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The Mana Kai Framework a degrowth lens

Abstract

The Mana Kai Framework is a set of values, goals and objectives to improve the food provisioning system in Aotearoa New Zealand, developed through a round of nationwide consultations, with the ultimate purpose of informing a national food strategy. This article builds upon Mana Kai, finding that the consultation process assumed only a growth economy in future; a second round of consultation using a degrowth lens, it is argued, would produce a valuable alternative framework. This could prove fruitful towards the stated Mana Kai aspiration to ignite a social movement to drive significant systemic change, and could, alongside the existing framework, inform a national food strategy that is ready for growth and degrowth futures, both of which are plausible, thereby ensuring a more resilient food system in Aotearoa New Zealand.

Keywordsdegrowth, food system, Mana Kai Framework, national food strategy, Māori values, plausible future

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Experts have been calling for an Aotearoa New Zealand national food strategy for some years. Drivers include the need to address obesity (Mackay et al., 2020); the need to respond to food insecurity, exacerbated by Covid-19, as highlighted by University of Auckland health experts Elaine Rush and Sarah Gerritsen (Science Media Centre, 2021); and the opportunity to capitalise on New Zealand's 'rising international reputation' as a food producing nation by supporting sustainability and adaptability to new technologies and consumer demands (Bardsley et al., 2020).

Concerns have deepened. The cost of living rose more than 8% in 2022, with fruit and vegetable prices rising the most, worsening food insecurity and affecting nutritional intake (Statistics New Zealand, 2023). Food prices may rise further. Recent extreme weather events caused by La Niña and climate change have resulted in catastrophic flooding, including across some of the country's most productive landscapes, destroying whole farms that were established over generations. The prospect of repeat flooding in future hangs over decision making about where and how to rebuild those system assets.

Aotearoa's food system is ripe for a nationwide strategic approach to improve social outcomes, environmental sustainability and systemic resilience. The development of the Mana Kai[1] Framework in 2022 to inform a national food strategy could not have been timelier.

Persistent local and global uncertainties are signs that even greater complexity and challenges may lie ahead and that the rules and order of the 20th century may no longer apply in many situations. Emerging 21st-century perspectives are vital to incorporate when developing new policies and strategies that are intended to be transformational. In light of this, this article projects a degrowth lens onto the Mana Kai Framework to encourage a second look at new threats to, and opportunities for, the New Zealand food system.

Table 1: Complete Mana Kai Framework of Values, Goals and Objectives (based on Mana Kai, 2022c, p.9)

Mana o te Whenua Natural Energy of the Environment	**V1: Tuakana/Teina (social order)** G1: As kaitiaki (guardians), kai collection and production protects and enhances our environment O1: We have halted the loss of biodiversity and are demonstrably restoring natural habits on farm and in the oceans by 2030 O2: Improved nutrient utilisation and reduced containment run-off enables a measured improvement in waterways quality by 2027, and reversal to a healthy state by 2040 O3: The food system takes a leadership role in enabling Aotearoa New Zealand to achieve its international decarbonisation commitments	**V2: Atua (gods)** G2: The mauri (lifeforce) inherent in our kai is protected and respected O4: The Mana Kai Pou is developed and adopted by 2023 with 200 food and health organisations as signatories O5: We are internationally recognised as being trusted leaders for our regenerative land and ocean kai collection and production systems by 2040 O6: The animals required to be used in our kai systems are protected through welfare codes that define global best practice	**V3: Ngā Nuinga (collective breath)** G3: A collective mindset to sharing abundance with all O7: National food waste is halved by 2030 O8: 500 Aotearoa New Zealand food companies have made public, verifiable pledges to contribute to enhanced food resilience by 2025 O9: That there are community food security plans for local food systems in place, incorporating additional land for food commons, and being implemented across the majority of local government entities by 2030
Mana o te Tangata Harvesting and Fair Distribution of Food	**V4: Mātauranga (knowledge)** G4: Indigenous knowledge and world class science integrated seamlessly O10: Indigenous knowledge is fully integrated into innovative, world class research activities conducted seamlessly across the Aotearoa New Zealand food system O11: Innovation spending in the food system is increased to and sustained at 2% or above of the producer gate value of land and ocean production O12: A Mātauranga embedded food curriculum is piloted across selected schools by 2027 and established in all schools by 2031	**V5: Manaakitanga (hospitality)** G5: Our mana comes from hospitality and generosity in sharing kai with community and visitors O13: Zero food poverty in Aotearoa New Zealand by 2035. O14: Our hospitality thrives creating future fit employment opportunities and economic outcomes that benefit all New Zealanders.	**V6: Rangatiratanga (self-determination)** G6: Governance and stewardship align with Te Tiriti O15: The diversity of governors and leadership of food organisations reflects our communities and Te Tiriti o Waitangi by 2030 O4: The Mana Kai Pou is developed and adopted by 2023 with 200 food and health organisations as signatories O16: The Sustainable Agricultural Finance Initiative is adopted by lenders to secure capital for regenerative transition by 2025
Mana Kai Sustenance from Food	**V7: Ohaoha (economy)** G7: Economic returns from healthy, sustainable food creates prosperity that benefits all New Zealanders O17: The value of food exports grows by 25% by 2030 through securing more value in market for the attributes inherent in a Mana Kai based food system O18: 25,000 new future fit jobs, decent roles that are well paid, that are attractive to New Zealanders are created in our food system by 2030 O19: Indigenous ingredients are grown and available to domestic consumers by 2030	**V8: Tikanga (customs)** G8: Kai is central to our culture and the way we use it in our lives reflects our national identity O4: The Mana Kai Pou is developed and adopted by 2023 with 200 food and health organisations as signatories O20: National Food Celebration festival is held annually as part of our expression of Matariki by 2024	**V9: Hauora (health)** G9: Our food delivers nutrition, wellbeing and joy O21: Aotearoa's childhood obesity, malnutrition and food insecurity are halved by 2030 O22: Ultra-processed food consumption reduced by 2% per annum O23: Healthy, sustainable eating guidelines are developed, widely promoted and incorporated into setting food policy by 2030

The Mana Kai Framework

The Mana Kai Framework[2] is an output of an ongoing project, the Mana Kai Initiative, formed in 2021 to assist in transforming Aotearoa New Zealand's food system for the benefit of all New Zealanders by articulating the values of the food system and aspirational actions for system change.

The initiative's leadership comprises senior figures from a range of public, private and not-for-profit organisations convened by the Aotearoa Circle, itself a voluntary initiative between public and private sector organisations concerned with, or about, natural capital, including large businesses, banks and consultancies, as well as research and innovation institutions and local and central government bodies. It was decided early on to build a framework using te ao Māori (the Māori worldview), leading to the key appointment of a Māori chairperson and engagement with an expert in tūpuna (ancestral) wisdom, who built an initial framework from nine Māori values, published in April 2022 (Mana Kai, 2022a).

The initial framework was used to catalyse and analyse key themes from a round of consultative kōrero (dialogues) involving more than 250 participants from 120 organisations across the public, private and civil society sectors. The result was a set of goals and objectives for the food system. These were added to the nine values to produce a complete framework (see Table 1), published in November 2022 (Mana Kai, 2022c). This was supplemented with a plan for acting on priority action areas (Mana Kai, 2022b).

The next step for the Mana Kai Initiative is to help realise the framework and the priority areas action plan by enabling a 'broad social movement [to engage in] creating significant systemic change [towards] a food system that is sustainable, inclusive, accessible, affordable, nutritious, and prosperous' (Mana Kai, 2022c, p.36).

Why reflect on Mana Kai?

Several Mana Kai objectives are undoubtedly ambitious and would require true systemic change, such as fully integrating indigenous knowledge into innovative, world-class research activities. Others are incremental, although bold, such as growing the value of food exports by 25% by 2030. Some potential food sector responsibilities are missing, including reducing greenhouse gas emissions other than carbon dioxide, such as methane and nitrous oxide; improving food sector resilience to future energy scarcity following a shift from fossil fuels to renewable energy, while keeping within the 1.5°C carbon budget (Slameršak, Kallis and O'Neill, 2022).

Several Mana Kai objectives are undoubtedly ambitious and would require true systemic change, such as fully integrating indigenous knowledge into innovative, world-class research activities.

Are any of the objectives conflicting? Is systemic change achievable given the deep-set ideologies underpinning existing systems? Looking back from an uncertain but imaginable future, are these objectives ambitious enough?

Perhaps the best way to approach these questions – and pose further pertinent questions – is to examine the framework from an alternative, more radical angle. This could add value through challenging key assumptions and opening up new lines of sight towards the purpose of the framework. A degrowth lens is proposed.

What is degrowth?

Degrowth is many things. Like Mana Kai, degrowth is a framework for a social movement (Demaria et al., 2013), guiding multifaceted kōrero on how to universally meet basic human needs through provisioning systems that operate within global and local planetary boundaries (Fanning et al., 2020). This is comprehensive and ambitious, concerned with nutrition, shelter, water, energy, income, education, health, networks, equality, equity and democracy.

The new research field of degrowth brings together expertise in ecological economics, history of economics, macroeconomics, anthropology, political science and technology studies. It is based in both the physical and social sciences and its arguments have been adopted by the Intergovernmental Panel on Climate Change (IPCC) to confront the conventional common sense that a good life within planetary boundaries depends on economic growth (IPCC, 2022a, 2022b). Only degrowth mitigation pathways stay under 1.5°C global warming, meet sustainability goals, assume historically experienced rates of GDP–energy decoupling, and avoid using negative emissions technologies (Keyßer and Lenzen, 2021). The 'decent living energy' scenario, for instance, projects 2050 global energy use as low as 1960 levels while provisioning a global population three times larger, assuming 'a massive rollout of advanced technologies across all sectors, as well as radical demand-side changes to reduce consumption – regardless of income – to levels of sufficiency' that are, nonetheless, 'materially generous' (Millward-Hopkins et al., 2020).

Degrowth is political (Asara et al., 2015). Scholars unite with, and often are, community, human rights and political activists (Kallis et al., 2018). The social and environmental ideas of the 1970s that were squashed by the notion of sustainable development (Tulloch and Neilson, 2014) are being politicised once again. Degrowth is only one example of this resurgence; other examples include the rising voices of indigenous peoples (e.g., the People's Agreement of Cochabamba (World People's Conference on Climate Change and the Rights of Mother Earth, 2010)), the increasing use of legal recourse to challenge greenwashing (Eversheds Sutherland, 2021), growing assertions of legal personhood and non-human rights (Butts, 2019) and protest by normally docile groups, such as school students and

scientists. With so much at stake in the 21st century, a second depoliticisation seems unlikely.

Degrowth is a critique of the growth paradigm (Schmelzer, 2022) and, in particular, capitalism as the cause of severe and widening wealth and income inequalities between and within nations (Piketty, 2014). If the capitalist system recompensed the real value of direct labour and social reproduction, there would be no surplus and, therefore, no growth (Kallis, 2018). Instead, capitalism pursues growth through global expansion that 'presupposes the perpetuation of colonial arrangements' (Hickel, 2021), driving extraction, pollution and emissions that lead to environmental injustices and ecological debt, and it relies on exploitation through the cheapening of labour and nature amounting to unequal exchange worth at least $10 trillion per year appropriated by the Global North from the Global South (Hickel, Dorninger et al., 2022). Many people in rich nations are cognisant of this imbalance to some extent, yet turn a blind eye both personally and professionally when making consumption and production decisions. Those people who are interested in degrowth are trying to imagine a different economic paradigm: a post-growth socioecological economy in which universal wellbeing is prioritised and the interconnected limits of nature are respected.

Degrowth applies globally but is not a blanket approach. No country is meeting all its citizens' wellbeing needs while operating within planetary boundaries (Fanning et al., 2021). Ideally, all countries would stabilise their economies within a desirable range of socioecological performance, described by the 'environmentally safe and socially just space' of Doughnut economics (Raworth, 2017). Specifically, rich nations cause 74% of ecological overshoot (Hickel, O'Neill et al., 2022) and 85% of excess carbon dioxide emissions (Hickel, 2020b), resulting in the tragic crises of biodiversity loss, climate change and inequality being experienced mostly in the Global South. Thus, an initial focus of degrowth is to downscale less necessary production and consumption in, and for, wealthy Global North nations, while assuring the wellbeing of those affected by this change, both domestically and abroad. Downscaling throughput means replacing economic patterns that demand high material and energy use. A core degrowth objective is to design a smooth transformation process for adapting to aggregate metabolic downscaling in the medium term, and steady, low metabolic activity in the long term.

From a degrowth perspective, New Zealand must continue to develop a wellbeing economy, but also downscale aggregate production and consumption by two-thirds by eliminating less necessary inputs and outputs to operate within planetary boundaries.

Degrowth is, therefore, a project for a radical social transformation (Barlow et al., 2022). Ideally, this would be democratic, happening bottom up through citizen action and top down through political change. The business sector, sitting between these layers, would be subject to market shifts and regulatory change, domestically and internationally.

Degrowth is a policy platform for building a 'Post-Growth Deal', rather like a Green Deal without growth. The impetus for this has been building slowly for several years but is now speeding up. Scientists and citizens urged the European Parliament in 2018 to plan for a post-growth future (O'Neill et al., 2018). In May 2023 the Parliament is holding a Beyond Growth conference facilitated by five political groups. Themes include, for instance, meeting the needs of working people and the role of trade unions in a degrowth transition. Most recently, the European Research Council awarded a €10 million Synergy Grant to a six-year project to develop a Post-Growth Deal, incorporating research on modelling wellbeing, post-growth policy packages, modelling provisioning systems, developing political alliances for transition, and practical steps for realisation (European Research Council, 2022). This is the leading edge of degrowth.

Is degrowth relevant?

Degrowth is relevant to Aotearoa New Zealand, one of the world's top 30 richest nations based on GDP per capita (World Bank, 2020). As with other rich nations, New Zealand's wealth does not indicate a capability to deliver acceptable outcomes simultaneously on environmental and social fronts.

New Zealand exceeds biophysical boundaries by factors of 2.3 on land use change, 3 on ecological footprint, 3.5 on material footprint and 3.7 on carbon dioxide emissions (University of Leeds, 2021). In other words, the nation consumes more than three times its fair share of Earth's resources and atmosphere.

At the same time, New Zealand is experiencing an intergenerational diminution in social wealth. Wellbeing economy data reveal a relatively healthy population with long life expectancy and high levels of social cohesion, trust and skills, and an older generation that has avoided poverty through an economic system favouring home ownership. Areas of real concern, however, include child poverty, school attendance, literacy and numeracy, housing quality and affordability, and psychological health among teens and young adults. Up to 10% of the population is experiencing low wellbeing in at least four areas, with this burden disproportionately falling on disabled people, sole parents and Māori and Pasifika peoples (Treasury, 2022).

From a degrowth perspective, New Zealand must continue to develop a wellbeing economy, but also downscale aggregate production and consumption by two-thirds by eliminating less necessary

inputs and outputs to operate within planetary boundaries. This indicates an urgent need for behavioural and systemic change, while putting policy and institutional structures in place to protect existing levels of wellbeing and ensure improvements are made where there are shortfalls.

Degrowth is relevant to the food provisioning system because it is one of the country's most obvious sources of environmental overshoot. It exceeds boundaries for methane and nitrous oxide emissions by a factor of ten and is about to exceed the boundary for phosphorous application, based on production, while carbon dioxide emissions are well above sustainable levels, based on consumption (Andersen et al., 2020). The Mana Kai Initiative notes that New Zealand is losing 192 million tonnes of soil per year (although it does not clarify how much soil loss is due to the food system versus other land uses), and that the agriculture sector accounts for nearly 50% of the country's greenhouse gas emissions (Mana Kai, 2022a).

Yet, the food system under-delivers for some New Zealanders. As the Mana Kai Initiative points out, at least 15% of the population was food insecure at the start of the pandemic, and that is believed to have risen now to 20% – one million people (Mana Kai, 2022c). Nutritious foods produced locally can retail domestically at export prices that are unaffordable to many New Zealanders, leading to food insecurity and over-reliance on cheaper, ultra-processed foods, some of which are imported. This malnourishment is connected to our alarming obesity statistics and high prevalence of non-communicable diseases (Mana Kai, 2022a). The Mana Kai Framework attempts to respond to the tensions that limit our ability to meet prosperity, nutritional and nature goals within New Zealand. Degrowth responds to those same tensions, locally and globally. Degrowth is, therefore, an appropriate, radical, alternative perspective for reflecting upon the Mana Kai Framework.

Reflection 1: values

Global North or Western values are typically anthropocentric. Anciently formed connections with nature that involved systems of useful knowledge and that had mental, emotional, physical and spiritual value were lost to Europeans some centuries ago. This is traceable to the scientific revolution of the 17th century, when reductionist ideas like mind–body dualism, nature as a machine and the separation of values and facts were brought to the fore. The 20th century saw somewhat of a shift from that mechanistic paradigm to an ecological appreciation, with a new emphasis on holism and systems thinking (Capra and Luisi, 2014). Yet how to authentically rekindle ancient connections with nature is a continuing 21st-century challenge that both Mana Kai and degrowth attempt to address.

To Māori, nature is a 'unified spiritual-socioecology', and the Māori economy is 'an environmental economy' in which economic success must not come at the expense of people (present and future) or nature ...

Mana Kai values are Māori values developed through consultation with an 'expert in tūpuna wisdom' (Mana Kai, 2022c, p.11), giving the initial framework authenticity as a basis for inclusive kōrero.

Māori values are cosmo-centric and biocentric. They extend from pūrākau (legends) that form part of kaupapa Māori (the Māori body of knowledge) underpinning te ao Māori. Māori people trace their whakapapa (genealogy) back to their original tūpuna (ancestors), Tāne, the atua (god) of man and forests, and his parents, Ranginui, the sky father, and Papatūānuku, the earth mother. In the Māori creation story, Ranginui and Papatūānuku were separated by Tāne to let light into the darkness where he and his nature-siblings existed. Soon, however, Tāne fought with his brothers, Tāwhirimātea (god of weather), Tangaroa (god of the sea), Rongomātāne (god of cultivated foods), Haumia-tikitiki (god of uncultivated foods), Ruwaimoko (god of volcanoes and earthquakes) and Tumatauenga (god of war). The latter triumphed and ate kai from his brothers' realms so it was no longer tapu (sacred). Tāne then created the first woman by forming earth into a human shape and endowing her with life, and she was sustained by the kai that was no longer tapu (Cowan and Pomare, 1930).

In this worldview, Māori people and nature have a familial relationship; a oneness. The word for land, whenua, also means placenta. When Māori introduce themselves they explain their whakapapa as the relationships they have with people and place. Nature is the tuakana (older sibling), to whom humans, as teina (younger siblings), have a responsibility to act as kaitiaki (guardians). This role demands tino rangatiratanga (self-determination) and mātauranga Māori (Māori knowledge). To Māori, nature is a 'unified spiritual-socioecology', and the Māori economy is 'an environmental economy' in which economic success must not come at the expense of people (present and future) or nature (Rout et al., 2021).

Degrowth is a Global North (European) framework which borrows from non-Western value systems and communities around the world for whom economic growth is not a purpose. Inspirations include Buen Vivir in Latin America, Eco-Swaraj in India, Ubuntu in South Africa and Gross National Happiness in Bhutan. We must turn to key scholars for their findings about emerging degrowth values. Parrique (2019) posits three universal values – autonomy, sufficiency and care – as forming the 'moral philosophy for degrowth'. Kallis, Varvarousis and Petridis (2022) pick out respect for nature, slowness, moderation, simplicity, solidarity,

Table 2: Potential Values Alignment Between Mana Kai and Degrowth

Mana Kai Values	Degrowth Values
	Societal dépense Ritualised destruction of community surpluses to slow down or avoid capital growth and the extraction of new resources. The opposite of accumulation and austerity.
Tuakana/Teina (social order) The social order of humanity and the natural world. Acknowledging that we are the teina (junior) and should respect nature, our tuakana (senior), and fulfil the role of kaitiaki (guardians)	**Care for people and nature / solidarity and stewardship** Solidarity means protecting those who are vulnerable, even at personal cost, requiring empathy and compassion. Stewardship is solidarity between humans and non-humans, requiring ecological sympathy. The opposite of exploitation.
Atua (gods) Connection of food to Atua and recognising that Atua give food its mana in the form of distinctive traits, quality, richness and succulence	
Ngā Nuinga (collective breath) A collective mindset where everyone has joint responsibilities to share and trade local food resources (not limiting its access) so that abundance is shared and tasted by all	**Commoning** The active process of pooling common resources to enable a good life beyond consumerism, expanding the commons, which is the vast the array of self-provisioning and governance systems that flourish outside the market and the State
Mātauranga (knowledge) Precious knowledge, wisdom, technology and innovation we have learnt (and continue to learn) on how to harvest, farm, fish, forage, gather, cook and package our food	
Manaakitanga (hospitality) Our hospitality and generosity to share our food with our people, visitors and then the rest of the world	**Sufficiency/moderation/distributive justice** A principle of distributive justice to ensure a good life for all. Involves distributing resources fairly to meet human needs, a duty of distributive justice toward past and future generations, and societal norms around upper and lower limits such that no one should have too little and no one should have too much
Rangatiratanga (self-determination) Governance, stewardship and assurity that Te Tiriti o Waitangi is honoured so that our food goals also help our societal goals be achieved	**Autonomy/self-determination** Having the will and the agency to take decisions critically and deliberately as an individual or a community without outside influences imposing their external beliefs, norms, and codes of conduct and, therefore, being free to invent their own futures
Ohaoha (economy) Economic benefits and food industries created to distribute wealth and sustain the food ecosystem as well as the business and employment opportunities for our people	
Tikanga (customs) Unique cultural processes and engagements we have that respect the relationship food producers and consumers have with food produced	
Hauora (health) Nutrition, happiness, togetherness and wellbeing shared and consumed through eating and producing quality food	**Slowness/voluntary simplicity/conviviality** A return to human mastery over time such that life is not dominated by the fundamentalism of speed which destroys diverse forms of human experience. Conviviality refers both to communal ways of living and to operating society with responsibly limited technologies

conviviality and self-sufficiency. They describe locations in the Mediterranean region and 'the world's "Souths" more generally' that exhibit values of slowness, moderation and conviviality as examples of 'real-existing degrowth' as opposed to 'Occidental values of utility, perpetual advancement and growth'. D'Alisa, Demaria and Kallis (2015) highlight commoning and societal dépense as particular degrowth values, remarking that 'a degrowth society would have to build new institutions to choose in a collective way how to dedicate its resources to basic needs on the one hand, and different forms of *dépense* on the other'. *Dépense*, an unfamiliar term, refers to unproductive expenditure of social surplus in ways that give collective character to society, but purposely limit accumulation that could fuel investment in productive growth. Classical outputs of *dépense* include the pyramids of Egypt and the churches of Europe in the Middle Ages (Kallis, 2019).

Some degrowth values may align with Māori values, both having socioecological foundations. Mika et al. (2022) argue that

Māori values centre on collective wellbeing as opposed to self-interest and have spiritual and material elements. Degrowth, too, is centred on wellbeing, although it does not have a spiritual element.

Exploring similarities and differences between Māori, Mana Kai, growth and degrowth values could initiate deeper kōrero on the belief systems that guide understandings of plausible pathways towards, and aspirations for, a secure future food system in Aotearoa. Potential alignments between degrowth and Mana Kai values are indicated in Table 2.

Reflection 2: ideology

Mana Kai leadership chose to ground the framework in te ao Māori for several reasons, including that 'Māori value-based business models are often naturally "triple bottom line" and can provide authentic insights into viable transition pathways' (Mana Kai, 2022a, p.15).

The term 'triple bottom line' references sustainable development ideology, which theorises an economy in which GDP growth, social progress and environmental protection are three coequal pillars. Thus, the Mana Kai Framework assumes growth paradigm beliefs.

Degrowth is opposed to triple bottom line thinking and our current understanding of sustainable development.

Sustainable development was forged from two ideas: development and sustainability. Development is the Western, mid-20th-century idea that poorer nations should grow their economies to emulate wealthier nations. Since the 1980s, 'developing' nation industrialisation and growth have been imposed through structural adjustment programme loans from the International Monetary Fund and World Bank. Contemporary sustainability emerged in the 1970s, following the rise of environmentalism in the 1960s and the publication in 1972 of the seminal study *The Limits to Growth*. Sustainable development was first defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987).

Over the last five decades the United Nations has, through an evolving sustainable development agenda, depoliticised the social and environmental movements of the 1960s and 1970s, neutralising their power to mobilise society around radical ideas, and it successfully enshrined economic growth as a sustainability pillar and goal. For example, Sustainable Development Goal 8 aims to 'promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all'. The New Zealand government used similar language in its first voluntary national review on progress towards the implementation of the UN 2030 Agenda for Sustainable Development, stating a belief in 'productive, sustainable and inclusive development to ensure no one is left behind' (Ministry of Foreign Affairs and Trade, 2019).

Sustainable Development Goal 8 calls for aggregate global GDP growth of 3% per year, which is incompatible with reductions in aggregate global resource use and carbon dioxide emissions in line with a carbon budget for staying within 2°C of global warming ...

Degrowth does not oppose non-growth sustainability goals, but does oppose sustainable development framing because tensions between the three pillars of economic growth, social progress and environmental protection can only be relieved in two ways, both of which are unsatisfactory.

The first way is absolute decoupling, whereby economic growth occurs without an increase in climate and ecological impacts. This is a stronger effect than mere efficiency improvements (relative decoupling); however, it is only theoretical. The global energy system could theoretically become largely based on renewable energy, with negative emissions technologies (NETs) removing as much carbon annually from the atmosphere as is produced, enabling the world to reach net zero emissions. But there is no empirical evidence to suggest that absolute decoupling can occur at the scale and pace needed to halt and reverse the climate and biodiversity crises before dangerous tipping points could reasonably be expected to be reached (Parrique et al., 2019). Thus, reliance on speculative technologies to perpetuate elite Western ways of living poses an unacceptable risk to all beings. Despite this clear knowledge, even 'climate progressive' nations rely on promissory NETs in their climate legislation, emissions pathways and carbon budgets. Without NETs, their necessary rates of mitigation would be significantly greater, demanding profound changes to their economies (Anderson, Broderick and Stoddard, 2020).

The second way in which sustainable development tensions are relieved is through trade-offs, whereby one (usually weaker) party relinquishes some of its goals to those of another (usually stronger) party. The trinity of coequal sustainable development pillars is a false narrative. The Sustainable Development Index shows that there are not yet any socioecologically developed nations with world-class performance on both social and environmental indicators at any level of national income. Countries with high gross national income per capita and high performance on social indicators, such as Norway and Australia, perform extremely poorly on environmental indicators (Hickel, 2020c). Responsible consumption and production is 'associated with trade-offs, especially regarding economic progress' (Kroll, Warchold and Pradhan, 2019). Meanwhile, Sustainable Development Goal 8 calls for aggregate

global GDP growth of 3% per year, which is incompatible with reductions in aggregate global resource use and carbon dioxide emissions in line with a carbon budget for staying within 2°C of global warming (Hickel, 2019). Furthermore, the Sustainable Development Goal framework fails to explicitly incorporate environmental justice (Menton et al., 2020).

The idea of the triple bottom line was developed in the late 1990s as an agenda to 'focus corporations not just on the economic value that they add, but also on the environmental and social value that they add – or destroy' (Elkington, 2004). It has become the framework for corporate sustainability, incorporating sustainable development theory into business and surfacing in corporate sustainability reporting of social, environmental and financial performance. Yet the global effect of more than two decades of business sustainability practice has been so underwhelming that John Elkington, the founder of triple bottom line thinking, has gone as far as to propose its 'strategic recall' as a management concept (Elkington, 2018).

A fundamental criticism that may explain the failure of the triple bottom line approach to business sustainability is that it is non-systemic (Srivastava, Dixit and Srivastava, 2021). Each bottom line, or pillar, is managed, measured and reported independently.

Not only is business sustainability performance divided into pillars, but business sustainability is also firm-centric. Bringing the triple bottom line lens to the Aotearoa New Zealand food provisioning system could severely atomise efforts, with organisations becoming overly focused on their own sustainability outcomes under the mistaken mechanistic belief that the success of the system will be defined by the success of the existing parts (i.e., firms). Private firms, including those represented within the leadership group of the Mana Kai Initiative, often have growth-based, competitive business models that are challenging to align with systemic approaches.

Degrowth is a radical social transformation to provision a good life for all within planetary boundaries. It takes the holistic view that systemic change is as much about emergent novel structural change arising from the chaos of disruption, as it is about changing the quality of existing components. Provisioning systems are a combination of physical infrastructure and technology systems, and social (government, community and market) systems that mediate the ways in which resources are used to create social outcomes (O'Neil et al., 2018). In the degrowth scenario, provisioning systems would be radically transformed by social forces striving for sufficiency and equity. Individual businesses could not hope to isolate from, or overcome, this momentum in order to drive change the way they individually see it, or to set a sustainability direction and standard. A degrowth business is not an entity, but rather a process within a larger system of processes (Nesterova, 2022).

> Without tino rangatiratanga, Māori values may be vulnerable to being co-opted and reshaped by the dominant Pākehā culture, rather than standing as an equal partner in a truly bicultural dialogue towards policy solutions ...

Reflection 3: distribution

The initial Mana Kai Framework includes the Māori value ohaoha (economy), translated as: 'Economic benefits and food industries created to distribute wealth and sustain the food ecosystem as well as the business and employment opportunities for our people' (see Table 2). The consultative kōrero adapted this value to produce the following goal in the complete Mana Kai Framework: 'Economic returns from healthy, sustainable food creates prosperity that benefits all New Zealanders' (see Table 1).

Through the consultation process, a highly consequential change of language occurred between the initial and complete Mana Kai frameworks: 'economic benefits' became 'economic returns'; and 'wealth distribution' has been reconceptualised as 'prosperity that benefits all'. Whereas the original value implies direct distribution of wealth to people, the subsequent goal implies a process of making private returns that are converted into a universally shareable form of prosperity. Mana Kai literature repeatedly expresses the belief that food export revenues generate wealth, presumably providing taxes that enable the New Zealand government to fund public services, as a form of prosperity benefitting all in the form of meeting wellbeing needs. 'The exports we send to the world are a vital source of wealth and prosperity, helping to fund the schools, roads and hospitals that underpin our society' (Mana Kai, 2022a, p.4); 'We believe that only in ensuring the strength and resilience of te taiao [the natural world], will we ever be able to create a food system that can deliver the abundance we seek to meet both our domestic needs and to create the economic prosperity that underpins the functioning of our society' (Mana Kai, 2022c, p.5).

The notion that national prosperity relies on private export revenues is a common dairy industry claim (Kerrigan, 2019) and was often repeated in consultation kōrero: 'Many contributors highlighted the importance of the role that food plays in enhancing the health of our people and our communities. The dual role that the system plays in also making a material contribution to our national economic prosperity was featured in many visions'; 'Food is responsible for much of our financial prosperity as a nation, given the significant returns we derive from exporting products to consumers around the world' (Mana Kai, 2022c, pp.5, 8).

Following this logic, greater export revenue (economic growth) would be needed to fund further public services (greater prosperity). It has even been said by a New Zealand agri-business leader that while 'NZ produces enough food to feed

40 million people, it should look to feed 800 million' (Burke, 2017). Presumably, more people would be nourished, more wealth would be generated for business owners and greater prosperity would trickle down to New Zealanders.

Such growth optimism (not to mention energy blindness), no doubt drove the revenue growth objective in the complete Mana Kai Framework: 'The value of food exports grows by 25% by 2030 through securing more value in market for the attributes inherent in a Mana Kai-based food system' (see Table 1).

Reflecting on this from a degrowth position, several questions arise. The first question goes back to ohaoha and asks whether Māori enterprises find they must compromise their idea of ohaoha to fit the Western economic context because they lack the autonomy to build an 'environmental economy' that is true to Māori values (Rout et al., 2021). Without tino rangatiratanga, Māori values may be vulnerable to being co-opted and reshaped by the dominant Pākehā culture, rather than standing as an equal partner in a truly bicultural dialogue towards policy solutions (Paulson, 2018).

The second degrowth-related question is whether improving wellbeing really does require private sector growth. There is a commonly held narrative that the private sector funds the public sector through taxation, and this justifies growth goals. The degrowth counter-narrative is that public services are production, not expenditure. According to modern monetary theory, governments do not tax individuals and the private sector to raise funds; they tax to remove the power to spend and to control inflation, and, vice versa, they can issue currency to create the means for public production. The United States government funds its military in this way (Kaiser-Schatzlein, 2020). The New Zealand government could issue its own currency to produce public services, mobilising labour and resources around socially necessary production with the greatest use value. By contrast, the private sector is organised around production with the greatest exchange value, whether it is socially necessary or not (Hickel, 2020c).

A third degrowth-related question is around how to ensure that a sufficient amount of food is produced for use value as opposed to its exchange value. Export pricing pushes some local produce out of the affordability range for some New Zealanders, reducing their access to fresh, nutritious food. Food is a human right and could be produced as a public service. Much of the Aotearoa food system could be run on a not-for-profit basis by worker cooperatives, for instance. This would make food much more affordable and accessible; it would bring direct democracy into production decision making and enable distribution of economic benefits directly to workers. Some food system jobs could be funded through a public job guarantee scheme. Degrowth perspectives like this are radically different, yet they are not unfamiliar or untested at small scales. They offer a socioecologically regenerative logic for the food system in 'sharp contrast to the just-in-time supply chain of the agrifood sector characterised by capitalist logic, production for trade, market dynamics, profits and state regulations' (Nelson and Edwards, 2021).

> The people of New Zealand who rely upon the food system for their nutrition and a healthy environment … or their livelihood … all deserve a national food strategy that prepares us for several plausible futures, including a degrowth future.

A final degrowth question is whether New Zealand's food production should downscale or upscale for the overall global social and environmental good. Current volumes, types and methods of food production in New Zealand are detrimental to local environments and the global atmosphere, contributing to New Zealand's overshoot on planetary boundaries. Yet, as has been pointed out, five million people are producing enough food to feed 40 million on a planet where many are starving.

Reducing aggregate food production by two-thirds to fit within planetary boundaries would produce enough to feed only 13 million people (5 million New Zealanders and 8 million others), assuming the business-as-usual food system. A change in the production mix (Willett et al., 2019) could potentially feed millions more people within planetary boundaries. We might also take more responsibility for optimising the downstream impact of New Zealand food exports, ensuring that they retain their quality as nourishing foods and don't become ingredients in ultra-processed foods of doubtful health value, and that exported foods reach people who need them, not those who are already well fed.

In the degrowth view, as global provisioning systems generally shift towards sufficiency and equity and as capitalism becomes less relevant, poorer nations would free up labour, energy and resources currently committed to superfluous production for Global North overconsumption, and direct these towards meeting their own needs, such as food production.

Downscaling production would be anathema to many New Zealanders, who still recall, or know about, the economic impact of losing tariff-free access to the UK market for 50% of New Zealand exports when the UK joined the EEC in 1973. While more than ten years of planning went into reducing the impact, what followed were two decades of minimal growth, 'painful' economic restructuring and privatisation of state assets (Spence, 2019).

By contrast, a degrowth-led downscaling of the New Zealand food production system to eliminate environmental overshoot would ideally be a democratic, planned and smooth process,

supplemented with communications that expose economic myths and explain new ways of thinking in straightforward language.

Degrowth is a potential future that must be considered. The future for the Aotearoa New Zealand food system may not be, as some might imagine, continued growth into export markets with ever higher value-added products, but could be a rapid closing off of key markets that are increasing their local resilience and pursuing ambitious climate and biodiversity goals, shutting out food-producing nations that cannot meet increasingly strict environmental criteria for market entry.

In recognition of these looming challenges, the policy landscape is perhaps the fastest growing area of degrowth research, with attention focused on 'universal basic incomes, work-time reductions, job guarantees with a living wage, maximum income caps, declining caps on resource use and emissions, not-for-profit cooperatives, holding deliberative forums, reclaiming the commons, establishing ecovillages, and housing cooperatives' (Fitzpatrick, Parrique and Cosme, 2022).

Conclusion

This degrowth reflection on the Mana Kai Framework contributes ideas that may not have been heard during its early development and the round of consultative kōrero. As the Mana Kai Initiative states: 'it is recognised that we will not have heard every perspective, or every good idea people have about where our aspirations should sit for our food system and actions and initiatives that can assist in moving it forward'; the Mana Kai Framework is the 'beginning of a journey' (Mana Kai, 2022c, p.6).

The Mana Kai Framework perpetuates economic growth as a driving factor in the New Zealand food system, while the more radical degrowth idea for transformative systemic change has not been reflected. This may risk limiting ambition to incremental improvements of the existing system. If widely applied, as the Mana Kai Initiative hopes, use of the growth-based framework may not lead to transformative systemic change and could condemn New Zealand to a future food system that is unable to perform as well as hoped on more ambitious social and environmental goals, some of which may be set beyond its shores.

To remedy this, a second round of kōrero, starting from the initial Mana Kai Framework of nine te ao Māori values, would examine the food system through a new perspective that is not tied to growth-based assumptions. This article has sought to pose questions and provocations that might be useful for that kōrero process, but not to presuppose solutions.

When the future is uncertain and the past is not a reliable guide, a flexible and precautionary approach is needed (Boston, 2022). The people of New Zealand who rely upon the food system for their nutrition and a healthy environment (which is all of us) or their livelihood (which is a great many of us) all deserve a national food strategy that prepares us for several plausible futures, including a degrowth future. A degrowth Mana Kai Framework could sit alongside the existing growth-based Mana Kai Framework. This plurality of perspectives could inform and future-proof a national food strategy and would be useful for scenario planning. Overlapping ideas between the growth and degrowth frameworks would point to 'no regrets' options for immediate action.

It is not implausible that degrowth-based economic, social and political architectures could emerge in other nations in the not too distant future, or that an international degrowth-linked trading bloc could form involving some of New Zealand's key export markets. Businesses, communities and government should be preparing for a degrowth future, at least as a resilience measure, if not also proactively as an opportunity to transform local provisioning to meet wellbeing goals.

A degrowth Mana Kai Framework, being a more radical version, could inspire a younger, ardent social movement to push for sweeping changes to New Zealand's food provisioning system for the longer term – their lived future.

Degrowth's credibility as a serious field of scholarship is not in doubt. It is an appropriate and valuable perspective for reflecting upon the Mana Kai Framework – or, indeed, any instrument for strategic change in Aotearoa New Zealand. The current lack of knowledge about degrowth within mainstream policymaking and business decision making is an obstacle to bringing degrowth considerations into strategy.

1 Mana Kai means sustenance from food.
2 The author has not been involved in producing the Mana Kai Framework.

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References

Andersen, L.S., O. Gaffney, W. Lamb, H. Hoff and A. Wood (2020) *A Safe Operating Space for New Zealand/Aotearoa: translating the planetary boundaries framework*, Stockholm Resilience Centre, Potsdam Institute for Climate Impact Research and Mercator Research Institute on Global Commons and Climate Change for the Ministry for the Environment, https://environment.govt.nz/assets/Publications/Files/a-safe-operating-space-for-nz-aotearoa.pdf

Anderson, K., J.F. Broderick and I. Stoddard (2020) 'A factor of two: how the mitigation plans of "climate progressive" nations fall far short of Paris-compliant pathways', *Climate Policy*, 20 (10), pp.1–15, https://doi.org/10.1080/14693062.2020.1728209

Asara, V., I. Otero, F. Demaria and E. Corbera (2015) 'Socially sustainable degrowth as a social–ecological transformation: repoliticising sustainability', *Sustainability Science*, 10 (3), pp.375–84, https://doi.org/10.1007/s11625-015-0321-9

Bardsley, A., B. Coates, S. Goldson, P. Gluckman and M. Kaiser (2020) *The Future of Food and the Primary Sector: the journey to sustainability*, Auckland: Koi Tū, the Centre for Informed Futures, University of Auckland

Barlow, N., L. Regen, N. Cadiou, E. Chertkovskaya, M. Hollweg, C. Plank, M. Schulken and V. Wolf (eds) (2022) *Degrowth and Strategy*, Mayflybooks/Ephemera

Boston, J. (2022) 'Living within biophysical limits: green growth versus degrowth', *Policy Quarterly*, 18 (2), pp.81–9

Brundtland, G. (1987) 'Report of the World Commission on Environment and Development: Our Common Future', United Nations General Assembly document A/42/427

Burke, P. (2017) 'Food revolution underway', *Rural News*, 5 April, https://ruralnewsgroup.co.nz/rural-news/rural-general-news/food-revolution-underway

Butts, E. (2019) 'Legal personhood and nonhuman rights', *Prindle Post*, 6 August, https://www.prindleinstitute.org/2019/08/legal-personhood-and-nonhuman-rights/

Capra, F. and P.L. Luisi (2014) *The Systems View of Life: a unifying vision*, Cambridge: Cambridge University Press

Cowan, J. and M. Pomare (1930) *Legends of the Maori: volume II*, Wellington: Whitcombe and Tombs

D'Alisa, G., F. Demaria and G. Kallis (eds) (2015) *Degrowth: a vocabulary for a new era*, Routledge

Demaria, F., F. Schneider, F. Sekulova and J. Martinez-Alier (2013) 'What is degrowth? From an activist slogan to a social movement', *Environmental Values*, 22 (2), pp.191–215, https://doi.org/10.3197/096327113x13581561725194

Elkington, J. (2004) 'Enter the triple bottom line', in A. Henriques and J. Richardson (eds), *The Triple Bottom Line: does it all add up? Assessing the sustainability of business and CSR*, Earthscan

Elkington, J. (2018) '25 years ago I coined the phrase "triple bottom line." Here's why it's time to rethink it', *Harvard Business Review*, 25 June, https://hbr.org/2018/06/25-years-ago-i-coined-the-phrase-triple-bottom-line-heres-why-im-giving-up-on-it

European Research Council (2022) 'ERC Synergy Grants 2022 – project highlights', 25 October, https://erc.europa.eu/news-events/news/erc-synergy-grants-2022-project-highlights

Eversheds Sutherland (2021) 'Greenwashing: a survey of recent litigation', 7 October, https://us.eversheds-sutherland.com/NewsCommentary/Legal-Alerts/245533/Greenwashing-A-survey-of-recent-litigation

Fanning, A.L., D.W. O'Neill and M. Büchs (2020) 'Provisioning systems for a good life within planetary boundaries', *Global Environmental Change*, 64, 102135, https://doi.org/10.1016/j.gloenvcha.2020.102135

Fanning, A.L., D.W. O'Neill, J. Hickel and N. Roux (2021) 'The social shortfall and ecological overshoot of nations', *Nature Sustainability*, https://doi.org/10.1038/s41893-021-00799-z

Fitzpatrick, N., T. Parrique and I. Cosme (2022) 'Exploring degrowth policy proposals: a systematic mapping with thematic synthesis', *Journal of Cleaner Production*, 365, 132764, https://doi.org/10.1016/j.jclepro.2022.132764

Hickel, J. (2019) 'The contradiction of the sustainable development goals: growth versus ecology on a finite planet', *Sustainable Development*, 27 (5), https://doi.org/10.1002/sd.1947

Hickel, J. (2020a) 'Degrowth and MMT: a thought experiment', 23 September, https://www.jasonhickel.org/blog/2020/9/10/degrowth-and-mmt-a-thought-experiment

Hickel, J. (2020b) 'Quantifying national responsibility for climate breakdown: an equality-based attribution approach for carbon dioxide emissions in excess of the planetary boundary', *Lancet Planetary Health*, 4 (9), e399–e404, https://doi.org/10.1016/S2542-5196(20)30196-0

Hickel, J. (2020c) 'The sustainable development index: measuring the ecological efficiency of human development in the Anthropocene', *Ecological Economics*, 167, 106331, https://doi.org/10.1016/j.ecolecon.2019.05.011

Hickel, J. (2021) 'The anti-colonial politics of degrowth', *Political Geography*, 88, 102404, https://doi.org/10.1016/j.polgeo.2021.102404

Hickel, J., C. Dorninger, H. Wieland and I. Suwandi (2022) 'Imperialist appropriation in the world economy: drain from the Global South through unequal exchange, 1990–2015', *Global Environmental Change*, 73, 102467, https://doi.org/10.1016/j.gloenvcha.2022.102467

Hickel, J., D.W. O'Neill, A.L. Fanning and H. Zoomkawala (2022) 'National responsibility for ecological breakdown: a fair-shares assessment of resource use, 1970–2017', *Lancet Planetary Health*, 6 (4), e342–e349, https://doi.org/10.1016/s2542-5196(22)00044-4

IPCC (2022a) *Climate Change 2022: impacts, adaptation and vulnerability*, contribution of Working Group II to the sixth assessment report of the Intergovernmental Panel on Climate Change, Cambridge: Cambridge University Press

IPCC (2022b) *Climate Change 2022: mitigation of climate change*, contribution of Working Group III to the sixth assessment report of the Intergovernmental Panel on Climate Change, Cambridge: Cambridge University Press

Kaiser-Schatzlein, R. (2020) 'The government can afford anything it wants', *New Republic*, 19 June, https://newrepublic.com/article/158221/government-can-afford-anythi-wants

Kallis, G. (2018) *Degrowth*, Newcastle upon Tyne: Agenda Publishing

Kallis, G. (2019) 'The degrowth alternative', February, https://greattransition.org/publication/the-degrowth-alternative

Kallis, G., V. Kostakis, S. Lange, B. Muraca, S. Paulson and M. Schmelzer (2018) 'Research on degrowth', *Annual Review of Environment and Resources*, 43 (1), pp.291–316, https://doi.org/10.1146/annurev-environ-102017-025941

Kallis, G., A. Varvarousis and P. Petridis (2022) 'Southern thought, islandness and real-existing degrowth in the Mediterranean', *World Development*, 157, 105957, https://doi.org/10.1016/j.worlddev.2022.105957

Kerrigan, M. (2019) 'Nice one: dairy delivers better way of life for all Kiwis', 30 August, https://www.dairynz.co.nz/news/nice-one-dairy-delivers-better-way-of-life-for-all-kiwis/

Keyßer, L.T. and M. Lenzen (2021) '1.5°C degrowth scenarios suggest the need for new mitigation pathways', *Nature Communications*, 12 (1), https://doi.org/10.1038/s41467-021-22884-9

Kroll, C., A. Warchold and P. Pradhan (2019) 'Sustainable Development Goals (SDGs): are we successful in turning trade-offs into synergies?', *Palgrave Communications*, 5 (1), https://doi.org/10.1057/s41599-019-0335-5

Mackay, S., F. Sing, S. Gerritsen and B. Swinburn (2020) *Benchmarking Food Environments 2020: progress by the New Zealand government*

on implementing recommended food environment policies and priority recommendations, Auckland: University of Auckland

Mana Kai (2022a) 'Mana Kai: a framework for kōrero on enhancing Aotearoa New Zealand's food system', Aotearoa Circle, https://www.theaotearoacircle.nz/s/Mana-Kai-Framework-FINAL.pdf

Mana Kai (2022b) 'The Mana Kai Initiative: priority action areas plan', Aotearoa Circle, https://www.theaotearoacircle.nz/s/TO-LAUNCH_Mana-Kai-Actions-Doc.pdf

Mana Kai (2022c) *The Mana Kai Initiative: the purpose and values of Aotearoa New Zealand's food system*, Aotearoa Circle, https://www.theaotearoacircle.nz/s/TO-LAUNCH_Mana-Kai-Purpose-Values-Document-lkdr.pdf

Menton, M., C. Larrea, S. Latorre, J. Martinez-Alier, M. Peck, L. Temper and M. Walter (2020) 'Environmental justice and the SDGs: from synergies to gaps and contradictions', *Sustainability Science*, 15 (6), pp.1621–36, https://doi.org/10.1007/s11625-020-00789-8

Mika, J.P., K. Dell, J. Newth and C. Houkamau (2022) 'Manahau: toward an indigenous Māori theory of value', *Philosophy of Management*, https://doi.org/10.1007/s40926-022-00195-3

Millward-Hopkins, J., J.K. Steinberger, D.N. Rao and Y. Oswald (2020) 'Providing decent living with minimum energy: a global scenario', *Global Environmental Change*, 65, 102168, https://doi.org/10.1016/j.gloenvcha.2020.102168

Ministry of Foreign Affairs and Trade (2019) *He Waka Eke Noa: towards a better future together*

Nelson, A. and F. Edwards (eds) (2021) *Food for Degrowth: perspectives and practices*, Routledge

Nesterova, I. (2022) 'Being in the world locally: degrowth business, critical realism, and humanistic geography', *Frontiers in Sustainability*, https://doi.org/https://doi.org/10.3389/frsus.2022.829848

O'Neill, D. et al. (2018) 'The EU needs a stability and wellbeing pact, not more growth, open letter, 16 September, *Guardian*, https://www.theguardian.com/politics/2018/sep/16/the-eu-needs-a-stability-and-wellbeing-pact-not-more-growth

O'Neill, D.W., A.L. Fanning, W.F. Lamb and J.K. Steinberger (2018) 'A good life for all within planetary boundaries', *Nature Sustainability*, 1 (2), pp.88–95, https://doi.org/10.1038/s41893-018-0021-4

Parrique, T. (2019) 'The political economy of degrowth', doctoral thesis, Université Clermont Auvergne, https://portal.research.lu.se/en/publications/the-political-economy-of-degrowth

Parrique, T., J. Barth, F. Briens, C. Kerschner, A. Kraus-Polk, A. Kuokkanen and J. Spengenberg (2019) *Decoupling Debunked: evidence and arguments against green growth as a sole strategy for sustainability*, European Environmental Bureau, https://eeb.org/library/decoupling-debunked/

Paulson, S. (2018) 'Pluriversal learning: pathways toward a world of many worlds', *Nordia Geographical Publications*, 47 (5), pp.85–109, https://nordia.journal.fi/article/view/79937

Piketty, T. (2014) *Capital in the Twenty-first Century*, Cambridge, Mass: Belknap Press

Raworth, K. (2017) *Doughnut Economics: seven ways to think like a 21st-century economist*, Random House

Rout, M., S. Awatere, J.P. Mika, J. Reid and M. Roskrug (2021) 'A Māori approach to environmental economics: te ao tūroa, te ao hurihuri, te ao mārama – the old world, a changing world, a world of light', in H. Shugart (ed.), *Oxford Research Encyclopedia of Environmental Science*

Schmelzer, M. (2022) 'From Luddites to limits? Towards a systematization of growth critiques in historical perspective', *Globalizations*, https://doi.org/10.1080/14747731.2022.2106044

Science Media Centre (2021) 'Food insecurity in the Covid pandemic: expert Q+A', 28 October, https://www.sciencemediacentre.co.nz/2021/10/28/food-insecurity-in-the-covid-pandemic-expert-qa/

Slameršak, A., G. Kallis and D.W. O'Neill (2022) 'Energy requirements and carbon emissions for a low-carbon energy transition', *Nature Communications*, 13 (1), https://doi.org/10.1038/s41467-022-33976-5

Spence, E. (2019) 'Clues for the future of Brexit may be found in New Zealand', *Stuff*, 18 August, https://www.stuff.co.nz/business/115096296/clues-for-the-future-of-brexit-may-be-found-in-new-zealand

Srivastava, A.K., S. Dixit and A.A. Srivastava (2021) 'Criticism of triple bottom line: TBL (with special reference to sustainability)', *Corporate Reputation Review*, https://doi.org/10.1057/s41299-021-00111-x

Statistics New Zealand (2023) 'Living costs increase for all household groups', 2 February, www.stats.govt.nz. https://www.stats.govt.nz/news/living-costs-increase-for-all-household-groups/

Treasury (2022) *Te Tai Waiora: wellbeing in Aotearoa New Zealand 2022*, Wellington: New Zealand Government

Tulloch, L. and D. Neilson (2014) 'The neoliberalisation of sustainability', *Citizenship, Social and Economics Education*, 13 (1), pp.26–38, https://doi.org/10.2304/csee.2014.13.1.26

University of Leeds (2021) 'Country trends: New Zealand', *A Good Life for All within Planetary Boundaries*, https://goodlife.leeds.ac.uk/national-trends/country-trends/#NZL

Willett, W., J. Rockström, B. Loken, M. Springmann, T. Lang, S. Vermeulen et al. (2019) 'Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems', *Lancet*, 393 (10170), pp.447–92, https://doi.org/10.1016/s0140-6736(18)31788-4

World Bank (2020) 'GDP per capita (current US$)', https://data.worldbank.org/indicator/ny.gdp.pcap.cd?most_recent_value_desc=true

World People's Conference on Climate Change and the Rights of Mother Earth (2010) 'People's Agreement of Cochabamba', 24 April, https://pwccc.wordpress.com/2010/04/24/peoples-agreement/