

20-D-00459

s 9(2)(a)

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Dear s 9(2)(a)

Please find the attached four briefing notes in the email on 'new thinking approaches' (policy innovation) as per your discussion with Michelle Pawson on the 24th of March.

Thank you for your email of 24 March 2020 requesting the following under the Official Information Act 1982 (the Act):

Under the Official Information Act, could you please send me all the papers about the innovation work we spoke about today.

The Ministry for the Environment has identified four documents in scope of your request, as listed in the attached document schedule. Some information within one document has been withheld under the following section of the Act:

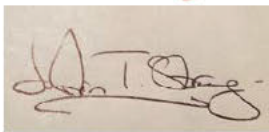
9(2)(f)(iv) To protect the confidentiality of advice tendered by Ministers of the Crown and officials.

In terms of section 9(1) of the Act, I am satisfied that, in the circumstances, the withholding of this information is not outweighed by other considerations that render it desirable to make the information available in the public interest.

You have the right to seek an investigation and review by the Office of the Ombudsman of my decision to withhold information relating to this request, in accordance with section 28(3) of the Act. The relevant details can be found on their website at: www.ombudsman.parliament.nz.

Please note that due to the public interest in our work the Ministry for the Environment publishes responses to requests for official information on our [OIA responses page](#) shortly after the response has been sent. If you have any queries about this, please feel free to contact our Executive Relations team: ministerials@mfe.govt.nz.

Yours sincerely



Justin Strang
Director, Office of the Chief Executive

Document schedule

No.	Date	Content	Decision	OIA Section/s applied (if withholding information)	Reason for withholding
1	14 May 2019	2019-B-05611 Aide-memoire: Case for change – New thinking approaches	Release in full		
2	25 July 2019	2019-B-05835 Briefing document: Follow up material regarding new thinking approaches	Release in full		
3	19 September 2019	2019-B-06007 Briefing document: Update on key milestones on sustainable finance	Withheld in part	S9(2)(f)(iv)	To maintain the constitutional convention protecting the confidentiality of advice tendered by Ministers and officials.
4	23 October 2019	2019-B 06089 Briefing document: Next steps on New Thinking on Environmental Policy	Release in full		

Released under the provision of the Official Information Act 1982



To Hon David Parker, Minister for the Environment			Tracking #:2019-B-05611
<u>Security Level</u>	Unclassified	Number of Attachments	Appendix
Date Submitted:	14 May 2019	Response needed by:	N/A
MfE Priority:	Non-Urgent	Action Sought:	Requested information

Aide-memoire: Case for change – New thinking approaches

Introduction

This paper outlines new thinking being undertaken internationally regarding how to address sustainability challenges relating to the environment. The paper expands on matters raised in a strategy discussion with officials on 11 April 2019 on long-term thinking about management of the marine domain.

Details about a range of new thinking and associated policy approaches are summarised for your information in **Appendix 1**.

The aim is to provide you with a brief overview of the thinking with the opportunity to subsequently explore particular lines of enquiry such as the implications for reform of the Resource Management Act 1991 (RMA) and regional pilots.

Upon request, officials can meet with you to discuss this paper and we can provide you with a more detailed comparative analysis of our organisational strategy with the thinking outlined in this paper, opportunities that exist, and future design options (institutional, governance, regulatory).

The nature of the information presented

The information appended is not exhaustive. The focus is on the leading and more popular approaches that challenge the current environmental management paradigm.

The information is structured as follows:

- **Thinking that challenges the current paradigm:** The approaches span a range of topics from environmental limits to new economic thinking.
- **Application of this thinking to key systems and policy:** such as the European Union’s approach to new economic thinking and the EAT-Lancet approach to the food system.
- **Environmental assessments:** international reports that detail the nature of the degradation of the environment, including the New Zealand context presented in Environment Aotearoa 2019.
- **Scenario and modelling exercises** that highlight the nature and scale of change that will be required.
- **New Zealand specific resource management reports:** the primary emphasis being changes within the bounds of the current management system.

Key findings

There is a constant stream of new thinking and new takes on existing ideas. This thinking often has different theoretical starting points and biases.

The body of thinking outlined, however, highlights the extent of change being called for and the increased focus on the interconnectedness and complexity of society, the economy and the environment.

We are seeing a compelling case for transformative change:

- An overwhelming body of evidence shows that our environment is degraded and many trends indicate that things continue to get worse. Improving environmental outcomes is essential to the maintenance of healthy ecosystems and our wellbeing.
- Business-as-usual approaches to intervention will not realise the level of change required to address long-term sustainability and well-being challenges. These approaches are typically incremental in nature, do not acknowledge the scale of change required to avoid environmental tipping points, produce increasingly unequal outcomes and do not sufficiently build resilience to shocks in socio-economic systems, as demonstrated by the 2008 financial crisis.

A range of new thinking explores how to give effect to transformative change, including:

- The need to intervene in the system at the paradigm level – that is, to help people to see the environment as the foundation for our society and economy and therefore the essential component for future well-being. Intervening at the paradigm level reflects the work of Donella Meadows that identifies the paradigm, or mind-set, out of which the system arises (its goals, power structure, rules and culture) as being the most effective place to intervene in a system.
- Thinking in terms of whole systems and embracing complexity, particularly in line with complex adaptive systems science and Māori traditional knowledge. This thinking prescribes a fundamentally different approach to uncertainty, market behaviour, heterogeneity and diversity.
- Rethinking our notion of resource use, well-being and orthodox economic theory, including the approach to inequality.
- The need for new policy approaches, analytical tools and greater experimentation to support such transformative change.
- Greater emphasis on stewardship and guardianship of the environment, with a focus on long-term cross-system outcomes, as a fundamental enabler of intergenerational equity and well-being. Increasing emphasis of desired resilience settings as an effective and tractable tool to use in pursuit of sustainability where complexity and uncertainty are prevalent
- Recognising shifting dynamics in society, including current revolutions taking place in technology (internet-of-things, ways of working) and data. These shifts are shaping new communities of interest and forming new centres of power (iwi interests, local initiatives), leading to demand for place-based solutions. This is leading to innovative solutions and new forms of social enterprise that challenge the typical thinking about the distinction between market and state, and the role of policy and legislation.
- New comparative institutional economics approaches, most notably based on Nobel Prize winner Elinor Ostrom's body of work on common-pool resource groups around the world, as described in her most influential book *Governing the Commons*.

The overriding message is that we are unlikely to deliver the scale of transformative change needed with existing 'market failure' thinking alone. We are unlikely to be able to tweak or simply reframe existing market and planning-based tools because these

approaches are not achieving the necessary behavioural change or reversing the continued decline in environmental performance. We should not assume that doing more of the same, but better, will achieve a different result.

A fundamental issue is that existing system goals and interventions are not designed to address the complex system challenges at hand. We need to rethink what we want to achieve through the collective efforts of legislation, policy, community, business and iwi initiatives.

Living within planetary boundaries and environmental limits will be an essential requirement for all facets of human activity. The question of how growth relates to planetary boundaries and environmental limits is a long-standing debate and three distinct theoretical positions have emerged:

- In 1972 the seminal work “The Limits to Growth” first raised the idea of a global ecological “overshoot” and that humanity was depleting resources human life and biodiversity depended on. This thinking is also referred to as **post-growth or de-growth**, who also assert that it is necessary to put a halt to economic growth to sustain prosperity because three categories of problems must be urgently dealt with (problems relating to the physical environment, inequality and resilience).
- The more mainstream thinking on the issue is referred to as **green growth or sustainable growth**, which includes many current governments globally and international institutions. This thinking argues that there is no trade-off. Instead, it promotes the politically appealing idea that the economy can grow while environmental problems are addressed. However, proponents of this view will often admit that the nature and structure (or ‘direction’) of economic growth likely need to change away from extractive, environmentally degrading practices.
- The last group is referred to as **pro-growth**, who tend to argue that dealing with environmental concerns is effectively a luxury to be contemplated once growth has been achieved and stabilised. This position is becoming increasingly understood to be clearly at odds with the reality of our planetary and local environmental context.

While a number of the ideas presented above are not new, what is new is the huge strides we have made over the past 40 years in understanding earth systems science and communicating it. Effectively, we are the first generation to understand that we face unprecedented global environmental risk. At the same time, we may be the last generation with a significant chance to do something about it.

Implications for New Zealand

Within New Zealand there are signs of change, although they are fragmented and often not well-aligned. We need to understand system interdependencies (the flow-on effects of exceeding climate targets or other ecosystem limits) and the consequences of our actions (and inactions).

The magnitude of the task for New Zealand is perhaps best summarised by Rod Oram in 2018 essay *Go Fast Go Far – Why NZ needs to change*:

“Getting to grips with these vast issues of utter unsustainability is daunting. ... [A]cross Aotearoa, there is growing awareness of the damage we’re doing to the ecosystem, the grave danger of ignoring that, and the abundant opportunities for responding in ways beneficial to it and us. ... We cannot take for granted our urgently needed transformation. It requires us to achieve an

unprecedented speed of change, scale of change and complexity of change we have never come within cooeee of before.”

While the current Government has adopted a wellbeing agenda, for the time being, GDP growth retains a dominant place in the discourse and policy analysis. For example, most of the discussion about the transition to a more sustainable economy has been discussed in terms of its impact on GDP. The question that begs as the focus shifts away from GDP is: What is the best course for economic growth in order to sustain wellbeing?

Treasury’s Living Standards framework refers to four stocks of capital (natural, social, human, and financial/physical) that affect our collective well-being. It adopts a pragmatic approach to the policy trade-offs that are made when considering these stock of capital. In doing so, it does not provide any clear sense of hierarchy. In contrast, one depiction of the UN Sustainable Development Goals is illustrative of how economic and social wellbeing is dependent on the well-being of the biosphere.

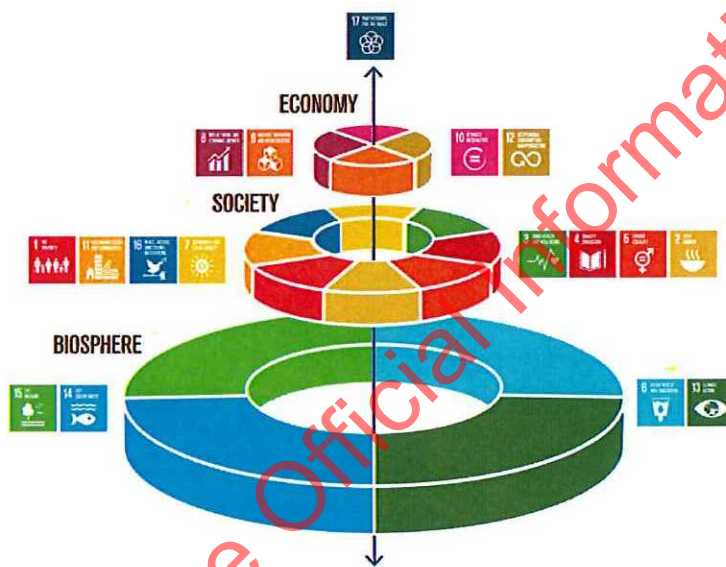


Figure 1: New way of viewing SDG's. Stockholm Resilience Centre, Stockholm University (2016).

We will not be able to take a radically different, more transformative approach to policy overnight. The question is how to begin incorporating these perspectives and evolving our policy approach while delivering our business-as-usual in parallel.

A realistic and pluralistic approach to policy is required that is better able to evolve, adapt and be applied to whole systems. In future, we need to focus on how to change complex systems (e.g. food, energy, finance, transport, tourism, and urban) to deliver the needs of our environment and our people, who interact in a distinctly New Zealand context.

The Ministry for the Environment’s Role

A key focus of the Ministry for the Environment (MfE) is to advise and implement policy reforms for climate, freshwater, waste and the RMA, in line with Government’s current priorities.

For the RMA and freshwater reforms, there is opportunity to explore the implications of the thinking outlined and the scope and nature of legislative change. MfE proposes to discuss this information with the Expert Advisory Panel.

Alongside these well-established work areas, MfE has commenced a project with Johan Rockström and the Stockholm Resilience Centre to translate the planetary boundaries for New Zealand (PBNZ project) and generate recommendations of what a resilient and inclusive response to shift us within these boundaries could look like. This will form the foundation for being able to understand what in-depth exploration of transformation of our core systems could look like.

We see our role as supporting and shaping conversations about the nature of our food, energy, finance, transport, tourism, and urban systems in the context of current and future environmental outcomes. This will require discussions across agencies and with the Government about the implications of the thinking outlined and our collective response. We are still at the initial investigatory stage of this endeavour. We are interested in exploring with you how such discussions could occur.

Recommendations

1. We recommend that you:
 - a. **Note** that officials are available to discuss the contents of this briefing.
 - b. **Agree** to share this Aide-memoire with the Associate Ministers for the Environment, Hon Nanaia Mahuta and Hon Eugenie Sage.

Signature


 Justin Strang
 Acting Director, Natural and Build Systems


 Date

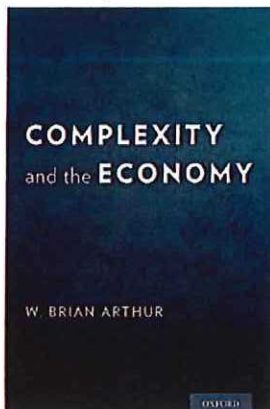
Hon David Parker
 Minister for the Environment

Date

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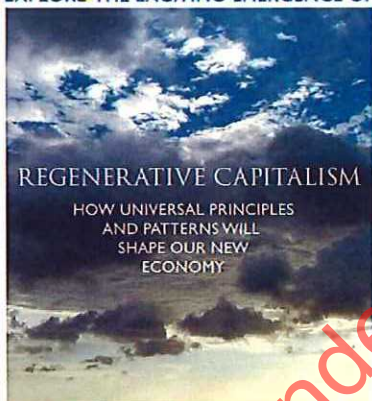
Complexity and the Economy, Brian Arthur (Santa Fe Institute)



1. Economics is changing, and since the financial crisis it has generated a number of new approaches. One of these—complexity economics—was pioneered in the 1980s and 1990s.
2. The standard 'neoclassical' framework sees behaviour in the economy as in an equilibrium steady state. People in the economy face well-defined problems and use perfect deductive reasoning make decisions.
3. The complexity framework by contrast sees the economy as always in process, always changing. People try to make sense of the situations they face using whatever reasoning they have at hand, and together create outcomes they must individually react to anew.
4. The resulting economy is not a well-ordered machine, but a complex evolving system that is imperfect and perpetually constructing itself anew.
5. The new approach is not just an extension of standard economics, nor does it consist of adding agent-based behaviour to standard models. It gives a different view of the economy: one where actions and strategies constantly evolve, where time becomes important, where structures form and re-form, where phenomena appear that are not visible to equilibrium analysis.

Regenerative capitalism, John Fullerton, 2015


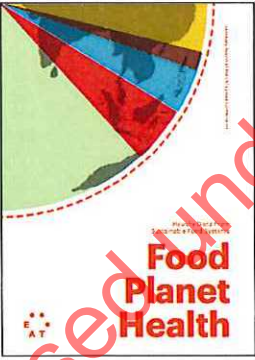
EXPLORE THE EXCITING EMERGENCE OF




CapitalInstitute.org/Regenerative-Capitalism

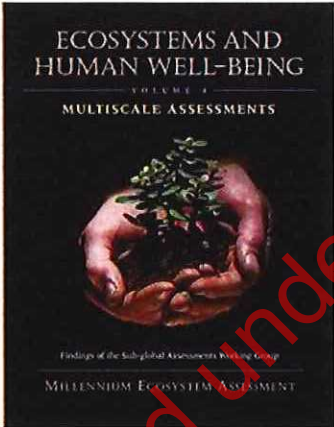
1. The term "regenerative" describes processes that restore, renew or revitalise their own sources of energy and materials.
2. Regenerative thinking is found in a growing number of fields, including design, agriculture, medicine, and economics.
3. Regenerative economics is defined as the "application of nature's laws and patterns of systemic health, self-organisation, self-renewal and regenerative vitality to socioeconomic systems"
4. A leading paper on regenerative capitalism by John Fullerton refers to eight elements of regenerative finance, consistent with a shift from a mechanistic to ecological worldview:
 - means not ends: finance is a means to a healthy economy, not the "ends" of economic activity
 - ethical and in service: finance must return to being grounded in a culture of services to clients and to the emergence of a regenerative economy. Resources (material and no-material) must circulate up and down the system efficiently and effectively
 - the supremacy of relationship: we should value relationships over transactions
 - transparency: value transparency over complexity, while embracing genuine value-adding innovation
 - real wealth: we should seek to generate long-term wealth creation, harmonising multiple forms of capital in right relationship
 - right scale: the system should be appropriately scaled, with the economy embedded in culture and the biosphere
 - collaborative: there should be values collaboration among values-aligned investors, financial institutions and enterprises form multiple sector
 - resilient: the system must balance efficiency with structural resiliency at the system level through decentralisation, diversity and buffers with institutions and the money system.

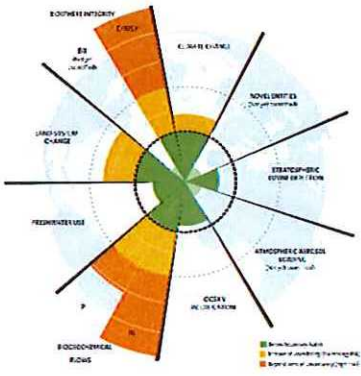

	Economic systems should be built on patterns and principles that mirror those found in healthy, resilient natural systems.
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Topic: Applications of this new thinking to key systems and policy	
<p>The EU's approach to innovation: Market Shaping (Paper by the Institute for Public Purpose and Innovation including Mariana Mazzucato)</p> 	<ol style="list-style-type: none"> 1. Policy makers are increasingly embracing the idea of using industrial and innovation policy to tackle 'grand challenges' facing society. 2. To do so requires a fundamental reappraisal of the role of the public sector that goes beyond the traditional 'market failure' framework derived from neoclassical economics to a 'market co-creating' and 'market- shaping' role. Such policies may have significant spillover effects and involve structural changes to the economy. 3. This approach argues that market-shaping, 'mission-oriented' policies should be evaluated on three levels: enhancing user experience and engagement; expanding technological frontiers; and broader macroeconomic multiplier effects. To do this, governments need to embrace and experiment with new tools and methodologies focused on user needs and dynamic - rather than allocative - efficiency. 4. These include techniques from service design research that focuses on user experience and co-creation practice; and strands of evolutionary economics that focus on shifting and shaping technology and innovation frontiers and managing complex systems under conditions of uncertainty.
<p>The EAT-Lancet's approach to food systems</p> 	<ol style="list-style-type: none"> 1. In January 2019, two major reports calling for transformative change in food systems were released: <ul style="list-style-type: none"> - The EAT Lancet Commission report on <i>Food in the Anthropocene</i> identified the dietary patterns needed for human health which fall within planetary boundaries - The Lancet Commission on Obesity report described <i>The Global Syndemic</i> of obesity, undernutrition and climate change and its common systemic drivers as the paramount challenge of the 21st Century for humans, the environment and the planet. 2. The reports called for major transformations of food systems, rather than tweaking the margins of business as usual, with a focus on double-duty and triple-duty actions which, by addressing the systemic drivers of the problems, create multiple-win outcomes. <p>Overarching concept</p> <ol style="list-style-type: none"> 3. A Great Intergenerational Food Transformation (GIFT) is needed to re-purpose and re-orient food systems so that they promote human health and wellbeing, environmental health and wellbeing, social equity, and economic prosperity. 4. Achieving the GIFT within a generation (ie by 2050) will be this generation's legacy to the current and future generations of children. The current trajectory is a legacy of a planet wrecked by climate change and full of malnourished populations.





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<p>The EU's approach to Sustainable Finance</p> 	<ol style="list-style-type: none"> 1. The European Union is taking a whole-of-system approach, investigating (and now implementing) how to integrate sustainability into its financial system (particularly the policy framework) in order to mobilise finance for sustainable growth. 2. Sustainable finance is the provision of finance to investments taking into account environmental, social and governance considerations. 3. Sustainable finance includes a strong green finance component that aims to support economic growth while: <ul style="list-style-type: none"> - reducing pressures on the environment - addressing emissions and tackling pollution - minimising waste and improving efficiency in the use of natural resources. 4. It also encompasses increasing awareness of and transparency on: <ul style="list-style-type: none"> - the risks which may have an impact on the sustainability of the financial system - the need for financial and corporate actors to mitigate those risks through appropriate governance.
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<p>Topic: Environmental Assessments</p>	
<p>Millennium Ecosystem Assessment 2001-2005</p> 	<ol style="list-style-type: none"> 1. UNEP coordinate some 1360 experts from 95 countries to assess the consequences of ecosystem change for human well-being and the scientific basis for action needed to enhance the conservation and sustainable use of those systems and their contribution to human well-being. 2. Over the past 50 years, human activity has resulted in a substantial and largely irreversible loss in the diversity of life on Earth. 3. The changes that have been made to ecosystems have contributed to substantial net gains in human well-being and economic development, but these gains have been achieved at growing costs in the form of the degradation of many ecosystem services, increased risks of nonlinear changes, and the exacerbation of poverty for some groups of people. 4. Emergent findings identify excessive nutrient loading of ecosystems as one of the major drivers today of ecosystem change. Although well studied, the issue is not yet receiving significant policy attention in many countries or internationally. 5. The challenge of reversing the degradation of ecosystem while meeting increasing demands for services will involve significant changes in policies, institutions and practices that are not currently under way.
<p>Planetary Boundaries, Stockholm Resilience Centre, 2015</p>	<ol style="list-style-type: none"> 1. In 2009 Stockholm Resilience Centre led a group of internationally renowned scientists to identify nine processes that regulate the stability and resilience of the Earth system. 2. These are: ocean acidification, biochemical flows (nitrogen, phosphorus), freshwater use, land-system change, biosphere integrity (biodiversity loss), climate change, novel entities (heavy metal compounds, synthetic organic pollutants), stratospheric

 <p>The diagram shows nine Earth system processes arranged in a circle around a central green area representing the 'Safe Operating Space'. Processes are color-coded: green for within the boundary, yellow for approaching, and orange/red for beyond. Processes shown to be beyond the boundary include: Biosphere Integrity, Land-System Change, and Stratospheric Ozone Depletion. Processes shown to be approaching the boundary include: Ocean Acidification, Atmospheric Aerosol Loading, and Freshwater Use. Processes shown to be within the boundary include: Climate Change, Chemical Pollution, Air Quality, and Terrestrial Ecosystem Change.</p>	<p>ozone depletion, and atmospheric aerosol loading. Two of the PBs – climate change and biosphere integrity – are recognised as of core importance to the Earth system.</p> <ol style="list-style-type: none"> Quantitative planetary boundaries were proposed within which humanity can continue to develop (a safe operating space). Crossing these boundaries increases the risk of generating large scale abrupt or irreversible environmental changes. Updated in 2015, the science-based analysis indicates that four of the processes (climate change, biosphere integrity, biogeochemical flows and land-system change) exceed the proposed PB. Two processes have yet to PB established. The PBs can be translated to a national scale. MfE is working with the Stockholm Resilience Centre and partners to downscale the PBs to New Zealand.
<p>UNEP Global Environment Outlook, 2019</p>  <p>The cover of the report features a vibrant illustration of a coastal landscape with mountains, a bay with boats, and various wildlife. The text on the cover includes 'GEO-6', 'HEALTHY PLANET HEALTHY PEOPLE', and the UN logo.</p>	<ol style="list-style-type: none"> Planetary health is deteriorating at unprecedented rates. The world is not on track to achieve the environmental dimension of the Sustainable Development Goals, and other internationally agreed environmental goals, by 2030 and is not on track to deliver long-term sustainability by 2050. Biodiversity loss from land use change, and habitat fragmentation, overexploitation and illegal wildlife trade, invasive species, pollution and climate change is driving a mass extinction of species, including critical ecosystem service providers such as pollinators. Land degradation is an increasing threat for human well-being and ecosystems. Land degradation hotspots cover approximately 29 per cent of global land, where 3.2 billion people reside. Antibiotic-resistant infections are projected to become a main cause of death worldwide by 2050. Greater efforts should be made to control mismanagement of antibacterial drugs at source, in human and agricultural use. Current environmental policy alone is not enough to address these challenges. Food, energy and transport systems as well as urban planning and chemical production, are primary examples of systems of production and consumption needing innovative, effective and integrated policies. Sustainable development will be more likely to be achieved through new modes of governance and adaptive management that give greater priority to the environmental dimension of the Sustainable Development Goals.

<p>Topic: Scenarios and Modelling exercises sketching out the scale & type of change required</p>	
<p>Achieving the Sustainable Development Goals within planetary boundaries, 2018</p>	<ol style="list-style-type: none"> A team from BI Norwegian Business School, Potsdam Institute for Climate Impact Research and the Stockholm Centre built a simulation model to clarify whether achieving all the 17 SDGs within the 9 planetary boundaries is a feasible ambition. Three scenarios were analysed – business as usual; accelerated economic growth; and a concerted strong focus on achieving the

 	<p>SDGs – to investigate the degree of success, and the resulting human pressures against global biophysical constraints.</p> <ol style="list-style-type: none"> World society does not achieve all 17 SDGs within 9 main PBs by 2030, or even by 2050, in any of the scenarios analysed. The global safety margin relative to the 9 PBs continues to decline. Tougher measures are needed to achieve wellbeing for all and sustainability.
<p>Shaping the Future of Global Food Systems, World Economic Forum, 2017</p> 	<ol style="list-style-type: none"> Considers four scenarios for the future of global food systems – Survival of the Richest, Unchecked Consumption, Open-source Sustainability (strong market connectivity and resource-efficient consumption) or Local is the New Global. Early signs of all four scenarios are present in our world today, and any of them could become a reality by 2030. Together, the scenarios demonstrate that today's food systems require a fundamental transformation to meet human needs within planetary boundaries in 2030. Insights include that: <ul style="list-style-type: none"> - consumption will make or break global health / sustainability - putting nutritious and sustainable food on every plate requires a fundamental redesign of food production systems - climate change will affect all future scenarios - innovations can revolutionize food systems but will introduce new challenges - new 'smart policies' are needed to redesign food systems.
<p>Green Growth, UNEP, 2011</p> 	<ol style="list-style-type: none"> The United Nations Environment Programme report on the decoupling of natural resource use and environmental impacts from economic growth applied three scenarios: <ul style="list-style-type: none"> - business as usual (leading to a tripling of global annual resource extraction by 2050) - moderate contraction and convergence (requiring industrialized countries to reduce their per capita resource consumption by half the rate for the year 2000) - tough contraction and convergence (aimed at keeping global resource extraction at its current levels). None of these scenarios will lead to actual global reductions in resource use, but all indicate that substantial reductions in the resource requirements of economic activities will be necessary if the growing world population can expect to live under conditions of sustainable resource management. Technological innovations have often led to greater resource consumption. Improvements in resource efficiency drive down prices and cause demand to rise. Suggests innovations in resource extraction and use systems will be required.

Topic: New Zealand specific resource management reports

Environmental Performance Review, OECD, 2017



1. Recommendations to help New Zealand make further progress towards its environmental policy objectives and international commitments:
 - highlights the need for a long-term vision for the transition towards a low-carbon, greener economy
 - argues that New Zealand's natural resource management system could be made more effective, through providing greater direction at a national level, and aligning the RMA with relevant legislation.
 - New Zealand needs to continue to build capacity of Māori communities to realise their consultation rights
 - central government needs to provide support to local authorities and communities implementing freshwater reform
 - economic instruments would help manage water quality and quantity more effectively
 - New Zealand's green and liveable cities could be improved by developing urban public transport systems, along with more systematic use of user- and beneficiary-based instruments (e.g. road pricing and development charges) to help local government finance investment in infrastructure and services, while encouraging more efficient use of resources and land, and containing urban sprawl.
 - governance for sustainable urban development is challenging – institutional fragmentation, a complex urban planning system, inconsistent local practices, policy misalignment and restrictive land-use regulations frustrate urban growth and environmental objectives. A model based on Auckland's governance and spatial planning arrangements could be more widely applied.

Better Urban Planning, Productivity Commission, 2017



1. In 2015 the Government tasked the Productivity Commission to review New Zealand's urban planning system.
2. The report identified that a future planning system should:
 - have a clearer distinction between the built and natural environments
 - develop new mechanisms and models to overcome growth challenges (i.e. market mechanisms like creating competitive land markets)
 - allow for more responsive infrastructure provision – enabled by cooperation between central and local government (including cost sharing)
 - better planning and plans through spatial planning and independent hearings panels
 - improvements in consultation, recognition and protection of Māori interests, and planning capability and culture
 - improved system stewardship by central government including providing clear direction.

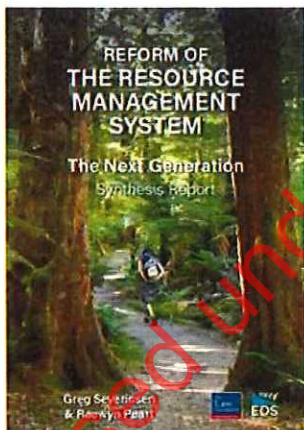
Low Emissions Economy, Productivity Commission, 2018

1. In 2017 the Government asked the Commission to identify options for how New Zealand can reduce its domestic greenhouse gas emissions through a transition to a low-



- emissions economy, while at the same time continuing to grow income and wellbeing.
2. The report identified three particular shifts must happen for New Zealand to achieve its low-emissions goals:
 - stop burning fossil fuels and switch to using electricity and other low-emission energy sources
 - undertake substantial levels of afforestation to offset New Zealand's remaining emissions
 - make changes to the structure and methods of agricultural production, including diversification of land use towards more horticulture and cropping, and greater adoption of low-emissions practices on farms.
 3. The report also recommends a suite of other policy reforms to help drive the transition to achieve the above shifts at the right scale and pace, including:
 - establish a comprehensive and durable climate change policy framework, including separate legislated long-term targets for short- and long-lived gases; a series of successive emissions budgets; and an independent Climate Change Commission
 - reform the New Zealand Emissions Trading Scheme and apply some form of emissions pricing to methane from agriculture and waste
 - devote significantly more resources to low-emissions innovation and technology to account for the long timeframes involved in bringing innovative ideas to fruition.

Review of the Resource Management System, EDS, 2018



1. EDS is undertaking a first principles review of New Zealand's resource management system. In working papers published to date EDS has found that a future system should:
 - be more proactive and directive with regard to land use change to address pressure on natural and physical resources
 - set environmental bottom lines for all domains
 - manage trade-offs above bottom lines – with a distinction to be made between what is an objective to be balanced against other objectives versus what is a bottom line (for example questions about urban amenity and providing infrastructure would be objectives for trading off). This would establish a hierarchy in the system
 - pursue positive outcomes and provide public goods – this could occur through spatial planning at the national and regional level
 - protect and promote Māori interests – including grappling with questions around partnership and governance
 - resolve disputes
 - allocate rights to use non-private resources – and influencing decisions about rights to use resources by setting allocation principles and directing resources to particular outcomes where there is a strong public interest.



To Hon David Parker, Minister for the Environment			Tracking #: 2019-B-05835
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Follow up materials regarding new thinking approaches

Purpose

This paper attaches materials following our discussion about new thinking approaches on 26 June 2019 [2019-B-05611 refers].

Follow up materials

Two attachments are provided as follows:

- **Slide pack** revised to reflect discussions - summarising the exploration of new thinking approaches undertaken by MfE to date.
- **A document** clarifying the different arguments being made in relation to money creation, as discussed.

In relation to our discussion about the 'privatisation of the commons', we note that this issue is considered in the readings we have already provided. We summarise here some of the key points made in the readings relating to this issue:¹

Doughnut economics, Kate Raworth:²

- Kate argues that the commons have been encroached upon by the market and state for centuries, particularly through the enclosure of common land and the division of enterprise into workers and owners. This was facilitated by an economic theory which argued that the commons was doomed to fail and which ignored households. She prescribes a move beyond the market/state distinction towards a four pillar view that also includes the commons and households.

Resilience thinking, Stockholm Resilience Centre (SRC):³

- SRC prescribes polycentric governance as a means to more effectively govern the commons.

Policy and appraisal for missions, market shaping and public purpose, Institute for Public Purpose and Innovation (UCL):⁴

- UCL argues for a rethink of 'value' as something that is *collectively* generated by a range of stakeholders, including the private sector, the state and civil society. This differs from the more mainstream view that value is exclusively created by private enterprise.

¹ Note that all three of these readings draw heavily on Elinor Ostrom's body of work.

² At page 82-84, 178-182.

³ At page 16. Note that Tim Jackson makes a similar argument at page 190 and 219 of *Prosperity without growth*.

⁴ At page 10. This draws heavily on Ryan-Collins, Lloyd, & Macfarlane (2017), *Rethinking the Economics of Land*.

- This approach draws a distinction between productive *profits* and economic *rents* (referred to as unearned income deriving from 'arbitrary' control over resources). Under this approach, the primary role of taxation is not to internalise externalities, but to tax away rents accruing from the monopolistic ownership, particularly of land. This view of rents is that they do not accrue from market 'imperfections', but from the inherent imbalances in economic and political power.

Next steps

We have been carrying out this work as part of our stewardship role. We see this new thinking as important, as it has potential to help achieve behaviour change. We have an immediate audience, the Resource Management Act expert advisory group, with whom we will share the slides. We are also planning to:

- engage with other agencies on the general topic of new economic thinking;
- debate this further internally, including exploring the extent to which we are already applying various perspectives on economics internally; and
- look for opportunities to further embed some of this thinking internally.

We are happy to engage with you further on this matter as desired.

Signature



Justin Strang
Acting Director, Natural and Build Systems

25/7/19.

Date

Hon David Parker

Minister for the Environment

Date

Ministry for the Environment contacts

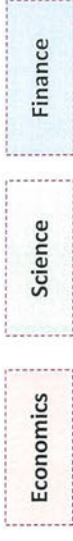
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Contents

1. How we got here: origins of the policy thinking
2. Our distillation of the key ideas from the new thinking
3. Possible implications for policy

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1. An evolution in policy thinking: how we got here



Early history...

Hayek-Keynes Debate

- Following the great depression, the roots of current economic ideas lie in the debate between Keynes and Hayek from 1931-1971.



Neoliberalism (political application)

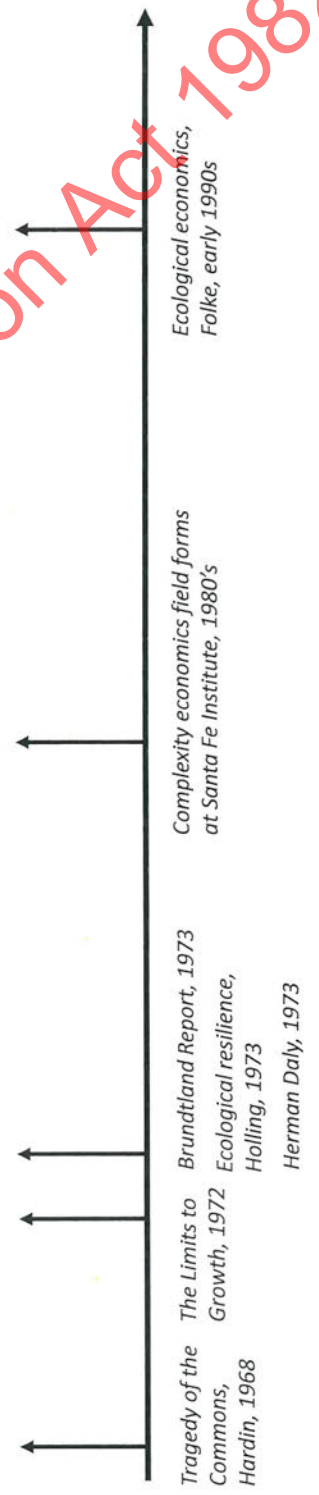
- Ideas of laissez-faire economic liberalism and free market capitalism came to dominate in the 1980's in particular.
- Focus on unleashing competition and allowing people to maximise self-interest

Neoclassical economics (underlying analysis)

- Neoclassical economics becomes the dominant school of thought. Key assumptions include:
 - Rational man / rational expectations
 - Efficient markets / equilibrium analysis
- Focus becomes maximising efficiency
- Environmental, climate and social issues are seen as externalities
- As an environmental Ministry, our role is to 'solve' externalities

Policy thinking becomes law

- Reflecting this shift towards neoclassical economics, a number of new pieces of legislation are passed in the late 80's and into the 90's including the Environment Act, Reserve Bank Act, Companies Act, Resource Management Act, Fisheries Act and Public Finance Act.



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1. An evolution in policy thinking: how we got here



...through to the present day

2000's

2010's

Now

Some see the typical approach to policy as fit for purpose and some are arguing for new approaches

Global financial crisis

- Some countries suffered serious consequences due to the GFC.
- This forced a significant shift in thinking, with many starting to rethink economics & finance.

New thinking on finance

- The financial system has a key role to play as part of the transition towards a more sustainable economy.
- Environmental and social considerations need to be mainstreamed into the system.

New integrated approaches to policy

- Global best practice is now exploring and drawing on this thinking, e.g. the OECD
- We are seeing new policy approaches and a shifting role for the state, the market and finance
- We are seeing an uptake in new tools and models (e.g. agent-based models)
- We are seeing greater utilisation of behavioural science
- Increasing acceptance of the need to live within environmental limits / planetary boundaries
- Need for a new narrative and shifting the dominant paradigm

Rethinking economics

- Multiple heterodox economics perspectives gain in popularity including complexity, ecological, evolutionary, behavioural, institutional, Post-Keynesian, among others.

Systems science and complexity science

- Advances in technology
- Resilience thinking
- Earth systems science
- Climate / environmental science

(all with origins much earlier than the 2000's)

Heterodox economics was already inspired by science, systems and complexity theory. Following the crisis these ideas become much more broadly sought out and utilised. They are also being further enabled by advances in technology.

Millennium Ecosystem Assessment, UNEP, 2005

Planetary Boundaries, Rockstrom, 2009

Sustainable Development Goals and Paris Agreement 2015

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1. An evolution in policy thinking: how we got here

1. The dominant economic paradigm

Moral philosophy
Maximising
utilitarianism



Behavioural theory
Homo economicus
(rational man)



Economic theory
Neoclassical
economics



**Economic &
political ideology**
Neoliberalism



Economic system
Modern, globalised
capitalism



Note – This slide illustrates the different layers of the paradigm in which policymakers operate within. When we think of economics, we cannot do so in isolation.

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2. Distillation of the key ideas from the new thinking

1. Doughnut economics
2. Resilience thinking
3. Prosperity without growth
4. Circular economy
5. Complexity economics
6. Regenerative capitalism

Economic system
Regenerative / distributive / circular
/ resilient systems / capitalism

**Economic &
political ideology**
Prosperity /
wellbeing

Economic theory
New / pluralistic
economic thinking

**Behavioural
theory**
Homo sapiens

Moral philosophy
People can flourish within
a 'safe and just operating
space for humanity'



Note - This slide illustrates what this new thinking is arguing for, i.e. a shift at all layers of the economic paradigm we operate in. There is no complete, one-size-fits all approach, and the new thinking has focused on different layers to differing degrees. This does not reflect the Government's or Ministry's position in any way.






2. What is different and what is similar?

Reading	Positive or normative	Focus of the book	Key distinguishing ideas	Key common ideas
1. Doughnut economics	Normative	Arguing that the 21 st century challenge is to shift the economy within the doughnut. This requires new economic thinking more in line with complex adaptive systems thinking, recognising earth systems science	Has had mainstream appeal, particularly the critique of neoclassical economics and visual 'doughnut'. Thinking is being applied broadly to: economies, supply chains, regions, cities and business models	→ Redefine sustainability to recognise environmental limits (ie planetary boundaries) and the need for resilience
2. Resilience thinking	Positive	Building adaptive capacity in socio-ecological systems	Stresses importance of polycentric governance* & adaptive learning. Focus on communities & ecosystems (not economy)	→ Foster complex adaptive systems thinking
3. Regenerative capitalism	Normative	Focus on rethinking the economic paradigm and goals of society by incorporating concepts from nature	Primarily a political economy perspective, focusing on what goals and the purpose of the economy should be	→ Deliver equity and wellbeing
4. Prosperity without growth		Reframing the debate on enterprise, work, investment and money in order to move away from a growth-based economy and deliver prosperity	Macro-economic focus draws more on post-Keynesian and modern monetary theory	→ Treat people as socially adaptable
5. Circular economy		Practically redesigning products and systems to design out waste and pollution, providing the possibility of resource use regenerating nature	Focused on resource use more-so than whole economies. Ties in ideas from design in an applied way. Has been popular among business as a new approach to waste	→ Evidence suggests transformational change to systems is necessary
6. Complexity economics	Positive	Seeks to build a coherent theoretical framework of economic (human and market) function, with a strong focus on technology and innovation	Provides alternative framework for understanding the economy. Use policy experiments and scale up effective ones, build adaptable laws and institutions and use complex systems analysis tools	

***Positive** – what is / factual / objective. **Normative** – what ought to be / opinion / subjective. **Polycentric governance** – a system in which multiple governing bodies interact to make and enforce rules within a specific policy arena or location.

3. What could the new thinking mean for policy?

We could evolve the underlying architecture of the policy-making toolkit in line with the following:

	Current policy approach	New thinking
Approach	Market failure approach 	Market shaping approach (as part of broader whole-system approaches)
Analysis	Static cost-benefit analysis as part of regulatory impact analysis 	Integrated complex systems analysis - using interdisciplinary tools e.g. agent-based models
Policies	Focus on levers of prices, regulations and taxes 	Focus goes beyond prices, regulations and taxes to also include narratives, structural dynamics. Utilise more of a pilot/scale-up model
Assumptions	Assume humans are rational, markets are in equilibrium, perfect information 	Humans are socially adaptable, markets are reflexive, information is imperfect
Thinking	Reductionist, mechanistic, linear 	Holistic / integrated, complex, adaptive

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3. Examples: Where theory has moved into practice

- Systems approaches applied to policy problems:
 - E.g. The EU's approach to sustainable finance which looks to transform the whole financial system towards one with a new purpose, incentives, narrative and policies. They are also using the market shaping / mission-based approach to innovation policy
 - E.g. The EAT Lancet's food systems approach that integrates wellbeing and sustainable food systems into the same conversation (i.e. incorporating planetary boundaries, public health outcomes, biodiversity etc)
- Circular economy applied to economies, cities and businesses
 - E.g. EU Circular Economy Action Plan 2015 – spans product design, consumption, waste management, markets for secondary raw materials and water reuse, investment and innovation (as at March 2019 all 54 steps fully delivered or in process of delivery)
 - E.g. London, Amsterdam, Glasgow, Brussels are developing a circular economy approach
 - E.g. British Standards Institution BSI 8001:2017 – circular economy guidelines for business
- Doughnut economics applied to urban planning
 - E.g. Norra Kymlinge (north of Stockholm) – 2017 project to design a Doughnut district, for minimum 10 000 people living and working in the area. Based on the idea of living within environmental limits
- Planetary boundaries applied to a country
 - E.g. Sweden has downscaled the planetary boundaries, enables conversation about 16 national environmental quality objectives and science-based targets. Exploring ecological compensation as a policy instrument.
- Complex systems analysis applied to whole economies
 - E.g. The EU is using agent-based modelling to gain insights on the whole-of-economy and mainstreaming sustainability into the financial system.

Clarifying the different arguments being made in relation to money creation

Purpose: The purpose of this document is to clarify the arguments made domestically about money¹ creation that were raised in our conversation on 26 June, and to compare those arguments with the arguments made in the new economic thinking and by central banks globally. We do not seek to make recommendations on this issue, but rather to clarify the nature of the debate.

Summary of the arguments being made in relation to money creation

In this section we summarise the relevant arguments being made in relation to money creation.

Attachment 1 contains the statements we have used as evidence of the 'arguments' being made.

		<i>Parties</i>		
		<i>Domestic arguments</i>	<i>Arguments made in the new thinking²</i>	<i>Five other central banks globally³</i>
Argument	<i>Private banks <u>do not</u> create money, they lend out existing deposits, i.e. money already in existence</i>	✓ Don Brash, Graeme Wheeler and the Reserve Bank of New Zealand (RBNZ)	-	-
	<i>Private banks <u>do</u> create money when they lend, i.e. the money they loan is not already in existence in the form of deposits</i>	✓ RBNZ, Positive Money NZ, Shamubeel Eaqub, Michael Reddell, Bryan Gould, Bernard Hickey, Raf Manji and Brian Gaynor	✓ Kate Raworth, Tim Jackson and John Fullerton	✓ The Bank of England, the Deutsche Bundesbank, the Bank of Norway, the European Central Bank and the Reserve Bank of Australia

Why the issue of money creation is relevant for environmental issues

Tim Jackson⁴ and Kate Raworth⁵ argue private banks create ~97% of money in the UK, and therefore they are effectively controlling the directionality of most new investment in the economy. The authors are critical of this directionality, noting that in the lead-up to the 2008 financial crisis, 75% of that money was used to buy stocks and houses, with only 13% going to small business engaged in productive enterprise. They go on to argue that the banks' profit motive and short term focus can 'crowd out' sustainable investments (i.e. depending on the definition of sustainable, those that do not come with, or come with much lower, negative consequences for the environment or society). This leads to a lack of investments that are sustainable in the long term, and results in investment being predominantly directed towards existing assets and speculation (also inflating asset prices).

¹ Please note that we use 'money' to also refer to 'credit', i.e. loans advanced to companies and households by commercial banks. This differs from physical money which refers only to notes and coins.

² Note that Resilience thinking, Circular economy and Complexity economics do not consider this issue.

³ The Central Bank of Iceland has also welcomed debate on the issue.

⁴ Prosperity without growth, at page 154.

⁵ Doughnut economics, at page 182.

Policies proposed by those arguing that banks do create money

In this section we summarise the policy proposals being made by those who argue that banks do create money. These have been ranked from more accepted to less well accepted.

		<i>Parties</i>		
		<i>Domestic arguments</i>	<i>Arguments made in the new thinking</i>	<i>Others making this argument globally⁶</i>
<i>Typically more well accepted</i> ↑ ----- ↓	Review / research the role of money creation in society	-	-	✓ UK (2015), Netherlands (2016)
	Guide / control the directionality of money creation (through regulation or otherwise). For example it could be directed to 'sustainable' investments or directed away from speculative towards 'productive' investments	-	-	✓ China, East Asia, France (until the 1980's), Richard Werner
	Modify the existing money creation system by returning a greater degree of control over the money supply to the government	-	✓ Tim Jackson	✓ IMF, Adair Turner. Earlier supporters include Irving Fisher, Milton Friedman
<i>Policy / argument</i> ----- ↓	Remove banks' power to create money and implement either: a) A 'sovereign money' system (governments do not 'raise' money for public spending, they spend directly into the economy subject to the caveat that it was non-inflationary) b) 100% reserve system (full reserve banking) c) A hybrid of the two	✓ Positive Money NZ	✓ Kate Raworth, Tim Jackson	✓ A referendum on this was held in Switzerland (but not passed). Other proposals have been made and debated in Parliaments in the UK (2010), USA, Iceland and Netherlands (2015). Again these were they have not been successful. Earlier supporters include Herman Daly
<i>Typically less well accepted</i> ↓	Rethink the design of money fundamentally (i.e. move beyond the issue of who creates money, rethinking the nature and design of money)	-	✓ Kate Raworth	-

⁶ See KPMG's 2016 report 'Money Issuance' for further information on the overseas initiatives referred to in this column. <https://assets.kpmg/content/dam/kpmg/is/pdf/2016/09/KPMG-MoneyIssuance-2016.pdf>

Appendix 1: Statements about money creation in the economy

Statements made domestically - private banks do not create money, they lend out existing deposits⁷

- Don Brash has argued in a NZ Herald article⁸ that:
 - o 'an individual bank cannot create money by "the stroke of a pen..."'
- Graeme Wheeler appears to have shared a similar view:⁹
 - o 'New Zealand's banking system relies on offshore wholesale funding markets as a result of low levels of domestic savings'.
- RBNZ's official view on this matter is unclear. A 2019 Issues Paper authored by RBNZ¹⁰ appears to share Graeme Wheeler's view:
 - o 'Banks take household and business deposits and lend them to borrowers...'

Statements made domestically – private banks do create money when they lend

- In contrast to the above position, the RBNZ has made earlier statements in 2008 publications that could arguably suggest a different view:
 - o 'In a modern economy, money can be created either by the central bank (the Reserve Bank, in New Zealand's case) or by private sector institutions – in practice, mostly registered banks.'¹¹
 - o 'By far the largest share of money – 80 percent or more, depending on the measure – is created by private sector institutions - in practice, mostly registered banks.'¹²
- Shamubeel Eaqub:¹³
 - o 'The focus of the RBNZ and the next governor – due to be in place in March 2018 – must be on banking regulation and taking away their largely unfettered control over credit and money creation.'
- Michael Reddell:¹⁴
 - o 'It is suggested that there is something very wrong about the fact that most of our money supply is bank-created. Clearly, I disagree. Note that I'm not disagreeing that "money" is bank-created: a bank loan does typically leads to a new bank deposit, and those bank deposits do make up the bulk of our statistical measures of the "money supply".'
- Bryan Gould:¹⁵ (who debated the issue with Don Brash)
 - o [references the 2014 Bank of England Article below]
- Local commentators Bernard Hickey¹⁶, Raf Manji¹⁷ and Brian Gaynor.¹⁸

⁷ Note that Don Brash is the only one to state positively that banks do not create money. The others state banks lend out existing deposits, which only infers they do not create money when they lend.

⁸ https://www.nzherald.co.nz/opinion/news/article.cfm?c_id=466&objectid=11849995.

⁹ <https://www.rbnz.govt.nz/financial-stability/financial-stability-report/fsr-november-2016>

¹⁰ <https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Research/future-of-cash-issues-paper.pdf?revision=8c349571-f835-4d84-a6a5-4c435ad03b00&la=en> at page 26.

¹¹ www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Bulletins/2008/2008mar71-1lawrence.pdf

¹² RBNZ's bulletin Vol. 71, No. 1, March 2008.

¹³ <https://www.stuff.co.nz/business/opinion-analysis/89275957/shamubeel-eaqub-a-balancing-act-for-banks>

¹⁴ <https://croakingcassandra.com/2017/04/29/brash-vs-gould-vs-brash/> and

<https://www.rbnz.govt.nz/research-and-publications/speeches/2001/speech2001-08-27>

¹⁵ https://www.nzherald.co.nz/opinion/news/article.cfm?c_id=466&objectid=11845670

¹⁶ <https://www.youtube.com/watch?v=X04txP2-GA0>

¹⁷ <https://publicaddress.net/system/profile?id=1781>

¹⁸ https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12202119

Statements made in the new thinking – private banks do create money when they lend

- Kate Raworth, Doughnut economics:¹⁹
 - o 'Far from simply lending out savings, banks magically create money as credit.'
- Tim Jackson, Prosperity without growth:²⁰
 - o 'We tend to think of money as something printed by the central bank more or less under the control of the government... But the reality is that when a bank agrees to create a loan to a business or a household it simply enters the amount as a loan on the asset side of its balance sheet and the same amount as a deposit on the liability side of its balance sheet.'
- John Fullerton, Regenerative capitalism:²¹
 - o 'In Western developed economies, this credit creation function is generally carried out by the private banking sector. Subject to various regulation and limitations, banks are able to create credit "out of thin air" when they deem the purpose worthy and "bankable".'

Statements made by five other central banks - private banks do create money when they lend

- The Bank of England:
 - o (In 2014)²² '...the majority of money in the modern economy is created by commercial banks making loans. Money creation in practice differs from some popular misconceptions — banks do not act simply as intermediaries...'
 - o (In 2019)²³ states '...banks create their own funding in the act of lending.'
- The Deutsche Bundesbank,²⁴ the central bank of the Federal Republic of Germany (in 2017):
 - o '...banks can create book money just by making an accounting entry... excess central bank reserves are not a necessary precondition for a bank to grant credit...'
- The Bank of Norway²⁵ (in 2017):
 - o 'When you borrow from a bank, the bank credits your bank account. The deposit – the money – is created by the bank the moment it issues the loan. The bank does not transfer the money from someone else's bank account or from a vault full of money. The money lent to you by the bank has been created by the bank itself – out of nothing: fiat – let it become.'
- European Central Bank²⁶ (in 2017):
 - o 'Commercial banks can also create so-called "inside" money, i.e. bank deposits – this happens every time they issue a new loan.'
- The Reserve Bank of Australia²⁷ (in 2018):
 - o '...the loaned funds will tend to find their way into a deposit somewhere in the banking system. This process adds to the supply of money.'

¹⁹ Doughnut economics, at page 86.

²⁰ Prosperity without growth, at page 154.

²¹ The money creation process is not mentioned in the John Fullerton reading provided. But he does cover it here, for example <https://bsahely.com/2018/11/17/finance-for-a-regenerative-world-john-fullerton/>

²² <https://www.bankofengland.co.uk/quarterly-bulletin/2014/q1/money-creation-in-the-modern-economy>

²³ <https://www.bankofengland.co.uk/working-paper/2018/banks-are-not-intermediaries-of-loanable-funds-facts-theory-and-evidence>

²⁴ <https://www.bundesbank.de/en/tasks/topics/how-money-is-created-667392>

²⁵ <https://www.norges-bank.no/en/news-events/news-publications/Speeches/2017/2017-04-25-dnva/>

²⁶ https://www.ecb.europa.eu/explainers/tell-me-more/html/what_is_money.en.html

²⁷ <https://www.rba.gov.au/speeches/2018/sp-ag-2018-09-19.html>



To Hon James Shaw, Minister for Climate Change and Associate Minister of Finance CC: Hon Grant Robertson, Minister of Finance CC: Hon David Parker, Minister for the Environment and Associate Minister of Finance CC: Hon Kris Faafoi, Minister of Commerce and Consumer Affairs CC: the Department of Prime Minister and Cabinet			Tracking #: 2019-B-06007
Security Level	IN-CONFIDENCE	Number of Attachments	Nil
Date Submitted:	19 September 2019	Response needed by:	N/A
MfE Priority:	Medium	Action Sought:	None

Update on key upcoming milestones on sustainable finance

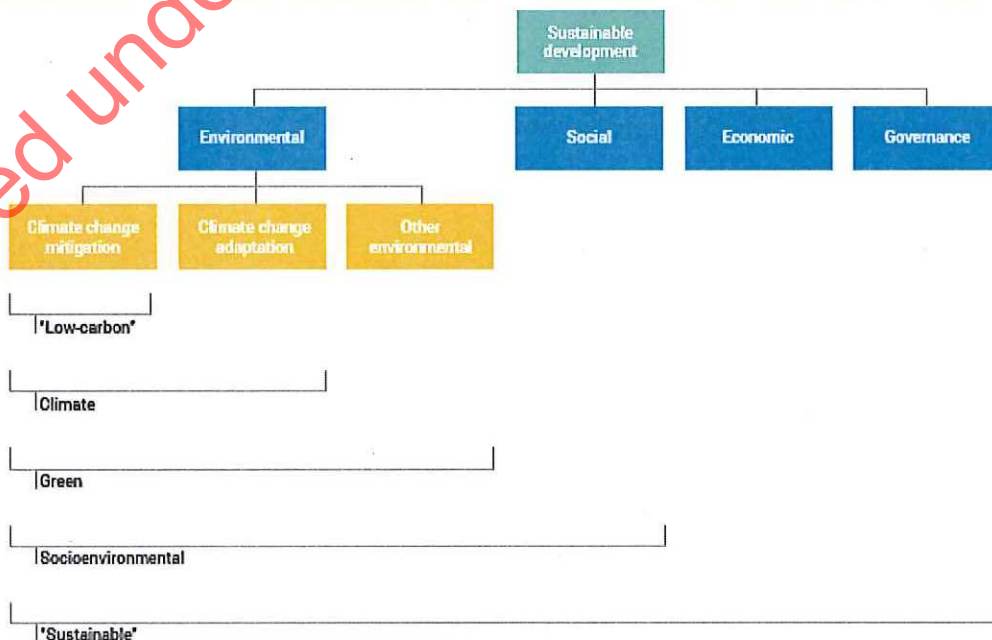
Key messages

- This document updates you on key upcoming milestones on sustainable finance taking place over the next 6-9 months, and recommends next steps.
- This update also summarises similar work happening in other jurisdictions, including the themes of sustainable finance roadmaps underway in the United Kingdom (UK), Canada, Norway, the European Union (EU) and China.

Introduction: What is sustainable finance?

1. Sustainable finance was initially conceived around 2008, with a focus on resilience to financial crises. The definition has significantly evolved since that time as financial institutions, corporations, investors, regulators, Governments and civil society have increasingly come to recognise the fundamental importance of finance for the success of efforts towards a sustainable economy.
2. Now, a 'sustainable financial system' has a more transformative meaning – that of a financial system with a clear purpose to serve the transition to a low-emissions, sustainable, just and inclusive economy and to embed sustainability into decision-making.

Figure 1 – A simple schema for understanding sustainable, green & climate finance



3. Throughout this document we generally use sustainable finance as a shorthand for climate and green finance.¹

Context

The domestic context for sustainable finance

4. We have outlined a high level map of the current state of play on sustainable finance in **Appendix 1**, including the progress that has been made already, the projects that agencies are doing now, and what agencies are not yet doing.
5. A number of events and milestones on sustainable finance are upcoming in the remainder of 2019, and early 2020. These have been summarised in **Appendix 2**.

The international context for sustainable finance

6. Sustainable finance has become much more prevalent across a wide range of countries over the past 1-3 years.
7. Spurred by the early work of the European Union's High Level Expert Group and China's work on a Green Financial System, many other countries are now following a national 'roadmap' process, with a focus on how to mainstream sustainability into the financial system.² This has shifted the focus from piecemeal initiatives to broader and more ambitious national strategies.
8. Most sustainable finance roadmaps aim to support their real economies to meet the Paris Agreement (in particular, Article 2(1)(c)³) and Sustainable Development Goals, including through ensuring that the economic opportunities are realised. **Appendix 3** provides a summary of some of the key themes from some of these international sustainable finance 'roadmaps' (i.e. the most common recommendations being made).
9. This international context is important due to the globalised nature of finance and the importance of ensuring international alignment to facilitate the shifting of capital into sustainable investments and away from unsustainable investments, over the long term.
10. There is also a competitive dynamic to these roadmaps, particularly among European countries who are competing quite strongly to become regional or global 'hubs' for sustainable finance. Other countries and cities have been very attracted by the opportunities of sustainable finance, including increased revenue for financial services firms, increased jobs, knowledge spill-overs and unlocking further investment opportunities.
11. Given that Australia's sustainable finance roadmap process is only slightly behind New Zealand's, and there are other roadmaps underway in Japan, Hong Kong and China, this competitive dynamic may increasingly emerge in Australasia as well.

¹ This image has been adopted from UNEP Inquiry Definitions, Concepts: Background Note 2016.

http://unepinquiry.org/wp-content/uploads/2016/09/1_Definitions_and_Concepts.pdf

² Other international developments include, among others: the UK's Green Finance Task-Force (and a Green Finance strategy by the UK HM Treasury); Canada's Expert Panel on Sustainable Finance; Finance Norway's Roadmap for Green Competitiveness; the Australian Sustainable Finance Initiative; the Green Finance Network Japan; South Africa Sustainable Finance Initiative; France's Finance for Tomorrow Initiative; the Green and Sustainable Finance Cluster Germany; Sustainable Finance Ireland; and Sustainable Finance Hong Kong.

³ Article 2(1)(c) of the Paris Agreement commits parties to: 'Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development.' This goal encompasses all finance flows, transnational and domestic, and creates an expectation upon New Zealand to undertake activities that in the short- and medium-term will redirect climate finance flows toward low emissions and climate-resilient outcomes.

Update on the work of the Aotearoa Circle's Sustainable Finance Forum

12. The key piece of work currently underway on sustainable finance in New Zealand is the work of the Aotearoa Circle's⁴ Sustainable Finance Forum (SFF). The SFF is comprised of a leadership group⁵ and technical working group, with Government observers from RBNZ, FMA and the Ministry for the Environment (MfE). The two groups have representation from banks, insurers, investors, academia and corporates.
13. We updated Ministers on the Aotearoa Circle when it was first formed in 2018 under the name of the Sustainable Wealth Initiative [2018-B-04854 refers], and again when it formally launched in October 2018 [2018-B-05011 refers]. This included an update on the SFF project.
14. The vision of the SFF is to see a sustainable financial system which will deliver the following outcomes:
 - a. the financial system plays its role in delivering on the critical sustainability agenda and the transition to a low-emissions, resource efficient, just and inclusive economy
 - b. decision making is well informed, transparent, and facilitates long-term well-being
 - c. the financial system is resilient, robust and agile through the incorporation of social, environmental and economic risks and opportunities
 - d. society has trust and confidence in the financial system, and actors (participants and individuals) understand its purpose and their role and responsibilities within it
 - e. the purpose of the financial system is to serve the long-term wellbeing needs of society, the environment and the real economy and capital is aligned accordingly
15. In line with that vision, the SFF is delivering the following outputs:
 - a. A sustainable finance roadmap for New Zealand. Specifically, this includes:
 - i. an interim report that will be released on 31 October. This report will explore the drivers and barriers and propose focus areas and potential solutions. We understand that Ministers will be invited to the launch event in Auckland, if not already.
 - ii. a final report, based on feedback (including an expectation of further collaboration with Government regarding prioritisation and staging of implementation of the various recommendations). The final report is due for release in the first half of 2020.
 - b. Two 'quick-win' projects that are also underway through the SFF:
 - i. a legal opinion from Chapman Tripp on the following question "To what extent (if at all) are New Zealand company directors, investment managers, professional trustees and other professionals with fiduciary obligations permitted or required to take account of climate change considerations in

⁴ The Aotearoa Circle (previously known as the Sustainable Wealth Initiative) is a unique partnership of public and private sector leaders, unified and committed to the pursuit of sustainable prosperity and reversing the decline of New Zealand's natural resources. It includes 33 chief executives from across the public and private sectors.

⁵ The leadership group includes Matt Whineray (Chief Executive, NZ Super) – co-chair, Karen Silk (General Manager of Commercial, Corporate and Institutional, Westpac NZ) – co-chair, Paul Goodwin (Managing Director, Institutional, ANZ), Bryce Davies (General Manager, Corporate Relations, IAG), Julia Hoare (Director, various, including A2 Milk Company and Auckland International Airport Limited), Mark Peterson (Chief Executive, NZX), Debbie Birch (Director, various, including Chair of Crown Irrigation Investments Limited and Taupo Moana Investments Limited), Sir Stephen Tindall (Founder, the Tindall Foundation and the Warehouse Group), Paul Newfield (Chief Investment Officer, HRL Morrison & Co), Simon Mackenzie (Chief Executive, Vector), Penny Sheerin (Partner, Chapman Tripp) and Jenny Gill (the Tindall Foundation).

their decision-making?". This is intended to educate the market (i.e. directors, investment managers, trustees in particular) on their existing fiduciary obligations and is expected to be launched alongside the interim report on 31 October 2019.⁶

- ii. a working group to progress definitions for sustainable agriculture, building from the EU Technical Expert Group's draft sustainable finance taxonomy. This has a focus on debt products – i.e. sustainability bonds and sustainability-linked loans. The working group includes staff from MPI and MFE, Enviromark, BNZ, Westpac, ANZ, and Climate Bonds Initiative (CBI).

Next steps

16. The SFF's release of the interim report on sustainable finance raises questions about the roles of Government agencies and the governance of work in this area. In particular it highlights the need to:
 - a. form an agreed position across agencies in advance of the release of the SFF's interim report, which likely only needs to be high-level at this stage;
 - b. further consider the governance and roles/responsibilities in relation to sustainable finance, as a highly cross-cutting area of work that sits across a large number of Ministerial portfolios; and
 - c. further consider the value of a Government strategy on sustainable finance.

Risks

17. There are rising expectations of well-coordinated Government action and leadership in this space by the finance sector, civil society and other countries. This risk may be mitigated by more actively sharing with stakeholders the range of work already underway.
18. Whilst agencies have a busy work programme, there are risks with continuing to proceed in the absence of a more strategic approach to sustainable finance, particularly given the importance of managing risks to financial stability, reorienting large amounts of private sector capital and maintaining private sector momentum.
19. Agencies are generally finding it difficult to resource sustainable finance. s 9(2)(f)(iv)

_____ We will continue to monitor this, noting that a number of other countries' roadmaps have pointed to capacity and capability as key issues, so we are not unique in that regard.

Recommendations

21. We recommend that you:
 - a. **Note** that agencies have met at the officials' level and agreed to:

⁶ The Noel Hutley SC opinion in Australia was very influential. Because no equivalent opinion has yet been undertaken in New Zealand, there is arguably a key gap in awareness among directors. Broadly speaking, the Hutley opinion states that, as a matter of Australian law, 'Climate change risks are capable of representing risks of harm to the interests of Australian companies, which would be regarded by a court as being foreseeable... Climate change risks may be relevant to a director's duty of care and diligence... company directors certainly can, and in some cases should be considering the impact on their business of climate change risks... It is conceivable that directors who fail to consider climate change risks now could be found liable for breaching their duty of care and diligence in the future.'

- i. meet monthly on sustainable finance;
 - ii. form an agreed position in advance of the release of the SFF's interim report;
 - iii. further consider the governance and roles/responsibilities in relation to sustainable finance, as a highly cross-cutting area of work that sits across a large number of Ministerial portfolios; and
 - iv. further consider the value of a Government strategy on sustainable finance.
- b. **Note** that officials will provide Ministers with a further brief in advance of the release of the interim report of the SFF on 31 October with an agreed position on the report.
- c. **Note** that the timing of the launch of the SFF interim report on 31 October may allow for you and Minister Faafoi to announce the Government's consultation on a mandatory regime for climate-related financial disclosures.
- d. **Note** that the SFF is seeking additional Government collaboration as part of the formation of that final report on sustainable finance (in the lead-up to mid-2020).

Signature



Justin Strang
 Head of Office of the Chief Executive

19/9/19
 Date

Hon James Shaw
 Minister for Climate Change

Date

Ministry for the Environment contacts

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Principal author	Jack Bisset	0273780593	
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Appendix 1: Mapping the current state of play on sustainable finance: what progress has been made already, what are agencies doing now, and what are agencies not yet doing?

What progress has been made already in embedding sustainable finance?

1. The Government has already made some progress on actions that are aligned with the SFF's vision of a sustainable financial system. However, this has not been part of a strategic direction around the core idea of sustainable finance. Key progress includes, among other things:
 - ✓ establishing New Zealand Green Investment Finance Limited, with a mandate to use public sector capital to leverage private sector capital into investments that reduce emissions;
 - ✓ making progress towards a stable, enduring framework for climate change policy and improving the emissions trading scheme, often cited as a critical enabler;
 - ✓ launching a report on 'the Climate Finance Landscape Aotearoa' by Mōhio Research (in 2018), with a high-level overview of climate finance activity;
 - ✓ issuing a \$600m Wellbeing Bond and a \$500m Sustainability Bond, both with ANZ (via Housing NZ's sustainable finance framework) with use of proceeds allocated to social and affordable housing;
 - ✓ issuing a \$350m green bond (via Auckland Council) as New Zealand's first green bond issuer, with funds going towards electric trains and cycle ways;
 - ✓ responding to the Productivity Commission's final report on *Low Emissions Economy*,⁷ and
 - ✓ establishing a cross-agency officials' sustainable finance working group.
2. The private sector has also made notable progress, including, among other things:
 - ✓ demonstrating international leadership on climate change investment, with NZ Super's climate change strategy being highly regarded internationally;
 - ✓ setting ambitious targets for making capital available for sustainability solutions, such as ANZ's target of \$15b by 2020 and Westpac's target of \$2b by 2020;
 - ✓ developing a \$1.8 green borrowing programme, issued by Contact Energy;
 - ✓ disclosing climate-related financial risks and opportunities in line with the recommendations of the Task-Force on Climate-Related Financial (TCFD), notably Meridian Energy;
 - ✓ exploring new financial instruments such as sustainability-linked loans⁸, which have now been issued by both ANZ and Westpac in Australia; and

⁷ Most relevant within this response was the Government's endorsement of the Task-Force on Climate-Related Financial Disclosures' framework and the statement that 'Transitioning to a low-emissions economy requires a re-orientation of public and private investment away from emissions-intensive activities and towards those that support and catalyse low-emissions energy, land use and other activities. As pointed out by the Commission, the speed and scale of this reorientation is crucial. Avoiding a late, abrupt transition is part of ensuring financial stability and a just, inclusive transition. In light of this, we have already begun redirecting significant funds towards low-emissions investment.'

⁸ Sustainability-linked loans see the proceeds of the loan used for general corporate purposes. However, how much is paid for the loan is determined by the company achieving certain environmental, social and governance targets.

- ✓ creating a platform for comparing the sustainability performance of Kiwisaver funds, recently launched by a new charity, Mindful Money.
3. New Zealand stakeholders have been increasingly involved with local and international collaborations on sustainable finance. A large number of new collaborations have emerged over the last 1-3 years. The most relevant collaborations (not including industry associations) include:
- ✓ the Aotearoa Circle's Sustainable Finance Forum ((SFF) multi-sectoral lead);
 - ✓ the Climate Leaders Coalition, most relevantly their commitment to assess and publicly disclose their climate related risks (private sector lead, with public sector signatories);
 - ✓ the Coalition of Finance Ministers for Climate Action (Treasury lead);
 - ✓ the International Organization of Securities Commissions Sustainable Finance Network (Financial Markets Authority (FMA) lead);
 - ✓ the International Forum of Sovereign Wealth Funds and One Planet Sovereign Wealth Fund Working Group (New Zealand Super Fund (NZ Super) lead);
 - ✓ the United Nations Principles for Responsible Investment (NZ Super lead);
 - ✓ the United Nations Principles for Responsible Banking (Westpac/ANZ lead);
 - ✓ the United Nations Sustainable Stock Exchange Initiative (NZX lead);
 - ✓ the United Nations Environment Programme Sustainable Insurance Forum (RBNZ lead);
 - ✓ the Central Banks and Supervisors Network for Greening the Financial System (Reserve Bank (RBNZ) lead);
 - ✓ the Global Research Alliance for Sustainable Finance and Investment (University of Otago lead);
 - ✓ the Impact Investing National Advisory Board Aotearoa (impact professionals lead);
 - ✓ the Global Steering Group on Impact Investing (impact professionals lead);
 - ✓ the Impact Initiative (Department of Internal Affairs/Ākina lead);
 - ✓ Pure Advantage: Financing the future (philanthropy/corporate lead);
 - ✓ Climate Bonds Initiative (international investor-focused NGO active in NZ); and
 - ✓ Mōhio Research, an innovation lab with research into innovative finance instruments for climate outcomes (academic lead with corporate partners).

What sustainable finance projects are agencies currently doing?

4. Government has the following projects underway, but these have typically been ad hoc and/or responsive to recommendations made in various individual reports:

Projects	Agency/s	Status of work programme
Reserve Bank's climate change strategy, including understanding and incorporating the impact of climate change on the Bank's core functions and providing leadership as an institution. This includes consideration of climate-related stress testing of the economy	RBNZ	Early stages.
Review of the Reserve Bank of New Zealand Act 1989, including questions regarding RBNZ's role in relation to climate change	Treasury/RBNZ	Consultation closed for Phase 2 closed. 3rd phase of consultation planned before end of 2019. Treasury to provide its view on the RBNZ's

		climate change role in October as part of advice to Ministers on Phase 2 of the review.
Investigating a mandatory regime for climate-related financial disclosures (in response to Recommendation 7.4 of the Productivity Commission's final report on the <i>Low Emissions Economy</i>)	MBIE/MFE	Advanced. Discussion document and Cabinet paper being drafted, with current plans to consult later this year, timing still TBC. Timing may align such that this is released at the same time as the SFF's interim report is launched.
Investigating the other recommendations made by the Productivity Commission in the investment chapter, particularly R7.1 relating to the mandate of NZVIF in relation to climate change and R7.5 relating to the alignment of project and programme funding (and creating a taxonomy of definitions) to discourage high-emissions activities and encourage low-emissions activities	Treasury/MBIE/MFE	Early stages.
Collaborating on a definition for sustainable agriculture with the SFF	MP/MFE (in collaboration with the SFF/banks and CBI)	Early stages, still in scoping and planning stages at the time of writing.
Review of KiwiSaver default provider arrangements, including questions regarding responsible investment	MBIE	Early stages. Submissions due on 18 September.
Community Resilience work programme to reduce or manage risks associated with natural hazards exacerbated by climate change, in order to build resilience in NZ communities. This involves five workstreams: information/data; risk assessment; better decision-making in the resource management system; insurance and risk assessments (Treasury-led); and, funding and financing (Treasury-led).	DIA / Treasury	Early stages.
Proposed guidance on green bonds and other responsible investment products	FMA	Discussion document planned for release in September.
s 9(2)(f)(iv)		
The Council of Financial Regulators decided at its last meeting to put climate change on its work programme	RBNZ / FMA / Commerce Commission / MBIE / Treasury	Early stages. Currently scoping areas of potential joint work.

What are agencies not yet doing in relation to sustainable finance?

5. As noted above, there is a large amount of work underway. However, there will be further opportunities to work on sustainable finance, resources permitting, to strengthen coordination and effectively support the Government's broader work programme. Specifically:
 - a. we expect that the interim report of the SFF (among other initiatives) will provide an assessment of the barriers to a sustainable finance system and recommend ways forward. We expect the SFF to make recommendations similar to those made in other roadmaps (see **Appendix 2**), which will be a high volume of work;
 - b. there are opportunities to better draw the value from and strategically leverage the large range of existing collaborations and relationships as listed in paragraph 4 above;⁹

⁹ For example, the Minister of Finance is considering an invitation to join the Coalition of Finance Ministers for Action on Climate Change, a grouping of 38 nations aiming to share information and promote action through fiscal and

- c. a large range of domestic and international stakeholders have made a series of recommendations about what needs to happen on sustainable finance. We expect that they will (at least partially) be picked up and will appear in the SFF's interim and final reports. Some of the recommendations made already include:
- i. a Government strategy on sustainable finance, including more targeted consideration of Government leadership (as recommended by the Investors Group on Climate Change (IGCC),¹⁰ McGuinness Institute¹¹ and more informally by Mōhio Research¹²);
 - ii. Government to consider how it can create an enabling environment for private led impact investing (as recommended by the Impact Initiative¹³);
 - iii. tracking or measuring climate finance flows (as recommended by Mōhio Research¹⁴ and the OECD¹⁵);
 - iv. project pipelines (as recommended by Mōhio Research¹⁶ and the OECD¹⁷);
 - v. building education and awareness on sustainable finance issues within Government, as well as among the sector and society (as recommended by the IGCC¹⁸);
 - vi. exploring the link between fiduciary/directors' duties and sustainability (as recommended by the McGuinness Institute¹⁹, Climate Change Adaptation

economic policy, and will decide. The Coalition, or other similar groupings, may provide a platform to encourage other nations to take action including through climate finance.

¹⁰ Investor Group on Climate Change (IGCC). (2018). Investing in climate solutions for New Zealand. Sydney: Investor Group on Climate Change Australia/New Zealand. Available at <https://igcc.org.au/wp-content/uploads/2016/04/IGCC-NZ-report-final.pdf>

¹¹ Page 110, McGuinness Institute, Discussion Paper 2019/01. The Climate Reporting Emergency. Available at - www.mcguinnessinstitute.org/wp-content/uploads/2019/09/20190913-Discussion-Paper-5pm.pdf

¹² See various references to a strategic approach to climate finance as part of recommendations 5.2 (on climate finance tracking), 5.3 (on climate finance principles), 5.5 (on structural realignment) and 5.6 (on climate finance leadership). David Hall and Sam Lindsay (2017), Climate Finance Landscape for Aotearoa New Zealand: A Preliminary Survey, Report Prepared for the Ministry for the Environment, Auckland: Mōhio. Available at www.mfe.govt.nz/sites/default/files/media/Climate%20Change/Climate%20Finance%20Landscape%20for%20Aotearoa%20New%20Zealand%20-%20A%20Preliminary%20Surve....pdf

¹³ The Impact Initiative. Transforming our economy: Financing the social enterprise sector in Aotearoa New Zealand (2018). Available at https://static1.squarespace.com/static/5b02f1bd85ede13734718842/t/5c180e98562fa7b103ba4376/1545080508007/Transforming_Our_Economy_Report.pdf

¹⁴ Above n 11. See recommendation 5.2.

¹⁵ The OECD coordinates a research collective on tracking climate finance flows. See <http://www.oecd.org/env/researchcollaborative/>

¹⁶ Above n 11. See recommendation 5.4.

¹⁷ Developing Robust Project Pipelines for Low-Carbon Infrastructure (OECD, 2018). Available at <http://www.oecd.org/environment/cc/policy-highlights-developing-robust-project-pipelines-for-low-carbon-infrastructure.pdf>

¹⁸ Above n 9.

¹⁹ Above n 10. See the specific regulatory changes proposed to directors' duties at page 115.

Technical Working Group²⁰ in relation to climate adaptation, the Impact Initiative in relation to social impact,²¹ and IGCC²²);

- vii. exploring the link between reporting and sustainability (as recommended by IGCC²³, Guinness Institute²⁴); and
- viii. exploring new institutions, (such as project-oriented intermediaries) new organisational forms and the alignment of the corporate regulatory system (as recommended by Mōhio Research²⁵, the Impact Initiative in relation to social impact²⁶).

²⁰ Climate Change Adaptation Technical Working Group (CCATWG). (2018). Adapting to Climate Change in New Zealand: Recommendations from the Climate Change Adaptation Technical Working Group. New Zealand: Author. Available at www.mfe.govt.nz/sites/default/files/media/Climate%20Change/ccatwg-report-web.pdf

²¹ Above n 12.

²² Above n 9.

²³ Above n 9.

²⁴ Above n 10. See the specific regulatory changes proposed to reporting at page 114-117. The Guinness Institute is recommending a broad review of the entire entity reporting framework (spanning all entity types).

²⁵ Above n 11. See recommendation 5.7 and 5.8.

²⁶ The Impact Initiative. Structuring for Impact: Evolving Legal Structures for Business in New Zealand (2019).

Available at

https://static1.squarespace.com/static/5b02f1bd85ede13734718842/t/5cb65895c83025eec4c96189/1555454166118/SELS_Report_2019_online_updated.pdf

Appendix 2: Upcoming events and milestones on sustainable finance

✓ = confirmed
 □ = unconfirmed

☆ = high profile public milestone

September 2019	October	November	2020
<ul style="list-style-type: none"> ✓ 3rd – workshop on sustainable agriculture definitions (with Sean Kidney CBI) ✓ 3rd - Mindful Money launch (including keynote from the Minister of Finance) ✓ 6th – first officials' cross-agency working group meeting ✓ 19th – briefing to Ministers on sustainable finance with context and upcoming priorities ✓ 24th – RIAA Annual Conference ✓ 24th – Ministers Faafoi and Shaw meeting to agree next steps on climate-related financial disclosures 	<ul style="list-style-type: none"> ✓ 9th – Climate Change & Business Conference in Auckland includes presentations from SFF co-chairs and Canadian Expert Panel on sustainable finance ✓ 14-15th – Investors' Group on Climate Change Conference in Sydney ✓ 16th & 17th – McGuiness Institute / CDSB / Simpson Grierson/ Business NZ event on climate-related financial disclosures ✓ 22nd – SBC event with CFOs regarding climate risk (including Westpac and Meridian) ✓ 31st – SFF interim report launched. Includes communications (e.g. NZ Herald opinion pieces) and legal opinion on fiduciary duties □ TBC - SFF co chairs meeting with Ministers □ TBC – DEV agrees release of consultation document on climate-related financial disclosures (23rd?) □ TBC – High level government position agreed on interim report in advance of report launch 	<ul style="list-style-type: none"> ✓ 5th – ICNZ conference (including presentations from Minister Robertson, Adrian Orr and Vicky Robertson) ✓ 7th – Westpac / KangaNews Sustainable Finance Summit (including keynote from Minister Shaw) □ TBC – discussion document released on mandatory regime for climate-related financial disclosures (MFE/MBIE). <ul style="list-style-type: none"> □ Timing could allow for this to be announced alongside the launch of the SFF interim report if desired □ TBC – stakeholder engagements on climate-related financial disclosures (MFE/MBIE/other) <ul style="list-style-type: none"> □ We are still considering which stakeholders to involve in this process and how 	<p>2020</p> <p>Q1</p> <ul style="list-style-type: none"> □ Collaboration between Government and SFF regarding the staging of the agreed recommendations (i.e. 'the roadmap') <p>Q2</p> <ul style="list-style-type: none"> ✓ SFF final report launched (mid-2020) □ TBC - Government strategy on sustainable finance

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Appendix 3: Summarising the key themes from international sustainable finance ‘roadmaps’

	UK		Canada – Expert Panel on Sustainable Finance – Final report, June 2019	Finance Norway – Roadmap for Green Competitiveness in the financial sector, June 2018	EU – High Level Expert Group Sustainable Finance Action Plan, January 2018	China – Guidelines for Establishing the Green Financial System, 2016
	Green Finance Taskforce Final Report, March 2018	HM Treasury Green Finance Strategy, July 2019				
Current status of the roadmap in that country	<p>Advanced</p> <ul style="list-style-type: none"> A number of these recommendations have now been either implemented or embedded into the HM Treasury’s own Green Finance Strategy (see next column). 	<p>Early stages</p> <ul style="list-style-type: none"> This strategy builds on the work of the UK Green Finance Taskforce. The Green Finance Institute was launched in July 2019 alongside a Financial Services Skills Taskforce. The UK government has also committed to review progress against the actions in the strategy — particularly on greening the financial system — including whether the Task-Force on Climate-Related Financial (TCFD) Recommendations have been implemented, by the end of 2020. A formal review of progress against the Strategy plans will be conducted in 2022. 	<p>Early stages</p> <ul style="list-style-type: none"> Little clearly demonstrated progress to date implementing the findings of the final report. However, Toronto Finance International (a public private partnership) is progressing with actions to embed sustainable finance in Toronto’s finance sector. 	<p>Early stages</p> <ul style="list-style-type: none"> Little clearly demonstrated progress to date implementing the findings of the final report. 	<p>Well advanced</p> <ul style="list-style-type: none"> The European Commission is now implementing priority aspects of the roadmap – embedding the recommendations of the TCFD disclosures and creating a world-leading sustainable finance taxonomy. 	<p>Well advanced</p> <ul style="list-style-type: none"> China’s comprehensive plan was one of the first globally. UNEP has since noted that this plan has led to major progress on green financial products, institutions, standards and methods, and it has played an increasingly important role in facilitating international cooperation on green finance.
Leadership and coordination	<ul style="list-style-type: none"> Industry, Government, and the UK prudential regulators, the PRA and where appropriate the FC, should work to identify any unnecessary regulatory and practical barriers that prevent or delay sustainable investments with a view to removing them to effectively manage 	<ul style="list-style-type: none"> Introduce the Green Finance Institute (GFI) as the UK’s principal forum for collaboration between the public and private sector with respect to green finance, the GFI will play an integral role in supporting delivery of our Green Finance Strategy and driving the mainstreaming of 	<ul style="list-style-type: none"> Establishing a standing Canadian Sustainable Finance Action Council, with a cross-departmental secretariat, to advise and assist the federal government in implementing the Panel’s recommendations. 	<ul style="list-style-type: none"> Focus and improve collaboration between the financial sector and the authorities. 	<ul style="list-style-type: none"> Corporate culture in the financial sector needs to be better aligned with a long-term outlook. Norms and values need to deliver on the promise of a sustainable financial system that benefits society. 	<ul style="list-style-type: none"> Strengthen cooperation among relevant government departments which are The People’s Bank of China, Ministry of Finance, Development and Reform Commission, Environmental Protection Department,

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	<p>the transition to a more sustainable financial system with reduced long term risk.</p>	<p>green finance in the UK and abroad.</p> <ul style="list-style-type: none"> Working with industry and the British Standards Institution to develop a set of Sustainable Finance Standards, and chairing a new International Organisation for Standardisation (ISO) Technical Committee on Sustainable Finance; Working with the FCA and Bank of England, including through the Fair and Effective Markets Review, to consider steps that can be taken to understand the potential or actual barriers to the growth and effectiveness of green finance markets; Clarifying responsibilities for the Prudential Regulation Authority, the Financial Conduct Authority (FCA) and the Financial Policy Committee to have regard to the Paris Agreement when carrying out their duties, and including climate-related financial issues in Government's location letter to The Pensions Regulator; 			<ul style="list-style-type: none"> Establish an EU Observatory on Sustainable Finance to support member state and EU level public policy development and evaluation, as well as public finance interventions in sustainable finance. Establish 'Sustainable Infrastructure Europe' 	<p>China Banking Regulatory Commission, China Securities Regulatory Commission and the China Insurance Regulatory Commission, to jointly promote the development of green finance.</p>
<p>Data and reporting</p>	<ul style="list-style-type: none"> Ensuring the UK has the best and most reliable information on climate-related risks and opportunities will be fundamental to its continued success and its ability to act as the leading green financial centre. Establish a new and voluntary UK Sustainability-related Disclosures framework, introducing additional elements beyond 	<ul style="list-style-type: none"> The Government setting out its expectation for all listed companies and large asset owners to disclose in line with the TCFD recommendations by 2022; Establishing a joint taskforce with UK regulators, chaired by Government, which will examine the most effective way to approach disclosure, including exploring the appropriateness of mandatory reporting; 	<ul style="list-style-type: none"> Embed climate-related risk into monitoring, regulation and supervision of Canada's financial system. Define and pursue a Canadian approach to implementing the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) 	<ul style="list-style-type: none"> Align climate reporting with the TCFD's recommendations. 	<ul style="list-style-type: none"> Implement the TCFD disclosure recommendations at the EU level, allowing for experimentation time and building on the experience of France's Article 173 Ensure the need for experimentation does not affect the EU's ability to deliver, by 2020, a comprehensive and 	<ul style="list-style-type: none"> Strengthen the financial information infrastructure, promote the sharing of information and statistical data, establish and improve early warning mechanisms and strengthen the supervision and evaluation of green financial funds.

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	<p>the scope of TCFD process.</p>	<ul style="list-style-type: none"> Supporting quality disclosures through data and guidance, such as that being prepared for occupational pensions schemes by a new Government and regulator sponsored working group; Working with international partners to catalyse market-led action on enhancing nature-related financial disclosures. 			<p>useful EU climate-disclosure regime, compliant with the TCFD recommendations.</p> <ul style="list-style-type: none"> Better integration of sustainability in ratings and market research Strengthen sustainability disclosure and accounting rule-making. 	<ul style="list-style-type: none"> Improve relevant regulations to effectively guard against financial risks. Fully utilise macro-prudential and micro-prudential supervision tools, unify and improve the relevant regulatory rules and standards while strengthening requirements for information disclosure.
<p>Education and awareness</p>	<ul style="list-style-type: none"> Government and professional bodies should develop competencies across a wider group of societal stakeholders through education tools including: Education for investors and professional training; raising awareness of green markers and demand for sustainable financial services, incorporating ESG issues into professional delegations of industry bodies etc Education for individual savers; delivery of a financial literacy programme via the Green Finance Institute to improve citizens knowledge of how their investment decisions shape their world Education for issuers and banks; education and capacity building programme to develop skills around identification of green projects in company capex plans, green data collection and reporting, ESG disclosure. 	<ul style="list-style-type: none"> Determining the steps necessary for landlords and businesses to understand and potentially disclose operational energy use; Enhancing climate-related and environmental data and analytics and promoting dialogue with regulators and industry to support innovation; Engaging with professional bodies to drive green finance competencies – notably through the launch of a Green Finance Education Charter - upskilling the UK's diplomatic networks and building capacity on green finance across the public sector. 	<ul style="list-style-type: none"> Establish the Canadian Centre for Climate Information and Analytics (C3IA) as an authoritative source of climate information and decision analysis. Promote a knowledgeable financial support ecosystem. A maturation in understanding and focus of climate change effects will be increasingly important for Canada's financial industry leaders and the financial system's regulatory authorities. 	<ul style="list-style-type: none"> Increase climate competence and capacity in the financial sector – To integrate climate risks and opportunities successfully into core processes, there is a need to increase the sector's competence and understanding of materiality, and to ensure sufficient capacity for implementation. This change will be quicker and more effective if directors and executive management have relevant knowledge. Climate competence must also be strengthened in higher education programmes relevant to the financial sector. 	<ul style="list-style-type: none"> Promote greater financial literacy on sustainable finance. Promote free and easily accessible information on sustainable finance. Facilitate citizen engagement on sustainable finance issues. 	<ul style="list-style-type: none"> Raise public environmental awareness and promote consensus for the development of green finance to build an ecological civilisation.

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	<p>impact reporting, ESG credit and sustainability equity ratings etc.</p>					
<p>How pricing, performance, definitions and fiduciary duties relate to environmental, social and long-term outcomes</p>	<ul style="list-style-type: none"> Prudential regulators should consider amending frameworks to allow protections to be proportionally recognized on balance sheets as a contingent form of green finance (regulatory capital) against these contingent climate risks to encourage protection and increase demand. Relevant regulators should ensure fiduciary duty clearly states the importance of ESG issues. Clarifying fiduciary duties, is essential to enable the UK financial system to respond in a timely way to climate risk and clean growth opportunities. Fiduciary duties are foundational for the UK Investment industry. The way they are framed, viewed and understood helps set the assumptions for appropriate investment behaviour. To maintain the UK's leadership on green finance, the UK should address fiduciary duties and the capacities of investors as a matter of priority to drive behaviour in the investment chain towards UK green finance. 		<ul style="list-style-type: none"> Clarify the scope of fiduciary duty in the context of climate change. A clear view of fiduciary duty is essential for financial services professionals who invest for and advise others. 	<ul style="list-style-type: none"> Establish a common taxonomy for sustainable finance - A common taxonomy will make it possible to understand the climate effects and exposures of different activities, businesses and products. It will then be easier for the financial sector to identify risks and opportunities, for customers to compare products, and for the authorities to oversee the sector's contributions to the transition. Include climate risk in the mandate of the supervisory authority's mandate. 	<ul style="list-style-type: none"> Establish and maintain a common sustainability taxonomy at the EU level Strengthen director duties related to sustainability. Incorporating sustainability in prudential requirements (focus on banks and insurance). Clarifying institutional investors' and asset managers' duties Fostering sustainable corporate governance and attenuating short-termism in capital markets. Incorporating sustainability considerations when providing financial advice Developing sustainability benchmarks 	<ul style="list-style-type: none"> Improve relevant regulations to effectively guard against financial risks. Fully utilise macro-prudential and micro-prudential supervision tools, unify and improve the relevant regulatory rules and standards while strengthening requirements for information disclosure.
<p>Mobilising and re-orientating capital for</p>	<ul style="list-style-type: none"> Knowing whether and how securities and loans, including mortgages, are financing 'green', 'brown' or 'neutral' activities in the real 	<ul style="list-style-type: none"> Exploring initiatives to accelerate the alignment of financial flows to the Paris Agreement's objectives; 	<ul style="list-style-type: none"> Map Canada's long-term path to a low-emissions, climate-smart economy, sector by sector, with an associated capital plan. 	<ul style="list-style-type: none"> Focus and improve collaboration between the financial sector and the authorities – The financial sector's 	<ul style="list-style-type: none"> Develop technical screening criteria for economic activities that can make a substantial 	<ul style="list-style-type: none"> Put the necessary policies and initiatives in place to support the establishment of sustainable financial

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<p>sustainable outcomes</p>	<p>economy and tagging them accordingly is a key stepping stone to enabling banks and investors to better identify the extent of their exposure to green (but also non-green) investments and facilitate the process of shifting capital to be aligned with sustainable growth. Identification and appropriate labelling or 'tagging' of green securities and loans is key to understanding progress in meeting national obligations under the Paris Agreement to align financial flows with 1.5/2°C; the potential for systemic risks to the financial system from climate change; and measuring the advancement of greening the UK's financial sector.</p>	<ul style="list-style-type: none"> • Announcing a package of measures to mobilise green finance for home energy efficiency; • Strengthening engagement with local actors to accelerate green finance across the country; • Working with the GFI to address market barriers to greater and more rapid deployment of green capital into priority sectors; • Promoting the adoption and mainstreaming of green finance products and services, including through the launch of a Green Home Finance Fund making £5 million of funding available to the private sector to pilot products such as green mortgages. 	<ul style="list-style-type: none"> • Provide Canadians the opportunity and incentive to connect their savings to climate objectives - An incentive for Canadians to make climate-smart investments would drive demand for financial products and services that promote sustainable outcomes. • Expand Canada's green fixed income market, and set a global standard for transition-oriented financing. • Promote sustainable investment as 'business as usual' within Canada's asset management community • Define Canada's clean technology market advantage and financing strategy. • Support Canada's oil and natural gas industry in building a low-emissions, globally competitive future. • Accelerate the development of a vibrant private building retrofit market. • Align Canada's infrastructure strategy with its long-term sustainable growth objectives and leverage private capital in its delivery. • Engage institutional investors in the financing of Canada's electricity grid of the future. 	<p>transition is dependent on close collaboration with the authorities to adjust regulatory conditions and ensure good flows of information. When the authorities offer to cover parts of the risk, the threshold is lowered for private capital to finance and invest in green projects and ventures. When nonlife insurers share data with the authorities, work on loss prevention and adaptation to climate change becomes more effective.</p> <ul style="list-style-type: none"> • Use digitalisation skills to scale the market for climate-smart solutions • Contribute to innovation and change in other sectors – The financial sector has an influence on the rest of the business sector through the way it finances, lends and invests. By building knowledge and understanding of climate risks and opportunities, financial institutions can be a catalyst in the transition to a low-carbon future. 	<p>contribution to climate change mitigation or adaptation, while avoiding significant harm to the four other environmental objectives. - A list of economic activities assessed and classified based on their contribution to EU sustainability related policy objectives.</p> <ul style="list-style-type: none"> • Fostering investment in sustainable projects. 	<p>products including: Green credit; Green bonds; Green funds; Other green markets and financial instruments.</p>
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To Hon David Parker, Minister for the Environment			Tracking #: 2019-B-06089
<u>Security Level</u>	Unclassified	Number of Attachments	1
Date Submitted:	18 October 2019	Response needed by:	23 October 2019
MfE Priority:	Non-urgent	Action Sought:	To discuss with officials on 23 October 2019

Next Steps on New Thinking on Environmental Policy

Introduction

On 26 June 2019 we met with you to discuss new thinking being undertaken internationally regarding how to address environmental sustainability challenges and examples of where that is leading to new environmental policy approaches. Assorted readings were provided to you.

A second meeting is scheduled on 23 October at 7.30pm to discuss two areas where we think this thinking could be applied – Environmental Responsibility and Sustainable Finance. The purpose of this paper is to recap the previous discussion and provide background content for our pending discussion.

Recap

Recapping on the previous discussion, the following emerging threads are useful to reimagine a system that could deliver different environmental outcomes (i.e. reimagining sustainability):

- *intergenerational stewardship* – the notion of our collective obligation to sustain the environment for future generations and that decisions we make now, will affect generations to come. This reflects that the environment is non-substitutable and degradation may not be reversible.
- *distributive equality* – this encompasses ideas of intra-generational sharing of costs and benefits and the fair public return from private use of common pool resources.
- *regenerative approaches to resources* – the idea that not only do we need to stop degrading nature but now we have a responsibility to restore nature.
- *“growth” has consequences* and the *environment is not infinite*, there are ecological boundaries/limits beyond which we threaten the availability of resources in the future - both resources for use and life sustaining resources.
- *people are part of the environment* - we exist within socio-ecological systems, we can't divorce ourselves from the environment.
- *different interpretations of wellbeing* broaden our understanding of sustainability and provide different measures of the wealth of a nation.
- *the need to manage systems in an integrated way*, such as the food, land-use, and financial systems, rather than issues-by-issue, sector-by-sector, as this reflects the complexity of our interactions with nature.

Our take home idea from this thinking and research has been that business-as-usual approaches may not realise the level of change needed. Therefore, we need to look at the decisions that can shape the future state of our environment.

Environmental Responsibility

In our previous meeting we discussed how the concept of sustainability is the prevailing resource management paradigm enshrined in international law and domestic legislation, and how this has come under scrutiny as a result of the failure of the economic and environmental management systems (the current paradigm) to deliver equitable and enduring environmental outcomes in a changing world.

Sustainability was always about operating within environmental limits. However, in terms of our legislative practice and day-to-day management, sustainability as a governing ethos has not delivered what it intended to achieve. It is largely an unfulfilled promise, in that it has failed to deliver development within environmental limits, and fundamentally change people's behaviours. Nature should not be treated as an externality.

In response to growing environmental concern, countries such as the United Kingdom are starting to reconsider their existing environmental management systems and take action to activate transformative change. On 15 October 2019, the British Department for Environment, Food and Rural Affairs (DEFRA) introduced an Environment Bill to Parliament. The intent of this proposed legislation is to act as a transformative mechanism to improve environmental outcomes in the UK and set a 25 year Environment Plan to ensure future generational prosperity. Our initial read of this Bill is that it is consistent with the thinking we have explored (below).

Our Current State

Environmental Aotearoa 2019 (EA19) released in April highlighted that New Zealand faces multiple environmental challenges including: our indigenous biodiversity being under threat, the degradation of our soil and water, polluted urban environments, and high greenhouse emissions per capita. Although this report highlights that our environment is more degraded than previously realised and with trends that are worsening, there is currently no requirement under legislation (the Environment Act 1986 or other) for a policy response to these environmental assessments.

Early indication of results from the Planetary Boundaries project MfE is undertaking with the Stockholm Resilience Centre (and partners) reinforces the message from EA19, that New Zealand is reaching its environmental limits (a full draft report will be forthcoming in November, final expected February 2020).

Given the challenges we are facing globally and domestically, the future state of the environment and implications for economic wellbeing, we need to embark on developing a broad consensus about what our environmental responsibility is now and should be in the future.

We think transformative change to our environmental management system needs to be explored to address our current macro policy gaps.

Environmental Responsibility as a concept

Environmental responsibility is a way of presenting a coherent strategic response to current and future challenges to the environment, including climate adaptation.

This is about enshrining our collective responsibility for the state of our environment. The aim is to deliver equitable and enduring environmental outcomes in a changing world. This will require changes in thinking and behaviours towards the environment.

Environmental responsibility captures the thinking that environmental sustainability remains an unfulfilled promise. We live in a complex system, sustainability has acted as a broad church commonly relied upon for multiple purposes; hence it has lost its meaning.

What needs to change to build our environmental responsibility?

If we are looking towards a new model, a broad change in governance, institutions, and policy levers will require government leadership. A potential legislative model could look to address the macro policy gaps of our current system and contain the following components:

- *strategic oversight* – the establishment of some type of governance oversight with the power to issue recommendations and monitor progress towards achieving them. This could take the form of an independent body whose focus is ensuring intergenerational equity (similar to the role of the State Services Commissioner but with enhanced powers), or the creation of a parliamentary committee with the obligation to review all proposed primary and secondary legislative instruments, or the strengthening and expansion of the Parliamentary Commissioner for the Environment's powers
- the articulation of a *generational goal* (sets a 50 – 100 year direction) for environmental outcomes within broader well-being outcomes
- sets clear *national environmental objectives* and milestones for reaching them
- embeds a *clear hierarchy* that ensures environmental outcomes are not traded off with other capitals, and is binding on all other legislation
- *recognises environmental boundaries* and requires the setting of environmental limits (not bottom lines but boundaries intended to reflect broad consensus about the state of the environment we want to maintain or restore) and, where appropriate, targets in order to build environmental resilience
- *incentivises the shift* to regenerative practices for multiple sectors
- *generates regular strategic system insights* to prepare for and respond to macro-level changes in land and water use, infrastructure, and energy trends
- amends the Environmental Reporting Act to provide for monitoring and review of performance of existing legislative instruments
- authorises the use of *economic instruments* in relation to production and consumption to internalise the costs of activities on the environment.

Legislation can embody change and activate transformation, but to achieve enduring change there would need to be support from Government, Māori/iwi, business and communities to effect a broad shift in public values and human behaviour.

High-level implementation options

The shift to an environmental responsibility approach will require a transition, with associated costs. We see the scale of transition to a more responsible environmental system as being as big as those New Zealand confronted in the 1980s. Consideration of the method and pace of change will be essential and requires further work.

Legislation is ideal where there is a clear gap that requires the mandatory backing of the instruments of the state (i.e. regulation, economic instruments, and enforcement). In the case of environmental outcomes, there is a strong case to be made that current legislative settings are sub-optimal. In the context of the RM reforms, different legislative options could be considered. The EDS, for example, has made the case for an Environmental Strategy Act that would provide “common principles that would have to be given effect to in all other resource management legislation” – so something akin to environmental responsibility.

Our view on progressing environmental responsibility

Our view is that legislative change will perform a critical function in the transformation that is needed. The exercise of the full powers available to Government will be required to effect meaningful change to environmental outcomes and it brings with it a heightened degree of commitment.

Sustainable Finance

In order to realise the Government’s vision of a sustainable economy, we need to increase the priority of developing a sustainable financial system. Sustainable finance is an area that is well suited to the application of new thinking.

Sustainable Finance is a programme of work that was initiated as part of the Aotearoa Circle. A briefing [2019-B-06007] was provided to you in September outlining this work. A copy is appended for your reference.

The attached paper outlines the current work programme and opportunities moving forward. Key points in that paper include:

- key upcoming milestones on sustainable finance taking place over the next 6 - 9 months, and next steps.
- A summary of similar work happening in other jurisdictions, including the status and themes of sustainable finance roadmaps underway in the United Kingdom (UK), Canada, Norway, the European Union (EU) and China.

To build on our previous discussion on new economics and the finance system, we propose to focus this discussion on the following questions:

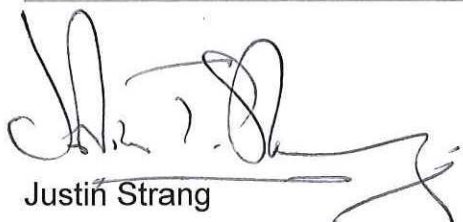
- What is a sustainable financial system?
 - A ‘sustainable financial system’ means a financial system with a clear purpose to serve the transition to a low-emissions, sustainable, just and inclusive economy and to embed sustainability into decision-making.
- Does New Zealand currently have a sustainable financial system?
- What does it mean in practice, in terms of action from the private sector and Government policy, to move to a sustainable financial system?
- What type of regulatory impact analysis is needed to move sustainable finance policies into practice?
 - Can we leverage the regulatory impact analysis of sustainable finance policies used in other jurisdictions such as the European Union, who have been using economic modelling approaches that integrate environmental and financial considerations into one system?

Recommendations

We recommend that you:

- a. **Note** that officials will meet with you on 23 October to discuss the contents of this briefing.
- b. **Agree** to share this Aide-memoire with the Associate Ministers for the Environment, Hon Nanaia Mahuta and Hon Eugenie Sage.

Signature



Justin Strang

Director, Office of the Chief Executive

18/10/18

Date

Hon David Parker

Minister for the Environment

Date

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