

Climate Risk: Understanding the financial risk that climate change presents to New Zealand companies

The question is no longer whether a particular company is exposed to Climate Risk, but by how much?

Executive Summary

There is clear scientific consensus that human-induced climate change is underway and will worsen (see Part 1 of this paper).

Climate change has significant implications for all parts of society, including the corporate sector. This paper defines “**Climate Risk**” as the financial risks that climate change presents to the corporate sector. Part 2 of this paper provides examples of Climate Risk, including:

- Operational risk (disruption of company operations);
- Insurance risk (increased premiums and/or uninsurability);
- Regulatory risk (regulation of greenhouse gas emissions and ensuing compliance costs);
- Shareholder risk (shareholder activism and disruption);
- Litigation risk (costs resulting from “climate litigation”);
- Capital risk (inability to raise capital);
- Competitive risk (loss of economic opportunity) and
- Reputational risk.

Prudence and common sense dictate that those responsible for preserving the value of New Zealand businesses and investments analyse Climate Risk and take steps to mitigate it. A failure to address Climate Risk would raise profound questions about the proper exercise of governance and fiduciary duty and expose the company to massive future liability if the company continues with activities that contribute to climate change. Part 3 of this paper outlines the steps that a prudent board of a major company would take to assess and address Climate Risk.

Part 1: The Scientific Context

Climate change is happening now and will worsen

There is clear scientific consensus that human-induced climate change is happening now and will worsen. The extent of change will be determined by how much more greenhouse pollution we put in the atmosphere.

Mainstream business is accepting the scientific consensus and incorporating it into their strategic planning. According to the Chief Executive of the New Zealand Business Council for Sustainable Development, Peter Neilson:

"The time to keep cherry picking the science is over.... The deniers now comprise an underwhelming minority. The vast majority of New Zealanders know climate change is a problem."¹

The most recent (2007) report of the world's most authoritative body of climate scientists, the Intergovernmental Panel on Climate Change (IPCC)², confirmed that:³

- Temperatures have already risen 0.76 degrees centigrade over the past century.
- It is "very likely" (more than a 90% probability) that most of this global warming was due to increased greenhouse gases from human activity.
- Eleven of the last twelve years (1995 -2006) rank among the 12 warmest years on record.
- Mountain glaciers and snow cover have declined on average in both hemispheres. Widespread decreases in glaciers and ice caps have contributed to sea level rise.
- At continental, regional, and ocean basin scales, numerous long-term changes in climate have been observed. These include changes in Arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones
- Temperature is projected to increase further during the 21st Century. The extent of change will be determined by how much more greenhouse pollution we put in the atmosphere. Under a low emissions pathway, temperature will rise a further 1.1 to 2.9°C. Under a high emissions pathway, temperature will rise a further 2.4 to 6.4°C by 2090.

According to UK Environment Minister David Miliband, "the report confirms our concerns that the window of opportunity to avoid dangerous climate change is closing more quickly than previously thought".

New Zealand will not be immune to climate change. The latest IPCC report on climate impacts states with "high confidence" that New Zealand is already experiencing climate change impacts⁴ and that the country's most vulnerable sectors are natural systems, water security and coastal

¹ *Jury's in, time to adapt on climate change*, New Zealand Business Council for Sustainable Development Press Release, 10 April, 2007.

² Approximately 2500 scientific experts were involved in the preparation and review of the IPCC reports.

³ Working Group 1 of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, see <http://www.ipcc.ch/>

⁴ IPCC WGII Fourth Assessment Report, Chapter 11: Australia and New Zealand, 2007

communities. According to the National Institute of Water and Atmospheric Research's (NIWA) summary of the IPCC findings and the Ministry for the Environment:

- Heat waves and fire risk are virtually certain to increase in intensity and frequency.
- Water scarcity problems in the eastern lowlands are likely to increase by 2030.
- Floods, landslides, droughts and storm surges are very likely to become more frequent. Under moderate projections, it is possible that sea levels will rise 30 to 50cm by 2100. Such a rise would lead to increased coastal erosion, flooding from storms, salination of freshwater, and drainage problems.
- More rain is likely to fall in the west of the country and less in the east.
- We can also expect more episodes of heavy rainfall and for westerly winds to become more prevalent with a greater risk of severe winds and storms.
- Agricultural productivity is expected to be exposed to increased risk of drought and the spreading of pests and diseases.
- Hotter summers will bring increased risks of heat stress and subtropical diseases such as dengue fever.
- Native ecosystems could be invaded by exotic species.
- Alpine areas and sub Antarctic Islands are ecosystems at greatest risk. 200-300 New Zealand indigenous alpine species could become extinct by 2080.

Part 2: What is Climate Risk?

Introduction

Climate Risk describes the range of financial risks that climate change presents to a company. Part 2 of this paper outlines seven types of Climate Risk, ranging from disruption of operations to the introduction of a “cost on carbon” and climate litigation.

A recent report by leading global finance firm UBS⁵ offers a detailed breakdown identifying key investment risks and opportunities presented by climate change. According to the report, risks include heightened regulation, increased impairment of physical property, loss of revenues and erosion of reputation.

The extent to which a company is exposed to Climate Risk will depend on that company’s operations and future plans. This means that Climate Risk is best assessed by persons who are intimate with the company’s operations, or have open access to information on the company’s operations.

“Climate change, or the threat of human induced climate change, affects companies’ profitability and value in two key ways: the cost of carbon; and physical weather and climate impacts.”

Citigroup, November 2006⁶

Are New Zealand companies managing their Climate Risk?

Research conducted by the Carbon Disclosure Project⁷ (CDP) suggests that New Zealand companies are not adequately assessing or managing Climate Risk.

In 2006, the CDP surveyed the top NZX50 and ASX100 companies on behalf of the Investor Group on Climate Change⁸ and Goldman Sachs JBWere. Only 39% of NZX50 companies responded to the survey. The CDP report found that:

- 94% of respondent companies recognised climate change-related issues could affect earnings, liabilities or their risk profile;
- however, only 25% of respondent companies demonstrated a sophisticated understanding of climate change related risks that may impact on their operations; and
- only 11% of respondent companies have an integrated or sophisticated emissions reduction strategy and track record in implementing such initiatives (e.g. energy efficiency initiatives, resource substitution initiatives, emission offset initiatives).

⁵ UBS Research Focus – Climate Change: Beyond Whether, January 2007.

⁶ Citigroup. *Climate Change and the ASX100* 30 November 2006

⁷ Carbon Disclosure Project Report 2006 Australia and New Zealand <http://www.cdproject.net/reports.asp>

⁸ The IGCC represents investors from Australia and New Zealand with \$195 billion funds under management.

Climate Risk 1: Operational Risk

Climate change will have increasing impacts on the operations of New Zealand companies.

The 2006 Stern Report concluded that climate change could produce economic disruption on the scale of the two World Wars and the Great Depression, a figure in the trillions of dollars. Climate change could wipe out 5 to 20% of global GDP. Conversely, taking action to stabilise climate by making deep cuts in greenhouse pollution would cost only 1% of global GDP.

New Zealand is vulnerable to extreme weather events and these come with real economic costs. The insured losses from the Lower North Island floods in 2004 were about \$112 million, but the uninsured losses were estimated to be around \$290 million⁹.

New Zealand's agricultural sector is particularly vulnerable to climate change. The 1997 El Niño drought caused a loss of NZ\$618 Million (0.9%) in GDP and the La Niña event the following year caused a loss of NZ\$539 million in GDP – a loss of over NZ\$1 billion¹⁰.

All business sectors are at risk, though the type and extent of risk varies. A useful analysis of sectoral risk is made in *Climate Change and Company Value: A Guide for Company Analysts* (AMP Henderson Capital Investors and Baker & McKenzie, 2005).

Examples of New Zealand business sectors that are particularly at risk include:

- **Agriculture:** Changes to rainfall and temperature, and increased storm damage are likely to adversely affect New Zealand's most important economic sector. Key eastern agricultural areas are projected to experience reduced water availability.
- **Tourism:** Climate change could severely disrupt New Zealand's growing tourism industry.
 - Iconic sites and World Heritage Areas such as Mt Cook/Aoraki in Te Wahipounamu - South West New Zealand, could suffer. One-third of the South Island's 3000 glaciers could disappear in a few decades if the temperature rises by 1.5 - 4.5°C. This could reduce visitor flows to tourism dependent towns such as Fox and Franz Josef.
 - The snowline may also rise several hundred metres, adversely impacting the New Zealand snowsports industry.
 - Sea-level rise, increased storms and storm surges will also impact coastal areas.
- **Property:** Climate change has significant implications for the property sector.¹¹ For example:
 - The commercial property sector faces increased energy costs, greenhouse building standards, and increased consumer demand for "green buildings";
 - The industrial and rural property sectors face disruption due to extreme weather events, increased coastal erosion, higher insurance premiums or difficulties in obtaining insurance and increased tenancy default.

⁹ FMG chief executive Gordon Smith

¹⁰ IPCC Climate Change 2001: Working Group II: Chapter 12, Australia and New Zealand. Impacts, Adaptation and Vulnerability 12.5.6. Drought

¹¹ BRANZ provide further information on climate change implications for the building and construction sector in New Zealand. For example, see: <http://www.branz.co.nz/branzLtd/publications/pdfs/SR130.pdf>

- Local governments are also tightening planning restrictions around coastal areas vulnerable to sea level rise and storm surge.

Climate Risk 2: Insurance Risk

Climate change will increase insurance premiums and make some activities uninsurable. The extent to which a particular company is affected will depend upon the company's operations, and the ways in which the company has adjusted its behaviour in anticipation of the impacts of climate change.

"Recent history has shown that weather-related losses can stress insurance companies to the point of bankruptcies, elevated consumer prices, withdrawal of insurance coverage, and elevated demand for publicly funded compensation and relief."¹²

"...the net damage costs of climate change are likely to be significant and to increase over time.... In some locations and amongst some groups of people with high exposure, high sensitivity and/or low adaptive capacity, net costs will be significantly larger than the global aggregate."¹³

The Insurance Council of New Zealand has noted that coastal properties could fall in value because insurers are refusing to cover them for extreme weather events linked to climate change. According to Insurance Council chief executive Chris Ryan, "the changing weather that we are experiencing will raise the risk for some particular properties. In a worst-case scenario, those properties might not get insurance."¹⁴

The President of the Reinsurance Association of America has publicly stated that global warming could bankrupt the insurance industry.¹⁵ Insurance allows companies to share risk. If insurance coverage becomes too expensive, or is withdrawn, events that would in the past have been covered by insurance may instead lead to bankruptcy. Time Magazine has noted that:

"Most policies covering natural disasters are renewable on a yearly basis. When risks become too expensive, insurers can simply walk away."¹⁶

Climate Risk 3: Regulatory Risk

Various regulatory schemes are being introduced in response to climate change. These schemes present New Zealand companies with a number of financial risks, including payment for greenhouse gas emissions (whether direct or indirect), and compliance costs.

Payment for greenhouse gas emissions may be direct (e.g. a carbon tax or emissions trading scheme) or indirect (e.g. increased energy prices). In either case, a company's current and future financial liability can be reduced by taking action now to reduce company emissions and energy use.

Climate Change and Energy Minister David Parker indicated in May 2007 that an emissions trading scheme could be legislated by 2008, with the possibility of eventually bringing all

¹² See Chapter 8 of the IPCC Third Assessment Report, *Climate Change 2001 Impacts, Adaptation and Vulnerability*, IPCC 2001, available at http://www.grida.no/climate/ipcc_tar/.

¹³ IPCC Climate Change 2007: Impacts, Adaptation and Vulnerability: Working Group II, April 2007.

¹⁴ http://www.NewZealandherald.co.NewZealand/section/1/story.cfm?c_id=1&objectid=10433806 (accessed 1 May 2007).

¹⁵ See Coleman, Tony, "The Impact of Climate Change on Insurance Against Catastrophes", Insurance Australia Group, at page 11.

¹⁶ "Who's Going to Pay For Climate Change? The threat of lawsuits — and an exodus of insurance companies — may finally force corporations to think green", Time Magazine, 7 February 2003.

greenhouse gas polluting sectors under such a regime¹⁷. The Opposition National Party has adopted a national target of a 50% reduction in carbon-equivalent net emissions, as compared to 1990 levels, by 2050 - to “send a clear message to the world: New Zealand means business on climate change”. The Opposition Leader John Key has also stated that National will introduce a comprehensive 'cap and trade' emission permit system to manage greenhouse gas emissions.¹⁸

New Zealand companies with international operations or significant international markets should also be incorporating the following legal and regulatory developments into their business planning:

- The EU emissions trading scheme commenced in 2005 and is moving into its second period in 2008. There are moves underway to broaden the range of activities covered by the scheme, for example by including aviation emissions.
- The EU has agreed to reduce greenhouse gas emissions by 20 per cent below 1990 levels by 2020, and to increase the commitment to a 30 per cent reduction if other industrialised countries agree to similar targets.
- In the USA, the introduction of State-based emissions trading schemes in the Western and North-eastern States is well advanced.
- At the US Federal level, a record number of climate change bills have been introduced to the new Democrat controlled Congress (see table below). The Pew Centre's recent Global Climate Change Survey found that the majority of US companies believe that federal legislation is imminent, and 84 percent of those believe federal standards will take effect before 2015.¹⁹ Recently, Republican US Senator and presidential hopeful John McCain predicted that if Congress passes legislation in the next two years to enact a mandatory carbon emissions reduction program, President Bush would sign it.
- In Australia, the States have committed to introduce a State-based emissions trading scheme by 2010 if the Federal Government fails to enact a national scheme. The Federal Government has indicated it will move towards adopting an emissions trading scheme.

¹⁷ Press conference, Hon David Parker, 8 May, 2007

¹⁸ See: <http://www.national.org.nz/Article.aspx?ArticleID=10195>

¹⁹ Pew Center on Global Climate Change: Getting Ahead of the Curve: Corporate Strategies That Address Climate Change. October 2006

Climate change legislation in the US Congress

Title and sponsors	Reduction target and timeframe	Important attributes
Climate Stewardship and Innovation Act Senators Lieberman (I-CT) and McCain (R-AZ)	Bring emissions to 2004 levels by 2012, to 1990 levels by 2020, to 22% below 1990 levels by 2030, and to 60% below 1990 levels by 2050.	Caps electric power, industrial, commercial, and transport sectors; includes provision for clean development mechanism through which US companies gain credits for emission reductions they sponsor in developing countries.
Global Warming Pollution Reduction Act Senators Sanders (I-VT) and Leahy (D-VT)	Stabilise global greenhouse gas concentrations below 450 parts per million: US reductions to 1990 levels by 2020 and 80% below that by 2050.	Besides economy-wide caps, bill provides for national renewable energy quotas and energy efficiency goals with credits trading programmes.
Electric Utility Cap-and-Trade Act Senators Carper (D-DE) and Feinstein (D-CA)	Caps current emissions through 2011, then at 2001 levels by 2012, thereafter cap lowers further 1% each year through 2020, subject to EPA review.	Electric generation sector only; specifies auctioning of credits, use of offsets; establishes independent scientific panel to make recommendations to the EPA every four years on the reduction rate required.
Climate Stewardship Act House Reps. Oliver (D-MA) and Gilchrest (R-MD)	Bring emissions to 2004 levels by 2012, to 1990 levels by 2020, to 22% below 1990 levels by 2030, and to 60% below 1990 levels by 2050.	Same as Lieberman and McCain's, except offset credits may account for only 15% of emissions reductions, and "early action" credits limited to 20% of cap.
Global Warming Reduction Act Senators Kerry (D-MA) and Snowe (R-ME)	Reduce emissions to 60 per cent below 1990 levels by 2050, though at increasing annual reductions starting at 1.5% a year for the first ten years.	Besides economy-wide caps, bill includes nationwide renewable fuels standard, and national renewable energy quota of 20% by 2020.

Source: CO2 Australia March 07 Carbon Update

Climate Risk 4: Litigation Risk

Companies that fail to act to minimise their Climate Risk are more likely to be made the subject of a wide range of potential "climate lawsuits".

New Zealand companies are particularly vulnerable in this respect. New Zealand courts were some of the first in the world to accept the science of human-induced climate change.²⁰ Further, New Zealand courts have been willing to consider the climate implications of energy proposals, viewing renewable projects favourably²¹ and non-renewable projects unfavourably²² in the consenting process. Australian courts have adopted a similar approach.²³ As the impacts of global climate change worsen, the targets of climate litigation are likely to extend beyond the energy sector.

Litigation continues to gather momentum globally, particularly in the United States.²⁴ In the landmark 2007 decision of *Massachusetts, et al v EPA*²⁵, the U.S. Supreme Court ruled that the Environmental Protection Agency must review its decision not to regulate the domestic release of global warming gases, which the court considered to be "pollution" under the Clean Air Act. Massachusetts recently launched a second lawsuit against Federal energy regulators, accusing them of failing to tighten standards that could reduce greenhouse gas emissions and eliminate the need for major new power plants.

²⁰ *Environmental Defence Society v. Auckland Regional Council and Contact Energy Limited* [2002] 11 NZRMA 492

²¹ *Genesis Power Ltd and the Energy Efficiency and Conservation Authority v Franklin District Council, R Gordon Whiting*, Decision No. A148/05, 7th September 2005.

²² *Greenpeace New Zealand v Northland Regional Council and Mighty River Power*, CIV 2006-404-004617 Judgment of Williams J, 12 October 2006.

²³ See, for example, *Taralga Landscape Guardians Inc v Minister for Planning and RES Southern Cross Pty Ltd* [2007] NSWLEC 59, and *Gray v Minister for Planning & Ors* [2006] NSWLEC 720

²⁴ Further information on current and potential lawsuits is available: at www.climatelawsuit.org, www.icta.org and www.cana.net.au/ACJP

²⁵ See <http://www.supremecourtus.gov/opinions/06pdf/05-1120.pdf>

The U.S. State of California is currently suing 6 major car companies, seeking payment of compensation for the damage caused by the companies' greenhouse emissions.²⁶ The case is arguably the most significant piece of climate change litigation to have been brought thus far. The Stern Review estimated the global cost of the impacts of climate change to be trillions of dollars. The Stern Review also estimated that the "social cost of carbon" (the cost of impacts associated with an additional unit of greenhouse gas emissions) at US\$85 per tonne of CO₂. As a consequence, companies with significant emissions could face insolvency if they were held liable for their proportional contribution to climate change.

If the histories of tobacco and asbestos litigation are any example, those corporations that are made the subject of litigation are likely to suffer damage to both their balance sheet and their reputation. The major difference, says William Baue from *SocialFunds.com*, "is that the financial liability is going to be much greater for climate change."²⁷

James Cameron, when he was at Baker & McKenzie, the international law firm, warned that the likelihood of a company being successfully sued for the damage caused by its greenhouse gas emissions could be greatly increased if the company were deemed to have acted culpably by, for instance, lobbying against greenhouse gas regulations.²⁸

An international and collaborative "Climate Justice Program"²⁹ is supporting legal actions that "hold the perpetrators of climate damage accountable and liable for the consequences of their actions". According to the Programme's directors, current climate lawsuits are just the beginning – more lawsuits are in the pipeline.³⁰ An "Australian Climate Justice Program" has also been launched in conjunction with the international program.³¹

The range of potential climate lawsuits in New Zealand includes:

- mass tort actions based in negligence or nuisance,³²
- actions in relation to defective products or misleading and deceptive conduct under consumer protection legislation;
- lawsuits targeting company directors, such as under the Companies Act 1993; and
- actions under environmental legislation, in particular provisions relating to harm of the environment and protected areas.

The standing provisions for climate lawsuits can be broad. In other words, there is a wide range of potential plaintiffs, including, individuals whose health has been affected (for example by increased incidence of tropical diseases); individuals whose property has been damaged;

²⁶ See <http://ag.ca.gov/newsalerts/release.php?id=1338>

²⁷ William Baue, 'Climate Change Litigation Could Affect Companies' Market Value' *SocialFunds.com*, 23 July 2003, www.socialfunds.com/news/article.cgi/article1180.html

²⁸ See "Climate change could be next legal battlefield", *The Financial Times*, 2003/07/13, available at: <http://news.ft.com/servlet/ContentServer?pagename=FT.com/StoryFT/FullStory&c=StoryFT&cid=1057562354269&p=1012571727288>

²⁹ See www.climatelaw.org

³⁰ See "Climate change could be next legal battlefield", *The Financial Times*, 2003/07/13, available at: <http://news.ft.com/servlet/ContentServer?pagename=FT.com/StoryFT/FullStory&c=StoryFT&cid=1057562354269&p=1012571727288>

³¹ See www.cana.net.au/ACJP

³² In 2002, the Australian Conservation Foundation released a paper titled *Tort Based Climate Litigation in Australia*, available at www.acfonline.org.au/docs/publications/rpt0030.pdf

individuals or companies that have suffered financial loss; non-governmental organisations, the national government and regional and local councils. Greenpeace notes that it has already been involved in climate lawsuits both in New Zealand and abroad. The remedies that are available for each climate lawsuit vary, but the consequences of an adverse judgement could be financially severe.

In conclusion, prudent companies are reducing their exposure to climate litigation – by reducing their company’s greenhouse emissions. Conversely, companies that are failing to reduce their greenhouse emissions are increasing their exposure to litigation. Companies that are choosing to *increase* their greenhouse emissions, and/or impede the introduction of regulations that are intended to reduce greenhouse emissions are highly exposed. Due to the massive damages that are likely to be incurred if climate change is allowed to worsen, companies with significant emissions could face insolvency if they are held liable for their proportional contribution to climate change.

Climate Risk 5: Shareholder Risk

The number of shareholder actions on climate change is rising. More importantly, the nature of shareholder activists is also changing, with an increasing number of mainstream institutional investors becoming active.³³

In 2007 in the US, a record 42 "global warming" resolutions were filed against companies.³⁴ Most of the resolutions called for company plans to reduce greenhouse gas emissions. In many cases, resolutions were only withdrawn by shareholders after a pledge by the company to implement the request.³⁵

Companies that delay taking action on climate change are also at risk of being sued by their shareholders. For example, they could be sued for incurring higher costs as a result of unduly delaying emission reductions; or failing to disclose investment-relevant information. According to international insurer Swiss Re:³⁶

"Shareholders actions might follow, claiming that directors and officers of such companies should be liable for not adequately addressing the potential threats brought by climate-change related regulation".

Climate Risk 6: Capital Risk

Climate Risk is an increasingly relevant consideration in the choice and maintenance of investments. Superannuation funds have a particular interest in ensuring the long-term security of their investments. Mainstream investment houses are developing sophisticated means of assessing companies’ strategic response to Climate Risk. The size and influence of socially responsible investment funds is growing. Companies that have failed to address Climate Risk can be expected to face increased difficulty raising capital

³³ *Value at Risk: Climate Change and the Future of Governance*, CERES/Innovest, April 2003.

³⁴ http://www.ceres.org/pub/docs/Resolution_tracker.pdf

³⁵ See http://www.ceres.org/investorprograms/shareholder_action.php

³⁶ See "Climate change could be next legal battlefield", The Financial Times, 2003/07/13, available at: <http://news.ft.com/servlet/ContentServer?pagename=FT.com/StoryFT/FullStory&c=StoryFT&cid=1057562354269&p=1012571727288>

Capital Risk Example 1 – The Equator Principles

Over 50 banks around the world have now signed up to "Equator Principles," a set of guidelines developed by the banks for managing social and environmental issues related to the financing of development projects. The banks will apply the principles globally to project financings in all industry sectors, including mining, oil and gas, and forestry.³⁷

Capital Risk Example 2 – The Institutional Investors Group on Climate Change (IIGCC)

"Climate change is now a material issue, affecting future returns and creating new responsibilities". "All companies now have a 'duty of care' to address climate change. [AMP Henderson] will not invest in any company ... that is taking an irresponsible approach to climate change".

IIGCC Member, AMP Henderson.³⁸

The Institutional Investors Group on Climate Change (IIGCC)³⁹ was established in 2001 as a forum for collaboration between pension funds and other institutional investors to address the investment risks and opportunities associated with climate change. The group seeks to promote better understanding of the implications of climate change for financial performance and to encourage the integration of climate risks and opportunities into investment decision-making and dialogue with companies and policymakers. The IIGCC has 31 members representing around €2.5 trillion of assets.

Capital Risk Example 3 – The Carbon Disclosure Project

"CDP now represents one third of the money in the world."

Paul Dickinson Coordinator, Carbon Disclosure Project

The Carbon Disclosure Project (CDP)⁴⁰ provides a secretariat for the world's largest institutional investor collaboration on the business implications of climate change. CDP represents an efficient process whereby many institutional investors collectively sign a single global request for disclosure of information on Greenhouse Gas Emissions. More than 1,000 large corporations report on their emissions through this web site.

The first cycle of the project (CDP 1) involved sending a letter and questionnaire to the FT500 largest companies in the world on 31st May 2002. CDP has grown rapidly. The "CDP 4" information request was signed by 225 institutional investors with assets of more than \$31 trillion and sent on 1st February 2006. For the first time, CDP specifically covered New Zealand companies (NZX50, for information on the response, see above section "Are New Zealand companies managing their Climate Risk?"). The "CDP 5" information request was signed by more than 280 institutional investors with assets of more than \$41 trillion and sent on 1st February 2007. The information request was sent to 2,400 companies. The responses will be made publicly available in September 2007.

³⁷ See <http://www.equator-principles.com/>

³⁸ AMP Henderson Global Investment 'Climate Change Position Paper: Socially Responsible Investment', September 2002, at executive summary and at page 12.

³⁹ See <http://www.iigcc.org>

⁴⁰ See <http://www.cdproject.net>

Climate Risk 7: Competitive Risk

Companies that fail to address Climate Risk may be placing themselves at a competitive disadvantage. According to the OECD,⁴¹ leadership on climate change drives companies to be more innovative and create additional value for their shareholders and to seek new business opportunities. Action can lead to:

- direct gain over competitors, for example through “first mover” advantage; and
- indirect gains, for example by improving a company's negotiating position when a government proposes to introduce regulation, or simply through an improved or "greener" reputation.

The right blend of Climate Risk strategies can substantially reduce the costs of mitigation, and perhaps even produce a net economic benefit.⁴² An obvious examples is the reduced energy expenditure that most companies will achieve under a program to reduce company greenhouse gas emissions.

There are numerous examples of companies that have made commitments to reduce company greenhouse gas emissions, and then met those commitments easily and with substantial financial benefit. For example, Canadian company, Catalyst, the world's largest directory paper producer, committed to reduce its carbon dioxide (CO₂) emissions 70% below its 1990 levels by the year 2010, one of the most significant reductions committed to by a public company. Catalyst achieved its goal well ahead of target – in 2005 – eliminating more than 1 million tonnes of annual greenhouse emissions, cutting its fossil fuel use by 46%, and saving tens of millions of dollars.⁴³

"Businesses which adopt sustainable practices, to make a profit while also achieving environmental and social goals, are securing a long-term advantage. Our research says tomorrow's customers will severely punish those who don't. If New Zealand doesn't see the opportunities inherent in climate change our trading partners will punish us too. In a world rapidly going green, the key message for New Zealanders is to get in behind and benefit from the changes."

Peter Neilson, Chief Executive of the NZ Business Council for Sustainable Development

Climate Risk 8: Reputational Risk

Companies which are seen to undermine steps to address climate change or who have projects or practices which contribute to climate change risk being exposed to public campaigns which can damage their image. Recent examples include Exxonmobil which has been the subject of various consumer and shareholder campaigns around the world (for example see www.exxonsecrets.org). In New Zealand, Mighty River Power has been subject to a widespread, national public campaign by Greenpeace and community groups against the company's proposal to re-fire Marsden B power station on coal.

Reputational Risk can impede a company' ability to compete in the marketplace, as consumers seek alternative purchases. The latest Colmar Brunton Market Mood Monitor in March 2007

⁴¹ OECD 'Policies to reduce greenhouse Gas emissions in Industry" COM/ENV/EPOC/IEA/SLT(2003)

⁴² *Value at Risk: Climate Change and the Future of Governance*, CERES/Innovest, April 2003.

⁴³ See:

http://www.panda.org/about_wwf/what_we_do/climate_change/solutions/business_industry/climate_savers/index.cfm

showed that global warming is changing the way New Zealanders think about the companies from which they purchase products and services. A quarter (25%) have taken into consideration a company's contribution to global warming when deciding to do business with them. One in ten New Zealanders (12%) have actually stopped buying a company's products or service because it is contributing too much to global warming.

Perhaps more importantly, Reputational Risk can adversely affect companies ability to recruit and retain quality employees in a competitive labour market.

Part 3: How can directors act to address Climate Risk?

The extent to which a particular company is exposed to a particular Climate Risk requires investigation by persons who are intimate with the company's operations, or have open access to information on the company's operations.

We do not wish to dictate to boards the actions which they should take to address Climate Risk. However, we suggest that at a minimum, in order to ensure that the fulfillment of fiduciary duties, a prudent board of directors would:⁴⁴

- oversee the preparation of a thorough assessment of Climate Risk (and opportunities);
- oversee the preparation and implementation of an action plan to mitigate Climate Risk; and
- ensure that proper structures of accountability are in place to monitor the company's progress in addressing Climate Risk.

Assessing your company's current Climate Risk

A proper assessment of Climate Risk would include:

- **Emissions measurement** – Calculation of your company's direct and indirect greenhouse gas emissions. We suggest that "The Greenhouse Gas Protocol: a common corporate accounting and reporting standard" provides a useful framework for this task.⁴⁵
- **Cost projections** – Estimation of the cost of your company's current and projected greenhouse gas emissions under various regulatory scenarios.⁴⁶
- **Impact assessment** – Assessment of the potential for climate change to disrupt or otherwise adversely affect your company's operations.
- **Insurance profile** – Assessment of the potential impacts of increased insurance premiums and uninsurability upon your company's operations.

Action Plan to mitigate Climate Risk

A prudent Board of Directors would prepare, announce and implement an action plan to mitigate their company's Climate Risk. The action plan would be integrated into the company's overall business plans, and include:

- An **emissions reduction plan**, including an analysis of cost-effective opportunities for reducing emissions, the setting of progressive emissions targets and staged actions to meet those targets.

⁴⁴ Adapted from AMP Henderson Global Investment 'Climate Change Position Paper: Socially Responsible Investment', September 2002. For a more detailed description of how to address Climate Risk, see section 3 of the AMP Henderson paper.

⁴⁵ See www.ghgprotocol.org

⁴⁶ The International Financial Reporting Interpretations Committee (IFRIC, the interpretative arm of the International Accounting Standards Board (IASB)) has issued guidance on accounting for greenhouse gas emissions. See: <http://www.iasb.org>

- A **business adaptation plan**, including measures to minimise operational disruption due to climate change.
- For progressive companies, a **business opportunities plan**, including an analysis of the business opportunities presented by climate change, and actions to take advantage of those opportunities.

Accountability

Formal, board-level accountability mechanisms would be put in place to monitor and report on the company's progress in:

- assessing and continually reviewing Climate Risk; and
- preparing, implementing and reviewing its action plan to address Climate Risk.

Comprehensive planning

The actions outlined above represent a “basic” approach to Climate Risk. More comprehensive measures to addressing Climate Risk are described in *Managing the Risks and Opportunities of Climate Change: A Practical Toolkit for Corporate Leaders*, a publication of Ceres and the Investor Network on Climate Risk.⁴⁷ We commend this publication to you.

We also recommend the online materials and resources provided by *Tackling Global Warming: The Climate Change Resource for Boards and their Advisors*.⁴⁸

Further information

Greenpeace considers that each company is best placed to assess and address its Climate Risk and that there is enough information contained in this brief to help you begin the process if you have not done so already. We would welcome any feedback on your progress on these issues. If you have any questions relating to this brief, please do not hesitate to contact us:

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⁴⁷ Available at: http://www.ceres.org/pub/docs/Ceres_corporate_toolkit_012006.pdf

⁴⁸ See: <http://www.tacklingglobalwarming.com/>