

Commentary: climate policy in Aotearoa New Zealand – a backwards flip?

Robert I. McLachlan

In 1975, Chris Nobbs, a young New Zealander trained in chemistry and economics and working at the Environment Directorate of the OECD in Paris, wrote a paper titled ‘The economics of stock pollutants: the example of cadmium’. Together with David Pearce, later an eminent environmental economist, he noted that ‘pollution taxes will not secure the optimal level of pollution ... since such taxes are relevant only for flow pollutant situations’ (Nobbs and Pearce, 1975).

It was not until a generation later that it became widely accepted that carbon dioxide itself is a stock pollutant and that only ‘net zero’ CO₂ emissions will halt CO₂-induced global warming (Fankhauser et al., 2022). This has led to nearly 100 states and 1,000 large companies establishing net zero goals (Hale et al., 2022). One such is New Zealand’s Climate Change Response (Zero Carbon) Amendment Act 2019, which requires the government to set and meet carbon budgets to reach net zero long-lived greenhouse gas emissions by, and beyond, 2050.

But questions about how to achieve this, and how to resolve the problem pointed out by Chris Nobbs – that pollution taxes struggle with stock pollutants – remain. David Hall and I examined the evidence in *Policy Quarterly* last year, explaining why ‘emissions pricing can’t do it alone’. Complementary measures are needed to overcome non-price barriers and trigger the required system transformations (Hall and McLachlan, 2022). Complementary measures build public

support for climate action, while high carbon prices erode it. And the inflationary effect of high carbon prices was indeed a factor in the Labour government’s decision in December 2022 not to follow the advice of the Climate Change Commission on Emissions Trading Scheme (ETS) settings, a decision overturned in July 2023 on judicial review.

However, precisely the opposite dynamic played out in the 2023 general election. The National Party repeatedly criticised individual climate policies such as the clean car discount and the Government Investment in Decarbonising Industry (GIDI) Fund. Transport spokesperson Simeon Brown described the clean car discount as ‘tens of millions being paid to millionaires to buy Teslas while ute owners have been penalised with taxes despite not having alternatives’ (Brown, 2023); Christopher Luxon described the GIDI Fund as ‘corporate welfare’. Arguments against its preference to rely on the ETS as the main tool to lower emissions were ignored.

Thus, the 2023 general election and the remaining challenges for New Zealand’s response to climate change provide yet another illustration of the intrinsic difficulty of climate change, due to its combination of uncertain and/or irreversible fast- and slow-onset impacts, its global nature, and controversy over the required solutions – all of which require transformative action sustained over many decades (Boston, 2021). It was just these aspects that the commitment devices built into the Climate Change Response (Zero Carbon) Amendment Act were intended to address. Given the election results, there will now be a change of tack, and it is to be hoped that the checks and balances already in place will be strong enough to keep the country on track.

It may never be possible to definitively attribute policy impacts, as the whole economic and social system evolves slowly in response to pressures from all quarters. For example, New Zealand’s emissions from energy have shown a remarkably rapid fall over the past three years (see Figure 1). Annual emissions are now at their lowest point since 1999 and are down 15% since 2019. This is faster progress even than that embodied in the Climate Change Commission’s ‘demonstration path’, which includes a reduction of 27% by 2030. Government policies played a part: the ETS price rose from \$40 in mid-2021 to \$85 in early 2023; the clean car discount triggered a rapid rise in the sale of electric and other low-emission vehicles, cutting emissions by several hundred thousand tonnes of CO₂ a year; GIDI allocated \$196 million, leading to 456,000 tonnes of CO₂ annual

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abatements. But we also had the Covid-19 pandemic, with ongoing impacts like working from home; high petrol prices; a gas shortage; and high rainfall, leading to more hydroelectricity production. Full emissions data for 2023, allocating emissions to sectors, will not be available until April 2025 (McLachlan, 2023).

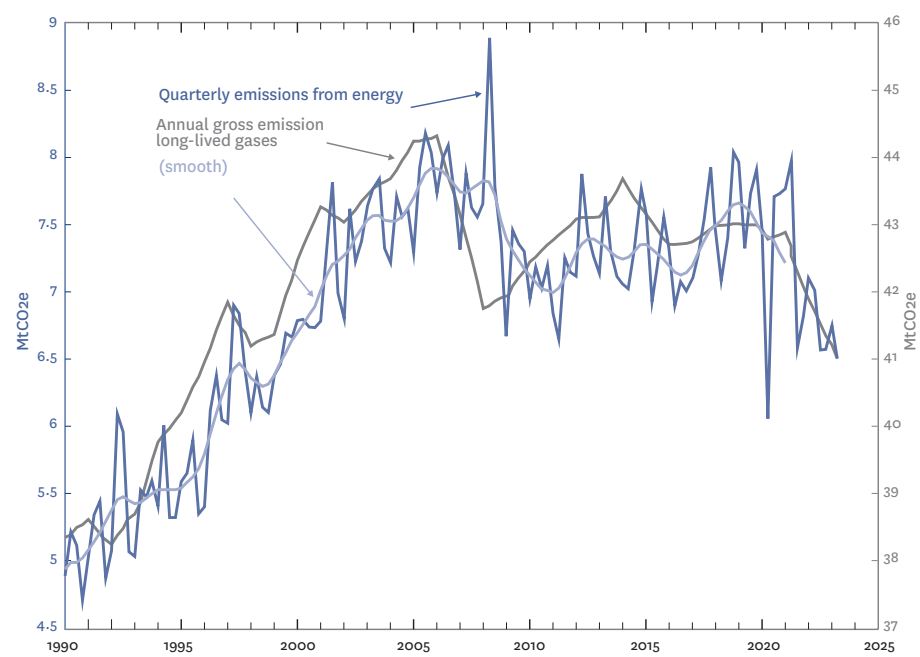
Perhaps more important than any specifics is the national mood, creating an ever-wider awareness of the need to reduce emissions. The mood is affected by government policy, signalling and determination, but also by prices, global trends and climate impacts. After unprecedented flooding in the north and east of the North Island in January and February 2023, public opinion shifted strongly in favour of more urgent action on climate change; but by October that concern had faded (1 News, 2023; Manhire, 2023).

Here I look at seven open aspects of climate change policy and how they might be affected by the National Party's announced policies. All of these will enter into consideration for the second (2026–30) Emissions Reduction Plan, on which the Climate Change Commission will advise by the end of 2023. (I will ignore possible impacts of the coalition negotiations, whose outcome is unknown at the time of writing.)

The Emissions Trading Scheme

The previous government launched a review of the ETS, intended to select an approach that would prioritise gross emissions reductions while still incentivising removals. Submissions have been received but not yet published. The National Party's plan to use the ETS as its primary tool to meet the carbon budgets, while also restricting whole-farm conversions to plantation forestry, and closing them to foreign owners entirely, will test the scheme. Currently, the cost-containment reserve triggers (the effective price ceilings) are set at \$184 and \$230 for 2024, significantly above the current price of \$69.50. However, the ETS settings can be reviewed, and other factors, such as the stockpile of units, affect its ability to influence emissions. A key political issue is the extent to which a National-led government will be willing to allow the carbon price to increase, given its impact

Figure 1: New Zealand greenhouse gas emissions from 1990: annual gross emissions of long-lived gases and quarterly emissions from energy



The left axis shows quarterly emissions from energy to June 2023 (Ministry of Business, Innovation and Employment); the right axis shows annual gross emissions of all long-lived gases, as reported to the UNFCCC by the Ministry for the Environment. Under the Climate Change Commission's demonstration path, gross long-lived gas emissions are 32 MtCO_{2e} in 2030. Image: Robert McLachlan

on the cost of living.

The Energy Strategy

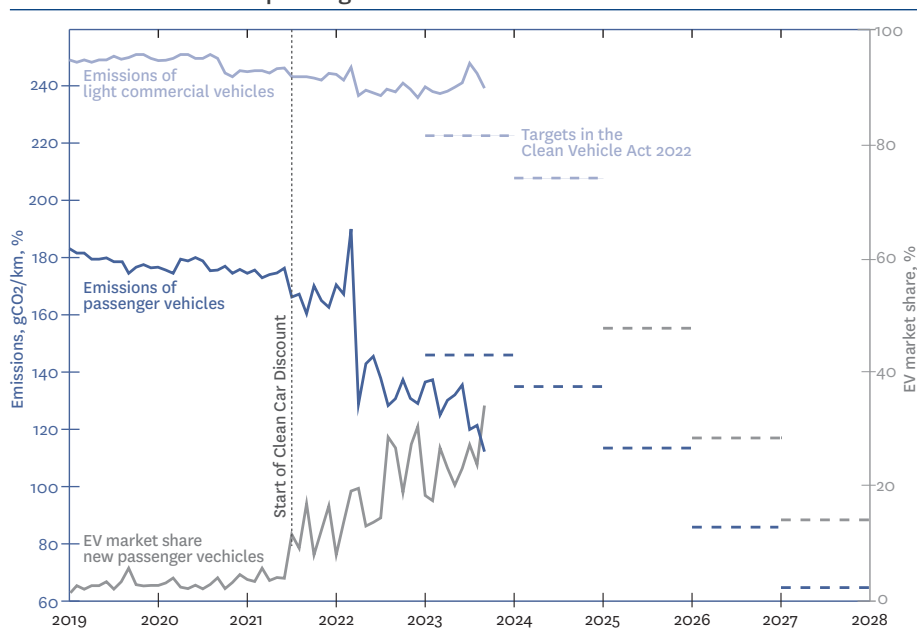
As part of the first Emissions Reduction Plan, the Labour government began an extensive inquiry into long-term energy policy. This was primarily intended to guide the transition to a low-emission economy, with possible targets such as a 50% renewable share of final energy use by 2035, up from 30% today. However, it includes many other components, such as the gas transition strategy, the hydrogen roadmap, the overall operation of the electricity system, and a proposed ban on new fossil baseload electricity. The new National-led government plans to repeal the ban on new offshore oil and gas drilling and to double renewable energy production by easing consenting requirements for generation and transmission. While these will influence the Energy Strategy, much work already underway (e.g., on frameworks for offshore wind and for hydrogen) will likely continue.

But consenting requirements are not the major roadblock in renewable energy: that would be economics. To reach the final investment decision on a large project requires assurance that demand for electricity will be there and that prices will support it. The pace of electrification of the

economy, especially of transport, industry and buildings, is therefore crucial. We have hardly started on this journey: total electricity consumption has not changed since 2010. Despite New Zealand's first large solar farms now being under construction, the Electricity Authority is forecasting that supply will be tight for each of the next three winters, which would mean higher prices and higher emissions (Electricity Authority, 2023). Longer term, the pledge to stop work on the Lake Onslow pumped hydro energy storage scheme leaves the NZ Battery Project with just one remaining option, the 'portfolio approach', able to advance. The NZ Battery Project was established in 2020 to manage or mitigate dry-year risk in the electricity system by providing at least 5,000 GWh of energy storage while also lowering emissions and wholesale electricity prices. Arguably, this brief did not go far enough: future energy scenarios involve staggering amounts of intermittent wind and solar energy, which impacts on energy storage requirements on time scales ranging from hours to years (Ferris and Philpott, 2023). Long-term planning and a consistent strategic direction, to be developed in the Energy Strategy, are essential.

The National Party is planning to cut government spending on electrification,

Figure 2: Emissions of light vehicles entering the fleet, and market share of new electric passenger vehicles



Data: Ministry of Transport

including the Climate Emergency Response Fund (\$7 billion) and some of GIDI (\$1 billion). However, the effect of this is hard to predict. Some of this spending is already committed, such as that allocated to New Zealand Steel and Fonterra, or will likely remain, such as our international climate finance commitments, agricultural greenhouse gas research funding, climate change adaptation, and implementation of congestion charging. Nevertheless, to the extent that there is less funding available, emissions reductions are likely to be slower than otherwise.

Transport

Globally, the policy consensus on transport is clear. A report for the Global Stocktake of the Paris Agreement, summarising work of the IPCC, stated that:

Phasing out internal combustion engines and using electric vehicles offer the greatest mitigation potential in the sector. In addition, demand-side interventions, such as shifting transport modes (e.g., to walking and using public transport), will be essential in the context of rethinking mobility. (UNFCCC, 2023)

While the current Emissions Reduction Plan does include many of these elements, the NZ Upgrade Programme, involving many large new motorways, promised to

undermine it due to induced demand for driving, allocation of resources to road transport, furthering support for car dependency, and bedding in a hegemony for more roads at any cost. The timing, just a few weeks before the first Covid lockdown, could not have been worse, as climate transport advocates were left wondering how we might actually have ‘built back better’ in another world. Meanwhile, many initiatives (driving reduction, mass transit, cycleway construction, road space reallocation, speed limit reductions) have been delayed or remain stalled in public administration.

As noted above, the clean car discount became a particular focus of the election campaign, virtually the subject of a culture war, despite it being a market-based mechanism subject to extensive testing overseas. There are also concerns for the clean car standard, a system of progressively upgraded fuel efficiency standards for newly registered vehicles, which the National Party has said will be amended in consultation with industry. (See Figure 2.) While the electrification of the fleet is inevitable given time, the transition must happen fast enough to meet our overall emissions budgets. So far, no analysis of the impact this might have on the total climate package has been done.

Instead, the National Party will spend \$247 million to install 10,000 EV chargers nationwide by 2030, in a scheme to be

designed analogously to the ultra-fast broadband roll-out. Currently, New Zealand has a similar number of fast (50 kW+) chargers per electric vehicle as jurisdictions like California and Norway, a roll-out that has been well managed and co-funded by the Low Emission Transport Fund and industry. This is an important element of electrification; the combined effect with the changing EV market and the introduction of road user charges for electric vehicles in March 2024 is hard to predict. Overall, it seems unlikely that the roadblocks that are preventing the system transformation that is needed will be addressed in the next term of government.

Agriculture

In 2003, National Party MP Shane Ardern (cousin of Jacinda Ardern, at that time a young research assistant to Helen Clark) famously drove a tractor up the front steps of Parliament Buildings in the original ‘fart tax’ protest. The subsequent 20 years have featured continuous research, debate and delay, but no actual decrease in agricultural emissions. He Waka Eke Noa, launched in 2019 by Jacinda Ardern as a joint government, iwi and industry project, was reckoned dead in the water by the time it reported in late 2022, as whatever consensus there had been between the parties fell apart (Johnston, 2023). Perhaps the most significant achievement in this time was the introduction of fertiliser limits in most areas from July 2021, which over time may result in lower emissions of nitrous oxides. A convergence on farm-level reporting and mitigation has also emerged.

National Party policy is to end the ‘effective ban’ on genetic engineering, easing the route to trials and use of GM crops, feeds, livestock and methane inhibitors; delay emissions pricing to 2030; and review methane targets ‘for consistency with no additional warming from agriculture’ (National Party, 2023). This last item is a reference to an idea that has taken root in farming circles, receiving a rebuff recently from the parliamentary commissioner for the environment, Simon Upton; ruminant methane is an issue that just won’t die (Gibson, 2023). Note that although New Zealand uses a split gas approach in some respects, with different

targets for long-lived and short-lived greenhouse gases, the five-yearly carbon budgets and the nationally determined contribution both refer to total emissions of all gases. Underperforming on methane means making up the difference elsewhere – namely, a faster reduction of long-lived gas emissions.

Adaptation

A record number of 17 weather-related states of emergency have been declared in New Zealand in 2023; the norm used to be one or two per year (see Figure 3). Weather-related insurance payouts averaged \$123 million per year from 2002 to 2018 (in 2023 dollars), climbing to \$615 million in 2019–22; the total for 2023 is \$3,914 million at the time of writing. While 2023 has been exceptional by any measure, it gives an indication of what may be an average year in 10 or 15 years' time.

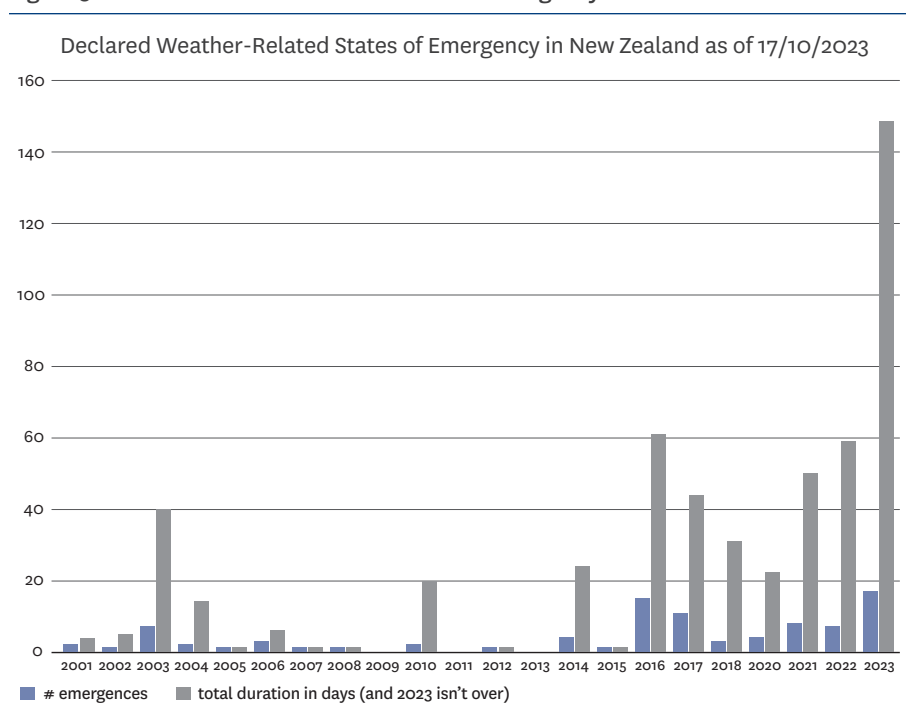
A Climate Adaptation Bill was to have been introduced to Parliament in 2023 before the election, potentially drawing on advice from the Expert Working Group on Managed Retreat (2023). This would have been part of the wider reform of the Resource Management Act, but it was delayed. Now questions of adaptation, financing and the management of risk will pass to the new government, and the recent resource management reforms reversed pending the development of a new approach.

Equitable transition

The low-emissions transition will entail major social shifts, and climate justice and public support require that it should not increase social inequality. Jobs in some emissions-intensive areas will shrink, and others will grow; some changes will affect urban and rural areas differently; household costs will change. New industries and technologies will emerge that will lead to social change. For these reasons, work on an equitable transition was considered an important part of the first Emissions Reduction Plan. Despite extensive work, the strategy is not yet ready.

Already, equity has been a significant part of the climate debate; I described above how it is a factor in views of the clean car discount. East Coast communities have been badly affected by storms, infrastructure damage and forestry slash. But all policies

Figure 3: Declared Weather-Related States of Emergency since 2002



Source: Civil Defence National Emergency Management Agency

have some impact on equity; a very high carbon price would increase the price of petrol, which is regressive on poorer households, while '[w]ith fewer resources, lower income households will have lower ability to change behaviour or invest to reduce their exposure to emissions prices' (Ministry for the Environment, 2019, p.66). As Shaw et al. write,

Our current transport system is not only unhealthy but inequitable. Parts of the population are excluded from the benefits that transport brings (e.g. access to employment, to healthcare and to whānau connections), suffer disproportionately from the adverse health consequences of the transport system and/or are placed under significant financial strain to pay for essential travel to work, school etc. (Shaw et al., 2023)

The nationally determined contribution

In 2021, the then climate change minister, James Shaw, headed to COP26 in Glasgow with a new pledge, to halve net emissions between 2005 and 2030. This nationally determined contribution (NDC) targets net emissions totalling 571 MtCO₂e from 2021 to 2030. The domestic emissions budgets add up to 670 MtCO₂e, leaving a gap of 99 MtCO₂e even if the domestic

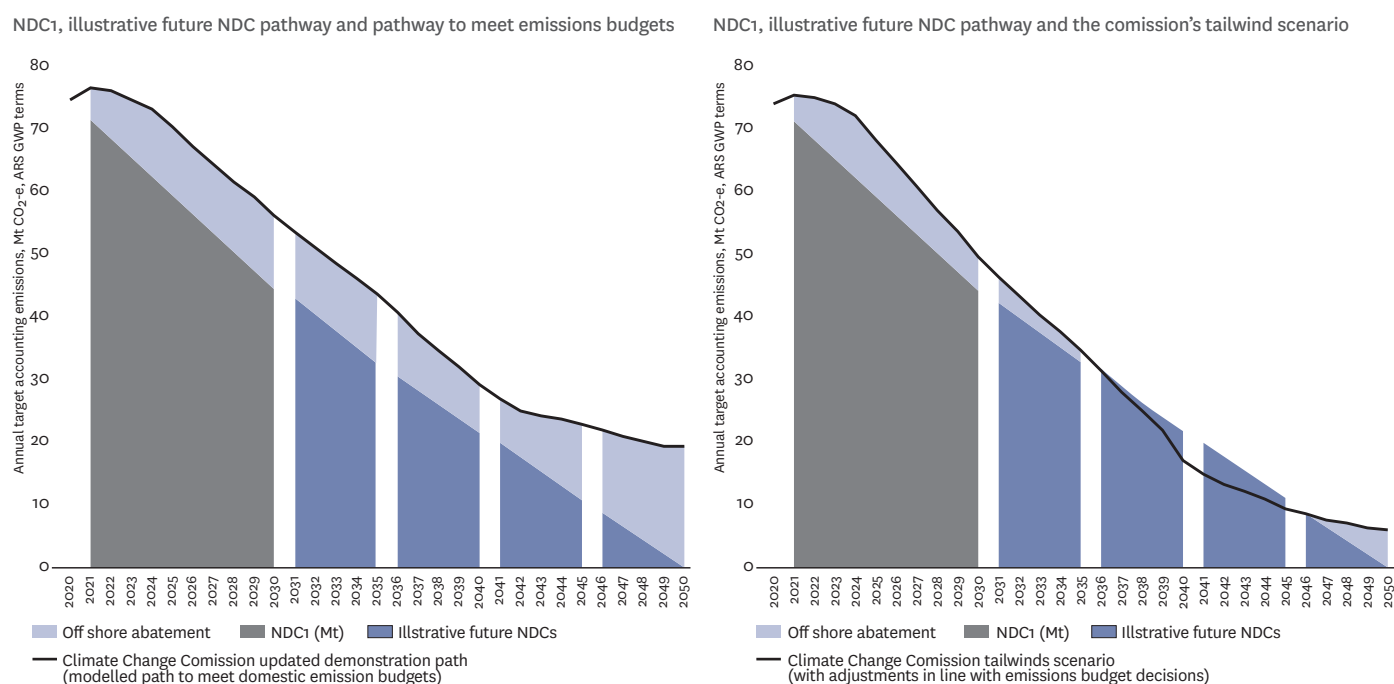
carbon budgets are achieved (see Figure 4.) The projected gap can only be met by faster domestic action and/or by international mitigation, the latter estimated to cost anywhere from \$3 billion (using a price relevant to developing economies) to \$24 billion (using a price relevant to advanced economies) (Treasury, 2023). In July 2023, Cabinet agreed to an 'adaptive' approach, in particular exploring the possibility of faster domestic emissions reductions (Ministry for the Environment, 2023).

Meanwhile, the Global Stocktake process under the Paris Agreement is underway. For the 'well below 2°C' target, global greenhouse gas emissions must fall 21% between 2019 and 2030; for '1.5°C', they must fall 43%. Current NDCs add up to between -8% and +3% (UNFCCC, 2023). Therefore, it seems likely that the UNFCCC will call for increased ambition from all parties under the 'ratchet' mechanism. Just before the election, James Shaw asked the Climate Change Commission to advise on New Zealand's second NDC, out to 2035.

Afterword

The parliamentary commissioner for the environment has reviewed the process by which the first Emissions Reduction Plan was prepared (Parliamentary Commissioner for the Environment, 2023).

Figure 4: Two possible pathways that meet the current NDC (dark grey) and possible future NDCs (dark blue), the pathway on the right requiring more domestic action and less international abatement (Ministry for the Environment, 2023)



Source: Ministry for the Environment, 2023

He found that the scale and breadth of the Emissions Reduction Plan put great strain on government resources, particularly during the pandemic, and required an unusual degree of cross-portfolio cooperation. Key high-level questions should have been resolved earlier, including the significance of distributional impacts, who should pay, and the balances between pricing and complementary measures, gross and net emissions, domestic and international effort, and near-term and long-term impacts. Ultimately, officials

were able to produce a plan that could plausibly meet the first emissions budget, as in fact it is proving to do. Now there will be a change of direction. Inevitably, in a democracy, plans developed and explored in great detail can be scrapped as a result of an election, without any corresponding analysis of the impact. It was also inevitable that the structures and processes set up by the Climate Change Response (Zero Carbon) Amendment Act would be tested repeatedly over time. With climate change, humanity is running into a limit. We are

finding limits to be uncomfortable, to be something new and baffling, the full implications of which are still, even now, only starting to percolate through and around us. We have tried to do things, found them to be harder than we first thought, been repeatedly disillusioned, learned, made partial progress, and tried again. Prediction is difficult (especially about the future), but it is safe to say that this cycle will be with us for a long time to come.

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