

Breaking the Ice

on Degrowth in Aotearoa New Zealand

**A collection of essays
by New Zealand leaders
to start conversations
among New Zealand leaders**

**Edited by Jennifer Wilkins
June 2023**

[Heliocene.org](https://heliocene.org)

Preface

The global economic system extracts and pollutes on a growing scale and doesn't distribute wealth fairly among those who create it. Efforts to make this system sustainable are failing to achieve sufficiently broad, rapid, durable, scalable results. If current trends continue, **renewable energy use will not displace but rather will add to** fossil fuel energy use within the Paris Agreement timeframe, and **none of the Sustainable Development Goals will be achieved by 2030**. A global polycrisis of climate chaos, nature depletion, inequality and **care** is channelling us toward known futures we'd rather not meet. It doesn't have to be this way. Degrowth is a framework for provisioning universal wellbeing within nature's limits through a democratically planned, equitable downscaling of less necessary production and consumption and a fairer distribution of the benefits of value created.

I'm a New Zealand-based degrowth specialist¹ and an advocate for building a national conversation on the topic, **as has been happening in Europe**. To mark Global Degrowth Day on 3 June 2023, I asked well-known New Zealanders who hadn't necessarily engaged with degrowth before if they would contribute a short essay on their interpretation of it and its value (or not) to Aotearoa New Zealand. Those invited ranged from business leaders and politicians to scientists and cultural leaders. Of 75 invitees, 26 did not reply, 28 politely declined, 21 accepted and 11 contributed. These rudimentary statistics provide a simple snapshot of New Zealand's nascent relationship with this new and urgent concept.

Degrowth is a challenge to write about because engaging with it can feel rational and right, yet it is plump with perplexing paradox – such are the rhapsodies and pains of paradigm shift. Landing on the degrowth side of the fence means going against the mainstream common sense that wellbeing relies on growth and growth can be greened. Sticking to the growth side means going against the emerging wisdom that only eco-social economies can deliver wellbeing within biosphere limits.

In this volume, eleven pioneering New Zealand leaders interpret degrowth through the lens of their own experience, be it personal or professional. My role has simply been to gather and share this record of their reflections. The voices within these pages are breaking the ice on an important twenty-first century conversation for Aotearoa New Zealand. I hope you will be inspired to join in.

Jennifer Wilkins, June 2023

¹ Jennifer Wilkins is a degrowth advocate, researcher, consultant and business professional with a background in infrastructure, forestry and manufacturing. She is a chartered management accountant and MBA of Warwick Business School and is currently completing a Master's in Degrowth: Ecology, Economics and Policy at the Autonomous University of Barcelona.

Contents

Contributing Essayists	4
John Berry, sustainable investments leader	6
Rachel Brown, business sustainability leader	8
Rob Campbell, public & private boards leader	10
Victoria Crockford, housing accessibility leader	13
David Hall, climate policy leader	15
Gareth Hughes, wellbeing economics leader	18
Julia Jones, business foresight leader	20
Susan Krumdieck, transition engineering leader	22
Prem S Maan, agriculture business leader	25
Roger & Melissa Robson-Williams, natural sciences leaders	27
Dewy Sacayan, climate action leader	31

Contributing Essayists

John Berry, sustainable investments leader

John believes no one should have to choose between an ethical investment and a profitable one and, as co-founder of [Pathfinder Asset Management](#), has embedded this belief in a series of innovative ethical funds awarded Best Ethical KiwiSaver Fund by Mindful Money, Social Impactor of the Year by the Sustainable Business Network, Responsible Investment Manager of the Year by ResearchIP and Favourite Ethical KiwiSaver Scheme by MoneyHub. John is on the board of Men's Health Trust NZ and the advisory board of MindLab.

Rachel Brown, business sustainability leader

Rachel Brown ONZM is the founder and CEO of the [Sustainable Business Network](#). She has been advancing sustainability in New Zealand business for more than 20 years and was awarded the New Zealand Order of Merit for years of service to sustainable business in 2018. Rachel sits on the board of the Milford Foundation, the business advisory panel for All of Government Procurement and advisory panels for Jobs for Nature, the National Waste Strategy and the Million Metres Streams. Rachel was trained by Al Gore on how to present The Inconvenient Truth and was invited by him to present on the Climate Reality Project broadcast.

Rob Campbell, public & private boards leader

Rob Campbell CNZM is an experienced public and private sector director.

Victoria Crockford, housing accessibility leader

Victoria Crockford has a diverse professional background across the housing, energy, social enterprise and film and television sectors for NGOs, large corporates and start-ups in communications, government relations and executive leadership. Her most recent role was advocating for the right to a decent home for all as CEO of Community Housing Aotearoa-Ngā Wharerau o Aotearoa, a national peak body for the community housing sector. She is currently consulting to 'for purpose' organisations from Tāhuna/Queenstown, where she lives with her young family.

David Hall, climate policy leader

Dr David Hall has a DPhil in Politics from the University of Oxford with expertise in climate action, land use change, sustainable finance and just transitions. He is Climate Policy Director at [Toha](#), Adjunct Lecturer at AUT where he teaches Climate Action and Principal Investigator for AUT's Living Laboratories Programme of nature-based solutions. He edited the book *A Careful Revolution: Towards a Low-Emissions Future*.

Gareth Hughes, wellbeing economics leader

Gareth Hughes is the Country Lead for the [Wellbeing Economy Alliance Aotearoa](#), a registered charity focused on economic transformation. He is also chairperson of SAFE, a political commentator for RNZ and a columnist for Stuff. He is a former Green MP.

Julia Jones, business foresight leader

Never really living in the moment but always being excited about the future is what drives Julia Jones. Change is inevitable and she works hard to help others have confidence in navigating an uncertain future. Although blessed with many highlights, Julia attributes her most impactful growth to her lowlights.

Susan Krumdieck, transition engineering leader

Professor Susan Krumdieck is a mechanical engineer. She is the Professor and Chair in [Energy Transition Engineering at Heriot-Watt University](#), Scotland, and was the first woman appointed to full professor in engineering in 2014 at the University of Canterbury.

Prem S Maan, agriculture business leader

Prem Maan is a founder and Executive Chairman of [Southern Pastures Group](#) (which includes farms, Lewis Road Creamery and NZ Grass Fed Products) and of Foundation Capital. An economist by training, Prem started out at Lincoln University and then had a successful investment banking career before creating Foundation Capital.

Roger & Melissa Robson-Williams, natural sciences leaders

Dr Roger Robson Williams has a PhD in Plant Pathology, a Postgraduate Diploma in Public Leadership and Management and is a sustainability professional. Dr Melissa Robson-Williams has a PhD in Plant and Soil Science, an MSc in Integrated Water Management and works as an environmental scientist. Both work in the Aotearoa New Zealand science system and have written in their personal capacities.

Dewy Sacayan, climate action leader

Dewy Sacayan is a climate activist, lawyer and sustainability strategist and consultant, with experience in disaster management, climate change policy and grassroots campaigning. She participated at the UNFCCC COP negotiations in Peru and Morocco and campaigned for the Zero Carbon Act through [Generation Zero](#), where she served as Private Sector Engagement Lead and Co-chair for its governance board. She was awarded the Outstanding Young Professional Award by Zonta International and was named in Asia NZ Foundation's 25 under 25 and as Outstanding Filipino Young Professional by the Philippine Embassy to New Zealand.

John Berry, sustainable investments leader

Anti-capitalist, anti-investment, anti-prosperity?

Remember last time someone shared a novel new idea with you? Maybe it was confronting, challenging the way you've always done things.

It's easy to dismiss non-conforming or inconvenient ideas. Accepting change is hard, especially if requiring a reset on your worldview.

First time I heard the idea we should stop giving one-minute-wonder plastic presents for Christmas I saw it as 'anti-fun'. But thinking about it, I knew my first reaction was wrong.

When I first heard we'd have a referendum considering alternatives to our 'first-past-the-post' democracy, I thought change would bring deadlock and system failure. I was wrong.

I remember when someone first shared with me the idea the basis of our economic system – ever increasing growth – isn't sustainable for the economy or planet. I thought questioning perpetual growth was anti-capitalist. Again, I was wrong.

I've since accepted that no economic or social or ecological system can continue with growth on growth forever.

Our world accepted we couldn't commercially kill whales in ever-increasing numbers; they'd eventually be driven to extinction. School kids understand we can't dump a rubbish truck of waste into our oceans every minute of every hour of every day forever. Plastic will eventually clog seas and ecosystems that feed us.

It may take a decade, a century or more, but whales can be hunted to extinction and oceans can choke in plastic.

Similarly, most business leaders likely accept social inequality cannot grow forever wider and wider; eventually the entire system will fall in on itself.

There's a commonality to considering the long-term welfare of whales, the health of our oceans and social stability. It's time horizon. The longer your horizon, the deeper and wider you cast your concern and consideration.

If you're a business solely focused on the next quarter's profit number, you won't be losing sleep over climate change or social inequality. A short time horizon doesn't require you to look very far.

But extend your time horizon and everything changes. A business that's planning its place in the world a decade ahead cannot ignore social

I didn't like the novel idea of 'degrowth' the first time I heard it, in fact the name alone sounded nuts. But I think I was wrong.

challenges. Thinking one, two or three decades ahead, you cannot ignore climate change.

Putting aside 'values' and 'doing the right thing', from a purely financial perspective, if a business does not support the wider social and economic environment with a long-term view, then there will be no future business.

For business, 'degrowth' is the idea of achieving more from less. It's the idea

of adopting an increasingly 'circular' and less 'extractive' model. It's the idea of serving local communities as well as local shareholders. It may mean focusing on the smaller and more impactful rather than focusing the on larger and growth for the sake of growth. It may be measuring success differently or acknowledging the difference between 'enough' and 'too much.' Maybe it means being more cooperative and collaborative outside of the organisation.

These ideas can be challenging for business. How have they tangibly shaped our thinking at Pathfinder as an investment manager?

We talk about 'investing for the world we want, not the world we have'. This can mean investing in companies that replace a wasteful end-of-life with a sustainable end-of-life. Like our investment in Wool+Aid, the maker of biodegradable merino wool bandages and plasters (rather than plastic based).

We look for investments that promote a circular economy rather than extraction. Like Mint Innovation which removes metals from e-waste rather than mining.

We've constructed a business model providing long term support for social and environmental causes, in a way that grows with our business. We give 20% of our KiwiSaver management fees to our charity partners – this means less for our shareholders but more for our communities.

I didn't like the novel idea of 'degrowth' the first time I heard it, in fact the name alone sounded nuts. It resonated as anti-capitalist, anti-investment and anti-prosperity. But I think I was wrong.

Business shouldn't strive for perpetual growth to infinity, instead it needs to reimagine its purpose, its delivery and its DNA. There's a simple place to start if you're concerned about the long-term sustainability of business, of communities and of ecosystems. Be open to the degrowth discussion.

Rachel Brown, business sustainability leader

**All my life, I've been told economic growth is what we need.
It's what makes life good.**

We're told growth keeps our economies thriving. It provides jobs, homes and education. It fuels our way of life. But the push for endless growth is undermining our ability to thrive.

The concept of degrowth challenges our consumerist culture and behaviour. It focuses our effort on the stuff that really matters. It means new measures of success. It could be instrumental in rethinking wealth and fairness.

An economics based on unbridled self-interest has accelerated extraction, consumption and pollution. The invisible hand of the market has put two fingers up to equality. It's flipped the bird at sustainability.

We are at the limits of 'growth' as we know it. Future generations are likely to be poorer. We're pushing a tidal wave of unresolved problems ahead of us.

When economies work well, societies work well. People with decent homes, jobs, healthcare and education tend to act reasonably and work together. When economies don't work, people lose all that. Society disintegrates.

This is already the reality for many. On our current path, fewer and fewer of us will prosper. The poorest will suffer worst.

The individualised economy is becoming a suicidal race to the bottom. Low cost, low wages, low quality. Abandoning innovation. Grabbing shorter and shorter term cash.

Despite this, many are making conscious choices. They're moving away from consumerism. They're changing the way they travel, use energy and shop. But current systems make this hard. The right choice is often more expensive or time consuming.

So we need to change the system.

Degrowth. Circular economies. Green growth. Sustainable growth. Inclusive growth. Wellbeing economics. They are all being tested. They can redistribute wealth and regenerate nature.

Doughnut Economics (including the home grown version – Oranga Iho Nui, a.k.a. Te Reo Doughnut), particularly, highlights our social and planetary boundaries. We must 'degrow' in the areas creating overload. This includes climate change, nitrogen and phosphorous loading, land conversion and biodiversity loss. And we must shift our focus to where

we're drastically underperforming. This includes living wages, hunger, life expectancy, access to clean water and sanitation, corruption, social justice, gender equity, housing and neighbourhoods.

We also desperately need to learn from te ao Māori, to help place intergenerational thinking at the heart of our lives.

Inequality is spiralling. We've had decades of underinvestment in our common good – from infrastructure to the education and health sectors. We're unprepared to adapt to the climate we are triggering. Meanwhile, the very rich are getting absurdly rich at the expense of the rest of us. They are not taxed fairly. Those without significant family wealth are becoming a debt-fuelled renting class.

We have to turn that around. And there is plenty to do. This is where progress in the 21st century should be focused.

Economist Shamubeel Eaqub has said: 'Tax is love.' It really is the only way we can redistribute fairly. Philanthropy is good, but it's not going to deliver scale or be able to deliver the low carbon infrastructure, education or health system we really need.

**We need a
revolution
in the way
we work.**

We need a fairer tax system to invest in resilient low impact infrastructure and help nature regenerate. We need to support innovative, sustainable products and services.

Raising the Goods and Services Tax (GST) won't do it. Ordinary people spend more of their earnings than the very rich. We must tax wealth properly. Otherwise we're back to some kind of futuristic feudalism, which won't be accepted for long. There is willingness, with a growing number of extremely wealthy people now asking for a fairer system that includes their assets.

We need a revolution in the way we work. We need to design and build for this emerging circular economy, where materials are not abandoned to become waste and pollution.

The focus must move from the current growth fixation, to ensuring everyone has fulfilling work, a healthy home and neighbourhoods.

Actually, growth is fine – it is what we grow that matters. We can grow innovation, design, investments, meaningful jobs, nature, great places to live and work...But we can't keep growing an unfair and extractive economy. That has to change.

We don't need and can't have endless growth as it currently is. We need and can have economic wellbeing for all, within the world's natural boundaries.

Rob Campbell, public & private boards leader

Degrowth: The Way To Prosperity

I am of an age and background that predisposed me to the idea that economic prosperity is a legitimate personal and societal aim. Something that could be taken from the physical world and turned into 'value'. That was very much the thinking of my parent's generation and class as their lives matured after massive economic depression and war.

The youthful rebellions of my time were about rejecting the conformity and rigidity of that prior generation. We were motivated by recognising and opposing various forms of class and cultural repression inherent in that conformity and rigidity of Pākehā life. Apart from some of the more idealistic slogans and expressions of environmental and social harm, I and a great many of my compatriots had not shifted from an alienated and distanced relationship between ourselves, what we thought was our wellbeing and nature. We had read Marx on alienation but understood that only superficially. We did not see how alienated our lives were from the reality of the physical world.

The evidence was all around us, there for us to see if we cared. In 1968, Bobby Kennedy, hardly a radical, had declared that humanity had 'surrendered personal excellence and community values in the mere accumulation of material things'. He noted that such measures as GDP measure 'everything except that which makes life worthwhile'.

I was a particularly slow learner. Not lonely in that, but continuing to live in the unreal world where economic statistics (and let's be honest our own bank accounts and comforts) had significance beyond what open eyes and an open mind could readily have seen. I confess that it is only within the last decade or so that I have allowed reality to intrude on my old fantasy world.

There were glimpses. Even through the mists of my economics training, I had seen the insanity of prosperity being measured by numbers that excluded so much work by women, that rated the value of costly armaments above free peace, that saw no price and only benefit for inequity and exploitation. I was aware of, but paid no heed to, world views which had different values. In my case it was stumbling onto Buddhist teachings, not stubbing my mental toes on physical reality, that made me think. I mean 'think', not the automaton mental processing which calculates rates of return, but thought which seeks to understand, not process.

It is surely a good measure of how alienated I was from reality that I was shaken, not by physical evidence, nor from a world view which was there,

living and indigenous to the physical reality surrounding me, but by this ancient surviving philosophy from far away. Some things are universal, but it is a peculiar form of mental blindness that ignores the locally present understanding. The door once opened has iteratively led me on a longer journey.

You could argue that this is still a narrow path – a domino form of thinking driven, door once opened, as much by empirical observation as anything deeper.

But this is how I see it:

- The planet is bounded physically and, for all practical purposes, finite
- Humanity is, at some level, an accident on an accidental planet
- Humanity has evolved and does evolve with some agency and has some influence on the planet
- Observable impacts of humanity are increasing and include significant physical changes and depletions
- At least some of these are testing observable limits
- The motivations which have driven and continue to drive human evolution focus significantly on utilising physical resources and its outcomes are unequal and unfulfilled

People continue to cling to the idea that technology will enable humanity to avoid its own or the planet's collapse (or some combination of the two). The empirical evidence for this is not strong. Substantive and rapid technology advance is possible but the historical period in which it has been demonstrated is very short relative to species existence. If there are physical limits which are already being stretched or have been passed, then the likelihood of a technology 'answer' diminishes. It seems far more likely that our agency as a species to impact future events lies in amelioration rather than full avoidance of disaster.

People continue to cling to the idea that technology will enable humanity to avoid its own or the planet's collapse. The empirical evidence for this is not strong.

We must also note that while improving human welfare may not be completely a zero-sum exercise, the fact is that inequality is more widely visible and more practically unacceptable than it may have been in the past. That unequal welfare will and should be adjusted, it is fantastical thinking that all can keep gaining while the disadvantaged 'catch up'. Reality shows that this is not achievable. So, the rich either try to impose ongoing inequality or enable and assist its reduction. This will involve a substantive shift in the rich view

of the world's future. Absent this, the risks of existential human conflict and of planetary damage escalate.

All this tells me that our policies and practices now should be directed not towards the least likely outcome that we can continue to meet unchanged motivations and aspirations with new methods, but towards changing those motivations and aspirations to fit physical and social reality.

Degrowth in physical terms becomes the only option, not 'an' or 'a possible' option. Does this mean that the lives of the rich cannot improve? Far from it. There is much richness to derive from developing as a species in forms consistent with species and planetary health which do not rely on ever expanding physical resource use. Degrowth, as the IPCC put it in 2018, is 'a planned reduction of energy and resource throughput designed to bring the economy back into balance with the living world in a way that reduces inequality and improves human wellbeing'.

For those who care about the statistics rather than the reality, measures such as GDP can easily be replaced by measures which do capture non-material or non-traded values, but which measure growth and progress in what really matters. I rather like Bhutan's Gross National Happiness Index, but something more down to earth will do. This can happen (realistically, can only happen) via reduction in energy and resource throughput. Prosaically, as a WEF publication put it, with 'people in rich countries changing their diets, living in smaller houses and driving and travelling less'. I think it is tougher than that, but it is far from a death sentence – which not changing our lives certainly is.

Victoria Crockford, housing accessibility leader

The phrase 'de-growth' strikes at the core of what it is to be a human alive in the Anthropocene.

So, when I was asked to write about my understanding of it for this collection of essays, I decided to let my mind wander. With a background in housing and energy, I thought I knew what it meant for me - fulfilling the right to a decent home for all, a more diverse and diffuse energy system and the dismantling of shareholder primacy. These are actions and my practical streak wants to see de-growth as an action plan.

But knowing the power of words, I turned my back on the plan and I sat with the phrase. I turned it around and around in my mind to try and find the essence of the words themselves for me. De. Growth.

I stood looking over the land I have been so blessed to stand on and it was there that I found it. For me, de-growth is not about de-ification at all, but about re-learning a relational way of being with each other and with our natural environment.

We have an immense opportunity here in Aotearoa New Zealand because we have the gift of Te Tiriti o Waitangi, or the Treaty of Waitangi, one of our founding documents, and the one that has most profoundly shaped race relations.

I am Pākehā, descended from a pretty typical mélange of Scots, Irish and English. Like many people I know, I have turned my mind in the last few years to what it means to be Tangata Tiriti - a person of the Treaty of Waitangi. In many ways, I always was this person; it was how my ancestors were allowed to be here. But in all the ways that count, I was not this person. I didn't begin to know or understand the stories of our land and our peoples until university. I didn't really begin to know or understand my personal responsibilities until I had my first child nine years ago.

Her appearance in the world made me ask deeper questions about what it means to be a person in this world, a citizen in this country, a partner in this land. It made me ask about systems change - what point in the system is it best to influence and how? Where does justice derive from?

Having the privilege of working closely with a tangata whenua (or indigenous) organisation on housing in recent times has accelerated this self-reflection. What does it mean for me to become what I always was, a person of the Treaty endowed with a role, a responsibility, and yes, rights? This is, of course, a journey and a set of vexed questions that Māori have been carrying for nearly 200 years and others have certainly written about more eloquently than me.

But in the context of degrowth, this process of un-learning and re-learning comes at a critical juncture for how we ask the same challenging questions of ourselves regarding our planetary boundaries. Like in our social sphere, we must move away from a transaction and extraction mindset and into a relational mindset. Urgently.

This to me is the true premise of degrowth. That in returning to relationships, we have an opportunity to fulfil the potential of humanity.

That is where the power of the Treaty lies. As a nation, we are already having conversations about what it means to be allies and partners. About what it means to honour commitments and undertake redress. In going through this process, and with Tangata Tiriti doing

their share of the work, we have a kernel of understanding about what it takes to re-shape a transactional system into a relational system. Make no mistake, there is still racism, backlash and misunderstandings aplenty. Just like there are still constant misuses and abuses of the 'carbon budget' we have left. Just like we stand by while mass extinction events occur.

However, there is a groundswell. There are people prepared to re-orient their view of the world and accept that they can't live exactly as they are now, perhaps blissfully untouched by the traumas that have occurred, but that they have so much to gain from becoming a person of the Treaty with a more profound knowledge of who they are and how to live here, in this place, connected to rivers, mountains and sea.

This to me is the true premise of degrowth. That in returning to relationships, we have an opportunity to fulfil the potential of humanity. As a species that cares, that loves, that nourishes. That can adapt to a changed reality. That sees the beauty in simplicity. That can move beyond transaction and an unsustainable growth system to a relational system that understands the true, deep, difficult task of partnership with each other and with our planetary home.

David Hall, climate policy leader

The meaning of any word, ultimately, belongs to the people who use it.

I start with this Wittgensteinian thought because it exposes a critical constraint on the idea of degrowth. Let me explain.

A small subset of elites - economists, journalists, politicians - have popularised the equivalence of 'growth' with GDP. We hear it reiterated in media continually, repeatedly, moronically.

Degrowthers take this equivalence at face value, but provocatively invert it. Crudely speaking, what was good (rising GDP) is now bad, and what was bad (declining GDP) is now good. More precisely, declining GDP is treated as a necessary and praiseworthy outcome of a planned contraction of material and energy throughput in an economy. Thus, degrowth is the antithesis to the thesis of infinite growth on a finite planet.

And yet hardly any ordinary people fluent in the English language treat growth so one-dimensionally. It is perfectly comprehensible to say, 'I've grown', without referring to an increase in girth or height. Indeed, among full-grown adults, it is more likely to refer to a new level of maturity or self-consciousness. It might even refer to the transition of a person (perhaps even a society?) from profligacy and overconsumption to a more intentional lifestyle that does more with less. In such a context, ordinary people can say 'I've grown' without being misunderstood.

According to the *Oxford English Dictionary*, in its earliest uses, *to grow* meant to 'manifest vigorous life; to put forth foliage, flourish, be green.' Deriving from the Old English *grówan*, it shares with 'green' the same verbal base and with 'grass' the same Germanic root in *grô*. These herbaceous linkages are woven through growth's other meanings: to come into existence, to germinate, to develop or progress through the phases of life. No competent speaker in the Middle Ages, attuned to the seasons as one needed to be, would've understood this growth to be infinite. A healthy pasture waxes and wanes; it grows within a context of equilibrium. It is only in late Middle English that growth comes to refer generally to a volumetric increase in the magnitude, quantity or power of a thing.

The treatment of GDP as 'growth' is one such usage. The further equivalence of GDP with wellbeing implies that such 'growth' is necessarily good. This value judgment is deeply problematic - and degrowthers are hardly the first to recognise this. In the report that formalised GDP, Simon Kuznets wrote that: '[t]he welfare of a nation can...

scarcely be inferred from a measurement of national income as defined above.'

By contrast, to flourish, to develop, to 'manifest vigorous life' – these are essential qualities of wellbeing. Which is why, while it is easy to imagine people giving up on the idea of GDP, it is much harder to imagine people giving up on the idea of growth. Its positive valences are deeply rooted and, I suspect, irrepressible.

This doesn't mean that the substance of degrowth economics is inherently unattractive. On the contrary, as degrowthers rightly boast, **many policies** that they align themselves to – four-day working weeks, housing sufficiency, public transport, cooperative ownership models, universal basic income – have more popular support than policy makers often assume.

I have my own sympathies with aspects of the degrowth agenda. Care and conviviality, I agree, are neglected elements of economic flourishing. More objectively, I also believe that **demand-side mitigation** is a necessary element of any credible pathway to Paris Agreement commitments. We've left things too late and the process of technological substitution takes time. To achieve short-term emission reduction goals, there is no avoiding the need to be less wasteful, less debauched, less insatiable for emissions-intensive goods and infrastructure. We would be wise to carry that modesty forward into future socio-technical systems.

But is declining GDP a sure predictor of success? If it is a poor guide to national wellbeing – which it is – then surely it is no more useful as rear vision mirror. Why not just stop treating it as an economic objective, either as something to achieve or avoid?

In a diverse society, what values might we bulldoze by overeager, universalising calls for degrowth?

This is the intent of what is called growth agnosticism (**Kate Raworth**) or agrowth (**Jeroen van der Bergh**). Do the right thing by people and planet – and let GDP do what it may.

Agnosticism is prudent because I doubt anyone truly knows how our system of national accounts will respond to the combined disruptions of climate action and climate change itself. Our climate story is not yet told and its sub-plots are fiendishly complex. Given the unknowns, I find self-certainty, on either side of the debate, repellent.

But the point of this essay sits another level down. Contrary to how degrowth, green growth and agrowth are framed, we should just *stop* associating an accounting metric with a rich and plentiful concept like growth. After all, GDP does not track – or only indirectly tracks – many

types of growth that we rightfully admire, like growth in wisdom, care, mana, human capabilities, civic engagement and populations of threatened species. And among the things that GDP does track, it is indifferent to their goodness or badness. The financial footprint is all that matters to GDP, whether the dollar is spent on raising a child or destroying a world.

And beyond these elite disagreements, ordinary speakers use growth with far greater sophistication and nuance. Cancers grow, which is bad, but that does not prevent an ordinary person from seeing the goodness in a growing garden, baby or talent. It is a question of what you value. Wellbeing economics, arguably, gets the problem right by differentiating between the quantities and qualities whose growth is associated with human flourishing (or not). Meanwhile, advocates of degrowth and post-growth, who deny themselves the handsome word of 'growth', are forced to fill the gap it leaves with terms like 'prosperity' (Tim Jackson) and 'radical abundance' (Jason Hickel).

Once we get clear about what we value, why not relish its growth? In a diverse society, what values might we bulldoze by overeager, universalising calls for degrowth? In resisting such overreach, a group of Global South activists committed to anti-oppression and decolonisation, **POSSIBLE FUTURES**, recently wrote:

'We look favourably upon the imminent end of modern Western civilisation, and regret immensely that the price for this has been planetary systems collapse, of which the sixth mass extinction is merely a by-product. For us, *this* has been *planetary degrowth*, yet no Western perspective acknowledges this as such. With collapse fuelled by power structures tightening their stranglehold on life, we know that there is a lot of *growing* to be done. Imagining a planet "after growth", economic or otherwise, is not even impossible, it's pointless.'

Part of me admires the punk aesthetic of degrowth and its direct assault on conventional dogma. By destabilising clichés that will lead us to ruin, its provocations have renewed important conversations in the Global North, likely even sharpened a few influential minds.

But, like others, I suspect that degrowth is too contrarian to ever secure broad-based support. Most people can see that the conflation of fossil-fuelled GDP with economic growth is incoherent and increasingly suicidal – yet the degrowth movement not only lets this association go unchallenged, it reifies it.

Perhaps the more radical, more momentous solution is *to reclaim growth*, to wrest it away from its absurd and pernicious associations with GDP and to repopulate it with measures that track human and ecological flourishing. Even within limits, growth is an intelligible goal, as ordinary as green grass.

Gareth Hughes, wellbeing economics leader

Aotearoa's Early Champion of Degrowth

'Growth of what, where and for whom?' That was the big question I posed at the memorial service for the late Jeanette Fitzsimons. The politician, academic and campaigner had spent her lifetime pushing for people and planet and courageously challenging economic growth. Jeanette was an inspiration to me and I believe this was the question she would have wanted asked in a cathedral full of politicians.

After I served a decade in Parliament, diligently working on the symptoms of economic growth – climate change, biodiversity loss and inequality – I retired to a conservation island in Otago to write a biography of Fitzsimons who died suddenly in 2020.

I felt this project was urgent and important as she, perhaps more than any other New Zealander, challenged the sacred cow of economic growth yet also managed to be New Zealand's most trusted politician. She lived her values – farming organically, living lightly on the Earth and acting boldly while also loving music, family and her work.

Born in 1945, across her lifetime she witnessed the tremendous and unprecedented burst of economic growth, but for her what was apparent was the negative impacts on the natural world. The first image of the whole Earth from space in 1968 highlighted the folly of chasing infinite growth on a finite planet. She understood the symptoms we see in society from climate change to biodiversity collapse are directly related to the systems underpinning it.

They generally called it the limits to growth or 'affluenza'.

Her personal journey directly started in 1972. Inspired by the Club of Rome's *Limits to Growth* and the Ecologist's *Blueprint for Survival*, she joined the newly formed Values Party, the world's first national ecological party. The opening words of its incendiary manifesto were 'New Zealand is in the grip of a new depression. It is a depression which arises not from a lack of affluence but almost too much of it.' Values was a party

founded on a deep scepticism of growth and she would go on to eventually lead it into Parliament in 1999 renamed as the Greens.

Degrowth wasn't a common term to her generation, and they generally called it the limits to growth or 'affluenza'. The systemic solution was a steady state economy. Politics then and now is not a supportive place for unorthodox ideas like challenging growth. Economic growth has been

the fundamental underpinning of society for centuries and something left and right-wing parties saw as their *raison d'être*. In the early 2000s, questioning it was seen as heretical.

Jeanette would be ridiculed by other MPs in debates, but she would definitely defend her views, saying in 2006: 'The planet is being abused in order to generate ever more wealth and economic growth, supposedly to improve our wellbeing and make us happier, yet the awful truth is, it doesn't. Instead, we appear to be getting more miserable.'

For Fitzsimons, the urgent imperative to use less energy and resources wasn't a grim vision of the hungry shivering in poverty as her opponents portrayed. Her positive insight was that resources are finite, so we have to learn to share them – there was more than enough to meet everyone's needs as well as provide an unlimited amount of music, art, culture and community.

Freed from the shackles of politics in 2010, she would retire from Parliament and challenge economic growth more directly. She chained herself to a dairy factory, blockaded a fracking well and sailed into the Tasman Sea to directly block a deep sea exploratory oil drilling ship. At this time she would publish *Enough: The Challenges of a Post-Growth Economy*, an important contribution to New Zealand's emerging degrowth literature.

Four decades after *Limits to Growth* was published and despite the climate awareness of the time she was still practically a lone voice in the wilderness arguing for an end to growth and promoting the wellbeing of 'enoughness'.

A decade on, it's no longer on the margins. Degrowth is discussed in the mainstream media and by businesses. French and Irish Presidents have recently raised it in high-profile forums. Smashed by extreme weather events, the costs of growth on the planet can no longer be ignored.

However, voluntarily setting limits and aiming for 'enoughness' are not new ideas. They can be seen throughout history and in traditional Māori approaches, such as *rāhui*.

In 2023, as these issues are debated more urgently, let's remember, celebrate and continue to be inspired by the early thinkers who challenged us to ask what growth, where and for whom?

Julia Jones, business foresight leader

Growing ambition, shrinking impact

If I had to sum up my observations of New Zealand's climate action and discussions in a few words, it would be reactive, clumsy and forced. Our conversations revolve around how we can 'hack' environmental impact, not how we can adapt our own behaviour to have less impact. We want a better world but we don't want to be inconvenienced, so we keep looking for solutions that don't require individual compromise.

The planet has a finite capacity, yet we seem to have infinite demands on it. This begs the question: how do we create success when growth is no longer an option? How do we grow our ambition by shrinking our behaviour? As the biodiversity conversation accelerates, it gives us a fantastic opportunity to become deliberate, responsive and inspiring.

During my study tour across the United States last year, it hit me in the face that there is growing momentum around the biodiversity conversation within large investment firms. As the Task Force on Climate-related Financial Disclosures (TCFD) takes flight in New Zealand, the Taskforce on Nature-related Financial Disclosures (TNFD) conversation is waiting on the runway.

When growth is no longer a viable option, success becomes defined by how important or necessary we are to others.

Without question, the focus on climate has urgency, but tunnel vision on carbon is creating many unconsidered consequences; for example, the use of exotic forests for carbon offsets. Addressing the elephant in the room, it's kind of like carbon Catholicism. You sin and repent. But does it actually change behaviour? Does it make things better?

The focus on natural capital and biodiversity is about holistic system thinking and behavioural change. It brings in fresh water, food production, communities and indigenous methodology and it supports climate balance. How do we capture this and use it as a superpower and key competitive advantage for export?

When growth is no longer a viable option, success becomes defined by how important or necessary we are to others. This becomes about maintaining sustainable relevance, not producing more. Why couldn't we be as important to the United States with wellbeing through food as Taiwan is with computer components?

Creating a biodiversity narrative will require measurement and data, with underlying digital capability to show our land as a resource and how it can be used. We can't put further pressure on business, creating death by spreadsheet scenarios. This needs to be tech-enabled, not lack-of-human-resource-disabled.

The stakeholder group needs to be wide and diverse, but not so wide that we lose sight of our grassroots needs, and not so narrow that we don't explore innovation. The conversation will take great maturity as there will need to be compromises.

Economics is not a villain in this story, it needs to be part of the narrative. This is not an economics versus environment conversation, it's about rethinking and creating wealth without using, making or building more.

If we continue to only think of transitioning out of crisis, our transition will be transactional and unsustainable. Now is the time to have the foresight to transition with vision and to rediscover growing our ambition by shrinking.

Susan Krumdieck, transition engineering leader

The 60,000-year experiment of human society has required understanding and anticipation of cycles. People have always observed, innovated and shared knowledge so they could be opportunistic, collect, hunt, preserve and plan for the winter part of the cycle when food was scarce and the need for fuel was high. Surplus would mean survival and scarcity would mean suffering. Since the industrial revolution, the natural cycles have become less integral to our cultural history. The extraction cycle is similar for mining, fishing, forestry and fossil fuels and for land development. In a global economy, optimists tell us not to worry about boom-and-bust cycles because the market will simply deliver new extraction development from somewhere else or technology gains to replace the resource with something better. The boom-and-bust may be less noticeable in rich economies than in the locale where livelihoods and impacts first create surplus then scarcity and pollution.

Our economic philosophy is now shaped by extraction of finite resources, so the dynamics need to be well understood in order to devise the economic models for degrowth. The simple model for extraction is the Hubbert Production Curve based on a symmetric Gaussian distribution:

$$P(t) = [R/(\sigma\sqrt{2\pi})] \cdot \exp[-(t_p - t)^2 / (2\sigma^2)] \quad \text{Eqn (1)}$$

where $P(t)$ is the production rate (Units/yr) in year, t , from a resource of total quantity R (Units), with peak production in year, t_p , and the production curve has a shape factor, σ .

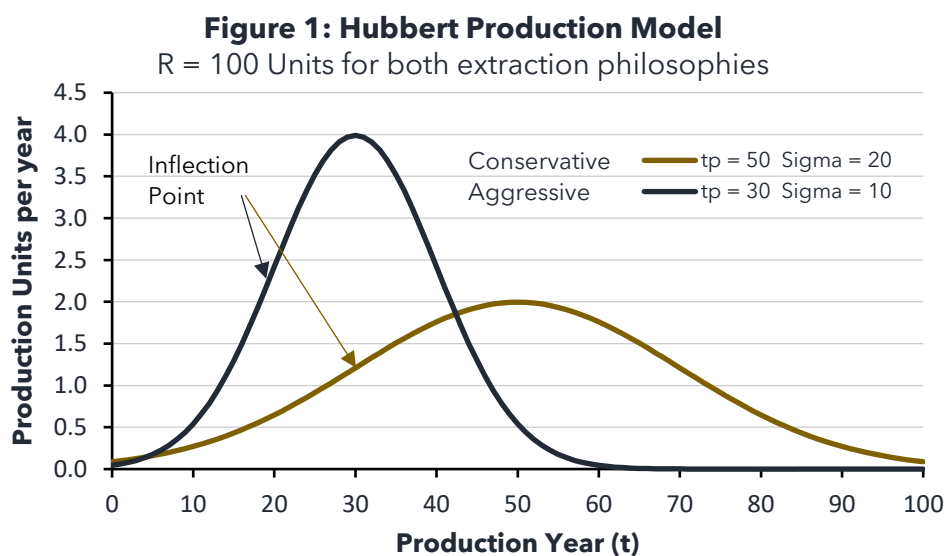


Figure 1 shows the production curves for a resource of 100 Units with two different economic philosophies. The aggressive extraction philosophy has a peak production rate of 4 units/yr in year 30 and a 60-year lifetime, while the conservative extraction philosophy has peak production of 2 units/yr in year 50 and a 100-year lifetime.

This model gives a simple approximation we can use for comparison of conservative and aggressive extraction philosophies. For both production philosophies, the peak of production is the point at which half of the original resource has been extracted.

Production grows rapidly in the beginning for both philosophies. In year 10, the remaining resource is virtually the same for both strategies but the much higher production volume in the aggressive strategy depletes the resource quickly, and in year 30, the aggressive strategy hits the production peak with negative growth going

Production Growth Rate		
Yr	Aggressive	Conservative
5	29.0%	12.0%
10	22.8%	10.7%
15	16.8%	9.3%
20	11.1%	7.9%
25	5.7%	6.6%
30	0%	5.3%
35	-4.4%	4.0%
40	-9.1%	2.7%
45	-13.5%	1.5%
50	-17.7%	0%

forward. The production growth slows from the outset, but in year 15 of the aggressive and year 30 of the conservative cycles, an inflection point in the curve means that the growth rate gains will slow until the peak. Aggressive production in year 35 is only 12% short of the all-time peak, but the future production rate will decline faster each subsequent year. The market growth spurred by the decades of surplus would lock-in consumption expectations and infrastructure assets that might become dysfunctional at lower production volume.

The Hubbert Production Model also gives insight into why oil & gas upstream investment has historically had stellar performance, and why the business models for the degrowth era have not yet emerged. Capital for development is attracted by the prospect of growth in future years. Year-on-year growth in the first 15 years is stellar for the aggressive philosophy and better than most other sectors for the conservative philosophy. Using a discount rate, $d = 10\%$, the net present value (Eqn 2) renders performance beyond 14 years virtually invisible, and the aggressive strategy is preferred.

$$NPV = \sum_t \frac{P(t)}{(1+d)^t} \quad \text{Eqn (2)}$$

The dynamics need to be well understood in order to devise the economic models for degrowth.

The life of industrial plant is around 25 years, requiring re-investment for workover to continue production. The plant size must be able to accommodate the highest lifetime volume. For the first years of the aggressive strategy, the performance is headline-grabbing. Year 5 production is 0.18 units,

which is a 30% increase over the previous year. Year 10 production is 0.54 units posting 23% growth. In year 21 there is an inflection and, while production increases, the *rate of* growth in production starts to decline. To attract investment for the workover in year 25, the enterprise will look to cut costs in labour, tax and maintenance and possibly safety. However, making the case for investment in continuing production with negative growth will be impossible. If the production is considered critical politically, then the enterprise may attract subsidies, but to provide profit with declining production, the price of the product would have to inflate faster than the production declines. Inflation in a critical commodity is also not politically acceptable. Therefore, the only option is to subsidise exploration and attract investors for development of the next resource to get high growth into the system while the mature fields wind down.

The conservative philosophy is an interesting contrast. The conservative plant size would be half that of the aggressive plant, presumably with lower capital cost. At the workover point, there would still be 25 years of growth left in the resource. Looking at the whole cycle from the point of view of the consumer, the conservative production cycle seems more sensible. Assuming 2% inflation of the product market price, the conservative firm would have a 100-year business model and realise 55% higher revenues.

Using the Hubbert Production Model of the physical extraction cycle, and experimenting with development philosophy, the conclusion is that NPV future blindness is the main problem with navigating into the degrowth economy.

Using physical models is the only way to navigate the degrowth economy, and provide some common sense ideas to inform extraction and end use philosophy:

- Hold known reserves for a future where the value of the commodity will be high.
- Invest in development with conservative philosophy.
- Couple the supply and demand investments with production cycle lifetimes.
- Use a competitive comparative economic analysis that moves into the future rather than discounting the future.

Prem S Maan, agriculture business leader

The recent extreme weather events in New Zealand, which included fatalities and significant property damage, including an estimated \$1 billion to the agriculture sector alone, should make us pause and think again of the best way forward for us to make our contribution to the planet's climate and food needs.²

Who remembers acid rain? Not many I bet, because the problem has largely been solved. But at one stage it was considered an even more urgent threat than climate change for those living under its cloud.

How it was solved is instructive and should help us solve the current pressing climate problems – emissions and a shocking loss of global biodiversity.

In New Zealand, we are witnessing discontent among pastoral farmers at proposals to essentially tax agriculture's carbon emissions. We export 97% of our dairy production to global markets while having the lowest carbon footprint in the world. Our meat producers likewise have the lowest greenhouse gas footprints, and our pastoral farmers are on a continuous journey to reduce this year by year.

In its most simple form, a cap and trade would see governments set sinking emissions caps.

However, half of our national emissions come from agriculture and so we have little choice but to cut farm emissions to help meet New Zealand's commitment to the Paris Agreement on climate change.

In a way these emissions have become the equivalent of our acid rain: an urgent and addressable

problem if the solution incentivises the right behaviour.

The issue of industrial air pollutants reacting with water and oxygen to form noxious sulphuric and nitric acid droplets, or acid rain, was solved by imposing a cap and trade system on polluting industries.

What's more, this solution came faster and at a fraction of the fearsome cost originally envisaged, simply because the structure of the system encouraged tremendous market behavioural response and innovation.

The current response in New Zealand proposes taxes on emissions which many fear will add up to livelihood-threatening costs over time. The

² This essay was *previously published in Rural News*, 20 April 2023

sequestration options conceded are negligible and impractical and will do little to meaningfully modify behaviour.

The plan may only achieve its objective by driving farmers out of the industry altogether, which will in itself cause harm to the country's wellbeing and deprive overseas markets of our wholesome low footprint products – which will then be replaced by others producing higher emissions options.

This is an own goal for planet Earth.

Cap and trade has been staring New Zealand and the world in the face since the days of acid rain. This solution was championed by President George H.W. Bush and was developed by an 'unlikely mix of environmentalists and free-market conservatives'. It is this type of unorthodox thinking that is required to solve the big issues facing us today.

In its most simple form, a cap and trade would see governments set sinking emissions caps. Farmers under the cap would get credits, which those above the cap would have to buy off them. Farmers would also be able to earn 'biocredits' for promoting biodiversity and carbon credits for carbon sequestration, including soil carbon sequestration.

This is a particularly appealing solution because it promotes continuous virtuous behavioural change to actively farm in a way that captures carbon, promotes biodiversity and reduces emissions.

It provides a direct answer to the two key global COPs – Climate Change COP and Biodiversity COP. Climate change is directly related to soil health and loss of biodiversity.

If we are to successfully confront the climate crisis in the long term, we need to encourage native planting wherever it can be accommodated for the dual purpose of carbon sequestration and biodiversity promotion – even if there is a cost in the short term and a slower rate of sequestration than exotic forests. Biodiversity credits, or 'biocredits', are also emerging as a tradeable unit of biodiversity that can incentivise nature conservation.

To simply penalise farmers for outputs is akin to single entry accounting. It is illogical and unfair.

Currently, pastoral farmers only get paid for the products that are sold to processors. A cap and trade system would essentially allow for double entry accounting. It would measure emissions as a cost against revenue for other social goods provided, including carbon sequestration, ecological preservation and biodiversity promotion.

Roger & Melissa Robson-Williams, natural sciences leaders

Food and the wellbeing of people and planet

Human wellbeing is intimately coupled with the provision of food for obvious physiological reasons and because of the central role that food plays in society. There is considerable scope to improve human wellbeing through improved nutrition in both the Global North and south (although the nature of the nutritional deficits may differ markedly between the two), and through better access to foods of cultural significance.³ Unfortunately, the present reality is that several of the earth's life supporting systems are now at critical tipping points⁴ and food production, processing, and distribution globally have contributed materially to this state of affairs.

It is ironic that food provisioning – so important for human flourishing – should be adding to the instability of our biosphere and in doing so be directly compromising human wellbeing. The significance of food in human civilisation does not alter the fact that the food system cannot operate beyond our planet's ecological limits. Without urgent action to restore the earth to within the safe operating space for all its critical life supporting systems, we will not only undermine the wellbeing of the current generation, but we will leave an increasingly intractable legacy of illbeing for future generations.

Degrowth: a solution to this conundrum?

Advocates of degrowth see it as a pathway to greater human and planetary wellbeing,⁵ highlighting the need to reduce production and consumption of physical goods or at least dramatically reduce the throughput of energy and materials needed to meet human needs. What challenges and opportunities might this present to the food production system in Aotearoa New Zealand? We explore this question in relation to three of the tenets of degrowth: operating within ecological limits, reducing consumption and re-localisation of production.

³ FAO, I., UNICEF, WFP AND WHO 2021. *The State of Food Security and Nutrition in the World 2021: Transforming food systems for food security, improved nutrition and affordable healthy diets for all*, Rome, Food & Agriculture Org.

⁴ Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., De Vries, W., De Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B. & Sörlin, S. 2015. Planetary boundaries: Guiding human development on a changing planet. *Science*, 347, 1259855.

⁵ Hickel, J. 2020. *Less is more: How degrowth will save the world*, Random House.

Operating within ecological limits

Degrowth acknowledges the finite capacity of our planet to both provide resources for, and absorb the impacts of, human activities. In response, it calls for an emphasis on regeneration of ecosystems, protection of biodiversity and a transition to renewable energy.

Improving efficiency is a rational response to the challenge of resource limitation. Considerable progress has been made in increasing crop yields and optimising inputs, eg water and fertiliser. However, such efficiency gains tend to reduce costs, leading to increased demand and thereby resulting in increased rather than decreased resource use. This is a phenomenon known as the Jevons' Paradox.⁶ As such, the pursuit of efficiency may at best be a necessary but insufficient intervention to enable food production to occur within ecological limits.

While the concept of regenerative agricultural systems is attracting some attention at present, the focus of much effort over recent decades has been on developing farming methods that do less harm to the environment, eg the protection of waterways, making some provision for biodiversity within the farmed landscape, or designing pesticides with fewer off-target impacts. Is there sufficient plasticity in current, mainstream agricultural production systems to enable them to become environmentally harmless let alone regenerative?

It is ironic that food provisioning should be adding to the instability of our biosphere.

To achieve degrowth goals for living within ecological limits, a more fundamental rethink of the goals of the food production system would be required. The pursuit of the most profitable land use in economic terms might need to give way to the pursuit of the optimum balance between environmental impacts and the provision of good nutrition. A reset of the food system's goals would represent a relatively deep leverage point for change, but how might we enable a just transition to such a transformed state?

Reducing over-consumption

Another degrowth approach to living within our finite planetary boundaries is the promotion of sufficiency and simplicity in place of the needless overconsumption of material goods. This is very apposite to eating habits in many wealthy countries, including Aotearoa New Zealand, where poor health outcomes due to the overconsumption of certain types of foods (and under-consumption of others) represents a

⁶ Polimeni, J. M. & Polimeni, R. I. 2006. Jevons' Paradox and the myth of technological liberation. *Ecological Complexity*, 3, 344-353.

significant human wellbeing challenge.^{7 8 9} It is also highly relevant in the context of avoidable food waste, an unfortunate side-effect of relative food abundance in advanced economies. As such, a sufficiency mindset is well-aligned with the imperatives to improve nutrition and reduce food waste. Furthermore, it imposes no ideological barriers to improving nutrition in parts of the world where food scarcity rather than over-consumption is the norm.

However, does the degrowth sufficiency paradigm pose an irreconcilable challenge to efforts to grow the market share of food and beverages from Aotearoa New Zealand in pursuit of export revenue growth irrespective of the extent to which needs are already being met in the receiving economy? Perhaps not if those products displace alternatives that are inferior in conferring human wellbeing or are produced with more adverse environmental and social impacts. But how might we confidently evaluate superiority given that judgements of many dimensions of human and planetary wellbeing are highly values laden?

Re-localisation of production

Another premise of degrowth is the desirability of re-localisation of production and consumption in the interests of a more diversified, local economy with greater resilience and reduced exposure to fragile global supply chains. This is a confronting prospect for a nation accustomed to an ever-growing export economy. However, where soils and climate permit, are there meaningful opportunities to export food production systems – licenced intellectual property, germplasm and know-how – rather than exporting physical goods? Could this be a new approach for Aotearoa New Zealand: enabling other nations to re-localise their own food provisioning in place of the current, non-circular trade in protein, water and packaging, etc? What would this mean for the wellbeing of our food producers?

Concluding remarks

Aotearoa New Zealand is reported to produce food for approximately 40 million people¹⁰ and there is good reason to acknowledge the efficiency of our methods, the quality of our food, the role that farming has played in growing our export economy and current efforts to reduce its environmental impacts. At the same time, we must recognise both the

⁷ Cammock, R., Tonumaie'a, D., Conn, C., Sa'ulilo, L., Tautolo, E.-S. & Nayar, S. 2021. *From individual behaviour strategies to sustainable food systems: Countering the obesity and non-communicable diseases epidemic in New Zealand. Health Policy*, 125, 229-238.

⁸ Puloka, I., Utter, J., Denny, S. & Fleming, T. 2017. *Dietary behaviours and the mental well-being of New Zealand adolescents. Journal of Paediatrics and Child Health*, 53, 657-662.

⁹ Rush, E., Savila, F. A., Jalili-Moghaddam, S. & Amoah, I. 2019. *Vegetables: New Zealand children are not eating enough. Frontiers in nutrition*, 5, 134.

¹⁰ Proudfoot, I. 2017. *KPMG Agribusiness Agenda KPMG: Auckland.*

contribution farming makes globally to destabilising the biosphere¹¹ and our current failure to ensure good nutrition for all New Zealanders.¹²

The possibility that degrowth could have any role in the provision of healthy food for a growing, and in many places malnourished, global population may seem counterintuitive, but perhaps it offers some new, if challenging, insights into how we might better balance the wellbeing of people and planet?

¹¹ Campbell, B. M., Beare, D. J., Bennett, E. M., Hall-Spencer, J. M., Ingram, J. S. I., Jaramillo, F., Ortiz, R., Ramankutty, N., Sayer, J. A. & Shindell, D. 2017. Agriculture production as a major driver of the Earth system exceeding planetary boundaries. *Ecology and Society*, 22.

¹² Rush, E. & Obolonkin, V. 2020. Food exports and imports of New Zealand in relation to the food-based dietary guidelines. *European Journal of Clinical Nutrition*, 74, 307-313.

Dewy Sacayan, climate action leader

I still remember the day I landed in Tacloban, Philippines, after super typhoon Haiyan had devastated the region. The airport that greeted us had only half a roof. One of the roads leading to the church I was going to volunteer for was blocked by a cargo ship that had flattened houses. 'We're still trying to recover bodies from under that ship', said the driver, nonchalantly, as we drove past. Strong coconut trees that once stood high were all flattened. There was no shelter apart from tents and made-up debris from what were once houses.

Amidst the rubble, the community had to rebuild their lives and homes, and you could see Filipino people smiling, waving, hoping. Some might call this the resilient Filipino spirit. However, I would argue that this is forced resilience. Forced mainly because the Philippines is one of many countries extremely vulnerable to climate change, going through more than 20 typhoons a year. More than 20 times in one year, Filipino people have to rebuild their lives and homes, and, unfortunately, say goodbye to loved ones.

This forced resilience begs the questions: what are the systems that drive this cyclical problem and what must be done to correct the injustices that frontline communities face?

To answer the first question, we must first acknowledge our colonial relationship to land and its original guardians – the indigenous.

The roots of exploitation of people and land: Doctrine of Discovery

Our colonial relationship to land is a root cause of climate change. Pope Francis acknowledges that 'it is essential to show special care for indigenous communities and their cultural traditions. They are not merely one minority among others, but should be the principal dialogue partners, especially when large projects affecting their land are proposed.'¹³ Unfortunately, historically and presently, indigenous communities were and are still not properly consulted on decisions affecting their land. To understand the roots of why we continue to fail to include indigenous people at the decision-making table, we must look to our history, depicted by the Doctrine of Discovery.

In the 15th and 16th centuries, the Vatican issued the 'papal bulls', which founded the international legal concept, the Doctrine of Discovery. The papal bulls gave monarchies the authority to conquer, subjugate the natives of the land by way of converting them or killing them and

¹³ *Laudato Si'* at [146].

claiming their lands. For example, *Dum Diversas* granted King Alfonso V of Portugal 'full and free power, through the Apostolic authority by this edict, to invade, conquer, fight, subjugate the Saracens and pagans, and other infidels... and to lead their persons in perpetual servitude.'¹⁴ The papal bulls sculpted a societal reasoning for European entitlement to indigenous lands, white supremacy and a global economy where those in the Global South remain in servitude to the Global North.¹⁵ We can directly link our traditional thinking of land as resources for exploitation to the papal bulls.

The capitalist system we live in today is rooted from these papal bulls. They have driven our capitalistic relationship to land, thereby encouraging exploitation of land and people. The idea of getting

It is critical to centre our action on decolonisation in order to ensure that we avoid repeating history.

wealthier than your neighbours to assert your geopolitical dominance is still colloquial, so much so that we still base a country's measure of success based on how big its GDP is.

Therefore, as we act on climate change, it is critical to centre our action on decolonisation in order to ensure that we avoid repeating

history, avoid doing more harm to communities most affected by our colonial relationship to land, and avoid succumbing to the same systems of leadership and governance that are not rooted in accountability. Overall, decolonisation is an integral part in rising to the core challenge of solving climate change, which is to dismantle systems that oppress our common home and drive frontline communities to have forced resilience from natural calamities.

The case for degrowth

Once we acknowledge that the only way we can attain climate justice is through decolonisation, the next step is to be laser-focused and realistic on what must be done to correct the injustices that frontline communities face.

Much like Pope Francis has rescinded the Doctrine of Discovery from Catholic teaching, we too can rescind systems that do not serve present and future generations, namely our affinity to endless growth at the cost of nature. I would argue that if 'land back' is the answer to giving justice to indigenous people, degrowth is the 'land back' version of the economic challenge to wider society.

¹⁴ *Dum Diversas: Reducing all Aborigine / non-Christians to perpetual servitude*, Roman Curia Pope Nicholas V, 18 June 1452, https://moor4igws.org/uploads/3/4/4/2/34429976/1452_dum_diversas.pdf.

¹⁵ *Kia Mau: Resisting Colonial Fictions*, Tina Ngata, at 14-15.

Degrowth is a socio-economic concept that challenges the idea of continuous economic growth and calls for a planned reduction of economic production and consumption in wealthy countries to achieve sustainability, social justice and wellbeing. This burgeoning concept is based on the recognition that pursuit of infinite economic growth based on exploitation of finite natural resources is unsustainable and has negative consequences for the environment, social equity and human wellbeing. Our current economic system is based on an unsustainable logic of infinite growth, historically fuelled by the Doctrine of Discovery, which perpetuates inequality and environmental degradation. Therefore, practising degrowth is the answer to radically saving Mother Earth and, by extension, ourselves.

Degrowth proposes a transition to a post-growth society that values social and ecological wellbeing over economic growth. This transition would involve a reduction in production and consumption, as well as changes in social norms and values, such as a shift towards cooperation, community building and solidarity. A post-growth society can provide a higher quality of life for all by reducing working hours, increasing leisure time and improving social services. Additionally, a post-growth society can promote environmental sustainability by reducing the exploitation of natural resources, reducing carbon emissions and preserving biodiversity. Ultimately, if a century-old doctrine can be rescinded, we can do the same with our infinite economic growth mindset.

Thus, the question becomes, how do we get the concept of degrowth into mainstream spheres of social justice thinking?

Using law and policy to affect climate justice and eliminate political short termism

As a climate lawyer and activist, my theory of change is biased towards using law and policy to affect long term systems change. Law and policy play a huge role in driving the rules around how land and people are to be treated. It is essential to engage with decision making to directly affect systems that do not serve people and planet and to tackle political short termism.

Political short termism maintains the status quo, working in favour of those already in power. Politicians would prioritise a short term win to gain another electoral term instead of tackling critical long term problems. It undercuts any chance of creating laws, policies and a sustainable economy with intergenerational benefits.

A prime example of political short termism is displayed at the UNFCCC COP negotiations, where countries set meaningless carbon emissions targets without planning how to meet them. To combat this, Generation Zero, a youth-led climate advocacy group in Aotearoa New Zealand, started a campaign to create the Zero Carbon Act – a nationwide campaign for a new law that would create, firstly, an independent group of experts to advise the government on viable emissions targets and,

secondly, a legal framework to create a plan to meet those targets. The goal of the campaign was two-fold: to pass an ambitious new climate law that would establish a clear pathway toward a zero-carbon economy, and to gain cross-party support for the new law.¹⁶

Built on core principles, such as decolonisation and non-partisanship, Generation Zero brought the whole country into the narrative. Young volunteers cycled from the top of the country to the Beehive and talked in schools and town halls along the way about the need for a new and ambitious climate law.

Using lobbying as its main tool, Generation Zero launched a series of campaigns, such as 'Adopt an MP' and 'Elbow Your Elders'. It also created an open letter signed by hundreds of businesses and influential leaders. This aimed to show politicians that there was nationwide demand for the Zero Carbon Act among businesses. Like it or not, they will always be an economic determinant. The groundswell of corporate social responsibility tells us that businesses who have been part of the climate crisis want to be part of the solution. The open letter helped signal a clear demand from business for certainty and clarity in adjusting to a zero-carbon future, which the Zero Carbon Act provided.

We live in a political reality needing immediate change.

Intergenerational unity and willingness to be part of the solution were the main values that made these campaigns a success. In November 2019, after almost three years of campaigning, the New Zealand government unanimously passed the Zero Carbon Act, signalling a new era in which young people can feel empowered to use law and policy to make changes critical to the future.

My hope is that these anecdotes of purposeful campaigning can be mirrored to advance degrowth into the mainstream and serve as a positive message that law and policy can be used for good. We can change the reality we live in now. We can solve climate change.

We live in a political reality needing immediate change. As former UN Secretary General Ban Ki Moon said: 'We are the last generation that can act on climate change.' Solving the global climate crisis requires all of us. And we can only begin to start making radical changes if we ensure that our actions are centred in decolonisation and degrowth. While prioritising indigenous voices, we must be mobilised to engage with decision makers to systematically change laws and policies to ensure a climate resilient future. Otherwise, delay in climate action equates to climate injustice.

¹⁶ 'Our Story,' Generation Zero, https://www.generationzero.org/our_story.

Contact:

Jennifer Wilkins

heliocene.nz@gmail.com

About Heliocene:

Heliocene.org is devoted to delivering emerging knowledge on sustainability and degrowth to Aotearoa New Zealand businesses, policymakers and society.