ruining inshore fishing around Gisborne and the Marlborough Sounds.
- Will carbon credits be worth anything in 30 years time? Political market, not real.
- "The planting should be on steep or unproductive land, and much of it in native trees, including Manuka". Really?
- Reality check needed.
- How can farming compete with a subsidised land use?

A people feedlot



Just like animal feedlots, the feed is trucked in and the waste piped out. Animals enjoy a controlled environment in feedlots too.

Rubbish views about farming

- Let's eat insects.
- Let's grow algae, but where?
- Lets do vertical farming
- Let's eat artificial meat from a factory.
- Let's eat "pretend meat" from a factory.
- Need to replace 330 million tonnes of meat/fish.
- Is manufactured food ideal for your health?
- Vegans don't require animals to be killed?

Common sense

- Farming requires compromises: glyphosphate, feedlots (like cities), nitrogen, irrigation, pesticides, herbicides.
- Reduce the world's human population, reduce pressure.
- Rubbish – who knew that 110mt plastic was shipped to China? Flush the toilet...
- Lessons from nature: Grizzly bears... as supreme predators control their own population.

Sustainability

- The most important sustainability issue? Survival of political parties and lobby groups.
- Farming is a political target. So is oil.
- These theories come from people who have never been hungry for a day in their lives.
- New Zealand has a negative media, and is dominated by "nay sayers".
- Prime Minister's Advisory Council – only one member from pastoral agriculture. And chaired by CEO of Air New Zealand, the worst GHG polluting company in our country.

Are farmers at the party? Or are we on the menu?

- All human settlement requires compromises around water quality.
- Who is dragging the chain?
- Dirty politics: Fish and Game, holier than thou: trout, salmon, Canadian geese, Mallard ducks. Opuha river – 12 x fish numbers from dam
- Do offsets really count? Just an excuse for "bad behaviour". Temporary effect

Muddled thinking

- Has allowed lobby group, Fish and Game to remain entrenched by legislation, despite its history of destructive environmental impact.
- Irrigation feeds 40% of people in the world. But NZ government has withdrawn support.
- Has done nothing about plastic pollution in NZ, or in the Pacific Ocean.
- There is always extra funding to the Ministry of Sickness. USA now spends 19% of GDP on 'health'.

NZ's productivity crisis

- Endless environmental reports. What % of NZ's 94,000km of roads are an "environmental disaster"?
- 15 years to action an irrigation scheme while costs double and triple.
- Every extra bureaucrat has to justify his/her existence. The regulators are breeding.
- Economy held together by productivity increase in the agricultural sector.
- But student numbers in agriculture are down 40% since 2015. And we import foreigners to work in our export industries.
- **Social welfare:** Primary industry with 74% of merchandise exports has to support an increasing number of dependants in cities.

Party time!

- Never has life been so good to so many.
- Magic carpet rides. Air travel not in Paris Accord.
- 6% of manmade GHG emissions from tourism.
- Airport car parks are growing bigger every year. People vote with their wings.
- New houses are built bigger every year.
- Don't spoil our fun ...

Our crappy economic model

- Rural New Zealand earns export income which is wasted building bigger cities!
- The fast growing population adds to GHG emissions, as do growing tourist numbers.
- There is shonky thinking re planting trees, grooming political egos over a pretence of short term carbon neutrality.
- Banning exploration for oil and gas will lead to more imported energy.
- Shafting pastoral farming will reduce export income by billion of dollars. What will replace that?

Common sense policies

- Endless environmental reports. What % of the planet is overstocked with people, the root of all our problems. Cap New Zealand's population at 5 million.
- New Zealand's Paris Accord targets: remove ruminant emissions. Pay fines rather than plant trees.
- Continue oil and gas exploration, target self-sufficiency.

Common sense is not common

- Impose a significant entry charge on tourists. Increase foreign visitor charges for all taxpayer created facilities, e.g. Aotearoa trail. It works in Bhutan.
- Enhance New Zealand's competitive advantages: fresh water, speaking English, agriculture/horticulture/aquaculture, scenery, low population, energy and mineral resources.
- Remove impediments to lowering New Zealand's very high building costs.
- Be proactive on health, not reactive.
- Attract more business owners into government and local government.
- Dismantle unnecessary bureaucracies – it's like controlling weeds. Cost control.

Winning the World Cup

- Lessons from the All Blacks...
Don't kick the ball away
Don't incur penalties

Face reality

- Shafting our rural economy will not stop the tide coming in.

Re the next page: Forest Owners Association article. 2.8 hectares is **30% of all New Zealand's sheep and beef pasture land.**
Is your farm marked for planting?