

Climate investment in Aotearoa



Funding and Financing the Net Zero Transition

Whāia te mātauranga hei oranga mō koutou

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1.0

Purpose

This brief paper is intended for attendees at the April 2023 “Investing in Climate Solutions” conference which is being convened by several Community Trusts, Philanthropy New Zealand | Tōpūtanga Tūku Aroha o Aotearoa and Toitū Tahua, the Centre for Sustainable Finance. It provides an outline of the climate investment landscape which may assist attendees in preparing for the conference. We understand attendees may include Non-Government Organisations and philanthropic investors who wish to do more to address climate change, as well as their advisers.

Important statement:

Nothing in this document constitutes investment advice. The authors suggest readers ensure they seek direction from appropriate professional investment advisors before making investment decisions. For further reading we recommend the IPCC AR6 Synthesis Report for global climate change implications and possibilities, Drawdown by Paul Hawking to help grasp the many global emissions reduction opportunities, and Pioneering Portfolio Management by David Swensen for institutional funds management.

References:

IPCC synthesis report: https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_SPM.pdf

Drawdown: <https://www.drawdown.org/>

2.0

Introduction

Since the industrial revolution, we have failed to understand and price the costs of greenhouse gas emissions. The cost of carbon emissions pollution might be relatively free to the emitter, but are very expensive to society. Emissions have had consequences on our health, our food and the environment around us. The lack of a price on carbon has been called “the greatest market failure the world has seen”.¹

The world is in the process of correcting this mistake, which is driving a trillion-dollar reallocation of investment, businesses and consumers towards a cleaner society and economy. This shift reflects both the risks that investors are perceiving in not responding, and the opportunities they believe may be created by responding to climate change. This paper provides some key examples of how this is happening.

Rohan MacMahon, a partner in the Climate Venture Capital Fund, says “there are a whole range of ways in which investors of different kinds are trying to address climate change. At the Climate VC Fund, we are investing directly into early stage companies with potentially transformative methods of reducing greenhouse gas emissions. We are just one example of climate investment; throughout this background paper we look at many others. Climate change is a collective issue. It will take a lot of capital from many different players, across various asset classes over a long period of time to address it.”

The following pages show a number of climate impact investment options, whether aiming for investment returns or impact benefits, or a combination of both. They consider the following:

- What level of Climate Impact may be expected from this form of investment?
- What level of Potential Returns may be expected?
- Is it a form of climate change “Mitigation” (reducing emissions, so that climate change has a reduced impact) or “Adaptation” (dealing with the consequences and impacts of climate change) – or both?
- Is it a kind of Investment or Granting – or possibly both?
- Is it a form of Equity or Debt – or possibly both?

This is not intended to be an exhaustive or definitive list. It provides more detail on mitigation solutions as these are generally more developed; more detail may be added on climate adaptation solutions in future versions of this document.

1. Lord Nicholas Stern in the Stern Report on the Economics of Climate Change, UK Treasury, 2006.

2.0

RIAA's responsible investment spectrum:

We can also use the categories of responsible investment suggested by the Responsible Investment Association of Australia (RIAA) as guidance and to help understand each form of asset allocation. RIAA describes a continuum of forms of investment, ranging from traditional for-profit with no consideration of Environmental, Social and Government (ESG) factors to grant-based philanthropy, with a number of different responsible investment methods sitting between the two. The chart following depicts this.

Form of Investment	Traditional Investment	Responsible and Ethical Investment							Philanthropy
<p>FOCUS</p>	<p>Limited or no regard for ESG factors</p>	<p>ESG INTEGRATION Consider ESG as part of investment decision</p>	<p>CORPORATE ENGAGEMENT Use shareholder power to influence company behaviour</p>	<p>SCREENING</p>			<p>SUSTAINABILITY THEMED INVESTING Invest to specifically target sustainability themes eg. climate</p>	<p>IMPACT INVESTING Invest to drive positive environmental or social impact</p>	<p>Grant to drive environmental or social impact</p>
				<p>NEGATIVE Avoid/divest from selected sectors/ companies</p>	<p>NORMS-BASED Screen out investments not meeting ESG criteria</p>	<p>POSITIVE Invest in sectors/ companies with better ESG performance</p>			
<p>IMPACT INTENTION</p>	<p>AGNOSTIC</p>	<p>AVOIDS HARM</p>			<p>BENEFITS STAKEHOLDERS</p>				
<p>FEATURES</p> <p>Delivers market financial returns</p> <p>Delivers < market or zero return</p> <p>Manage ESG risks</p> <p>Pursues ESG opportunities</p> <p>Intentionally delivers impact</p> <p>Measures and reports impact</p>									

3.0

Investment options



3.1

Invest in listed equities with a low carbon profile or specific emissions reduction goals

CLIMATE IMPACT:	Generally don't directly reduce emissions, but indirectly supports reductions		
POTENTIAL RETURNS:	Close to commercial returns, limited downside		
MITIGATION/ ADAPTATION	Both mitigation and adaptation		
RIAA CATEGORIES:	ESG Integration, Corporate Engagement, Screening		
INVESTMENT/ GRANTING:	Investment	EQUITY/ DEBT:	Equity

Listed companies are making various steps towards decarbonisation. Investors who purchase stock in companies which are reducing their emissions, or indexes and funds which do the same, can support broad ESG objectives. There are many ways to do this, including:

- Negative exclusion (choosing not to invest in particular industry categories, such as fossil fuel firms),
- Positive screening (choosing to invest in firms which are meeting specific levels of climate and/ or ESG performance;
- Corporate engagement (using shareholdings to seek to drive emissions reduction by investee companies);²
- Invest passively in climate Exchange Traded Funds which have a low-emissions or ESG orientation.

Some funds and indexes now also support climate adaptation objectives such as reductions in the physical risks which climate change poses.

However, such investments generally do not provide any new or additional capital flows to the companies which are decarbonising, so they have limited if any direct impact.

2. Examples of companies targeted by climate-specific shareholder resolutions include Shell, Exxon and Australian utility AGL.

“As part of our commitment to transition to a truly sustainable investment portfolio by 2030 or earlier, we believe it’s important to transition our listed investments to low carbon and climate centric funds. However, we also realise that although this may slightly reduce the cost of capital of those companies that these funds invest into, it does not directly invest more capital into the transition that we require. As such, its impact is limited. This is one of the reasons why we are increasingly investing into private markets. These allow us to be more selective with our investments and directly target those sectors/companies that have the ability to have the most positive impact. We also believe this will drive superior financial returns in the future”.

ALASTAIR RHODES (CEO - BAYTRUST)

3.2

Invest in debt products with a low carbon profile or specific emissions reduction goals

CLIMATE IMPACT:	Generally don't directly reduce emissions, but indirectly supports reductions		
POTENTIAL RETURNS:	Close to commercial returns, limited downside		
MITIGATION/ ADAPTATION	Mitigation		
RIAA CATEGORIES:	ESG Integration, Corporate Engagement, Screening		
INVESTMENT/ GRANTING:	Investment	EQUITY/ DEBT:	Debt

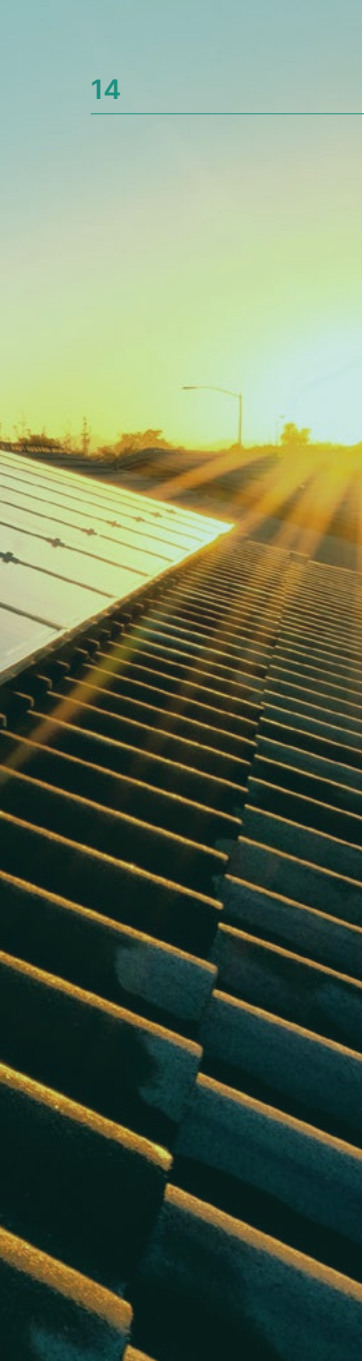
Green/climate bonds are becoming more common, and have been issued in recent years by Auckland Council, Westpac, Contact Energy, KiwiRail etc. Often green bonds are a form of refinancing in which case they are not additional in their climate impact. However, some green bonds do support new projects with direct emissions reduction benefits, for example KiwiRail's bonds for its proposed new Interislander ferries. In 2022 the New Zealand Government also launched its own Green Bond Framework setting out how the Government plans to finance or refinance climate programmes.

These are part of a broader trend towards more sustainable finance, which includes banks providing loans conditional on meeting specific environmental targets or goals. Depending on the organisation, these may be attractive ways of financing your projects for those seeking to borrow rather than invest.

3.3

Invest in unlisted companies / projects which lower emissions

CLIMATE IMPACT:	Direct and measurable reduction in emissions over time		
POTENTIAL RETURNS:	Potentially higher than listed commercial returns		
MITIGATION/ ADAPTATION	Mitigation		
RIAA CATEGORIES:	Sustainability-Themed Investment, Impact Investment		
INVESTMENT/ GRANTING:	Investment	EQUITY/ DEBT:	Usually equity but can also be debt



Direct investment provides capital to companies to help them expand and prosper. For companies which are helping to decarbonise the economy, this provides a direct and measurable impact on emissions. There are several ways to do this:

- Start-up direct investment: Investing into start-up companies which are working on clean technologies;
- Venture capital: Investing via a specifically targeted, professional fund into early stage companies which can deliver direct provable reductions in emissions;³
- Private equity: Investing with a fund which plans to buy into and offer additional capital to more established businesses which are decarbonising specific sectors;⁴ and
- Project finance: Investing to support a particular project getting underway, for example fund a new wind farm or solar array.⁵

“As part of our commitment to transition to a truly sustainable investment portfolio by 2030 or earlier, we are increasingly investing into private markets. As a large philanthropic investor we believe we have a role to take on a little more risk and invest at an earlier stage (often through funds) to help these funds/companies get established and show that they can deliver both a positive impact and superior financial returns. This will allow them to attract increased commercial capital on later years once their track records have been established.”

3. The Climate Venture Capital Fund is an example of this.

4. There are many examples of this form of private equity, including Purpose Capital in New Zealand.

5. An example of this in New Zealand is Lodestone Energy which is building several new solar arrays.

3.4

Invest directly in carbon instruments

CLIMATE IMPACT:	Does not reduce emissions, but may encourage faster climate action		
POTENTIAL RETURNS:	Varies		
MITIGATION/ ADAPTATION	Mitigation		
RIAA CATEGORIES:	Sustainability-Themed Investment		
INVESTMENT/ GRANTING:	Investment	EQUITY/ DEBT:	Equity



Many countries including New Zealand have a carbon pricing scheme which allows investors to buy, hold and sell carbon credits, either as part of a Government-sanctioned Emissions Trading Scheme (ETS) or a voluntary carbon market. In New Zealand, retail investors can invest via the NZX in carbon credits,⁶ while a wholesale market also exists in New Zealand and internationally.

Investors stand to benefit as the carbon price appreciates, reflecting emitters' need to purchase credits to offset their emissions and to comply with both their own emissions reduction targets and national emissions reduction plans.

Overseas investors and major emitters have bought and stockpiled NZ carbon credits (known as "NZ Units") for years. The current spot price of NZ Units carbon credits has increased from \$25 in 2020 to around \$65. The price of credits is, broadly, expected to rise over time but is not without volatility.⁷ Prices fell sharply from all-time peaks of around \$85 in late 2022, after the Government declined to implement some recommendations from the Climate Change Commission on future settings for the ETS. The Government has just announced a review⁸ into the ETS because of concerns it is not working to effectively and meaningfully reduce emissions.

It is reasonable to argue that increasing the demand for NZ Units, and ultimately an appreciating carbon price, will drive emissions mitigation over time. However, there is regulatory risk embedded in carbon prices. In New Zealand's case this has seen prices falling in early 2023, while internationally there have been many regulatory and governance issues with carbon offset schemes.

It is difficult to show a linkage to date between NZ carbon prices and emissions reduction. The NZ ETS has been in operation since 2008, and during this time period gross emissions have been fairly static, while net emissions (after accounting for land use changes) have increased. Investing into NZ Units increases the demand and thus should raise the carbon price, strengthening incentives for emitters to reduce emissions, but the impact of such investment is small.

6. Via Salt Asset Management's Carbon Fund (NZX: CO2).

7. For example, the Climate Change Commission stated in 2021 that it expects the "marginal abatement cost" per tonne of reduction in emissions (measured as CO₂-equivalent) to reach \$140 by 2030 and \$250 by 2050 in real terms (i.e. 2021 dollars).

8. See <https://environment.govt.nz/news/review-underway-of-role-of-nz-ets-in-climate-response/>

3.5

Invest in nature-based solutions

CLIMATE IMPACT:	Varies		
POTENTIAL RETURNS:	May be commercial, concessional or zero returns		
MITIGATION/ ADAPTATION	Mitigation		
RIAA CATEGORIES:	Sustainability-Themed Investment, Impact Investment		
INVESTMENT/ GRANTING:	Investment	EQUITY/ DEBT:	Equity or debt

Nature-based solutions is a broad term which incorporates a range of projects, such as planting exotic or native trees at scale, restoring wetlands, undertaking pest & predator control to offset emissions by increasing the level of carbon sequestration of forested areas, increasing soil carbon, and so forth. The economics of these solutions need to be closely examined.

Unfortunately, due to the slow growth rate of New Zealand native trees, a recent study⁹ shows that afforestation with native trees in New Zealand is not financially viable (having negative Net Present Value) and the emissions outcomes are too slow to assist in meeting New Zealand's 2030 commitments under the Paris Agreement. By contrast, exotic forestry is profitable, but appears well-served by existing players. A modest sum of Government funding is available under the Emissions Reduction Plan for forestry projects, but is probably insufficient to ensure a market return for native afforestation projects in the near term.

Nature-based solutions may offer other beneficial outcomes such as supporting Māori economic & cultural development, improving biodiversity, creating jobs and increasing infrastructure resilience. They also come with delivery risks: some of the largest global solutions based on payments to reduce deforestation and protect rainforests have recently come under strong criticism¹⁰ for over-stating their impact.

9. Sean Weaver, Ekos; "Carbon economics of natural regeneration at scale", NZ Journal of Forestry, February 2023, Vol. 67, No. 4

10. See for example The Guardian; "Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows", January 2023, <https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe>

Alastair Rhodes believes that nature-based solutions are critical to restoring the mauri of Aotearoa. He says "the economics of these solutions is still being worked through, and is currently largely relying on carbon credits at the moment. However, if the full benefits of these solutions were priced in, including job creation, water quality, biodiversity improvements etc., we believe these investments would more than stack up. Further research and commitments from central Government are needed in this area, as there are investors like ourselves who are ready and willing to invest in the right projects."

ALASTAIR RHODES (CEO - BAYTRUST)

3.6

Offer grant funding for local / national / international environmental projects

CLIMATE IMPACT:	Can be a small but direct impact per dollar invested		
POTENTIAL RETURNS:	Zero		
MITIGATION/ ADAPTATION	Both		
RIAA CATEGORIES:	Philanthropy		
INVESTMENT/ GRANTING:	Granting	EQUITY/ DEBT:	n/a

There are a plethora of opportunities for Non-Government Organisations and philanthropic investors to grant-fund environmental projects, and many are doing so today. These initiatives are often nature-based solutions (see 3.5 above). Locally, projects may include waste diversion/ reduction, micro-mobility (e.g. encouraging walkable cities, e-biking, carpooling) as well as nature-based solutions such as wetland protection, riparian & roadside tree planting, and so forth. Internationally, projects to roll out cleaner cookstoves in developing countries is an example of a grant-based project offering both emissions reduction and community health benefits.

Central Government is also a major grant-maker, and offers grants which can help reduce greenhouse gas emissions through agencies like the Energy Efficient & Conservation Authority (EECA) and programmes like the Waste Minimisation Fund, managed by the Ministry for the Environment.

As granting organisations know all too well, there is extensive demand for grants from across Aotearoa and internationally, which typically well outstrips the capability of funders to support them.

Alastair Rhodes says that with challenging investment markets, granting across NZ is likely to come under pressure. However, perpetual philanthropic organisations like BayTrust and the other signatories to the Climate Action Aotearoa Funders' Commitment¹¹ know that climate change is the biggest long term risk (and potential opportunity) to our communities. As such, he expects to see increased funding is being allocated into this area.

ALASTAIR RHODES (CEO - BAYTRUST)

11. See <https://www.climateactionaotearoa.co.nz/>

4.0

What else can you do?

Parties wishing to ensure Aotearoa New Zealand responds effectively to climate change have a range of other options which are less investment-oriented but are still relevant ways to help. These include:

- Funding climate activism – i.e. provide grants to local organisations who are doing climate related campaigns or direct emissions reductions such as tree-planting.
- Funding climate litigation – i.e. support those who are taking legal action against emitters or Governments. We would suggest those looking at this option should get in touch with Lawyers for Climate Action New Zealand Inc.¹²
- Investing to reduce your own footprint. Non-Governmental Organisations may choose to make their office building more energy-efficient, reduce travel, convert vehicles to EVs, support employees to use public transport or buy an e-bike, and so forth.

12. See <https://www.lawyersforclimateaction.nz/>

About

The Climate Venture Capital Fund is a venture fund which invests in companies that deliver high growth, high returns on investment – and high impact on climate change through reducing greenhouse gas emissions.

The Fund is managed by 2040 Ventures and is New Zealand's only venture capital fund which solely targets climate response.

climatevcfund.com



BayTrust was formed in 1988 as the Trust Bank Bay of Plenty Community Trust to hold shares in the Trust Bank Group for the benefit of Bay of Plenty Communities. In 1996 this share, along with all the other shares in the Trust Bank Group, was sold to the Westpac Bank and the sale proceeds of approximately \$90m invested by the Trust. While now known as BayTrust, the organisation's official name is the Bay of Plenty Community Trust Incorporated. Its area is from Katikati to Turangi to Cape Runaway including Rotorua, Taupo, Tauranga and Whakatane. BayTrust is committed to becoming a climate responsible (tiakina te ao turoa) organisation, and desires to work with Māori in a way that is consistent with the Principles of the Treaty of Waitangi.

baytrust.org.nz



Philanthropy New Zealand | Tōpūtanga Tuku Aroha o Aotearoa is the peak body representing and supporting philanthropy and grantmaking in Aotearoa New Zealand. It supports generosity, effective giving, and a strong philanthropic eco-system. It provides training, shares best practice, data and research, connects with Government and convenes its members to enable collaboration. It offers guidance for anyone with an interest in giving to make the world a better place. Its purpose is growing effective giving.

philanthropy.org.nz



The Centre for Sustainable Finance | Toitū Tahua was established to accelerate progress towards a sustainable, inclusive financial system. Their work is anchored in the Sustainable Finance Forum Roadmap, which calls for changing mindsets, transforming finance and financing transformation. The roadmap outlines a set of implementation principles that is followed in their work.

sustainablefinance.nz





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