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Analysis of Climate Change Reporting in the Public and Private Sectors

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Analysis of Climate Change Reporting in the Public and Private Sectors

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1.0 Introduction

This working paper aims to contribute to a dialogue on how New Zealand might manage risks and maximise opportunities for growth in the transition to a low-carbon economy. It is hoped that this work will be particularly useful to the Productivity Commission, the Ministry for the Environment and the Climate Leaders Coalition.

The Productivity Commission released the draft report *Low Emissions Economy* in April 2018 noting that:

> Existing financial reporting requirements (e.g. as contained in the Companies Act 1993) will likely fail to adequately incentivise the disclosure of climate risk in a manner that is consistent and credible (Productivity Commission, 2018, p. 152).

The Ministry for the Environment (MfE) released *Our Climate Your Say: Consultation on the Zero Carbon Bill* in June 2018, asking 'Should we explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risk?' (Ministry for the Environment, 2018, p. 50). In addition, MfE released *Adapting to climate change in New Zealand: Recommendations from the Climate Change Adaptation Technical Working Group* in May 2018, which recommends some of the guidelines from the Task Force on Climate-related Financial Disclosures (TCFD, see below) under 'Action 9: Update and regularly review organisational planning, risk management, and disclosure requirements' (Climate Change Adaptation Technical Working Group, 2018, pp. 34–35).

The Climate Leaders Coalition signed a joint Climate Change Statement in July 2018 in support of transition to a low-emissions economy and New Zealand's commitment to the Paris Agreement:

> We take climate change seriously in our business:
>
> - We measure our greenhouse gas emissions and publicly report on them
> - We set a public emissions reduction target consistent with keeping within 2° of warming
> - We work with our suppliers to reduce their greenhouse gas emissions
>
> We believe the transition to a low emissions economy is an opportunity to improve New Zealand's prosperity:
>
> - We support the Paris Agreement & New Zealand's commitment to it
> - We support the introduction of a climate commission and carbon budgets enshrined in law (Climate Leaders Coalition, 2018).

The Institute has previously undertaken research in this area, preparing *Working Paper 2018/01 – NZSX-listed Company Tables*. This was the Institute's comprehensive examination of Extended External Reporting (EER) in 2016 annual reports of NZSX-listed companies. The review of 2016 annual reports of NZSX-listed companies found that only 25% of them disclosed information on carbon emissions (McGuinness Institute, 2018, p. 169).

Given this finding, the Institute undertook further research, resulting in this additional working paper. The method applied in *Working Paper 2018/01 – NZSX-listed Company Tables* can be adapted to different subject areas and, in this instance, is specifically used to analyse climate change reporting in more detail. Both working papers are being used as the basis for an upcoming *Project 2058* report: *Report 17 – ReportingNZ: Building a Reporting Framework Fit For Purpose* (to be launched on 1 August 2018).

1.1 Purpose of this working paper

The purpose of this working paper is to explore the extent of climate change reporting in the annual reports (or, if not available, the financial statements) of both public and private sector organisations. The term 'climate change reporting' refers to discussion of the behaviour of an organisation in terms of climate change risks and initiatives and carbon emission metrics, costs, controls and targets in an annual report.

Some of this research has been influenced by the TCFD report *Recommendations of the Task Force on Climate-related Financial Disclosures* (TCFD, 2017). The McGuinness Institute hopes this information will inform public policy discussions by providing a benchmark on where New Zealand stands today. If this research is repeated, it could be used to assess the future impact of changes in public policy instruments.

The key questions underlying this research are:

1. What information does the organisation disclose about the types of climate change risks it faces?
2. What information does the organisation disclose about its emissions?
3. What information does the organisation disclose about its strategy to reduce emissions and mitigate the risks of climate change? This could be in terms of the organisation, community, country or world.

1.2 Purpose of Project ReportingNZ

This working paper forms part of *Project ReportingNZ*, which aims to contribute to a discussion on how to build an informed society, in response to the important role of organisations within society. When organisations operate efficiently and with similar values to the communities in which they operate, they add value through employment, taxation revenue and supporting community initiatives. However, they can also present challenges if they do not reflect societal values or do not operate in a transparent manner. *Project ReportingNZ* looks specifically at the role of annual reports as a tool for improving the relationship between organisations and the communities in which they operate, and as one of the few mechanisms to collect readily available data on organisations for use as an evidence base in policy development.

An underlying assumption of *Project ReportingNZ* is that New Zealand's reporting framework is no longer fit for purpose. Questions of what users of reports need to know, in what format and in what time frame need to be explored and assessed regularly to ensure reports are timely, relevant, cost-effective and useful.

The specific assumption underlying this working paper is that reporting on climate change is new, challenging and complex and, as such, will require all parties to work together to ensure regulation, standards and guidelines work together to produce cost-effective, accessible, timely and comparable reports. The adage that 'we manage what we measure' highlights that what is not measured is not managed.

Symptoms of an under-performing reporting framework include:

- **Uninformed citizens**
  This manifests as an ineffective democracy. Political parties fail to get traction on solving complex longitudinal problems, often referred to as 'the tragedy of the commons'. This may be due to the public not fully understanding the nature or urgency of an issue. This is particularly difficult when trade-offs are required and those who gain and lose from disruption are different. For example, as in the case of climate change, future generations are disadvantaged by ministers' and policy-makers' inability to implement better practices and make informed decisions in the present.
- **Inefficient markets**
  This manifests as information users making decisions based on incomplete or incorrect information. Preparers of reports may be aware of a risk but fail to describe it in sufficient detail or in a reasonably accessible manner for the user; a shareholder may be unaware of a climate change risk and only retrospectively discover what the company's staff and board already knew.
- **Dissatisfied preparers and users**
  This manifests as disgruntled individuals or organisations. Dissatisfaction among preparers may be due to the cost and time required to prepare data, or competitors benefitting from their transparency. Results of the McGuinness Institute's 2017 *ReportingNZ* surveys reveal that users are dissatisfied because they do not have the timely, relevant, accessible information they need.[1]

1 For *Survey Insights: An analysis of the 2017 Extended External Reporting Surveys* and other McGuinness Institute *Project ReportingNZ* publications, please see www.mcguinnessinstitute.org/publications.

2.0 Methodology

2.1 Data sets

The initial stage of this research was to define the five data sets we would be analysing and comparing. These were:

Data set 1 – 2017 Deloitte Top 200 companies [200] (see Table 1)

Data set 2 – Government departments [31] (see Table 14)

Data set 3 – Crown agents and Crown entities [65] (see Tables 18 and 19)

Data set 4 – State-owned enterprises [14] (see Table 23)

Data set 5 – Local authorities [78] (see Table 27)

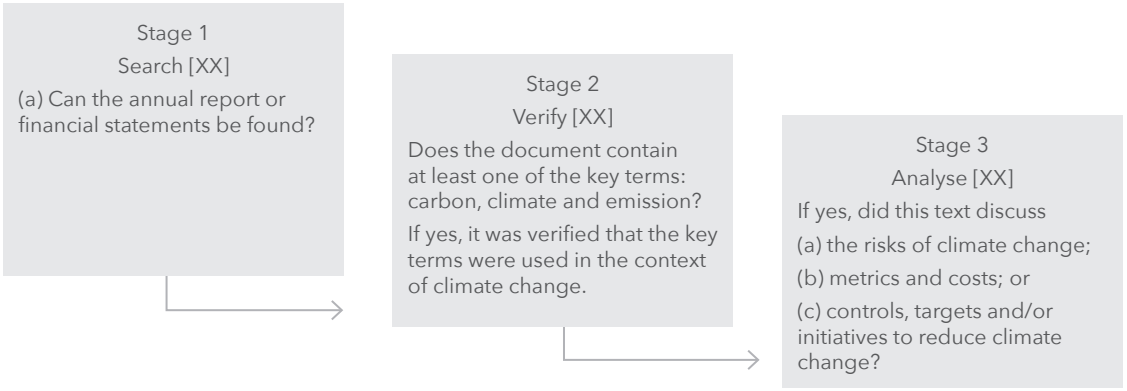
Appendices 1–5 contain all the supporting tables relevant to each of the five data sets. The first table of each appendix is a full list of the data set. The tables within each data set are published in the order they were prepared, showing how the documents were searched, verified and analysed. Appendix 6 contains excerpts from the TCFD report, the most commonly used guidance on climate change reporting. Where applicable, each figure is cross-referenced with a table.

All annual reports and financial statements that were analysed have been uploaded to www.reportingnz.org. This is to ensure that we are transparent and our data is easily verifiable, even if organisations update their own websites.

2.2 The standard methodology

The standard methodology for all data sets is described in Figure 1, and accompanied by a description below. Methodological differences between data sets are discussed in the relevant sections throughout this working paper.

Figure 1: Standard methodology for each data set



2.2.1 Stage 1: Search

Goal: Find copies of all annual reports.

For this stage, we searched either the Companies Register or the entities' own website and downloaded a copy of their 2017 annual report or, if there was no annual report, their 2017 financial statements.

2.2.2 Stage 2: Verify

Goal: Establish whether the documents include the search terms and verify that the terms are used in the context of climate change.

All documents were then searched using Adobe Acrobat Reader or Google Chrome for the terms 'carbon', 'climate' and 'emission'. Findings were recorded in an Excel spreadsheet along with the

page numbers of disclosures and qualitative notes on types of practices and/or targets disclosed. Any documents that did not contain any of the three search terms were set aside. The remaining reports were then checked to ensure that documents containing the search terms had used them in a context relevant to this research. For example, if a document only used the term 'climate' in reference to the 'economic climate', and did not include any other relevant disclosures, the document did not proceed to the next stage of research.

Pages on which the key words were used in the appropriate context were highlighted and then printed along with the annual report's cover page.

Sticky notes were placed on these hard copies to indicate which pages to go back to and review for examples of best practice. This information formed the basis of Section 8.0 Examples of best practice in this working paper.

2.2.3 Stage 3: Analyse

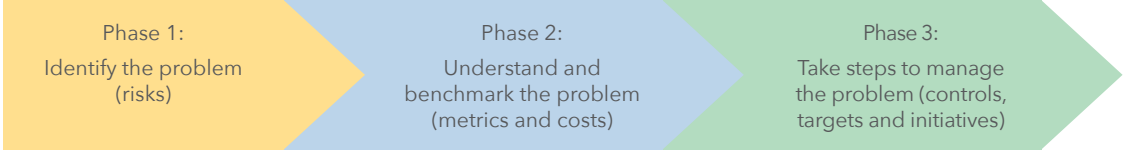
Goal: Analyse all the text containing the search terms.

In this stage, disclosures were grouped into one of the following climate change information categories:

1. **Climate change risks**: Any possible impact that climate change may have on the future of the organisation, country and/or world. The company may have a response to these impacts as part of its discussion of risk.
2. **Emission metrics**: Existing carbon emissions data stated in tonnes, percentages or CO_2/m_2 produced and/or abated.
3. **Emission costs**: Existing carbon emission offsets stated in financial figures and/or the number of carbon units used (usually found in financial statements).
4. **Emission controls**: Reference to existing measures that were put in place to control or abate carbon emissions.
5. **Emission targets**: Specific goals to reduce future carbon emissions. Emission targets refer to a specific numerical value (in contrast to initiatives, which are broader and less specific).
6. **Climate change initiatives**: A statement, reference to an action, or similar that shows the organisation is taking action or planning to take action to curb its emissions or reduce its vulnerability to climate change risks (or the vulnerability of a country or the world).

The categories were selected to represent the three steps of problem solving. Analysing disclosures of risk tells us firstly if the organisation is identifying a problem. Analysing disclosures of metrics and costs tells us secondly what data the organisation is collecting to understand and benchmark the problem. Analysing disclosures of controls, targets and initiatives tells us finally what the organisation is doing to try and manage the problem. We expected to find a significant level of disclosure of climate change risk, less disclosure of benchmarking of climate change and even less disclosure of attempts to manage climate change. In the bar graphs, Phase 1 is indicated with yellow, Phase 2 with blue and Phase 3 with green, as in Figure 2 below. The terms in brackets in the diagram below represent the categories of climate change information searched for in this research.

Figure 2: Phases of problem solving



2.3 A note on the standard methodology

The TCFD is an internationally recognised framework for reporting on climate change. The voluntary framework focuses on financial disclosures in financial statements. The method of this working paper uses aspects of the TCFD's approach, but there are some differences. The Institute's method is broader, with complete annual reports as the primary focus.

In terms of the four TCFD core elements (see excerpt in Appendix 6), 'risk management' and 'metrics and targets' are searched and directly correspond with the method that was applied. The other two core components: 'governance' and 'strategy' can be inferred from our method: 'governance' is treated as part of risk while 'strategy' is covered by controls, targets and initiatives. The TCFD defintion of 'strategy' has a narrower meaning than our definition of strategy in the context of this research. This may prove a limitation when organisations try to implement the recommendations. It was useful to review the TCFD recommendations while developing the standard method, but we decided to look more deeply at the three stages of problem solving as a way to explore the narrative of annual reporting.

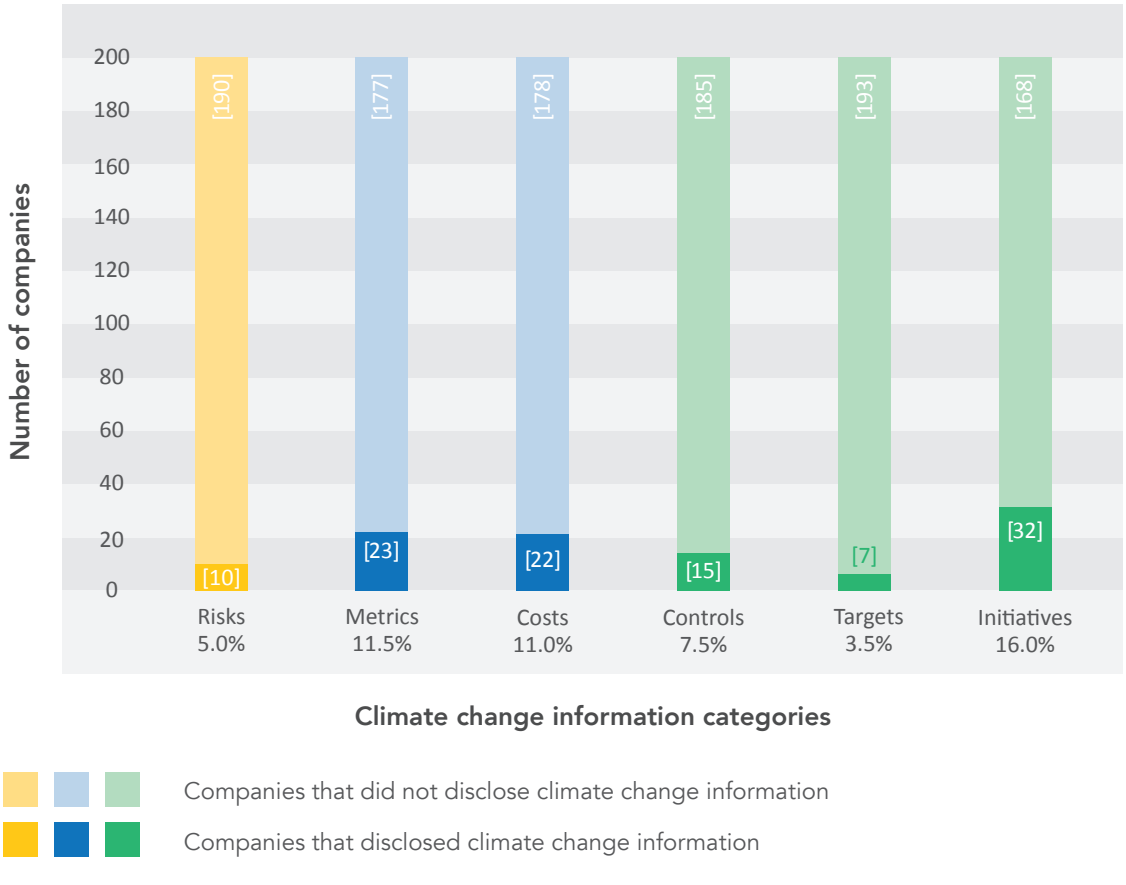
The Climate Leaders Coalition was launched as the Institute brought this research to a close. The Coalition focuses on the measurement of emissions in terms of past metrics and setting future targets against a scenario (Junn, 2018). The Coalition's approach to climate change reporting commits the companies to report on information in the Institute's Phase 2 and Phase 3 of problem solving. The Climate Change Statement itself constitutes a broad acknowledgement of risk, but we hope this report may be useful to the 60 companies in terms of guidance for more comprehensive disclosure in all six of the categories in our methodology. Table 1 shows that at least 32 of the 60 companies are included in Data set 1, the 2017 Deloitte Top 200 companies. These companies can be benchmarked in future research.

3.0 2017 Deloitte Top 200 companies [200]

3.1 Overview

Figure 3 illustrates the overall level of disclosure of climate change information in publicly available 2017 Deloitte Top 200 company annual reports (or financial statements). This figure accounts for the full data set, including documents that were not publicly available.

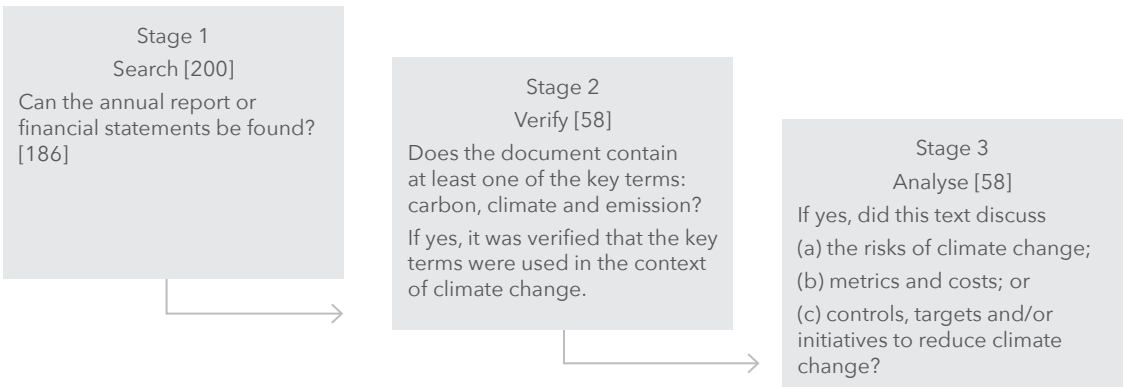
Figure 3: Deloitte Top 200 disclosure of climate change information by category (see Table 4)



3.2 Applying the method

The methodology is outlined in Figure 4 and accompanied by a description below.

Figure 4: Deloitte Top 200 methodology



The total Deloitte Top 200 data set consists of 200 annual reports (or financial statements). In Stage 1 this was narrowed down to 186 documents that could be found. Of those 186, 58 documents contained the search terms for Stage 2. All 58 of the documents were verified as using the search terms in the context of climate change. In Stage 3, discussion of the search terms was found to fit into at least one of the six categories of climate change information in all 58 documents.

3.2.1 Stage 1: Search

Finding the annual report (or financial statements)
This data set examines annual reports and financial statements published by the 2017 Deloitte Top 200 companies, found on the Companies Register or on the company's own website.

Primary search on the Companies Register
The list for the Top 200 companies provided by Deloitte used informal company names. For example, 'Air New Zealand Limited' was given as 'Air NZ'. Official names had to be found and recorded before any searches on the Companies Register could take place. For companies where it was difficult to be sure of the official name, the company's revenue figure stated on the Top 200 List was compared to the revenue figure in the financial statements found on the Companies Register. If a company was found on the Companies Register, the Register was reviewed to see if the company had filed a 2017 annual report (including financial statements) or 2017 financial statements.[2] Some large New Zealand and overseas companies and all Financial Markets Conduct reporting entities must submit audited annual financial statements to the Companies Office for filing on the Companies Register. These 'Financial statements must be filed or lodged no later than: 4 months after the balance date for FMC reporting entities, and 5 months from the balance date for large companies' (Companies Register, 2018a). Of the Deloitte Top 200, we were surprised to find that 19 companies filed their documents after 31 May 2018.[3] However, this late filing is more understandable in the context of the negligible penalties: '$25 for financial statements filed up to 25 working days after the due date' and '$100 for financial statements filed more than 25 working days after the due date' (Companies Register, 2018b). The 19 companies were deemed a substantial enough number to incorporate into the data set for analysis, thereby delaying the publication of our results. It is interesting to note that most of the documents from these companies were financial statements and therefore did not include many significant disclosures of climate change information. We note that there may still be more late filers for the 2017 financial year.

If a company's annual report (including financial statements) was found on the Companies Register, the document was used in the analysis and these companies were not part of the second search.

Secondary search on company websites
The secondary search looked for the financial statements or annual reports of companies that had either a) only submitted financial statements on the Companies Register or b) did not file financial statements or annual reports on the Companies Register. If the financial statements were found on the Companies Register, but the company's website contained the full annual report, the annual report was the document used for analysis.

There were three cases where the financial statements found on the Companies Register indicated that the document was to be read in conjunction with an additional report found on the company's website to make up the full annual report.

2 Note that two companies were not found on the Companies Register, but were on the Industrial/Providence Society Register, also accessed via the Companies Office website. These were Farmlands Co-operative Society Limited and Ashburton Trading Society Limited and their annual report and financial statements respectively were also found. As an isolated example, the Farmlands Co-operative Society Limited annual report from the Register was too blurry to analyse so it was also included in the second search.

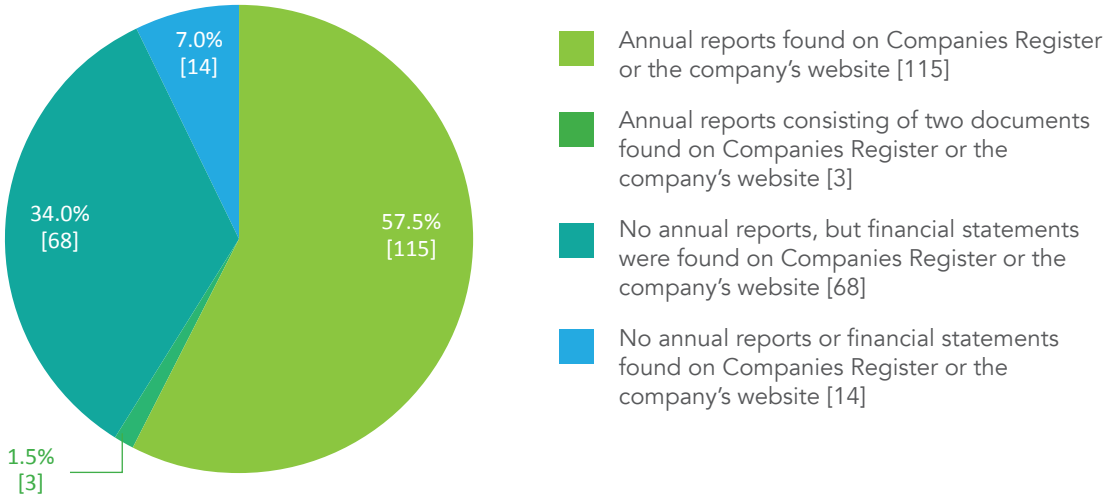
3 The 19 companies that filed after the five month due date were the following 'large' 'non-FMC' companies: ANZCO Foods Limited (1 June 2018), Haier New Zealand Investment Holding Company Limited (1 June 2018), Ingram Micro New Zealand Holdings (2 July 2018), Broadspectrum (New Zealand) Limited (8 June 2018), Opus International (NZ) Limited (13 June 2018), Frucor Suntory New Zealand Limited (5 June 2018), OMV New Zealand Limited (1 June 2018), Independent Liquor (NZ) Limited (6 June 2018), OfficeMax Holdings Limited (12 June 2018), GPC Asia Pacific (NZ) Holdings Limited (5 June 2018), McDonald's Restaurants (New Zealand) Limited (8 June 2018), Visionstream Pty Limited (New Zealand Branch) (7 June 2018), Martin-Brower New Zealand Holdings (28 June 2018), Electrix Limited (6 June 2018), New Zealand Sugar Company Limited (1 June 2018), Glencore Agriculture (NZ) Limited (26 June 2018), Rexel New Zealand Limited (6 June 2018), Tango Holdings NZ (1 June 2018), New Zealand Investment Holdings Limited (13 June 2018).

In these cases, the two documents were merged using Adobe Acrobat to form a combined annual report. These were labelled as 'combined'. There were no cases where a company had not filed any document on the Companies Register, but had filed financial statements on its own website. This search resulted in an additional 31 annual reports for analysis (15 of these companies had submitted financial statements on the Companies Register and the financial statements were replaced with the annual report for the analysis; three of these were merged with the financial statements for a full annual report, as indicated within the documents).

Final data set

Of the 200 Deloitte Top 200 companies, a total of 186 company documents were found and could therefore be analysed.

Figure 5: Deloitte Top 200 document availability (see Table 1)



Additional notes

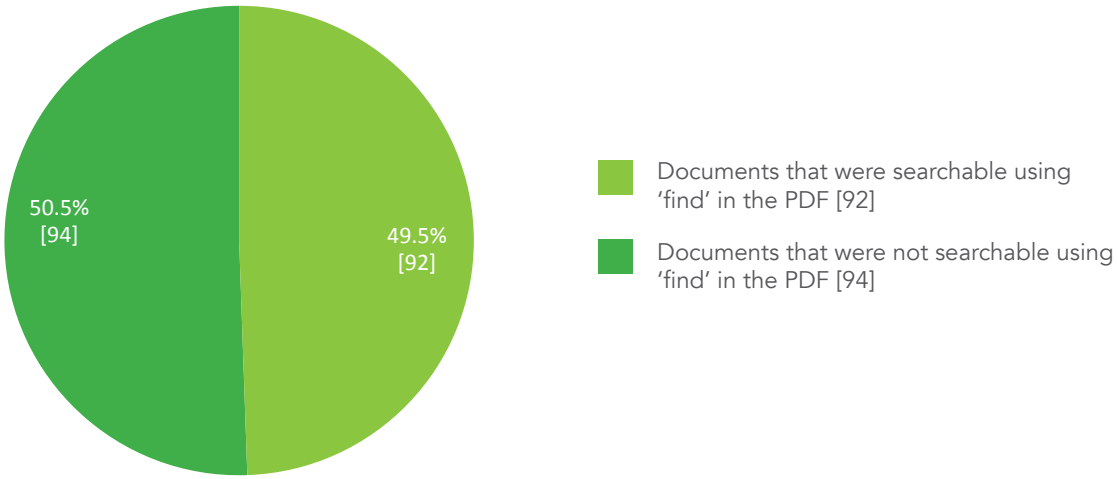
- If the company published financial statements only (rather than an annual report), the financial statements were still used in the analysis.
- Determining a document's type could be confusing as the cover page could say 'annual report' but the chairperson/director will present the document as 'financial statements' and on closer inspection the document only contains the financial statements. For the purposes of this research, it was decided that this distinction would be recorded whether the relevant text was in the notes to the financial statements or the text before the financial statements.
- Some documents listed on the Companies Register as annual reports were actually the 'concise' versions of a company's annual report. This was indicated on the cover page of the document. Full versions of annual reports were required for this research and so these were found online and combined as described above.
- For the purposes of this research, if a New Zealand company is a subsidiary of an international company, the parent annual report was not included in the analysis, only the separate report of the New Zealand subsidiary.

Tertiary search of documents

Once all available annual reports and financial statements were downloaded, a final check was done to ensure that the PDF could be searched using the control + F 'find' function. If the documents were unsearchable, Adobe Acrobat text recognition software was used. (Not doing this would result in search results incorrectly indicating that key words were not present, as the software would not register any words as being found).

As the final part of the data collection process, a column was added to the Excel spreadsheet to indicate which Deloitte Top 200 companies were also NZSX-listed. This was also indicated with a hashtag.

Figure 6: Deloitte Top 200 document searchability (see Table 2)



3.2.2 Stage 2: Verify

Does the document contain the key terms: carbon, climate and/or emission?
After all documents were made searchable they were searched on Adobe Acrobat for the key words 'climate', 'emission' and 'carbon'. These key words were chosen as the most likely to indicate climate change reporting and disclosures made in the annual reports.

Pages on which the key words were used were highlighted and then printed along with the annual report's cover page.

Hard copies of the documents were read for the context in which the key words were used, to determine their relevance to this research. For example, use of the key word 'climate' to refer to 'climate change' was relevant, whereas climate in the sense of 'financial climate' was not.

Sticky notes were placed on these hard copies to indicate which pages to go back to and review for examples of best practice to include in Section 8.0 Examples of best practice.

3.2.3. Stage 3: Analyse

Appearances of the key words were grouped into one of the following climate change information categories for analysis (see Section 2.2.3 for explanations of the categories).

1. Climate change risks
2. Emission metrics
3. Emission costs
4. Emission controls
5. Emission targets
6. Climate change initiatives

The research for this data set also explored:

(i) A comparison of the 2016 and 2017 Deloitte Top 200 companies that did not publish annual reports on the Companies Register. The 2016 figures were generated from the preliminary research undertaken for *Working Paper 2018/01 – NZSX-listed Company Tables* (see Table 13).

Note: the Companies Register will not publish a company's annual report unless it is required to by law. See note (m) on Table 1 and Figure 35.

(ii) A comparison of climate change reporting in the annual reports of 2017 Deloitte Top 200 companies that are also listed on the NZSX (both) and the 2017 Deloitte Top 200 that are not listed on the NZSX (only). See Figures 15 and 16.

(iii) A comparison of emission metrics, costs, controls and/or targets disclosed in 2016 and 2017 annual reports of the Deloitte Top 200 companies that were also NZSX-listed as at 31 December 2017. The 2016 figures were generated from the data in *Working Paper 2018/01 – NZSX-listed Company Tables*. The research for 2016 annual reports did not look at risks or initiatives, which is why those categories are excluded from this comparison. See Figures 17 and 18.

3.3 Results

In this section we present the results for this data set in a series of graphs.

Figure 7: Deloitte Top 200 disclosure of climate change information (see Table 3)

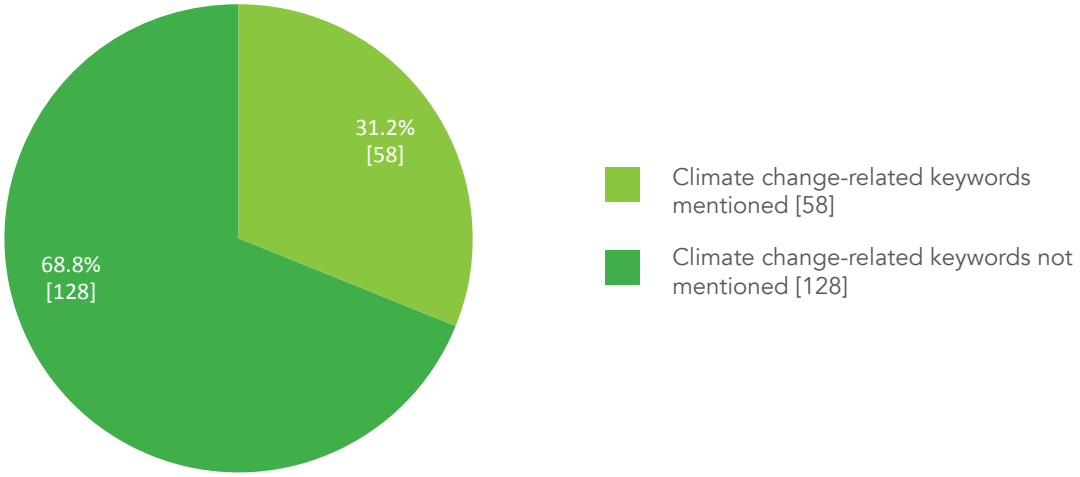


Figure 8: Deloitte Top 200 disclosure of climate change information by number of categories (see Table 5)

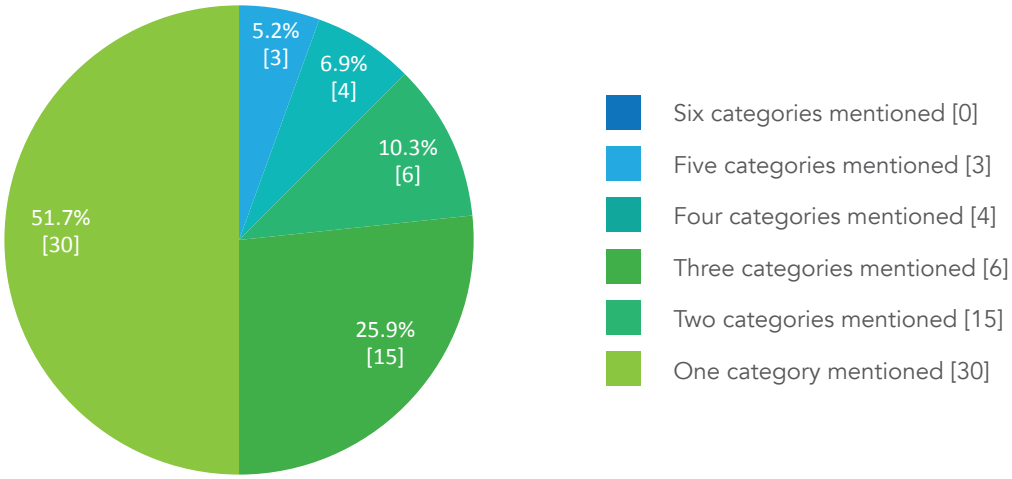


Figure 9: Deloitte Top 200 disclosure of climate change risks by nature of business (see Table 6)

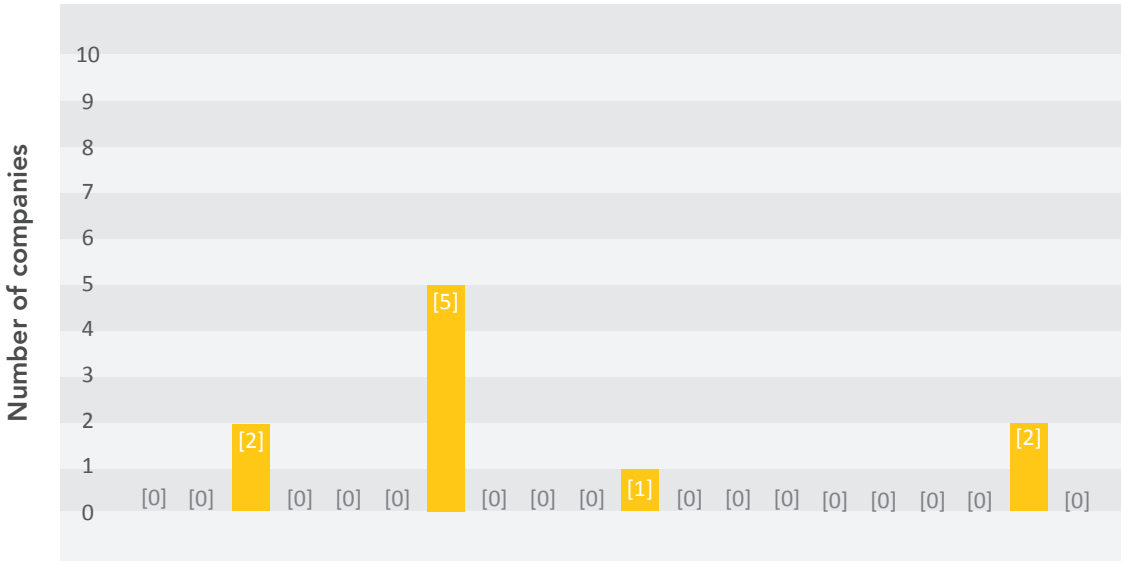


Figure 10: Deloitte Top 200 disclosure of climate change metrics by nature of business (see Table 7)

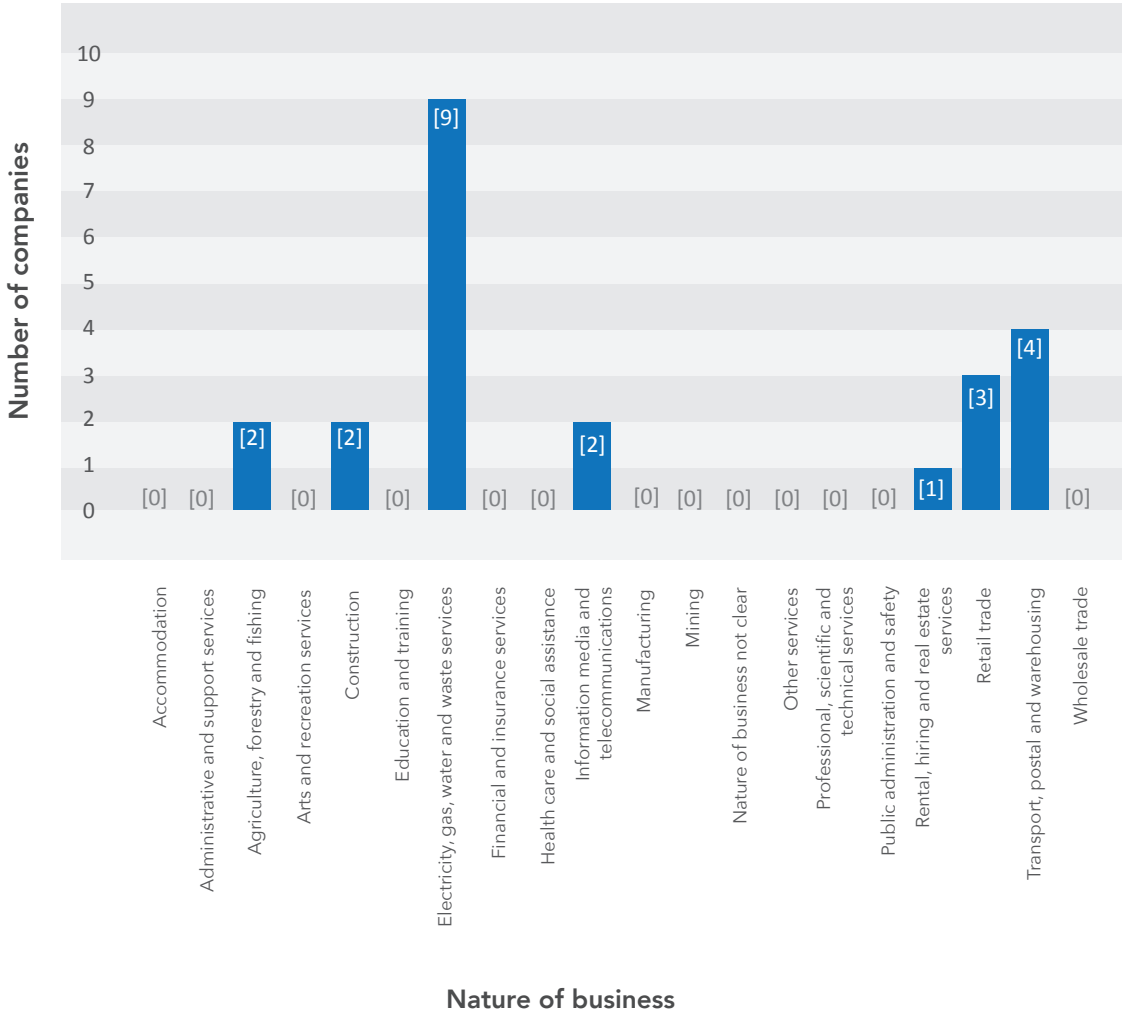


Figure 11: Deloitte Top 200 disclosure of climate change costs by nature of business (see Table 8)

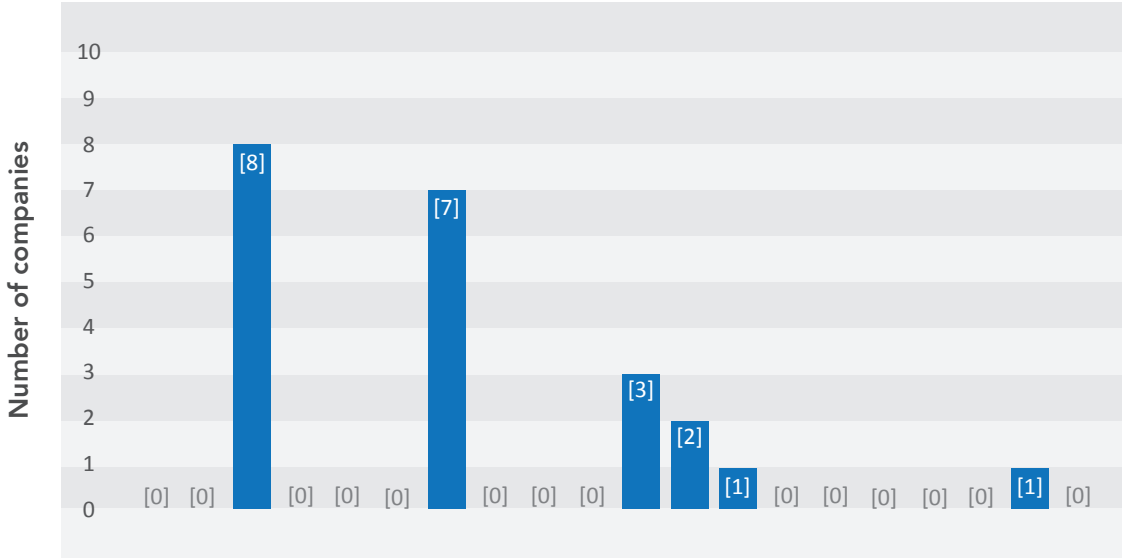


Figure 12: Deloitte Top 200 disclosure of climate change controls by nature of business (see Table 9)

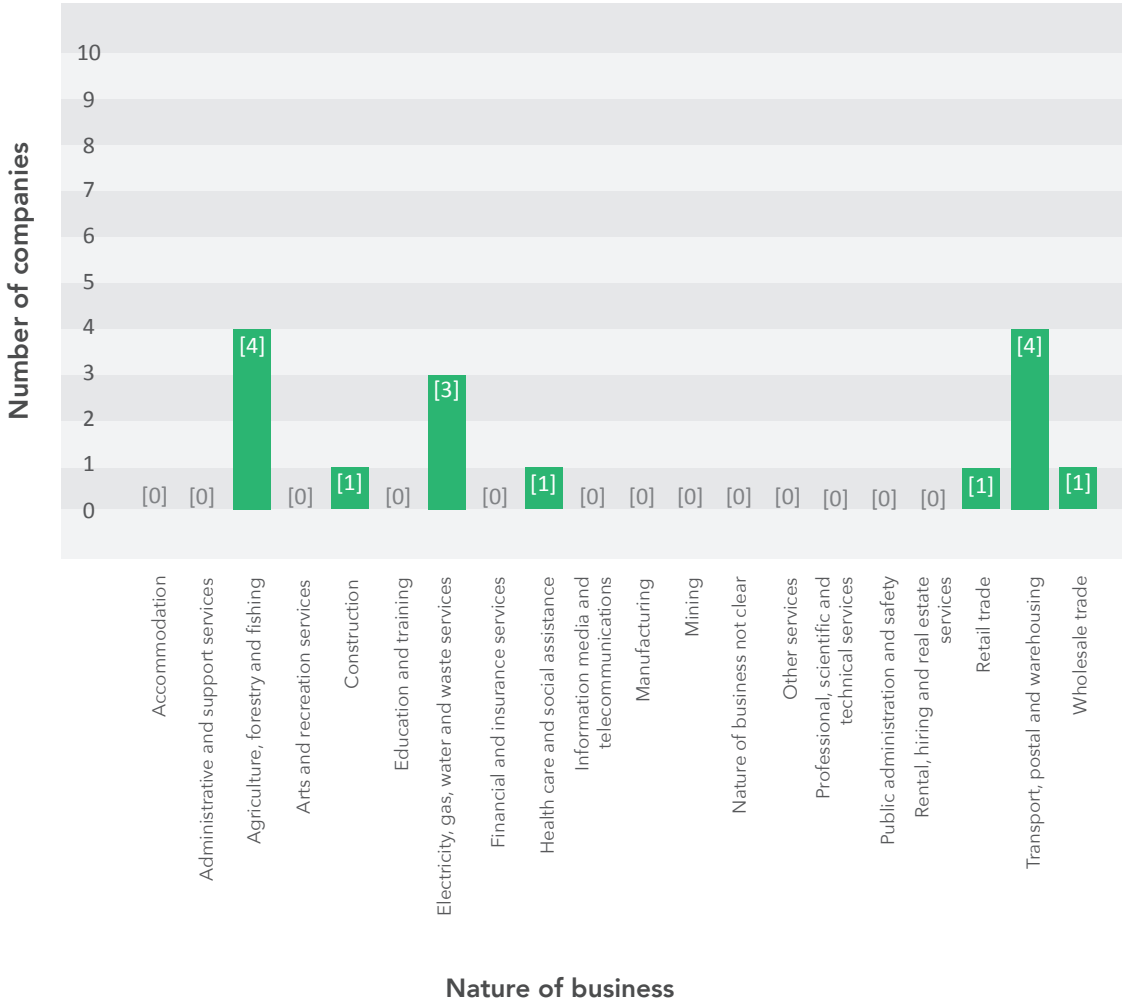


Figure 13: Deloitte Top 200 disclosure of climate change targets by nature of business (see Table 10)

Figure 14: Deloitte Top 200 disclosure of climate change initiatives by nature of business (see Table 11)

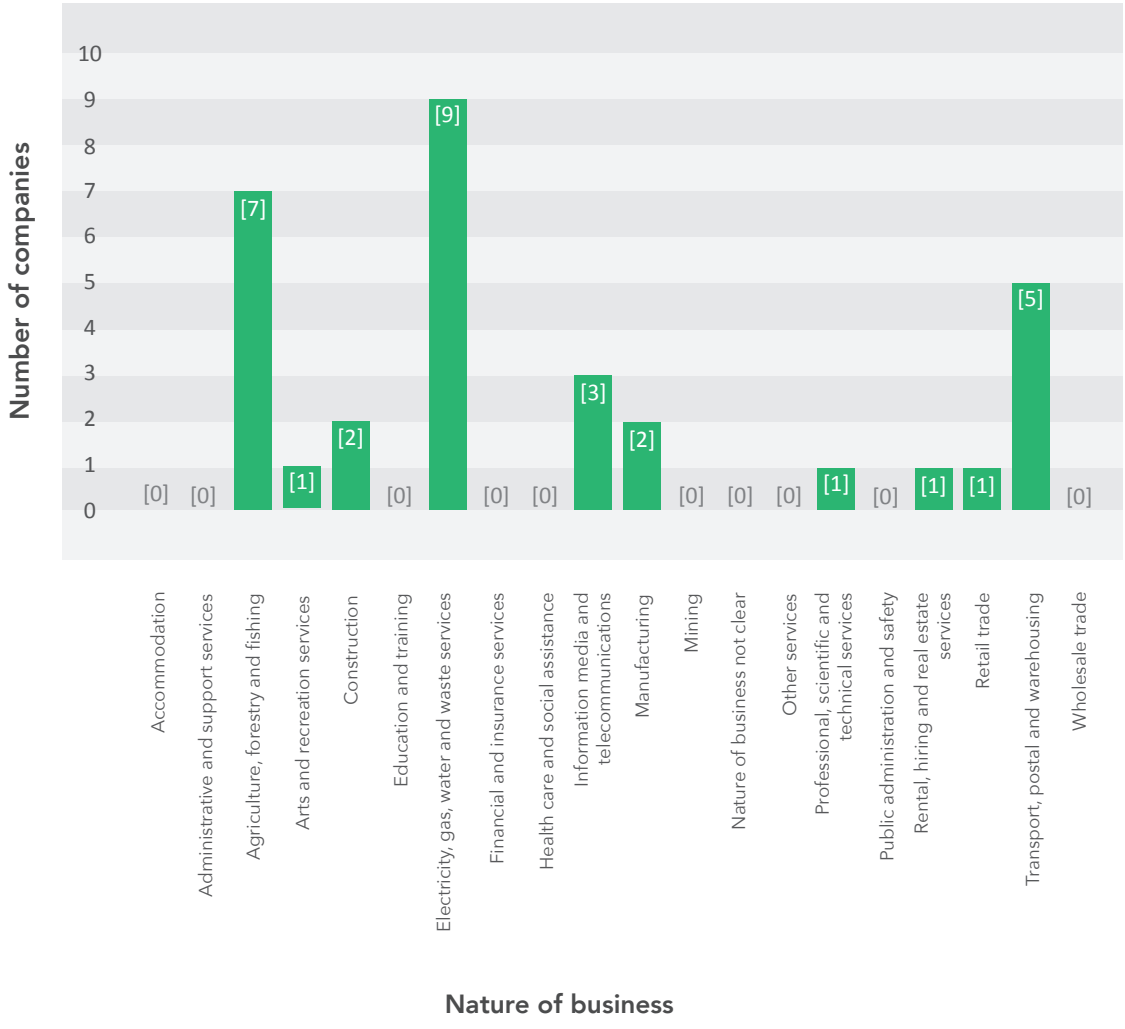


Figure 15: Comparison of disclosure of climate change information by category between the Deloitte Top 200 also on the NZSX, and the Deloitte Top 200 not on the NZSX (see Table 12)

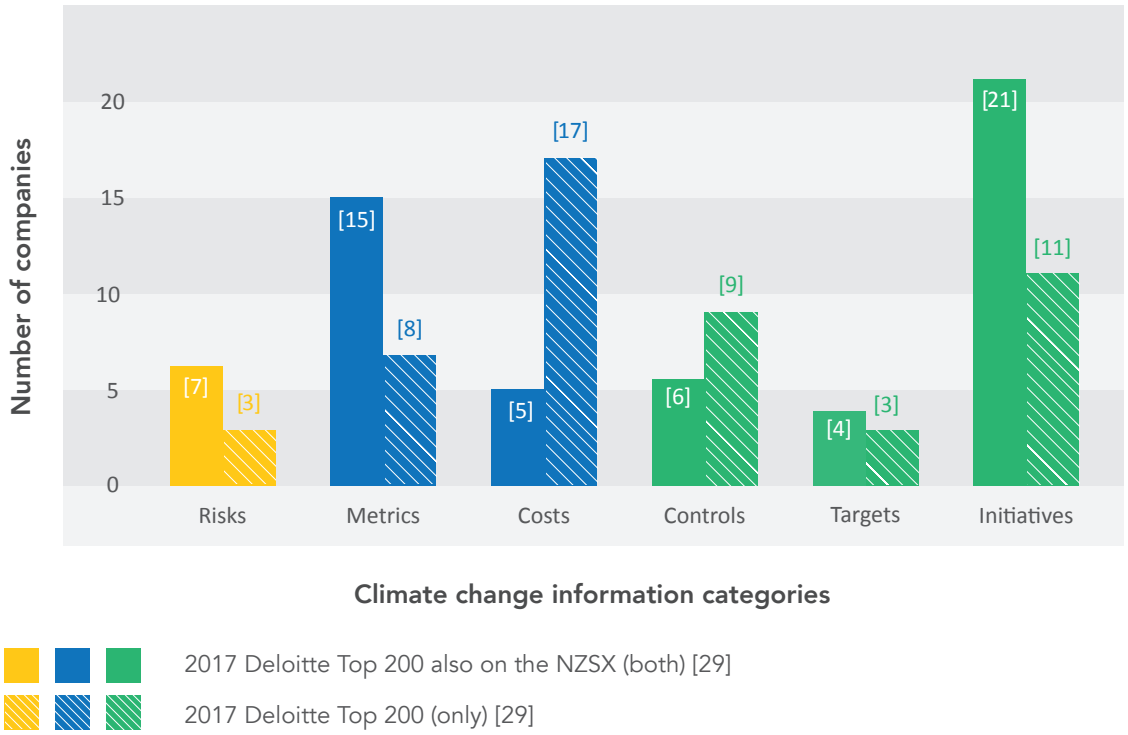


Figure 16: Comparison of disclosure of climate change information by number of categories between the Deloitte Top 200 also on the NZSX, and the Deloitte Top 200 not on the NZSX (see Table 12)

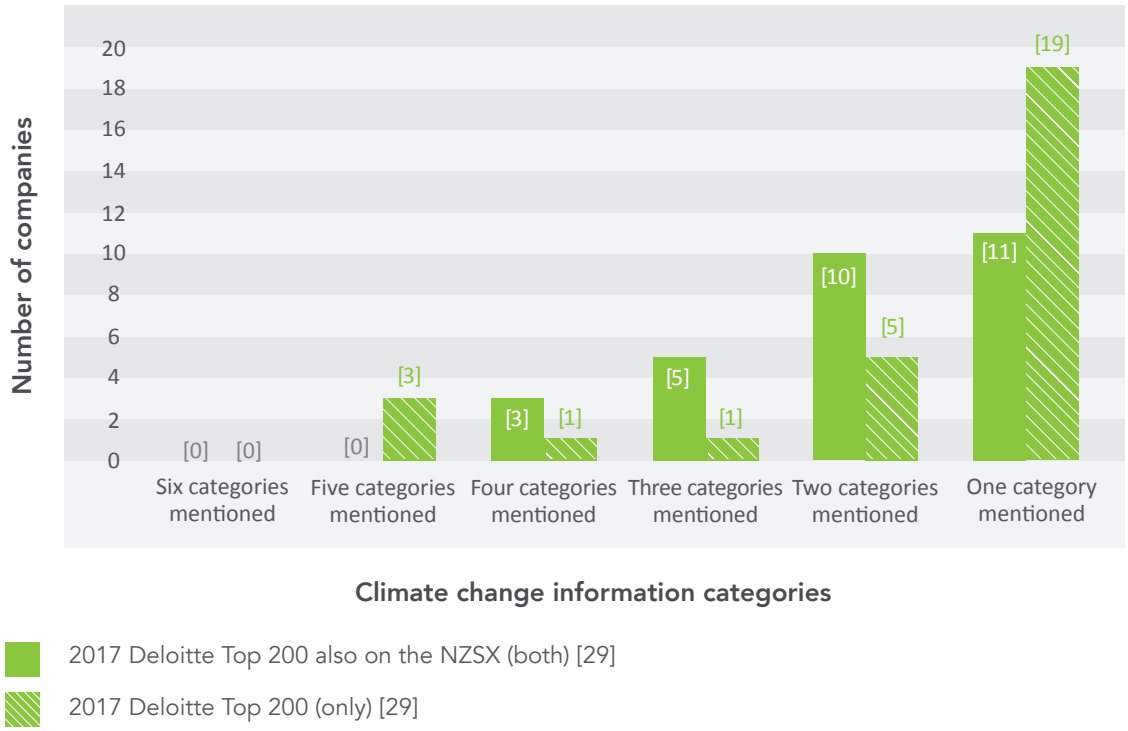


Figure 17: Comparison of disclosure of climate change metrics, costs, controls and/or targets by category between 2017 Deloitte Top 200 companies also on the NZSX, and the same companies in 2016 (see Table 12)

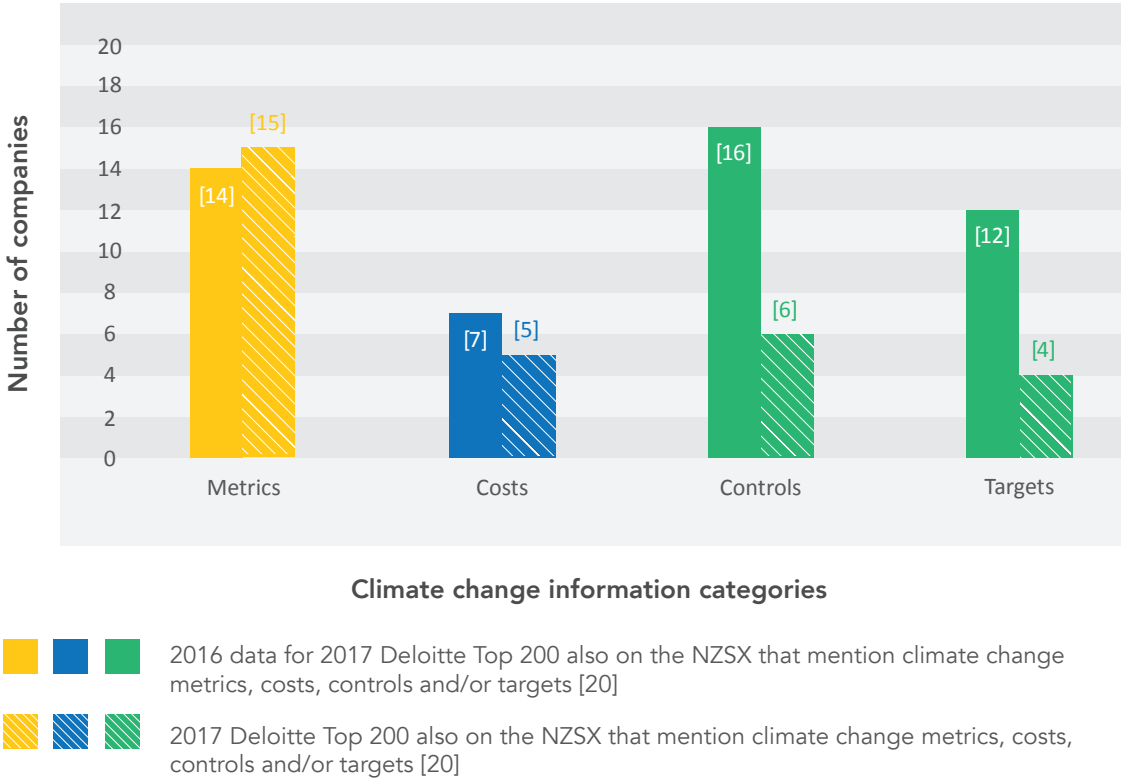
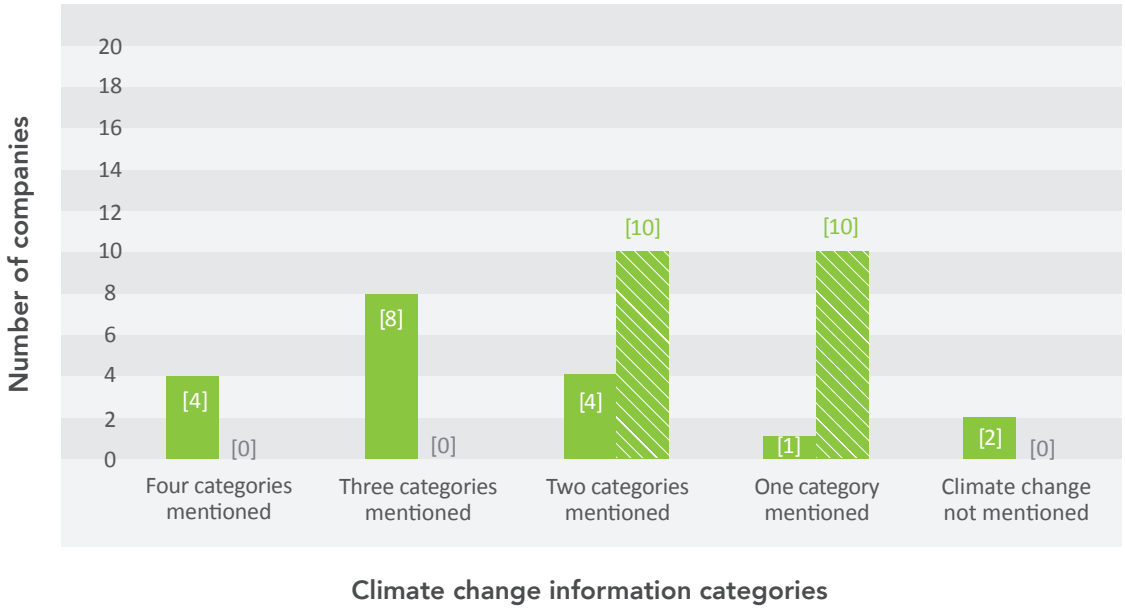


Figure 18: Comparison of disclosure of climate change metrics, costs, controls and/or targets by number of categories between 2017 Deloitte Top 200 companies also on the NZSX, and the same companies in 2016 (see Table 12)

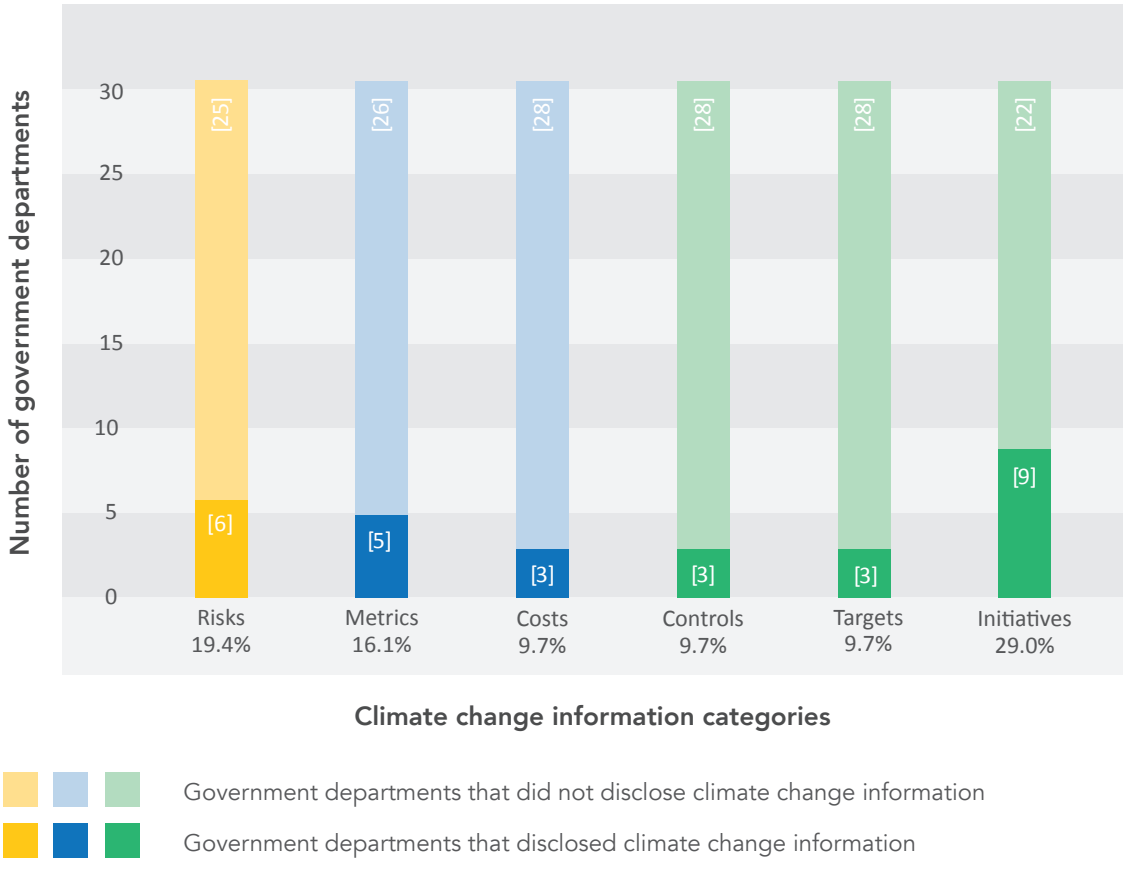


4.0 Government departments [31]

4.1 Overview

Figure 19 illustrates the overall level of disclosure of climate change information in publicly available government department annual reports. This figure accounts for the full data set, including documents that were not publicly available.

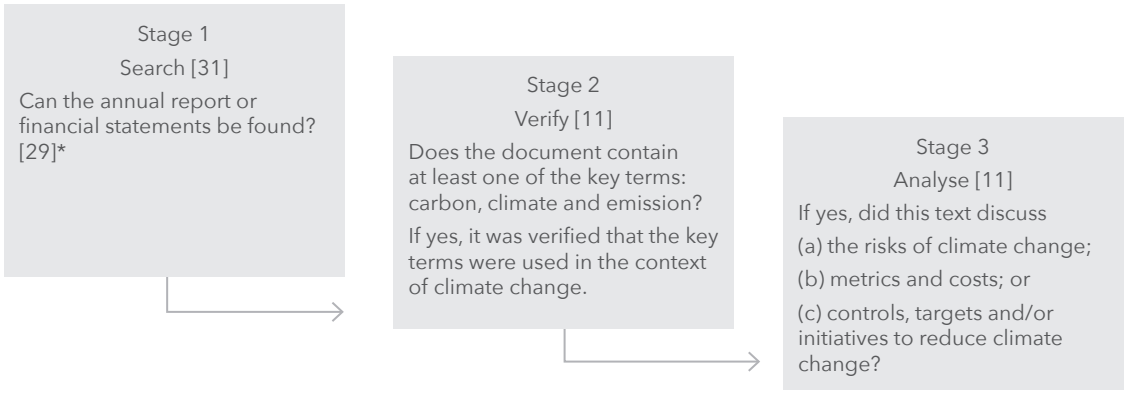
Figure 19: Government department disclosure of climate change information by category (see Table 16)



4.2 Applying the method

The process is briefly described in Figure 20 below. For a more detailed description, see Section 2.0.

Figure 20: Government department methodology



* Please note that two government departments were only established in 2017 and 2018 and therefore do not have 2017 annual reports (Oranga Tamariki Ministry for Children, n.d.; Te Kāhui Whakamana Rua Tekau mā Iwa — Pike River Recovery Agency, n.d.).

The total government department data set consists of 31 annual reports. In Stage 1 this was narrowed down to 29 documents that could be found. This was because two government departments, Oranga Tamariki Ministry for Children and Te Kāhui Whakamana Rua Tekau mā Iwa – Pike River Recovery Agency, were established in 2017 and 2018 respectively and therefore do not have 2017 annual reports. Of those 29, 11 documents contained the search terms for Stage 2. All 11 of the documents were verified as using the search terms in the context of climate change. In Stage 3, discussion of the search terms was found to fit into at least one of the six categories of climate change information in all 11 documents.

Preliminary searches indicated that a number of government departments report on climate change in their four-year plans. However, only annual reports are considered for the purposes of this research and four-year plans were therefore excluded from this research.

4.3 Results

In this section we present the results for this data set in a series of graphs. In this data set all organisations produced a complete and publicly available annual report, so financial statements were not analysed in isolation.

Figure 21: Government department disclosure of climate change information (see Table 15)

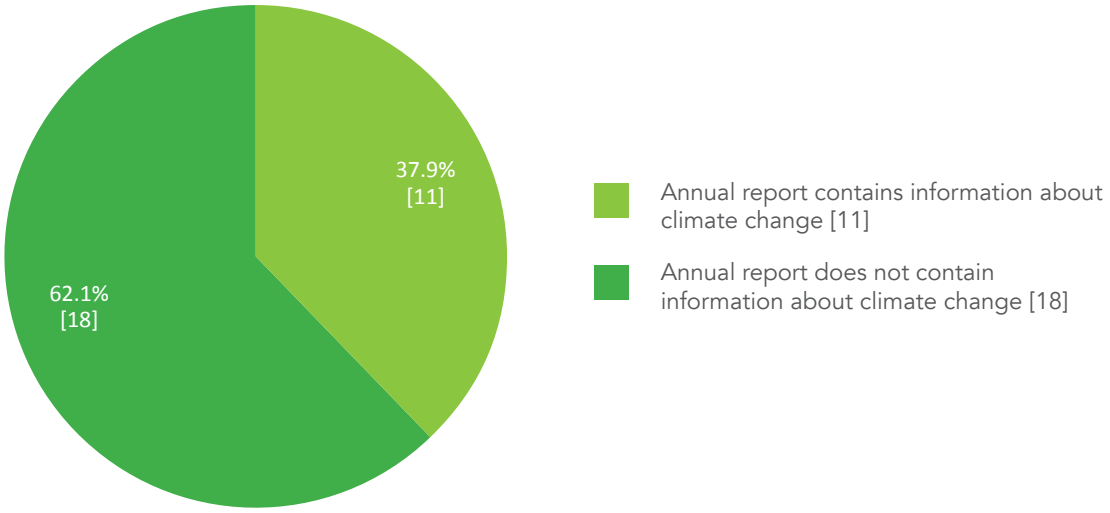
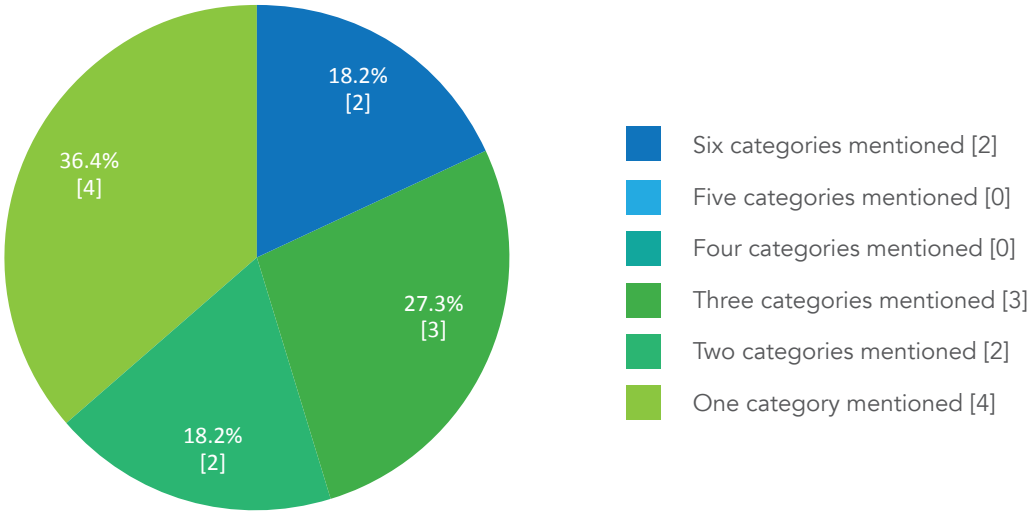


Figure 22: Government department disclosure of climate change information by number of categories (see Table 17)

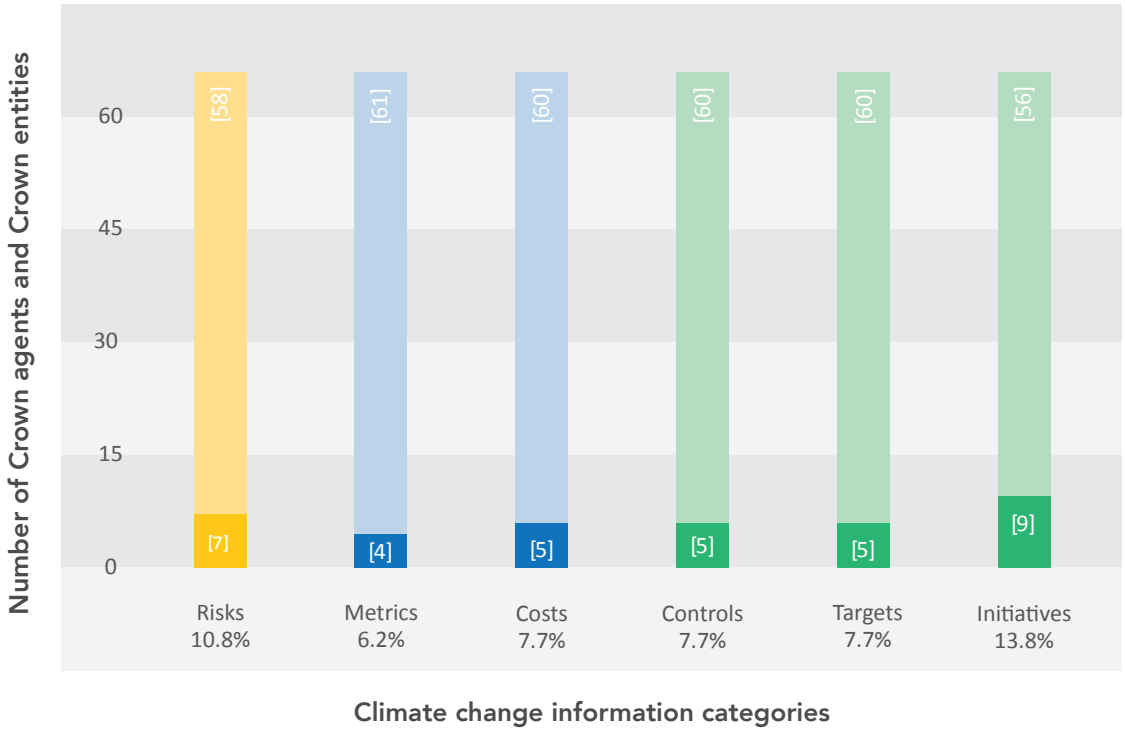


5.0 Data Set 3: Crown agents and Crown entities [65]

5.1 Overview

Figure 23 illustrates the overall level of disclosure of climate change information in publicly available Crown agent and Crown entity annual reports. This figure accounts for the full data set, including documents that were not publicly available.

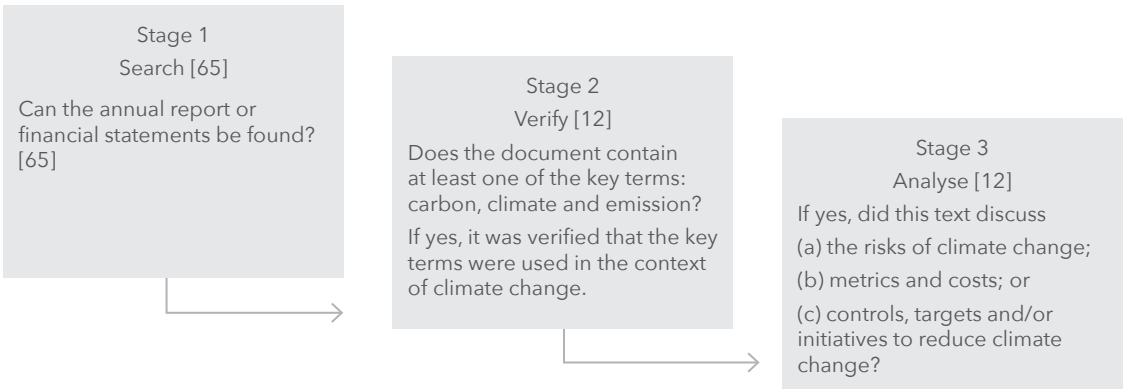
Figure 23: Crown agent and Crown entity disclosure of climate change information by category (see Table 21)



5.2 Applying the method

The process is briefly described in Figure 24 below. For a more detailed description, see Section 2.0.

Figure 24: Crown agent and Crown entity methodology



The total Crown agents and Crown entities data set consists of 65 annual reports[4]. In Stage 1 all 65 of the documents were found. Of those 65, 12 documents contained the search terms for Stage 2. All 12 of the documents were verified as using the search terms in the context of climate change. In Stage 3, discussion of the search terms was found to fit into at least one of the six categories of climate change information in all 12 documents.

5.3 Results

In this section we present the results for this data set in a series of graphs. In this data set all organisations produced a complete and publicly available annual report, so financial statements were not analysed in isolation.

Figure 25: Crown agent and Crown entity disclosure of climate change information (see Table 20)

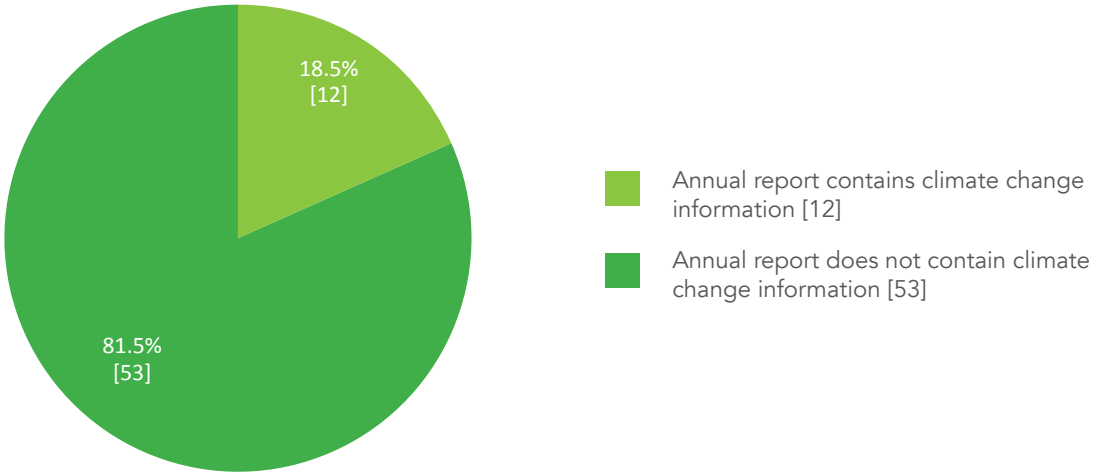
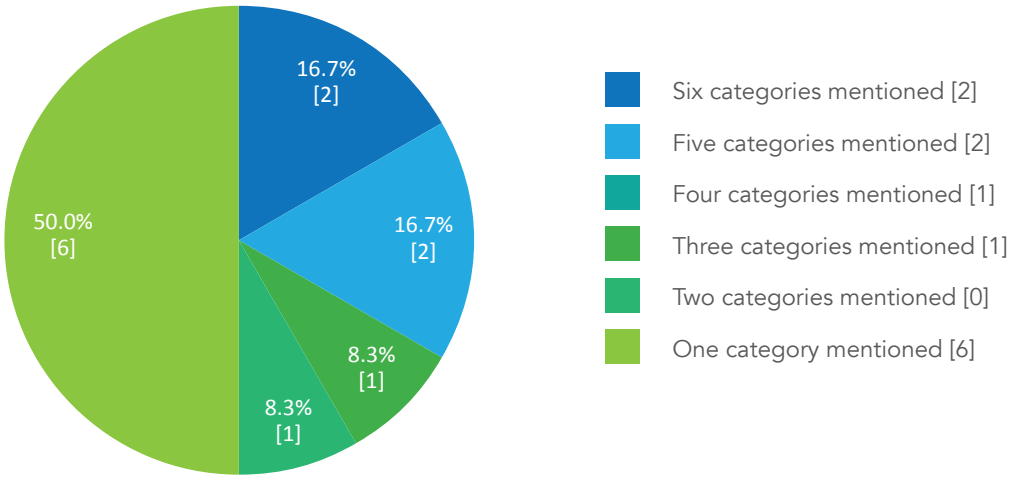


Figure 26: Crown agent and Crown entity disclosure of climate change information by number of categories (see Table 22)



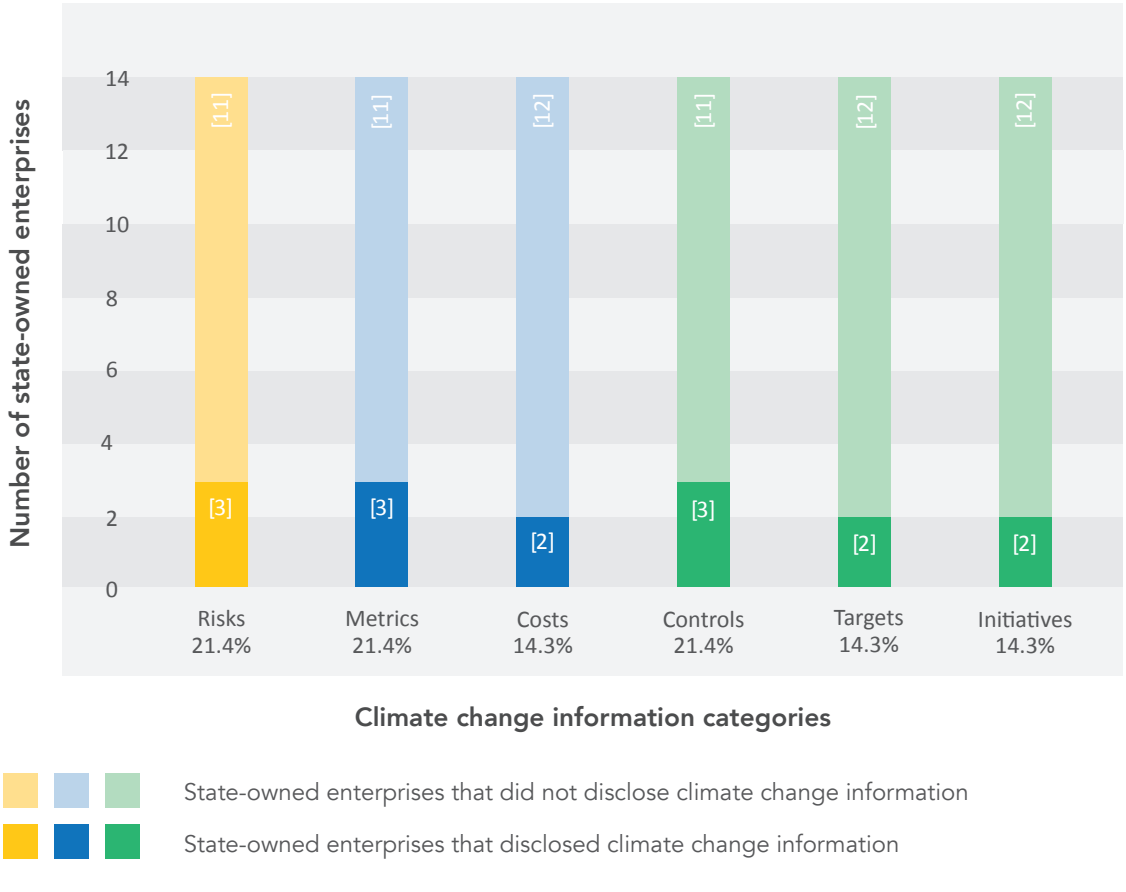
4 Two of the 65 Crown agents and Crown entities are District Health Boards (DHBs) and Crown Research Institutes (CRIs). Unlike other Crown agens or Crown entities, these two are made up of collections of individual entities. DHBs is made up of 20 separate DHBs while CRI is made up of seven separate CRIs, each with their own annual reports. To keep this data set consistent with how the Crown Entities Act 2004 lists 'District Health Boards' and 'Crown Research Institutes' collectively as Crown agents and Crown entities respectively, (rather than as the individual DHBs and CRIs), we have looked at each individual DHB and CRI's annual report, but collectively refer to their reporting outputs as 'DHBs' annual report' and 'CRIs' annual report'.

6.0 State-owned enterprises [14]

6.1 Overview

Figure 27 illustrates the overall level of disclosure of climate change information in publicly available state-owned enterprise annual reports. This figure accounts for the full data set, including documents that were not publicly available.

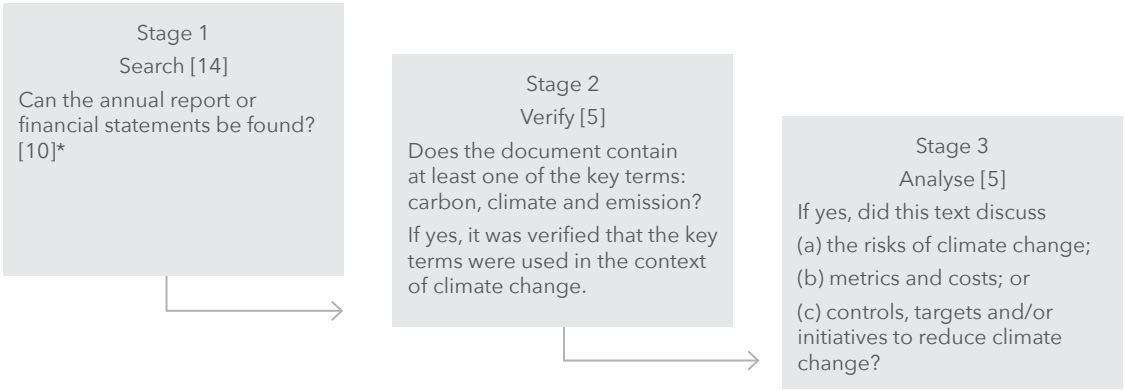
Figure 27: State-owned enterprise disclosure of climate change information by category (see Table 25)



6.2 Applying the method

The process is briefly described in Figure 28 below. For a more detailed description, see Section 2.0.

Figure 28: State-owned enterprise methodology

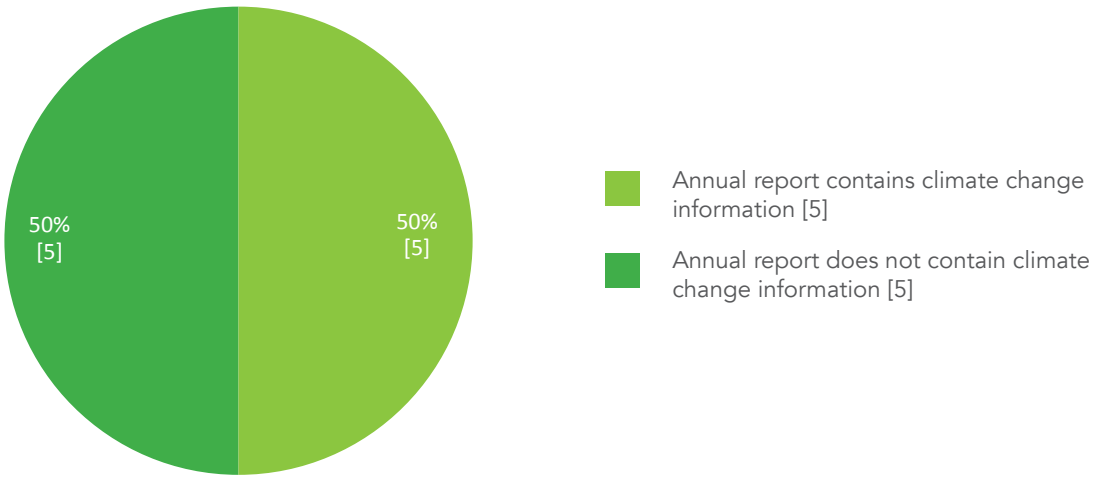


The total state-owned enterprise data set consists of 14 annual reports. In Stage 1 this was narrowed down to ten documents that could be found. Of those ten, five documents contained the search terms for Stage 2. All five of the documents were verified as using the search terms in the context of climate change. In Stage 3, discussion of the search terms was found to fit into at least one of the six categories of climate change information in all five documents.

6.3 Results

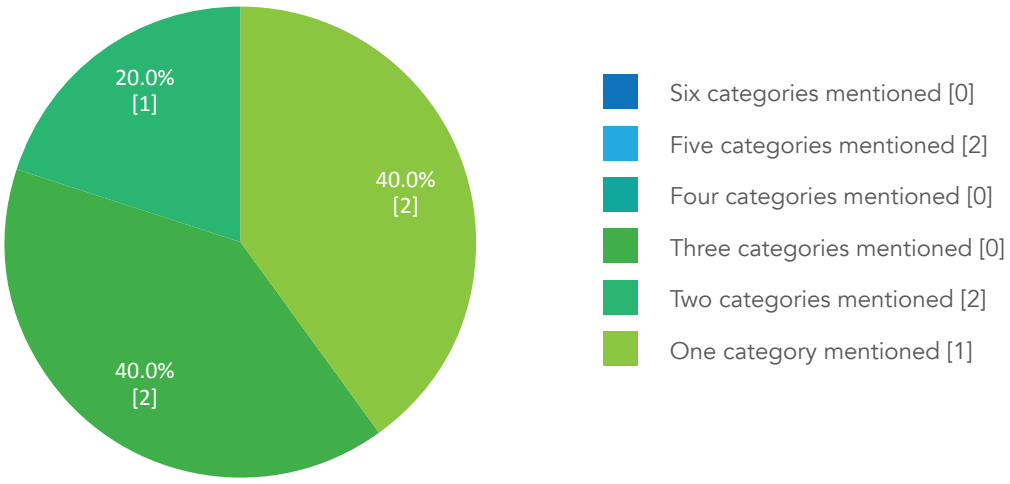
In this section we present the results for this data set in a series of graphs. In this data set all organisations produced a complete and publicly available annual report, so financial statements were not analysed in isolation.

Figure 29: State-owned enterprise disclosure of climate change information (see Table 24)



* Please note that four state-owned enterprises did not have 2017 annual reports. Electricity Corporation of New Zealand Limited is a transition entity in the process of deregulating NZ Electricity Market (it was split into three SOEs in 1999); it only exists to wind up a series of land title issues (Treasury, n.d.[a]; New Zealand Government, 2016). Learning Media Limited appears to have been closed around 2013; it still has a website but does not give information on how to access an annual report (Wellington.Scoop, 2013). New Zealand Railways Corporation only holds railway land and leases land to KiwiRail so KiwiRail can benefit; it is not a trading entity (Treasury, n.d.[b]). Solid Energy New Zealand Limited went into voluntary liquidation in 2015 and sold its mining assets in 2016 (Kirkness, 2018).

Figure 30: State-owned enterprise disclosure of climate change information by number of categories (see Table 26)

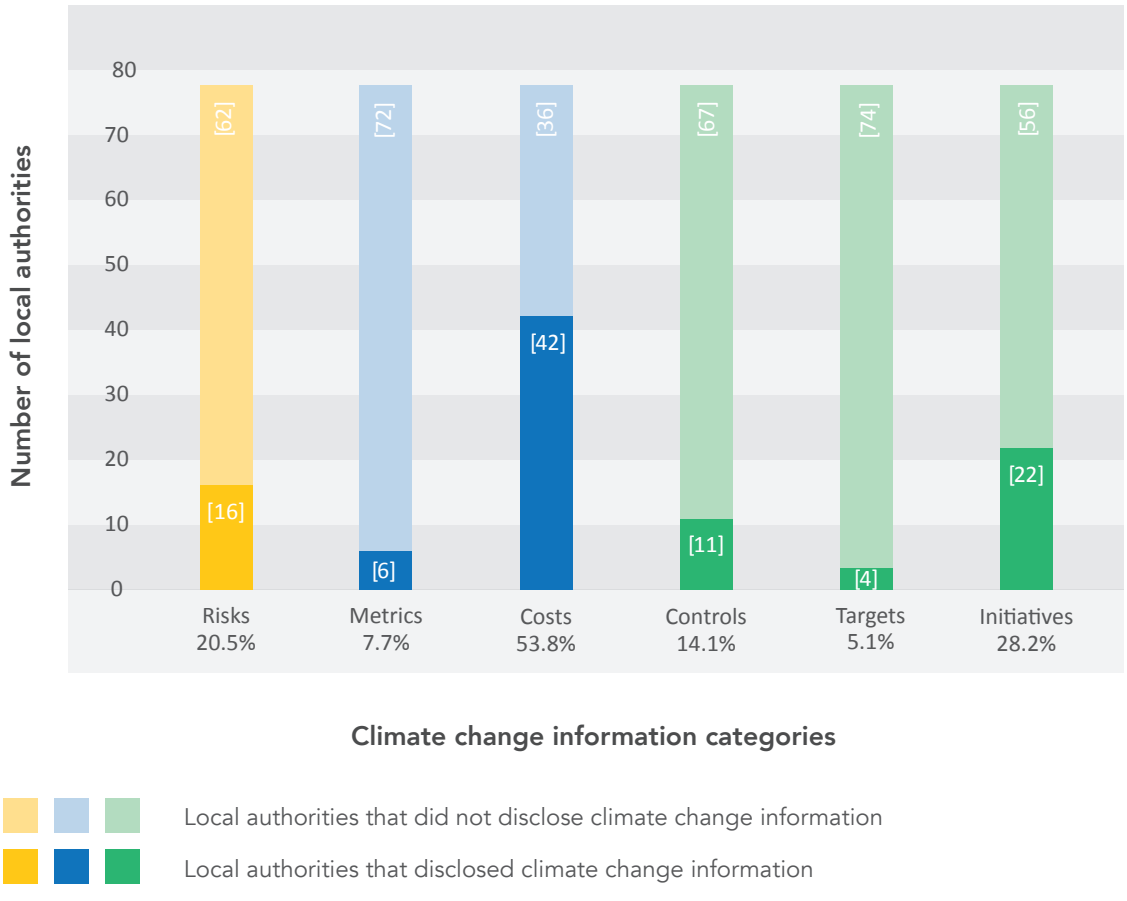


7.0 Local authorities [78]

7.1 Overview

Figure 31 illustrates the overall level of disclosure of climate change information in publicly available Local authority annual reports. This figure accounts for the full data set, including documents that were not publicly available.

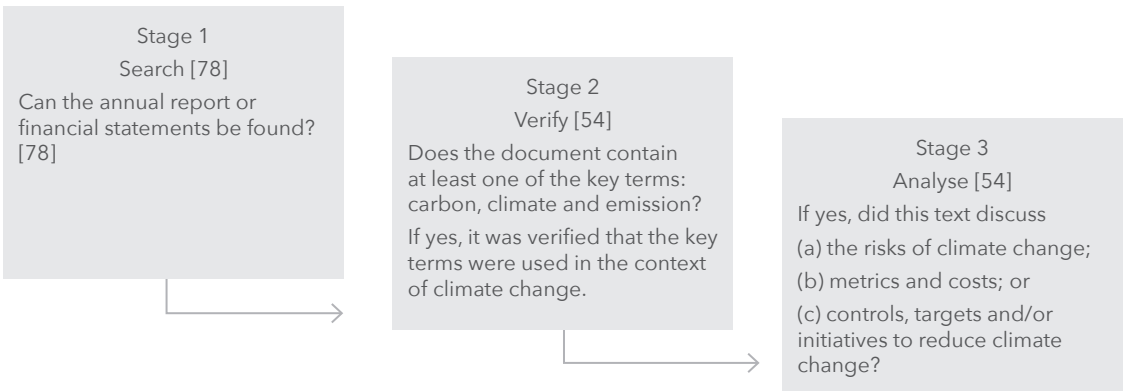
Figure 31: Local authority disclosure of climate change information by category (see Table 29)



7.2 Applying the method

The process is briefly described in Figure 32 below. For a more detailed description, see Section 2.0.

Figure 32: Local authority methodology



The total local authority data set consists of 78 annual reports. In Stage 1 all 78 of the documents were found. Of those 78, 54 documents contained the search terms for Stage 2. All 54 of the documents were verified as using the search terms in the context of climate change. In Stage 3, discussion of the search terms was found to fit into at least one of the six categories of climate change information in all 54 documents.

Preliminary searches indicated that a number of local authorities report on climate change in their ten-year plans. However, only annual reports are considered for the purposes of this research and ten-year plans were therefore excluded from this research.

7.3 Results

In this section we present the results for this data set in a series of graphs. In this data set all organisations produced a complete and publicly available annual report, so financial statements were not analysed in isolation.

Figure 33: Local authority disclosure of climate change information (see Table 28)

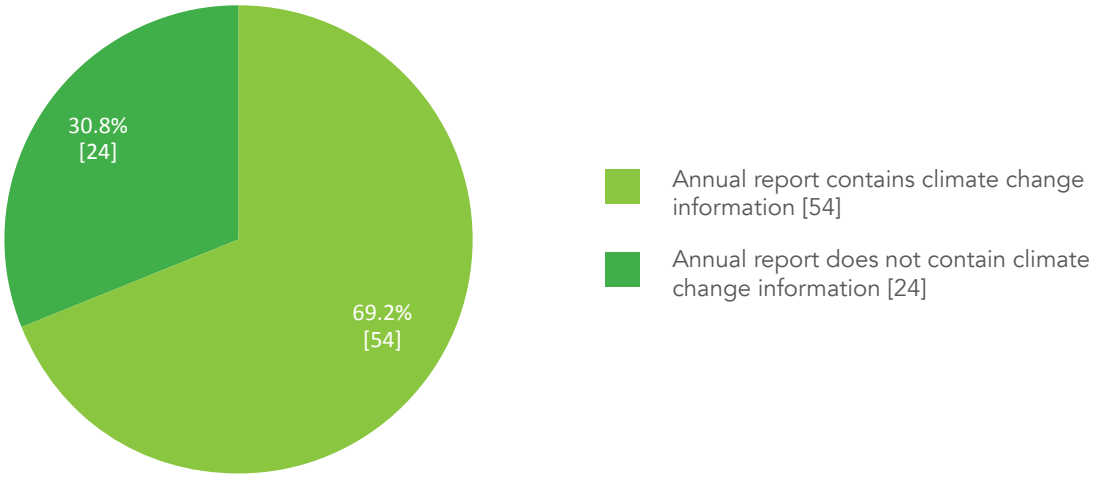
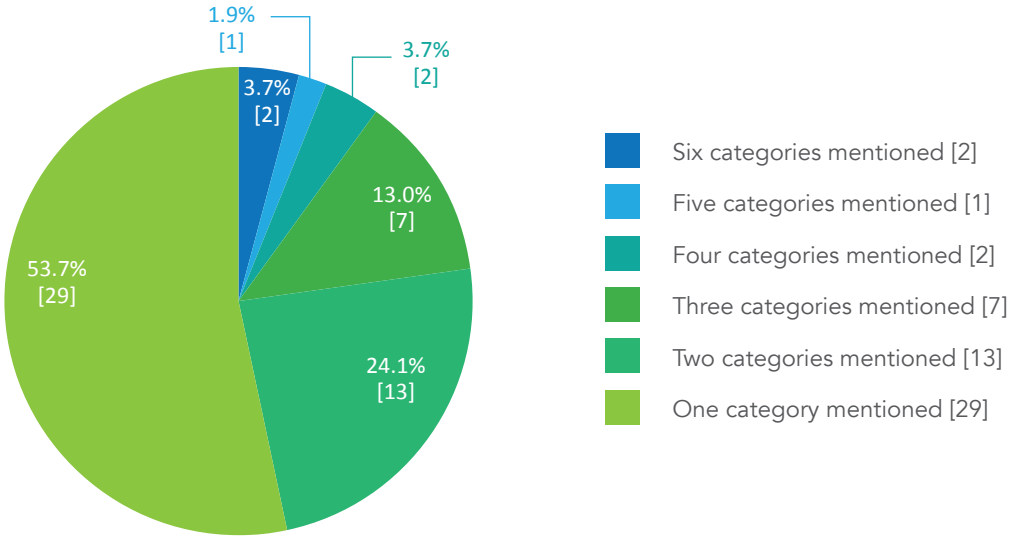


Figure 34: Local authority disclosure of climate change information by number of categories (see Table 30)



8.0 Examples of best practice

What follows are examples of the best reporters from each of the data sets. It is important to note that these are 'best practice' only in comparison to other examples from our research and are not necessarily best practice by international standards. There are no examples provided for the state-owned enterprises data set, as there were no examples of a high enough standard from the ten annual reports analysed.

These examples are intended to be useful for those preparing climate change information in the future. At the highest level, the reports were reviewed to see whether they included an explanation of the problem (the risk of climate change), how the organisation is attempting to understand the nature of the problem (the metrics and costs), and what measures the organisation is taking to reduce either their own contribution to the problem or the impact the problem may have on their operations (controls, targets and initiatives).

The sections of best practice examples for each data set are all structured differently. This is because of the significant variations in both sample size of data set and in quality of reporting across data sets. For example, the Deloitte Top 200 data set included a total of 58 documents that were valid in the final stage of analysis, while the state-owned data set included only five documents that were valid in the final stage of analysis.

8.1 2017 Deloitte Top 200 companies

8.1.1 Best practice reporting on risks

Z Energy (risks)

Z Energy has been included as an example of best practice because their report recognises that climate change is 'one of the biggest material issues facing our company, our industry, our communities, and the world' (Z Energy, 2017, p. 12). CEO Mike Bennetts also acknowledged that Z Energy's operations contribute around '8 % of New Zealand's carbon emissions' (Z Energy, 2017, p. 12). The acknowledgement that the company is part of the problem, along with specification of the degree to which they are contributing is a level of disclosure not found in any of the other annual reports. Furthermore, Z Energy highlighted their desire to address their contribution in a section titled 'Working to be part of the solution', which discuses three initiatives: exploring alternative fuels, electric vehicles and Bio D, as opportunities to reduce these emissions (Z Energy, 2017, pp. 36-41).

> Climate change is a material issue: We accept the overwhelming scientific evidence on climate change... Z supplies a product that keeps New Zealand moving, but that contributes around 8 percent of New Zealand's carbon emissions, acknowledging that agriculture contributes around 49 percent. Clearly, we are part of the problem. We're moving to be part of the solution and we want to work with others to lower those emissions. Z has no upstream assets so we don't need to sell oil if we can find something else to keep New Zealand moving (Z Energy, 2017, p.12).

Landcorp Farming Limited (risks)

The Landcorp Farming Limited (Landcorp) annual report, published under their brand name Pāmu, features a two-page discussion of environmental impacts, including a one-page report by Guy Salmon, chairman of the company's Environmental Reference Group. This section covers the three most important environmental issues facing New Zealand farmers today, one of which is identified as climate change:

> The foremost issue is climate change. Almost half of New Zealand's emissions total comprises agricultural emissions, overwhelmingly from the farming of ruminant animals. Under the Paris Climate Agreement, these emissions must be reduced to net zero. Since signing the first global climate change agreement 25 years ago, the New Zealand response has emphasised research into reducing emissions from pastoral agriculture, and the use of tree-planting to offset emissions in the meantime. The research is ongoing, but it is clear that there are no easy technological routes to net zero emissions for agriculture (Pāmu, 2017, p. 9).

Further, the report includes discussion of approaches the company may wish to take to adjust or prepare for the risk.

ENVIRONMENTAL CHALLENGES FACING FARMERS

Guy Salmon, Chairman Environmental Reference Group*

The environmental challenges facing New Zealand farmers today are unprecedented. Their complexity makes it difficult to bring the implications clearly into focus.

From left, Guy Salmon, Dr Mike Joy and Dr Alison Dewes, members of the Environmental Reference Group.

The foremost issue is climate change. Almost half of New Zealand's emissions total comprises agricultural emissions, overwhelmingly from the farming of ruminant animals. Under the Paris Climate Agreement, these emissions must be reduced to net zero.

Since signing the first global climate change agreement 25 years ago, the New Zealand response has emphasised research into reducing emissions from pastoral agriculture, and the use of tree-planting to offset emissions in the meantime. The research is ongoing, but it is clear that there are no easy technological routes to net zero emissions for agriculture. Further, the land base for tree planting is finite. Suitable land for the purpose will increasingly be in high global demand.

Reliance on tree-planting to offset emissions is a strategy which will have significant costs to farmers, and a limited lifetime. Scenario modelling by Vivid Economics for the cross-parliamentary group GLOBE–NZ has highlighted that even under optimistic technology assumptions, and with accelerated tree-planting, livestock numbers would need to be reduced at least 30% by mid-century.

The time frame for New Zealand to make this transition is likely to be foreshortened by the advent of highly competitive, plant-based, meat and dairy equivalent products in the global marketplace.

For these reasons, New Zealand's agriculture sector is now approaching a fork in the road. One fork leads us to largely phasing out ruminant livestock production, in favour of forestry and other mainly plant-based food products.

The other fork requires us to rapidly develop ruminant livestock-based products that are of such high market value that farmers can afford the high costs initially of offsetting their emissions, and ultimately of burying their emissions underground.

The second key issue facing agriculture is freshwater. A 25-year decline in freshwater quality can largely be attributed to land use intensification. This fact, and an associated over-allocation of aquifers and river flows to irrigation and stock watering, has led to a national consensus to set water quality and quantity limits for every catchment, and to take remedial action. Action has begun, but there are long lag times in achieving improvement.

There are also significant future costs to agriculture, not only in reducing the leakage of nutrients and faecal contamination, but also in curbing soil erosion and stream sedimentation. The latter is an issue for which national objectives and catchment limits have yet to be set, but these limits will have far-reaching implications for land use.

The third key issue is biodiversity protection. There has long been a societal consensus that further plant and animal species should not be lost, and there is an intense focus on protecting well-known species on the conservation estate.

Yet many of the species and critical habitats now at risk are located on private pastoral lands, especially in dry grassland habitats of the eastern South Island, along coastal margins, in species-rich Northland, and around the habitats of freshwater fish. Consequential impacts on agriculture are mainly localised, but they demand response.

On all these issues, foresighted action has long been lacking. Yet the growing environmental crisis embodies many elements of business opportunity. The need for innovative, solutions-focused leadership has become palpable. The Environmental Reference Group believes Pāmu is well-placed to rise to this challenge and we acknowledge the progress made over the past two years.

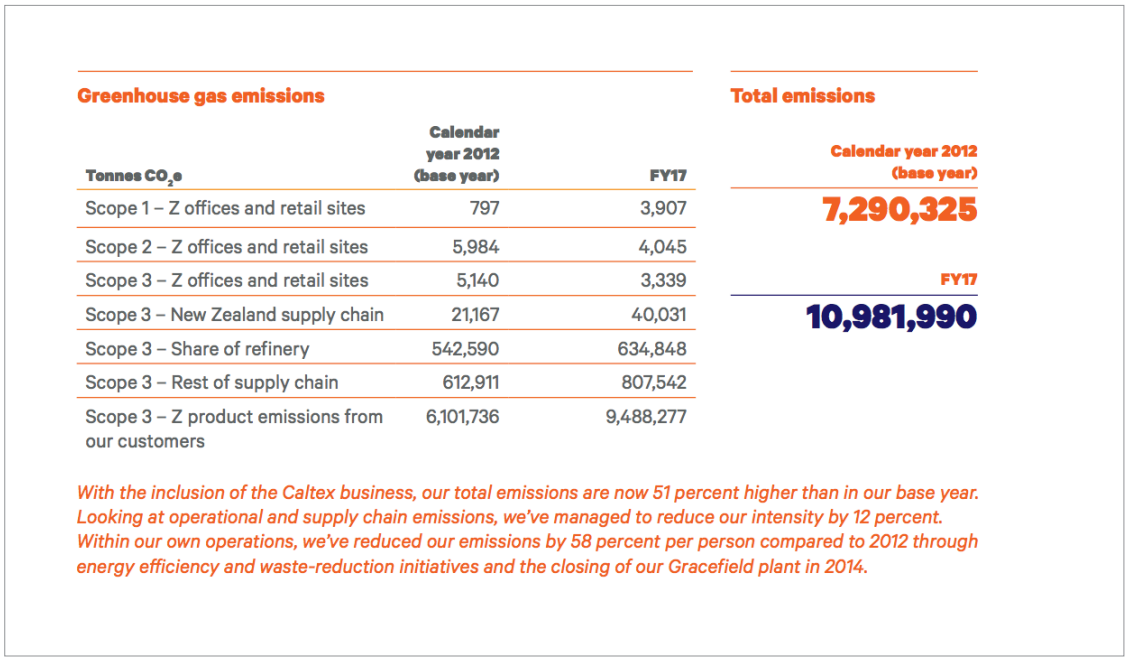
* The Environmental Reference Group of independent experts meets periodically to advise Pāmu on all issues related to farming practice and environmental impact. Other group members are: Dr Alison Dewes, Dr Mike Joy, Dr Tanira Kingi, Dave Maslen and Angus Robson.

Excerpt illustrating disclosure of climate change risk from Landcorp's annual report *Value to Market*, p. 9

8.1.2 Best practice reporting on metrics and costs

Z Energy (metrics)

Z Energy's annual report included a brief but detailed section outlining their carbon emissions. The table in this section referenced Scope 1, 2, and 3 emissions, which is a level of detail not seen in many other reports.[5] The report also included 2012 statistics in order to provide a base year for comparison, displaying that total emissions 'are now 51 percent higher than in our base year'.



Greenhouse gas emissions

Tonnes CO_2e	Calendar year 2012 (base year)	FY17
Scope 1 – Z offices and retail sites	797	3,907
Scope 2 – Z offices and retail sites	5,984	4,045
Scope 3 – Z offices and retail sites	5,140	3,339
Scope 3 – New Zealand supply chain	21,167	40,031
Scope 3 – Share of refinery	542,590	634,848
Scope 3 – Rest of supply chain	612,911	807,542
Scope 3 – Z product emissions from our customers	6,101,736	9,488,277

Total emissions

Calendar year 2012 (base year)

7,290,325

FY17

10,981,990

With the inclusion of the Caltex business, our total emissions are now 51 percent higher than in our base year. Looking at operational and supply chain emissions, we've managed to reduce our intensity by 12 percent. Within our own operations, we've reduced our emissions by 58 percent per person compared to 2012 through energy efficiency and waste-reduction initiatives and the closing of our Gracefield plant in 2014.

Excerpt illustrating disclosure of emission metrics from Z Energy's 2017 annual report *Solving what matters for a moving world*, p. 39

TradeMe Group Limited (metrics)

TradeMe Group Limited's (TradeMe) annual report has a short but detailed section discussing environmental sustainability and emissions. In this section, they use the example of second hand fridges, which can contribute to greenhouse gas emissions when disposed of incorrectly, to discuss the ways in which the company is reducing emissions. TradeMe has produced a brief analysis on how trading the fridges and continuing to use them instead of disposing of them has reduced potential greenhouse gas emissions. The analysis includes benefits to both local councils and the wider environment. Unlike other companies that have reported relevant climate change metrics, the fridge example is not something TradeMe has done themselves but is something they have captured the impact of in their metrics.

5 See explanation of Scopes 1, 2 and 3 emissions in Section 9.

Environmental sustainability
The fundamental premise of the Trade Me used goods marketplace business is the reuse and recycling of goods by members – one person sells their unwanted goods to another.

This year we've taken some early steps to look at how sustainable it is to buy and sell on Trade Me, testing this in our fridges category. Fridges contain gases that, if not disposed of properly, can leak into the environment.

Over the past nine years (where we had a good level of detailed data) more than 200,000 Trade Me members have bought and sold fridges on Trade Me. We provided our data in this category to a group of independent experts experienced in assessing sustainability initiatives. The panel estimated the number of fridges that could have ended up in landfill if they hadn't been disposed of properly. They concluded that by giving their fridges an extended life on Trade Me our members have saved an estimated 32,292 tonnes of CO_2 from release into the atmosphere from incorrect disposal, saved an estimated 18,000 fridges from entering landfills around the country and saved $4.2m in environmental costs. To put that in real terms, to remove that amount of CO_2 from the environment would take a year for a 3,754 hectare forest of mature trees (9–10 years old). The environmental costs are saved by Councils who can prolong the life of their landfills, earn recycling revenue, foster local jobs in addition to the wider environmental benefit of keeping gas emissions from entering our atmosphere.

Used goods is only one part of the business. As a corporate Trade Me has relatively low environmental impacts. The vast majority of our negative impact arises from energy consumption in our offices, and emissions from travel. As employee numbers have grown, more travel has been required between New Zealand and the markets where suppliers are based, between the Company's offices in Wellington, Christchurch and Auckland, and locally to maintain communication with key customers.

Since 2014 we have provided full data annually to Ernst & Young to prepare a Greenhouse Gases (GHG) Emissions Profile for our travel and other energy consumption. We buy carbon credits to fully offset carbon emissions, each year.

Our total GHG inventory for the 2015 calendar year (reported in our 2016 Annual Report) was 670 tonnes CO_2-e (split 368 tCo_2-e to travel, vehicles and landfill waste; and 306 tCO_2-e to power consumption). This year we are publishing our Annual Report before the GHG profile is available. We will report on our investor relations site when we have the 2016 year results.

Excerpt illustrating disclosure of emission metrics from *TradeMe Group Limited Annual Report 2017*, pp. 41–42

Pacific Aluminium (New Zealand) Limited (costs)

Almost all companies that mentioned the cost of climate change or carbon emissions did so in relation to Carbon Credits or Emission Trading Scheme units. As a result, almost all mentions of climate change costs were found in the financial section. There are currently no specific financial reporting requirements for carbon emissions, which means that we needed to look at the notes to the financial statements to get an idea of how much effort the company put into recording carbon emission costs accurately.

Pacific Aluminium (New Zealand) Limited (Pacific Aluminium) was the company that provided the most detail in the financial notes regarding the Emission Trading Scheme. There were several specific notes outlining the company's obligations under the Emission Trading Scheme, how they have valued their Emission Units, and what they intend to do with them in the future.

(q) Intangible assets

NZ Emissions Trading Scheme

Emission Trading Scheme units ('NZUs") allocated under the NZ Emissions Trading Scheme ("ETS") transitional assistance have been measured at fair value on date of allocation, and reported as intangible assets in accordance with the NZ IAS 20 *Government Grants* standard. Where the unit market value is lower than the carrying value at period end, the units are revalued to reflect the lower realisable value. The units are held for offsetting direct and indirect carbon emission cost obligations.

Excerpt illustrating disclosure of climate change costs from *Pacific Aluminium (New Zealand) Limited Annual financial report For the year ended 31 December 2017*, p. 15

(x) NZ Emissions Trading Scheme

The company is a liable entity under the ETS.

The activity of primary aluminium smelting as undertaken by the company has been assessed to be highly emissions-intensive and trade-exposed, and the company therefore qualifies for the allocation of NZUs at the maximum rate (currently 90%).

The ETS is a domestic-only scheme from June 2015, but the initial scheme transition measures currently remain in place. During this period, participants must surrender one emission unit for two tonnes of carbon dioxide equivalent emissions. Correspondingly, the allocation of units to energy-intensive and trade-exposed activities is halved, but remains at the 90% allocation rate. It is possible to buy units at market price or at a fixed price of NZ$25 per tonne from the government.

In late 2016, the government announced it will phase out the one-for-two transitional measure. The surrender obligation has increased to 67% from 1 January 2017, and will increase further to 83% from 1 January 2018, with a full surrender obligation from 1 January 2019 for all sectors in the NZ ETS. The company's allocations will increase proportionally with the removal of one-for-two.

It is the company's intention to utilise these assets to settle future ETS obligations, and sell any surplus units when required. Where the market price is lower than the carrying value at period end, the units and obligation will be impaired/revalued to reflect the lower realisable value. A subsequent reversal of impairment may occur when the market price rises, however the reversal shall be no more than the previous impairment value. Any reversal of impairment is recognised in profit or loss.

Excerpt illustrating disclosure climate change costs from *Pacific Aluminium (New Zealand) Limited Annual financial report For the year ended 31 December 2017*, p. 18

16 Non-current assets - Intangible assets

	Software $'000	Emissions trading scheme units $'000	Total $'000
Year ended 31 December 2017			
Opening net book amount	458	13,137	13,595
Additions - acquisition	3	-	3
Amortisation charge	(33)	-	(33)
Units acquired	-	14,290	14,290
Units utilised	-	(6,775)	(6,775)
Transfer to assets held for sale	-	(13,207)	(13,207)
Closing net book amount	428	7,445	7,873
At 31 December 2017			
Cost	9,928	7,445	17,373
Impairment	(1,545)	-	(1,545)
Accumulated amortisation	(7,955)	-	(7,955)
Net book amount	428	7,445	7,873

	Software $'000	Emissions trading scheme units $'000	Total $'000
At 31 December 2016			
Cost	9,925	13,137	23,062
Impairment	(1,545)	-	(1,545)
Accumulated amortisation	(7,922)	-	(7,922)
Net book amount	458	13,137	13,595

Emission Trading Scheme units ("NZUs") are classified as intangible assets and are carried at cost. Intangible NZUs assets are not amortised or subject to impairment as the economic benefits are realised from surrendering the rights to settle obligations arising under the ETS. It is the company's intention to utilise these assets to settle future ETS obligations, and sell any surplus units when required.

Excerpt illustrating disclosure of climate change costs from *Pacific Aluminium (New Zealand) Limited Annual financial report For the year ended 31 December 2017*, p. 28

8.1.3 Best practice reporting on controls, targets and initiatives

Warehouse Group and New Zealand Post (controls)

Both the Warehouse Group and New Zealand Post are part of Certified Emissions Measurement and Reduction Scheme (CEMARS). The scheme provides companies with programmes to accurately measure their greenhouse gas emissions as well as advice on how to manage and reduce their emissions. Being part of the scheme gives companies the right to use a specific certification logo. The certification illustrates a commitment to both accurately reporting on and actively minimising greenhouse gas emissions. This constitutes a control on business practices and ensures companies are continually striving to reduce emissions and improve reporting on their progress.

Excerpt illustrating disclosure of emission controls from The Warehouse Group's 2017 annual report *A plan to transform*, back cover

Environment

Greenhouse Gas (GHG) Emissions

New Zealand Post Limited meets the requirements of CEMARS® certification having measured its greenhouse gas emissions in accordance with ISO 14064-1: 2006 and committed to managing and reducing its emissions in respect to the operational emissions of its organisation within New Zealand. For the purposes of CEMARS certification (FY17). This includes Kiwibank and ReachMedia. Both will be removed from the scope of CEMARS certification in the FY18 reporting year.

The Group has applied a baseline year of 2012-13 for its emissions inventory. The operational control consolidation approach has been used to account for operational emissions with reference to the methodology described in the GHG Protocol and ISO 14064-1:2006 standards.

Figure 1: 2016-17 GHG emissions by source

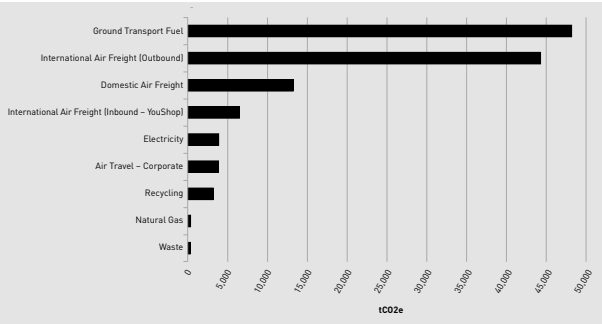


Figure 2: GHG emissions data summary (tCO_2e)

	2012-13 (base year)	2013-14	2014-15	2015-16	2016-17	Change from base year
Scope 1	16,403	16,093	15,650	14,866	2,308	-85.9%
Scope 2	5,607	4,507	4,664	4,671	3,856	-31.2%
Scope 3	108,296	98,217	93,400	102,237	117,460	8.5%
Total	**130,306**	**118,818**	**113,714**	**121,774**	**123,624**	**-5.1%**

- This statement is a summary of the verified information considered for CEMARS® certification. The full disclosure statement can be found at www.enviro-mark.com
- In FY16 the organisational boundary was expanded to include GHG emissions associated with Youshop services (a Scope 3 emissions source). In FY17 this accounted for an increase of 6,464 tCO2e.

Emissions audit statement

Excerpt illustrating disclosure of emission control from New Zealand Post's 2017 *Annual Report*, p. 94

SKYCITY Entertainment Group Limited (targets)

In their annual report, SKYCITY Entertainment Group Limited (SKYCITY) sets out precise and measurable environmental targets, which ensure progress can be monitored. They outline their major environmental goal, which is not climate-specific but some of their priorities for achieving this goal pertain to climate change and are set within specific time frames. Noticeably, the report makes reference to Scope 1, 2, and 3 emissions, which, as mentioned in discussion of Z Energy's reporting,

is a level of detail not seen in many other reports. This illustrates a commitment to the accurate measurement of emissions. Their targets and priorities do not just include reducing carbon emissions but also reducing energy consumption, waste, and water usage. Overall, the targets stood out from other corporate reporting because they were specific and detailed and outlined the intended steps that would allow the targets to be achieved.

THE ENVIRONMENT

Goal	• Reduce our environmental footprint every year
Priorities	• Begin measuring and reporting on our environmental footprint (eg carbon, energy, water and waste) • Seek energy savings through design of infrastructure and technology improvements • Introduce improved recycling, including food waste composting • Embed environmentally-friendly purchasing options into supply chain • Continue donation of reusable goods (eg excess edible food and hotel items)
Targets*	GENERAL • Measure and establish baseline data for the 2015–2017 financial years for emissions, energy, waste and water by the end of the financial year ending 30 June 2018 • Improve staff perception of SKYCITY as being responsible with respect to the environment CARBON: • Measure carbon footprint (Scope 1 and 2) for the SKYCITY Group by the end of the financial year ending 30 June 2018 • Measure carbon footprint (Scope 3) by the end of the financial year ending 30 June 2020 • 10% reduction in Scope 1 and 2 emissions by the end of the financial year ending 30 June 2018 (from the 2015 financial year baseline) • 30% reduction in total emissions by the end of the financial year ending 30 June 2025 ENERGY: • 3% energy reduction per year per dollar revenue (from the 2015 financial year baseline) WASTE: • 40% reduction of waste to landfill by the end of the financial year ending 30 June 2025 (from the 2015 financial year baseline) • 7% reduction per year per dollar revenue • Zero waste by the end of the financial year ending 30 June 2030 WATER: • 3% water use reduction per year per dollar revenue **These targets are subject to change once a baseline is established by SKYCITY.*

Highlights

Whilst we are in the final stages of gathering our three-year set of baseline data to confirm our environmental footprint, we have taken significant steps in the interim to reduce our energy, water and waste to landfill.

In April 2017, we introduced an improved set of recycling services at our Auckland site, including a new food waste separation and composting system. Food waste from our 21 kitchens and restaurants in Auckland is now being diverted to EnviroNZ, where it is composted into a fertiliser product for horticulture. We plan to expand this system to other sites in the SKYCITY Group where composting options exist.

CHEFS AND KITCHEN STAFF GET IN BEHIND OUR NEW FOOD WASTE COMPOSTING SYSTEM

Excerpt illustrating disclosure of emission targets from *SKYCITY Entertainment Group Annual Report,* p. 25

Ports of Auckland Limited (targets and initiatives)

The Ports of Auckland Limited (Ports of Auckland) annual report includes a substantial section titled 'Improved Environment', which is dedicated to explaining the company's long-term goal to be a zero-emission port and to become net positive for energy by 2040. This further expands on the short-term targets and initiatives they have invested in to help them get there. They include reflection on targets made in the past and assessment of their progress against these targets — this element was generally lacking in other reports. For example, they include discussion of failure to meet a target, highlighting the rigour of their internal reporting mechanisms.

Ports of Auckland set out their carbon emissions amount comprehensively and transparently, illustrating their desire to standardise their climate change reporting:

> The total carbon dioxide (CO_2) emissions for Ports of Auckland (including our 100%-owned subsidiaries) for this financial year is in the order of 19,000 tonnes (unaudited). This includes emissions from all Port-owned and -operated emission sources, and those indirect sources that are a result of Port operations, such as waste to landfill, electricity and air travel. The inventory has been prepared in accordance with the requirements of the measure step of the CEMARS programme and this is based on the Greenhouse Gas Protocol and ISO 14064-1:2006 (Ports of Auckland, 2017, p. 30).

a highlight in the racing schedule, always proving to be as much fun for our tug masters as it is for spectators.

Supporting Auckland youth

We are also working to ensure that Auckland school children get to experience the port. Almost every week we run boat tours of the port with the New Zealand Maritime Museum, hosting kids from schools all over Auckland. From early childhood education groups to high school students, these tours continue to be popular – often a first boat ride for many of the children. The tours are free to school groups during the school term, while in the holidays we open the tours to families for a small fee. We use the money raised from the school holiday tours to subsidise transport to the tours for schools from less well-off areas.

We have a close relationship with two local primary schools, Wiri Central School and Te Papapa School. Two of our executives contribute as members of the school boards and our staff often volunteer to participate in school book weeks and other activities. This year also marks the third year of a partnership with SCOUTS New Zealand, providing funding to help develop scouting in the region.

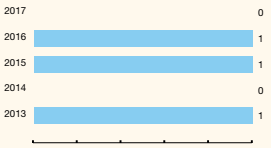
Improved environment

Our vision is to become a leading sustainable port at a global level, woven into the fabric of Auckland and driving the city's sustainable growth to improve the environment for future generations.

We have set a goal to become a zero-emission port and to become net positive for energy by 2040. This is an ambitious goal and will be difficult to meet, but we have taken our first steps.

For instance, we have partnered with Forum for the Future to develop a sustainability framework that sets clear goals and a roadmap for achieving them.

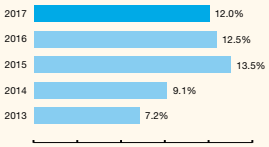
Environmental spills*



Note: Environmental measurements are currently only made at the Waitematā seaport

* The spills data refers to spills for which Ports of Auckland has assumed responsibility.

Rail moves as % of total land-side moves to/from the Port



Note: Volumes refer to the Waitematā seaport only.

To help us get started we set a number of short-term (up to three-year) targets. Our 2017 targets were designed to help us to build our internal capability through a number of pilot projects, and measure our current performance so we could set a baseline for our future work. The 2017 targets are summarised below.

Progress to date

Energy, emissions, water quality and waste

This year we signed a collaboration agreement with the Energy Efficiency & Conservation Authority (EECA) and we are working with EECA to develop an energy management plan with the aim of further reducing energy consumption company-wide. We have completed our first energy audit, which identified potential energy savings (fuel and electricity) of up to four gigawatt hours annually.

We have joined the Certified Emissions Measurement and Reduction Scheme (CEMARS) programme and, as part of

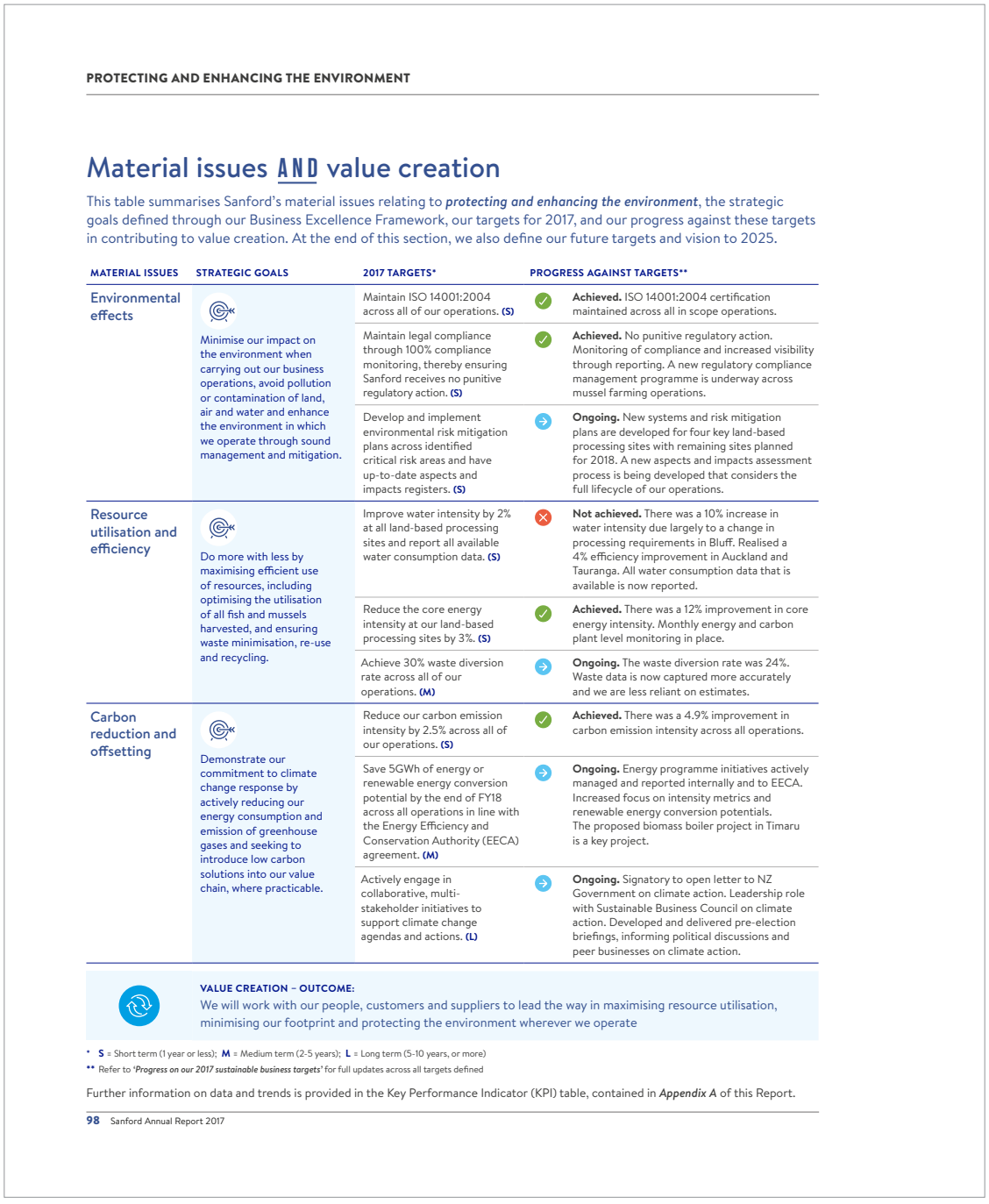
The 2017 targets

Determine metrics and gather baseline data for energy, emissions, waste and water quality. Set 2018 and 2025 targets based on baseline data.	**In progress, but behind schedule**
Begin to develop a plan for a zero-emissions container terminal, then complete and launch plan for zero-emissions terminal.	**In progress, but behind schedule**
Commence the development of an Environmental Management System that is ISO 14001 compliant; work with a relevant local partner to develop and execute improvements to achieve ISO 14001 accreditation by June 2018.	**On schedule**
Continued contribution to healthy marine environment through the Bryde's whales project.	**Achieved**
Pilot Project: Complete feasibility study for cruise shore power.	**Achieved**
Pilot Project: Consult Port of Los Angeles (and perhaps others) on how to develop a clean truck programme. Identify willing trucking company partners.	**Not achieved**

Excerpt illustrating disclosure of emission targets from *Ports of Auckland Annual Report 2017*, p. 29

Sanford Limited (targets and initiatives)

Seafood company Sanford Limited (Sanford) have taken a leadership role by signing an open letter to the New Zealand Government outlining ambitious emission reduction targets and including a long-term plan to reach these targets. Throughout their annual report they include discussion of multiple controls and initiatives, demonstrating their commitment to reducing greenhouse gas emissions and being an environmentally friendly company. They are collaborating with multiple parties to explore innovative ways to reduce emissions and increase efficiency e.g. by partnering with Active Refrigeration to assess ways to reduce emissions from refrigeration, and partnering with Energy Efficiency and Conservation Authority (EECA) to find ways to minimise energy usage.



PROTECTING AND ENHANCING THE ENVIRONMENT

Material issues AND value creation

This table summarises Sanford's material issues relating to ***protecting and enhancing the environment***, the strategic goals defined through our Business Excellence Framework, our targets for 2017, and our progress against these targets in contributing to value creation. At the end of this section, we also define our future targets and vision to 2025.

MATERIAL ISSUES	STRATEGIC GOALS	2017 TARGETS*	PROGRESS AGAINST TARGETS**
Environmental effects	Minimise our impact on the environment when carrying out our business operations, avoid pollution or contamination of land, air and water and enhance the environment in which we operate through sound management and mitigation.	Maintain ISO 14001:2004 across all of our operations. **(S)**	**Achieved.** ISO 14001:2004 certification maintained across all in scope operations.
		Maintain legal compliance through 100% compliance monitoring, thereby ensuring Sanford receives no punitive regulatory action. **(S)**	**Achieved.** No punitive regulatory action. Monitoring of compliance and increased visibility through reporting. A new regulatory compliance management programme is underway across mussel farming operations.
		Develop and implement environmental risk mitigation plans across identified critical risk areas and have up-to-date aspects and impacts registers. **(S)**	**Ongoing.** New systems and risk mitigation plans are developed for four key land-based processing sites with remaining sites planned for 2018. A new aspects and impacts assessment process is being developed that considers the full lifecycle of our operations.
Resource utilisation and efficiency	Do more with less by maximising efficient use of resources, including optimising the utilisation of all fish and mussels harvested, and ensuring waste minimisation, re-use and recycling.	Improve water intensity by 2% at all land-based processing sites and report all available water consumption data. **(S)**	**Not achieved.** There was a 10% increase in water intensity due largely to a change in processing requirements in Bluff. Realised a 4% efficiency improvement in Auckland and Tauranga. All water consumption data that is available is now reported.
		Reduce the core energy intensity at our land-based processing sites by 3%. **(S)**	**Achieved.** There was a 12% improvement in core energy intensity. Monthly energy and carbon plant level monitoring in place.
		Achieve 30% waste diversion rate across all of our operations. **(M)**	**Ongoing.** The waste diversion rate was 24%. Waste data is now captured more accurately and we are less reliant on estimates.
Carbon reduction and offsetting	Demonstrate our commitment to climate change response by actively reducing our energy consumption and emission of greenhouse gases and seeking to introduce low carbon solutions into our value chain, where practicable.	Reduce our carbon emission intensity by 2.5% across all of our operations. **(S)**	**Achieved.** There was a 4.9% improvement in carbon emission intensity across all operations.
		Save 5GWh of energy or renewable energy conversion potential by the end of FY18 across all operations in line with the Energy Efficiency and Conservation Authority (EECA) agreement. **(M)**	**Ongoing.** Energy programme initiatives actively managed and reported internally and to EECA. Increased focus on intensity metrics and renewable energy conversion potentials. The proposed biomass boiler project in Timaru is a key project.
		Actively engage in collaborative, multi-stakeholder initiatives to support climate change agendas and actions. **(L)**	**Ongoing.** Signatory to open letter to NZ Government on climate action. Leadership role with Sustainable Business Council on climate action. Developed and delivered pre-election briefings, informing political discussions and peer businesses on climate action.

VALUE CREATION – OUTCOME:
We will work with our people, customers and suppliers to lead the way in maximising resource utilisation, minimising our footprint and protecting the environment wherever we operate

* **S** = Short term (1 year or less); **M** = Medium term (2-5 years); **L** = Long term (5-10 years, or more)
** Refer to ***'Progress on our 2017 sustainable business targets'*** for full updates across all targets defined

Further information on data and trends is provided in the Key Performance Indicator (KPI) table, contained in ***Appendix A*** of this Report.

98 Sanford Annual Report 2017

Excerpt illustrating disclosure of emission targets from Sanford's 2017 annual report *THE POWER OF AND*, p. 98

• CASE STUDY •

Timaru biomass project

A key development in 2017 has been our focus on renewable energy, including the potential transition of our Timaru fishmeal plant boiler fuel source from coal to wood chip. We completed extensive trials and once commissioned, anticipate a range of benefits including improved processing controls, safety and fuel efficiency, a 50% projected reduction in emission levels, and a considerable reduction in carbon emissions.

Fully replacing coal with wood chip biomass as proposed, will realise a saving of 1,721.34 T CO_2-e per year, significantly reducing our greenhouse gas emissions towards our goal of 30% below 2005 levels by 2030.

With the support of EECA, we will continue to progress this opportunity in 2018.

PHOTO: TERRY DENLEY, PROJECTS AND PROCESS IMPROVEMENT MANAGER, HAS BEEN INSTRUMENTAL IN PROGRESSING THE TIMARU BOILER PROJECT AND OUR OTHER WORK WITH EECA

> **The people of New Zealand own the Marlborough Sounds, so we must behave in such a way that we are always welcome to be here.**
>
> **Grant Boyd**
> FLOATING & FARM DEVELOPMENT MANAGER
> SANFORD

ENERGY EFFICIENCY AND CONSERVATION AUTHORITY (EECA) AND SANFORD

Sanford is continuing to partner with EECA, which follows our energy management collaboration agreement. Energy management has played a significant role in our continuous improvement work and around 25 energy projects with short term paybacks and low investment thresholds were identified. Of these projects, 18 have the potential to deliver energy savings such as replacing light-emitting diode lighting, installing variable speed drives on motors, optimising freezing systems, and replacing the mussel vessel fleet's diesel engines.

> **Over the past year, Sanford has continued to build a clear link between energy savings and improved productivity. This is a win for Sanford's ongoing competitiveness and more broadly NZ Inc. I also applaud the continued priority given to carbon reduction through energy management – a cost effective way of responding to our climate change challenge.**
>
> **Andrew Caseley**
> CHIEF EXECUTIVE – EECA

To better understand our operational energy efficiency opportunities, we are producing monthly energy monitoring reports for our land-based processing sites and a select number of vessels. These reports have highlighted a number of energy saving opportunities across our operations. For example, we have had an efficiency benchmark improvement of 10.4% (kWh/kg) at our Havelock processing plant when compared to 2015. The improvement is due to implementing a number of initiatives such as optimising the boiler, reviewing our spiral freezer and boiler operating procedures, and focusing on the start-up and shutdown processes to avoid wastage. There was a $279,100 saving from tariff improvements during the year across all of Sanford's land-based processing sites, including a $124,600 saving in Havelock.

• CASE STUDY •

PHOTO: GRANT BOYD, DARREN BROWN AND LYNDON DAYMOND ACCEPTING THE CAWTHRON MARLBOROUGH ENVIRONMENTAL AWARD
PHOTO CREDIT: JACQUI LESLIE PHOTOGRAPHY

Cawthron environmental award in Marlborough

Our Havelock mussel farming team were the winners of the Cawthron Marlborough Environmental Award's Marine Category in March 2017. The judges concluded that the staff initiatives were an excellent example of a team's effort towards continuous improvement. Some of the initiatives that enabled the win include:

- ✓ **Smart tech:** From innovative, new compostable eco-lashings to sand-weighted ropes.
- ✓ **Beach clean-ups:** The Sanford team are working proactively with the community to keep marine debris off Marlborough's beaches and bays.
- ✓ **Cleaner engines:** Introducing biodegradable hydraulic oil, more effective bilge water filters and more efficient engines across the farming fleet.
- ✓ **Mussel float recycling:** Sanford acts as the recycling hub for all floats throughout Marlborough, recycling around 4,500 floats every year.

The team plan to invest the prize money into an environmental improvement project.

An open day was hosted following the win to share key initiatives and learnings.

Excerpt illustrating a disclosure of climate change initiatives from Sanford's 2017 annual report *THE POWER OF AND*, p. 102

8.2 Government departments

General observations

Overall, the annual reports of government departments were of a significantly different variety than those of the Deloitte Top 200, reflecting the fact that the operations of government departments are mostly office-based bureaucracy rather than high environmental impact activities like production. Most disclosures were either discussion of

- policies being enacted by government,
- research carried out by the department,
- environmental projects the department has invested in,
- other information related specifically to the department's role in government, or
- consideration of the wider New Zealand perspective in terms of the measures communities and individuals can take to help reduce emissions.

Most discussions on climate change in government department annual reports related to the role of the department in the overall system, rather than considering how the department could be more sustainable. For example, the Ministry of Business, Innovation and Employment's annual report contained information on carbon and emissions in relation to New Zealand's economy, while the Ministry of Transport's annual report contained climate change and emission information almost entirely relating to road transport. This is understandable given that government departments are part of a larger institution while private entities are not.

Some of the disclosures that do not relate specifically to what a department itself is doing have still been included to provide insight into which departments are concerned with making progress and investing in reducing emissions.

The two departments that disclosed the most climate change information in their annual reports were the Ministry for the Environment and the Ministry for Primary Industries. Both ministries had relevant disclosures in all six categories. The Ministry for the Environment had particularly significant levels of climate change and carbon emission disclosure.

8.2.1 Risks

For the most part, departments discussed their own policy area and did not venture analyses of the impact of their operations on emissions, or on how climate change risks might impact their activity and strategy in the future. There were of course some exceptions.

Inland Revenue Department (risks)

Excerpt illustrating disclosure of climate change risks from *Inland Revenue Annual Report 2017*, p. 14

The example in the excerpt above illustrates a clear articulation of risk from Inland Revenue Department (IRD). This is unexpected due to the degree of removal IRD's operations have from such a risk. This example highlights the fact there is no reason other departments could not aim for this level of climate change risk disclosure.

Department of Conservation (risks)

The following excerpt provides an example of a government department identifying the risk of climate change in terms of the impact it will have on the public:

> Not only is this a real loss to the heritage of this and future generations, it also affects the services that ecosystems provide, such as clean water and healthy soils, and reduces the flow-on benefits to New Zealand's prosperity (Department of Conservation, 2017, p. 11).

Ministry for Primary Industries (risks)

Another example, from the Ministry for Primary Industries (MPI), provides a highly specific discussion of risk and was selected for its regional focus and specificity:

> These weather events are likely to get heavier and/or more frequent. For a mid-range global greenhouse gas emission scenario, a 1-in-100-year event could become a 1-in-50-year event by the end of this century (Ministry for Primary Industries, 2017, p. 119).

8.2.2 Metrics and costs

Ministry for Primary Industries (metrics and costs)

MPI included a section in their annual report titled 'Reduced greenhouse gas emissions per unit of production'. This section included some of the strongest disclosures of climate change metrics:

> Biological emissions from agriculture increased on an absolute basis by 16 percent between 1990 and 2005, but have remained relatively static since.
>
> Since 1990, farmers have improved productivity through innovations in feed and nutrition, animal genetics, pasture management and animal health. Without these productivity improvements, absolute agricultural emissions would have increased by more than 40 percent to produce the same amount of product (Ministry for Primary Industries, 2017, p. 23).

8.2.3 Controls, targets and initiatives

Some government department annual reports mentioned the Electric Vehicles Programme, which we have categorised as a target or initiative but it is worth noting that this is actually a government-wide programme rather than an individual department initiative:

> The Ministry will continue to support the target of approximately 64,000 electric vehicles on New Zealand roads by the end of 2021 by continuing the work described above, monitoring the market to identify potential requirement for new policy interventions, and promoting market growth for electric vehicles (Ministry of Transport, 2017, p. 9).
>
> The review commended the work to date and the Government's Electric Vehicles Programme, which is focused on having 64,000 electric vehicles on our roads by 2021 (Ministry of Business, Innovation and Employment, 2017, p. 56).

Department of Conservation (targets)

This example illustrates a tangible target for the department, with specific numeric details attached to it. Often programmes such as this do not have such detailed attached to them.

Photo: Trees That Count

Trees That Count

Trees That Count is a partnership between the Project Crimson Trust, the Tindall Foundation, Pure Advantage and DOC. It aims to mobilise New Zealanders to plant millions of native trees to help mitigate climate change. Trees That Count is connecting with community groups, councils and all planting groups to get them to register with their website. Trees That Count report 3.1 million trees planted in 2016, and are aiming to have 4.7 million planted in 2017; one for each New Zealander.*

* Trees That Count at www.treesthatcount.co.nz.

Excerpt illustrating a specific target from Department of Conservation Annual Report, p. 43

Ministry for Primary Industries (initiatives)

MPI outlined a number of initiatives in their annual report, including a whole page dedicated to their appropriations for climate change research. They also mentioned several other programmes administered solely by the ministry or in partnership with others:

> The objective of the Afforestation Grant Scheme (AGS) is to encourage and support new forest planting, with applications prioritised, if necessary, according to their contribution to environmental outcomes. The expected result is to have 15,000 hectares of new forest planted by 2021. Secondary benefits include helping to reduce soil erosion, improving land use productivity and storing carbon (Ministry for Primary Industries, 2017, p. 116).

> Work completed using SLMACC funding in 2016/17 included development of a plain language factsheet by the National Institute of Water and Atmospheric Research (NIWA) to help farmers plan for, and adapt to manage, the effects of climate change on their business (Ministry for Primary Industries, 2017, p. 117).

8.3 Crown agents and Crown entities

Apart from the Crown entities that were expected to disclose climate change information (Energy Efficiency and Conservation Authority and the Environmental Protection Authority), very few mentioned climate change.

The Crown entity Guardians of New Zealand Superannuation stood out, mentioning all six types of climate change information in its annual report. This level of disclosure can be attributed to the decision to change portfolio type from passive to low-carbon.

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CASE STUDY NO. 4

Climate Change

In late 2016, we announced a climate change strategy for the Fund, the result of several years' work to identify:

- where carbon emissions and carbon reserves were concentrated in the Fund;
- how best to reduce exposure and carbon risk in the Fund; and
- where to focus our efforts in seeking additional low-carbon and climate-resilient investments that meet our risk-adjusted return requirements.

An important foundation for this work was the 2015 Mercer-led research study, Investing in a Time of Climate Change, which we co-funded.

We found that the bulk of the Fund's exposure to carbon emissions was contained in our global equities portfolio. This is the largest part of the Fund and one with significant exposure to carbon-intensive sectors. Within this, we found that carbon exposures were highly concentrated in a relatively small group of companies.

WHY DID WE NEED A STRATEGY?

It is becoming increasingly clear that in coming years the global economy will transition away from fossil fuels for energy needs. Governments, technology and society are driving an energy transformation. The forces for change include national and global policy, investments in new energy technologies and pressure from society at large.

These forces are likely to disrupt all industries to different degrees, as energy is an input for all industries.

For investors, the shift to a low-carbon global economy creates investment opportunities and presents material risks. Some assets we invest in today may become 'stranded', rendered uneconomic by proper pricing of the carbon pollution externality, made obsolete by new technologies or face a dwindling market as consumers vote with their feet. Investors also need to consider the potential unpredictability of national and global policy initiatives.

Reducing the Fund's exposure to these risks and to the physical impact of climate change is consistent with our mandate to maximise returns without undue risk to the Fund as a whole.

We believe that financial markets currently under-price carbon risk over the horizon that matters for the Guardians' investment purposes. This gives long horizon investors like the Fund an advantage, as we only need to believe that changes *will* occur and can be less concerned with *when* they will occur.

CLIMATE CHANGE INVESTMENT RISK STRATEGY

GOAL A portfolio more resilient to climate-related risks.

TARGETS By 2020: to reduce the carbon emission intensity of the Fund by at least 20%; and reduce the carbon reserves of the Fund by at least 40%.

PRINCIPLES

1 — **Whole portfolio**
Manage climate risks and opportunities of the whole portfolio.

2 — **Consistency**
Be as consistent as we can across all investments (listed and unlisted; active and passive).

3 — **Best tools**
Use the full range of tools available to us. There is no single solution.

WORKSTREAMS

REDUCE Reduce exposure to fossil fuel reserves and carbon emissions.

ANALYSE Incorporate climate change into investment analysis and decisions.

ENGAGE Manage climate risks by being an active owner through voting and engagement.

SEARCH Actively seek new investment opportunities, for example in renewable energy.

NEW ZEALAND SUPERANNUATION FUND ANNUAL REPORT 2017

Excerpt illustrating disclosure of climate changre risks and initiatives, and emission metrics and targets from Guardians of New Zealand Superannuation Annual Report 2016–17 *Invested in New Zealand and the world*, p. 46

PASSIVE PORTFOLIO TRANSITIONED TO LOW-CARBON

Since we finalised the climate change strategy, we have been in implementation mode, working on all four of the work streams, and particularly on the 'reduce' element. Within this work stream, our first priority was the 40% of the Fund held in global passive physical equities, which was transitioned to a low-carbon approach by the end of the financial year.

The transition resulted in the reallocation of NZD950m away from companies with high exposure to carbon emissions and reserves into lower-risk companies. Passive holdings in 297 companies were sold, meaning we have been able to significantly reduce exposure to carbon while maintaining a good level of diversification – there are still around 6,000 companies in the Fund's passive portfolio. Maintaining portfolio diversification is important if we are to meet our mandate to maximise returns without undue risk to the Fund as a whole and to manage the Fund in line with best practice.

The focus on carbon reduction was based on a bespoke carbon measurement methodology for listed equities, focused on stocks with high carbon footprints without regard to sector. We created rules for including companies in the passive portfolio based on third-party data on carbon emissions and reserves provided by independent investment adviser MSCI ESG Research.

We chose to retain holdings in stocks in the top quartile of MSCI ESG Research's 'Carbon Emissions' score – reflecting less risk and better management than their peers. The decision will help to ensure that the Fund captures the potential investment upside from companies that are well placed to succeed within the rapidly transforming energy sector.

We will reapply our carbon methodology to the passive portfolio on an annual basis and expect to adjust and refine it over time as the available carbon measurement tools and data improve.

Our next priority is to reduce carbon exposure in our active investment portfolio. Shortly after year end, we completed the first step in this, applying our bespoke carbon methodology to the Fund's New Zealand active equity mandates.

We are also continuing to engage with our external investment managers and with the boards and management teams of investee companies on climate change risk and identifying attractive investment opportunities in alternative energy and transformational infrastructure.

CHANGES INCORPORATED IN REFERENCE PORTFOLIO

Because we consider climate change to present material, uncompensated investment risks to the Fund, our bespoke carbon methodology was incorporated into the Reference Portfolio benchmark effective 1 July 2017. We have also taken this opportunity to incorporate our responsible investment exclusions (for tobacco, whaling, nuclear explosive devices, cluster munitions, landmines and individual breaches of standards) into the benchmark.

These changes reflect that if the Fund just invested in the Reference Portfolio, it wouldn't include those stocks. They ensure the Reference Portfolio is fit for purpose given the requirements in our mandate to maximise returns without undue risk to the Fund as a whole and to not prejudice New Zealand's reputation in the global community.

More information on our Reference Portfolio approach is available at: https://www.nzsuperfund.co.nz/how-we-invest/reference-portfolio

CARBON FOOTPRINT

Carbon foot printing is a tool we use to measure carbon exposure across the whole of the Fund.

The 2017 Carbon Footprint, which is based on data from MSCI ESG Research, found that the total Fund's carbon emissions intensity is 19.6% lower, and its exposure to carbon reserves is 21.5% lower than if the changes to our passive equity portfolio hadn't been made. The Fund's global equity exposure to the energy, materials, utilities, industrials and consumer staples sectors has been reduced and its exposure to the telecommunications, consumer discretionary, information technology, health care and financial sectors has increased.

REPORTING

We will report each year in our annual report on our progress towards meeting our 2020 targets and, from next year, against the guidelines published by the Task Force on Climate-Related Financial Disclosures (**https://www.fsb-tcfd.org/**).

For further information, including the Carbon Footprint, a Q&A and videos explaining the strategy and the transition to a low carbon passive equity portfolio, see: https://www.nzsuperfund.co.nz/how-we-invest-balancing-risk-and-return/climate-change

Excerpt disclosure of climate changre risks and initiatives, and emission metrics and targets from Guardians of New Zealand Superannuation Annual Report 2016–17 *Invested in New Zealand and the world*, p. 47

The fact that Guardians of New Zealand Superannuation is moving from a passive investment strategy to a low-carbon investment strategy indicates that it is thinking about the future of New Zealand in relation to climate change. Whether this is due to financial reasons or environmental concerns, it is clear that Guardians has undertaken extensive research in climate change and is willing to commit to investing for a cleaner future.

District Health Boards and Crown Research Institutes

We have included a separate section here for district health boards (DHBs) and Crown research institutes (CRIs) because, unlike the other Crown agents and Crown entities, these are not individual organisations. The Crown agent listed as 'District Health Boards' is made up of 20 DHBs and the Crown entity listed as 'Crown Research Institutes' is made up of seven CRIs. Each of these DHBs and CRIs produced an individual annual report, which was then analysed as part of the collective.

Out of the 20 district health boards (DHBs) in New Zealand, three had a sustainability section in their annual report that mentioned climate change and reducing emissions. These were the Auckland District Health Board, Northland District Health Board and Waitemata District Health Board. Out of the three, Auckland District Health Board had the most detailed information on climate change and sustainability, including mention of their certification under CEMARS. However, these three only had one page on sustainability, of which climate change was a small section. Out of the 20 DHBs, none mentioned costs relating to climate change in their annual report.

SUSTAINABILITY

One of the themes of the Auckland DHB Strategy to 2020 is Operational and Financial Sustainability. Our long term-strategy extends to reducing greenhouse gas emissions, energy use and waste.

At Auckland DHB we are committed to reducing our carbon footprint. By reducing our footprint we have a positive impact on our energy use, our environment, and the health and wellbeing of the communities in which we all live and work.

We work collaboratively with our external providers on sustainable initiatives that reduce our carbon footprint. Our Sustainability and Waste Minimisation Strategies align with the Government and Local Body objectives in reducing the carbon footprint and less reliance on landfill.

Increase in population will inevitably place a greater demand for our healthcare services. This upward trend also increases use of energy, clinical supplies, transport, water etc. We are consciously taking a social stand for the population we serve in reducing the environmental impact from our services.

We are also encouraging discussions with the wider community and our networks to promote sustainability, environmental awareness and innovation in order to reduce greenhouse emissions. All of these efforts will contribute, over time, to improved population health.

Our vision is to:

- Reduce energy use by 50%
- Produce 50% of our energy from on-site renewable sources by 2030
- Have zero landfill waste by 2040.

In 2015, Auckland DHB became certified under the Carbon Emissions Management and Reduction Plan (CEMARS). Under this Plan, we committed to reduce annual emissions by a minimum of 2% per annum to achieve a total of 20% reduction by 2025. In 2016, we were re-certified under CEMARS.

Auckland City Hospital and Greenlane Clinical Centre's emissions in 2016 were 13% lower than in 2015. These savings are equivalent to 4,280 return economy flights from Auckland to London or driving from Auckland to Wellington in an average size car 31,999 times.

On 8th December 2016 Auckland DHB hosted a symposium titled "Sustainability in the Health Sector" with senior clinicians highlighting the need for action to avert climate change and its impact on the health sector. The event was well supported with key representation from organisations and staff from various services and disciplines.

Our journey to go green

We aim to reduce our waste to landfill by introducing small 'desk cubes' in offices so people can see the waste they are producing and increasing the number of 'tri bins' around our sites so recycling is made easy.

We have recycled a total of 3,000 kg of PVC (e.g. oxygen masks, tubing, IV fluid bags) since 2016. Old equipment is being recycled.

An ongoing programme helps staff to reduce their reliance on cars to get to and from work. Initiatives are underway to encourage and support staff to bike to work and use public transport and electric vehicles.

Auckland Bike Challenge month, February 2017

All upgraded or new lifts are now equipped with green technology such as high efficiency motors and regenerative braking.

We have an agreement with the Energy Efficiency and Conservation Authority (ECCA) to improve energy efficiencies at our Grafton and Greenlane sites. Our new energy management system now means we can watch our energy consumption real time and implement savings.

Excerpt illustrating disclosure of emission metrics, controls and targets and climate change initiatives from Auckland District Health Board Annual Report 2016-2017, p. 34

Out of the seven Crown Research Institutes' annual reports, five discussed climate change. Interestingly, there were no mentions of climate change or carbon emissions in the annual report of the Institute of Environmental Science and Research Limited (EMS). The majority of references to climate change in the five annual reports were related to the research undertaken by those institutes. The two research institutes that mentioned targets (Landcare Research New Zealand Limited and New Zealand Forest Research Limited) both discussed New Zealand's commitment to reducing greenhouse gas emissions to 30% below 2005 levels by 2030. Since references to climate change in the annual reports of Crown Research Institutes were largely based on research rather than measures taken by the specific institute, no examples of Crown Research Institutes have been included in this best practice section.

General observations for this data set:

As expected, disclosure of climate change-related information by Crown entities was poor. Out of the 65 Crown entities, only 12 discussed climate change, two of which were District Health Boards (out of 20 annual reports from DHBs) and Crown Research Institutes (out of seven annual reports from research institutes). These results are very similar to the results for government departments, where annual reports focused almost entirely on the work the department had undertaken over the previous year.

8.4 State-owned enterprises

Out of all data groups in this research, state-owned enterprises had the highest percentage of entities that disclosed some form of climate change information at 50%. This is in contrast to Crown entity annual reports, which had a climate change information disclosure rate of only 18.5%, despite their similarity to state-owned enterprises. However, the small overall sample size of ten state-owned enterprises may skew their high percentage of disclosure.

Out of the five state-owned enterprises that discussed climate change, two of them mentioned five out of our six climate change categories: KiwiRail Holdings Limited and Landcorp Farming Limited. Interestingly, both of these state-owned enterprises also appear in the Deloitte Top 200, and Landcorp also feature in Deloitte Top 200 best practice examples in this work. Two other state-owned enterprises that disclosed climate change information in their annual reports (Transpower New Zealand Limited and New Zealand Post Limited) also appear in the Deloitte Top 200. This highlights a difference between state-owned enterprises and Crown entities, with state-owned enterprises having a more commercial, profit-focused outlook than Crown entities. This difference may contribute to the significant difference in climate change reporting between Crown entities and state-owned enterprises.

Observations

The small number of state-owned enterprises makes it difficult to draw any conclusions or make any meaningful observations from the data.

The four state-owned enterprises that were also in the Deloitte Top 200 were significantly better at climate change reporting than the state-owned enterprises that were not. The other state-owned enterprise that mentioned climate change, AsureQuality Limited, only made a brief reference to 'reducing the Company's carbon footprint' (AsureQuality Limited, 2017, p. 23).

8.5 Local authorities

Overall, most local authority annual reports contained some form of environmental information; however, they were generally vague and did not specifically concern climate change. Below are two examples of best practice in local authority annual reports.

Greater Wellington Regional Council

Greater Wellington Regional Council has the most comprehensive annual report in terms of climate change reporting. Although the report did not have information in all six categories, it had the most detailed information about climate change compared to other local authorities' annual reports.

The report includes a significant amount of detail around greenhouse gases and emissions, with plenty of metrics and figures. The most impressive section was a table showing corporate greenhouse gas emissions, the only local authority annual report to do so. It demonstrates that the Greater Wellington Regional Council is serious about reducing greenhouse gas emissions and is actively searching for ways to decrease their emissions. The Greater Wellington Regional Council's annual report also has a one page summary of climate change controls and initiatives, giving a clear idea of the range of responsibilities undertaken and ideas implemented to help reduce emissions.

Corporate Sustainability

Greater Wellington has established a Green House Gas (GHG) corporate emissions monitoring and reporting system to help enable the council to better understand and track its emissions reduction progress. The main sources of Greater Wellington's corporate emissions include workplace travel, employee commute, and electricity use in offices and over 100 small sites. The table below details Greater Wellington's corporate emissions by source for the 2016/17 financial year.

2016-17 Emissions Relative to Totals

Source	Tonnes CO2e	Corporate %	% of Total
Scope One Emissions: from sources owned or controlled by Greater Wellington			
Back-up generators	1.2	0.08%	0.03%
Gas	31.8	2.07%	0.80%
Vehicle Fleet	648.7	42.30%	16.27%
Scope Two Emissions: from the generation of electricity purchased by Greater Wellington			
Electricity	362.4	23.63%	9.09%
Scope Three Emissions: occur as a consequence of Greater Wellington activities but from sources it does not fully own or control			
Electricity transmission & distribution	29.5	1.92%	0.74%
Gas transmission & distribution	3.7	0.24%	0.09%
Taxi (Business travel)	2.3	0.15%	0.06%
Rental vehicles (Business travel)	0.2	0.01%	0.01%
Air travel (Business travel)	91.2	5.95%	2.29%
Bus and train (Business travel)	5.5	0.36%	0.14%
Employee commute	297.9	19.42%	7.47%
Waste to landfill	28.2	1.84%	0.71%
Recycling	25.7	1.68%	0.64%
Bulk water service emissions (Wellington Water)	2,459.6	(excluded)	61.68%
Corporate Emissions	1,533.6	100%	
Total Emissions	**3,987.7**		**100%**

Note: Any discrepancy due to emissions being rounded to nearest 0.0 tonnes CO2e for reading ease.

Emissions under the domain of Wellington Water are excluded from the Corporate Emissions category and included in total emissions calculations.

Excerpt illustrating disclosure of emission metrics from *Greater Wellington Regional Council Annual Report 2017*, p. 34

ADAPTING TO THE CHANGING CLIMATE **URUTAU KI TŌ TĀTOU ĀHUARANGI HURIHURI**

As the guardians and stewards of our region, Greater Wellington is committed to creating a brighter future for our communities. This means we cannot shy away from our responsibility to plan and prepare for the very real changes we are likely to face as a result of the changing climate. It is clear that already the early effects of climate change are happening, and that this is the biggest environmental challenge we face together. Everyone in our region will be affected.

Our Climate Change Strategy was adopted in 2015 and guides the work we do in this area. As part of implementing this Strategy, in October 2016 we changed our corporate vehicle policy to prioritise the purchase of electric vehicles. In practice this means we only purchase petrol or diesel vehicles when no suitable electric option is available. We now have eight electric or hybrid vehicles in our fleet and this will continue to grow.

The most significant piece of the work in the climate change area for this year was the commissioning of a report from NIWA. This significant research study and subsequent report provides a projection of how the region is likely to be affected by climate change.

Our Public Transport Operating Model (PTOM) was the first in New Zealand to incentivise operators to provide low emission bus fleets. We signed a contract with Tranzit Coachlines and Uzabus and this includes the introduction of 32 electric buses over three years from 2018.

Awareness campaigns for active transport encourage our residents to reduce reliance on private vehicles by walking, cycling and ride sharing. These programmes are achieving significant reach across the region. One example of this in action, the Aotearoa Bike Challenge, saw 1,916 participants from 167 workplaces cycle a total of 285,719 kilometres during February 2017. If these same journeys were taken in private vehicles an estimated 57 tonnes of carbon dioxide would have been emitted across the region.

Greater Wellington continues to encourage employees to reduce waste, recycle and compost. Across its three main offices, Greater Wellington diverts approximately twenty tonnes of recyclable and organic waste from landfill each year.

We also have a role to play in managing and maintaining forests in the region which draw carbon dioxide down from the atmosphere (carbon sequestration). Possum control and Key Native Ecosystem (KNE) programmes help maintain the carbon sequestration capacity of forests located within the 129,000 hectares under our management (the KNE programme encompasses 48,000 hectares of mostly forest ecosystems and regional possum control covers over 81,000 hectares of the region). Trees planted through our biodiversity and parks programmes, along with erosion control initiatives, have resulted in thousands of new trees and shrubs being planted each year.

While we cannot stop climate change from happening, we intend to take the lead and continue to adapt our own practices and educate our customers on how we can best work together to adapt to our changing climate.

Excerpt illustrating disclosure of climate change initiatives from *Greater Wellington Regional Council Annual Report 2017*, p. 15

Kapiti Coast District Council

Kapiti Coast District Council's annual report is one of two local authority annual reports to contain all six categories of climate change reporting information this working paper is concerned with. Most of these are from a page titled 'Supporting sustainability', which contains a small section titled 'Carbon management'. This is a concise summary, which describes achievements, plans for the next year, and the council's long-term emission targets. Although the summary is fairly brief, it is comprehensive and is something very few other local authority annual reports present.

Supporting sustainability

The council supports and undertakes a range of initiatives to promote and encourage sustainability in the district. This year those efforts included:

- The Council added its first light electric vehicle, a Nissan Leaf, to its fleet at the end of November 2016. It is entirely battery powered and has the lowest whole-of-life cost of vehicles in its class. Its performance will be assessed at the end of its first full year of use before any decisions are made about purchasing additional electric vehicles for the council's fleet.
- The Council held the first 'No. 8 Wire Week' in July 2016. There were 34 workshops or events on topics including composting, bee and chicken keeping, DIY, cooking, bike maintenance, and paper-making with harakeke (flax). The events attracted 250 individuals, many of whom attended several different sessions.
- We worked with WREMO to hold civil defence workshops in Ōtaki, Waikanae Beach, Raumati, Te Horo and Paaekākāriki. Emergency plans and the importance of building relationships with neighbours prior to disasters happening were emphasised.
- The Greener Neighbourhoods competition for 2016/17 ended with a judge's tour in April 2017 followed by an award ceremony in May. After tallying the eco-footprint results and considering the groups' achievements the judges decided to split the award between the ***Greenown Plus*** and ***Pounamu Ōtaki*** groups.
- The council's eco design advisory service provides free advice and information on sustainable residential building design and practice. In 2016/17, 190 two-hour home consultations were provided, and 220 short appointments, presentations or events. The latter included stalls at the Go Green Expo in Wellington and the Waitangi Day event in Ōtaki.
- The ***On To It*** newsletter, celebrating environmentally sustainable community initiatives, continued through the year as an online magazine hosted on the council website. In support of this the 'Sustainable Communities' Facebook page was also continued.

The bee-keeping workshop was well attended during No. 8 Wire Week

Carbon management

Council has a target of reducing greenhouse gas (GHG) emissions by 80% by 2021/22 compared to 2009/10. One of the top emissions sources in 2009/10 was diesel used for sewage sludge drying, which was dramatically reduced through the conversion to wood pellet fuel. Council's carbon footprint result for 2015/16 was verified by audit as 7,117 tonnes of CO_2 equivalent, 57% below its 2009/10 baseline year.

In January 2016, sludge was sent to the Silverstream landfill which has a 90% gas capture and destruction rate. Consequently, it is expected that the full-year effect of the change to sewage sludge disposal will be reflected in further emission reductions. This will be verified as part of the 2016/17 audit which is scheduled to be undertaken in November 2017.

The council's carbon and energy saving work was recognised at Enviro-Mark Solutions' Outstanding Performance Awards in June 2017. The award organisers manage the Certified Emissions Measurement and Reduction Scheme (CEMARS) that council has been part of since 2009. Council took out the overall award for Outstanding Performance in Carbon Management (large organisation). Council was recognised for not only drastically reducing emissions, but also reaping the financial benefit of managing its carbon footprint. The energy savings through one project implemented as part of its CEMARS certification have led to reduced costs of $300,000 per year.

Further reductions in council's carbon footprint are expected in 2017/18 due to the roll-out of a major streetlight conversion to LED technology.

Other community initiatives

Supporting expressway-affected neighbourhoods

The council supports neighbourhoods directly affected by expressways impacts. Council and the M2PP Alliance worked together to upgrade the Makarini Street Reserve, with a $24,000 contribution from the M2PP Alliance.

60

Excerpt illustrating disclosure of emission metrics, controls and targets, and climate change initiatives from *Kapiti Coast District Council Annual report 2016/17*, p. 60

The carbon management section states that the council has been part of CEMARS since 2009. This is particularly impressive as very few district councils are part of CEMARS and it demonstrates long-term commitment to reducing emissions.

Observations

Risks were discussed far more in local authority annual reports than in the other data sets, with 29.6% of annual reports that contained climate change information including some discussion of risks. This could be linked to the fact that local authorities provide services and infrastructure that would be affected by climate change.

The local authorities with particularly strong reports seemed to be based in and around Wellington. Greater Wellington Regional Council and Kapiti Coast District Council were the only two local authorities to contain information in all six categories of climate change information (and are therefored highlighted as examples of best practice above). The Greater Wellington Regional Council's annual report contained the most information, and was far more detailed than any of the other annual reports, although it contained only five out of the six information types. Auckland Council and Hawke's Bay District Council both contained four types of climate change information in their annual reports, although Auckland Council had the longest report by far.

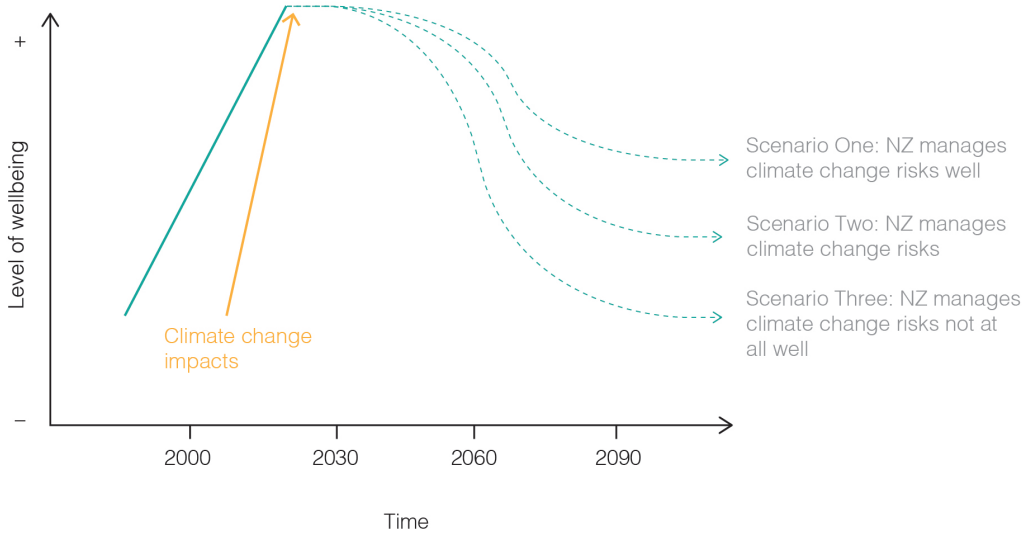
Many of the local authority annual reports contained financial information on carbon credits, Emissions Trading Scheme (ETS) credits or similar in their financial statements. For many of the annual reports, this was the only climate change information given in their annual report. Out of the 42 annual reports that contained information about climate change costs, 22 of them did not disclose any other climate change information.

Some annual reports discuss non-greenhouse gas emissions. For example, the Environment Southland Regional Council mentioned PM10 Emissions, which are not greenhouse gases. Similarly, Nelson City Council implemented a plan that 'allows 1600 Low Emission Burners in Airsheds B2 and C' (Nelson City Council, 2017, p. 51). The emissions from these burners are likely to be related to PM10 and other health-related emissions rather than greenhouse gases. As a result, neither of these examples are included in the data as climate change reporting.

9.0 Conclusions

Carbon pollution and its effects (such as increasing temperatures, frequency and severity of extreme weather and rising water levels) require urgent attention. Countries that respond to the risks of climate change by reducing emissions and investing effectively are more likely to navigate the risks of climate change and help create a thriving and durable low-emissions economy going forward. Figure 35 below illustrates that New Zealand's ability to respond quickly to the risks of climate change and adapt the economy to become a low-emissions one will help cushion the country from uncertainty. It will also deliver better outcomes for all New Zealanders in the short to medium term.

Figure 35: Illustrating the costs and benefits of acting early in response to climate change risks



This research looks at one aspect of the solution – timely and relevant climate change reporting. Before establishing what best practice climate change reporting consists of, it was important to understand the current New Zealand reporting landscape. The purpose of this research was to analyse 384 significant organisations operating in New Zealand across the public and private sectors and to learn more about the types and quality of climate change information they disclose in their annual reports (or financial statements if their annual reports were not available).

9.1 Observations

This section briefly sets out observations from the research and makes a few suggestions as to the way forward.

General observations about the research

1. Annual reports were not easily accessed in the public arena.

Organisations play an important role in building an informed society – one that is able to understand the risks an organisation, industry or country faces in regard to climate change. When looking at instruments to ensure climate change information is easily available, it is important to understand the nuances that exist within the current reporting framework.

Data set 1: Deloitte Top 200

Companies are not obligated to make an annual report accessible to the general public unless they are a Financial Markets Conduct (FMC) reporting entity. This obligation is outlined in the Financial

6 The Financial Markets Conduct Amendment Regulations 2017 puts an obligation on companies to make their annual reports publicly available but not on the Companies Register nor on the NZSX. The Regulations state: 'The report must be available, free of charge, on an Internet site maintained by, or on behalf of, the entity in a way that ensures that— (a) the report is prominently displayed on the site; and (b) members of the public can easily access the report at all reasonable times.' And 'The report must— (a) be made available on the site as soon as practicable after it is prepared (but in any event not later than 20 working days after it is prepared); and (b) remain available for at least 5 years after it is first made available'.

Markets Conduct Amendment Regulations 2017 and refers to making annual reports available on the company's website.6 NZSX-listed companies (a type of FMC reporting entity) have an additional obligation: the Main Board/Debt Market Listing Rules requires them to deliver their annual report to NZX within three months of the end of each issuer's financial year (see rule 10.4.1). Once uploaded, the annual report only needs to be made available on the NZSX board for six months (NZX, 2017a, pp. 139–140).

Audited financial statements are required to be filed on the Companies Register by some large New Zealand companies, all large overseas companies and all FMC reporting entities (Companies Register, 2018a). An idiosyncrasy of the current framework is that some of these companies voluntarily upload their annual report on the Companies Register instead of just their financial statements. Table 1 (Column 1) shows that of the 2017 Deloitte Top 200, 87 companies chose to voluntarily file their annual reports on the Companies Register. This highlights an opportunity for the government to require all companies that are currently required to file their financial statements to instead file their more comprehensive annual report.

Figure 36: Number of opaque companies on the 2016 and 2017 Deloitte Top 200

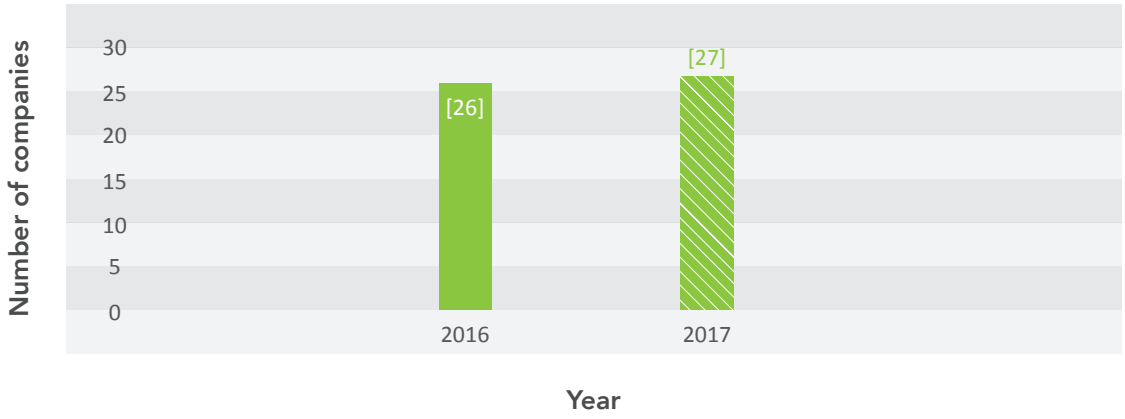


Figure 36 shows the number of Deloitte Top 200 companies unable to file their annual report or financial statements on the Companies Register and which are therefore relatively invisible to the public in that their documents are not available on a central repository. We have termed these 'opaque companies' because the reporting framework restricts their ability to be fully transparent. Table 1 (Column 2) shows that of the 2017 Deloitte Top 200 in this category, 29 companies decided to voluntarily file their annual report on their own website (leaving 14 companies with unavailable annual report or financial statements, see Column 3). This highlights an opportunity for government to allow companies to voluntarily upload their annual reports onto the Company Register.

Data sets 2–5: Government organisations

Annual reports for the other four data sets took longer to find as there was no central repository for government organisations. This meant that it was necessary to find the individual websites of each government department, Crown agency (or Crown entity), state-owned enterprise and local authority to search for their annual report. However, all annual reports were accessible, meaning we did not need to analyse financial statements. This highlights an opportunity for government to create a Government Register of all government organisations to ensure their legal documents are easily accessible.

This research illustrates that the existing reporting framework contains significant obstacles for those wanting to find timely, complete and comparable climate change information. Going forward, this means the filing system will need to be improved and expanded. This in turn raises the possibility of amendments to the Companies Register, the Companies Act 1993 and the Financial Reporting Act 2013.

2. **Climate change information was not easy to find in the annual report or the financial statements, and disclosure requirements between the two types of document remain unclear.**

Ensuring that information is easy to find has become an urgent issue. The announcement that 60 CEOs (collectively responsible for nearly 50% of New Zealand's emissions) have signed a CEO Climate Change Statement committing each business to 'measure our greenhouse gas emissions and publicly report on them' in support of the Paris Agreement provides a significant opportunity for the government (Climate Leaders Coalition, 2018). The convenor of the Climate Leaders Coalition, Z Energy CEO Mike Bennetts, stated:

> Each company will work to its own reporting standards. The most important thing is there'll be consistency in how they report so that year-on-year, people can see how they're tracking rather than changing reporting standards every 12 months or so (Cited in Junn, 2018).

However, it is unclear what guidance or standards the businesses might adopt, meaning the information may not be comparable between companies. It is also not clear whether the companies will disclose this information in their annual report, their financial statement or a separate report on their individual websites. What is clear is that these 60 companies will now be looking for guidance on how to implement climate change reporting. This provides a significant opportunity to government to build on the example of the Climate Leaders Coalition. The best practice examples in Section 8 of this working paper aim to support these companies and contribute to developing guidance and standards.

Previous research found that many annual reports were over 100 pages, meaning climate change disclosures can easily be missed (McGuinness Institute, 2018, pp. 3–8). Below we discuss the issues and outline some possible remedies for them.

Issue 1: Searchability

Many of the reports were not formatted as searchable PDFs, meaning that the research team had to download the documents onto Adobe Acrobat to enable searching for the key words specified in our methodology. Figure 6 shows that just over half (50.5%) of the documents provided by the 2017 Deloitte Top 200 were in this category. Based on this finding, we suggest that the Companies Office require searchable documents be uploaded to the Companies Register.

Issue 2: Content

Climate change information must be made easier to find within annual reports and financial statements. A related issue is clarity over what information should be disclosed in the annual report and what information should be disclosed in the financial statements.

At present there is no official IFRS disclosure standard on climate change other than adopting the existing conceptual framework (such as the concept of materiality). This leads to a high-level of uncertainty for preparers of reports as well as report users.

(a) One option is for the XRB to publish a voluntary guideline on climate change reporting as part of its non-financial reporting responsibilities. The External Reporting Board (XRB) could then produce guidance on climate change information under section 17(2)(a)(iii) of the Financial Reporting Act 2013, which allows the Board to issue financial reporting standards that relate to, among other things, 'the social, environmental, and economic context in which an entity operates'.

(b) A second option is to expand the filings content on the Companies Register. This could be mandatory or volunatary. The TCFD published recommendations in June 2007 suggesting that companies provide disclosures in their 'mainstream (i.e., public) annual financial filings' and stating:

> In most G20 jurisdictions, companies with public debt or equity have a legal obligation to disclose material information in their financial filings–including material climate-related information. The Task Force believes climate-related issues are or could be material for many organizations, and its recommendations should be useful to organizations in complying more effectively with existing disclosure obligations. In addition, disclosure in mainstream financial filings should foster shareholder engagement and broader use of climate-related financial disclosures, thus promoting a more informed understanding of climate-related risks and opportunities by investors and others. The Task Force also believes that publication of climate- related financial information in mainstream annual financial filings will help ensure that appropriate controls govern the production and disclosure of the required information. More specifically, the Task Force expects the governance processes for these disclosures would be similar to those used for existing public financial disclosures and would likely involve review by the chief financial officer and audit committee, as appropriate (TCFD, 2017, p. iv).

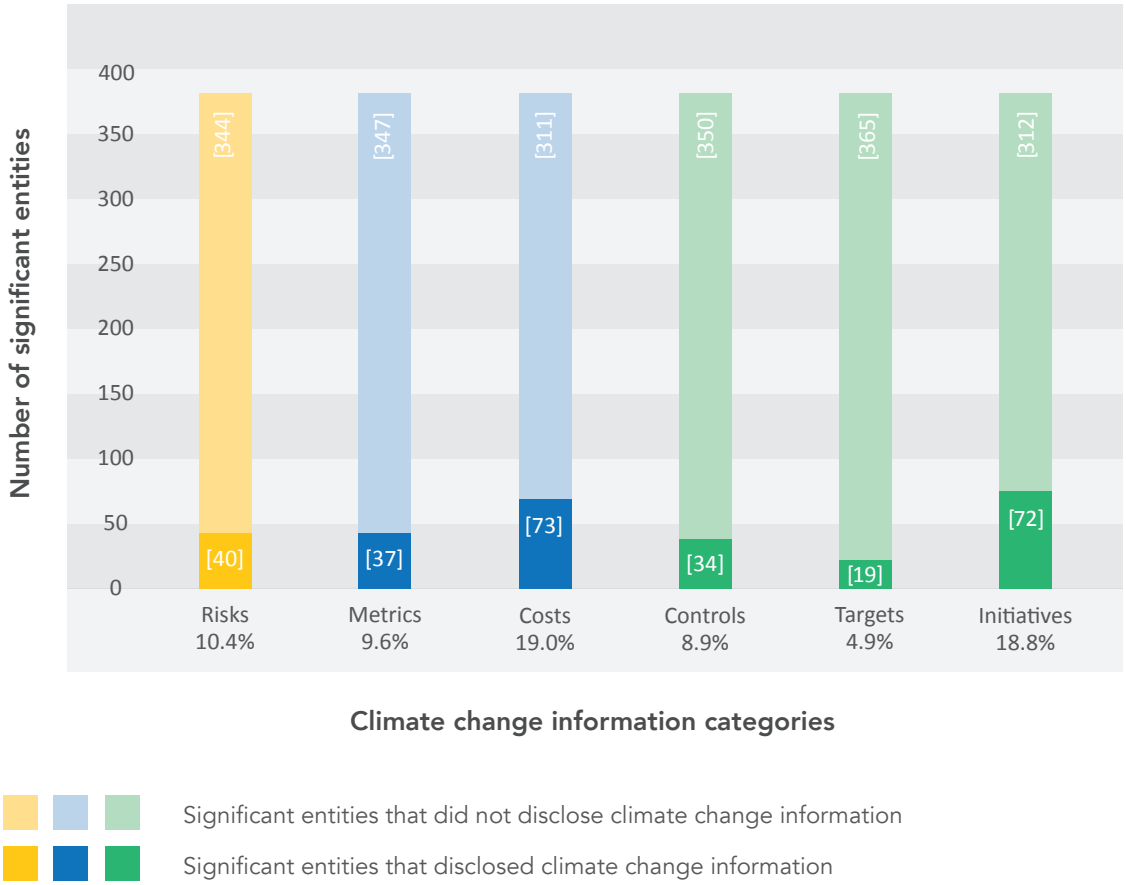
New Zealand's mainstream 'annual financial filings' are currently minimal and do not include the annual report. However, legislation could be introduced to require companies to prepare and file a new climate change report on the Companies Register. Another option would be to expand our filing requirements to include annual reports. This could be done with an amendment of s 211 'Contents of annual report' of the Companies Act 1993 to include disclosure of climate change information.

(c) A third option would be to strengthen the current guidelines that are existing in the wider reporting framework. For example, in the private sector there are the FMA Guidance library webpage and NZX Limited's *Main Board/Debt Market Listing Rules* (FMA, 2017; NZX, 2017a). This option is not ideal as it would leave out many of the big emitters and unfairly put additional pressure on a small number of reporters. Similar guidelines are available for the public sector, which could be updated quickly and cost-effectively without requiring legislation, listed below (please note that nothing could be found for state-owned enterprises):

1. For government departments, Treasury's *Year End Reporting: Departmental Annual Reports and End-Of-Year Performance Information on Appropriations* (Treasury, 2017a).
2. For Crown entities, Treasury's *Preparing the Annual Report and End-Of-Year Performance Information on Appropriations* (Treasury, 2017b).
3. For Crown Research Institutes, MBIE's Crown Research Institute Toolkit (specifically 'Section 2: Planning and reporting requirements of') (MBIE, 2018).
4. For local authorities, the Office of the Auditor-General's *Local government: Improving the usefulness of annual reports* (OAG, 2011).

(d) A further option would be to amend the law to make disclosure of certain climate change information in an annual report mandatory. A standard or guidance issued by XRB could outline which disclosures should be in the financial statements and which should be in the annual report.

Figure 37: Significant New Zealand entity disclosure of climate change information by category [384][7]



3. **Many annual reports or financial statements only disclosed a small amount of climate change information.**

   Figure 37 illustrates the small amount of climate-related information currently disclosed in annual reports and financial statements. It also highlights the difficulty we currently face in assessing climate-related risks and opportunities and therefore in exploring how New Zealand might transition to a low-emissions economy. Once the research team discovered the low level of information available, the methodology was adapted to be as inclusive as possible in order to gather a significant base of data for analysis. Those interpreting these results need to keep in mind the very low threshold that was applied when deciding whether information constituted climate-related information (see Tables 6–11).

   The small amount of information in these publicly available documents illustrates the extent to which New Zealand is vulnerable to climate change shocks, particularly in terms of financial market shocks and physical infrastructure shocks. It also indicates why we are failing to progress the necessary regulation to protect and empower New Zealand going forward. These results indicate that voluntary reporting has not delivered the necessary information to drive public policy or effective investment.

4. **Even the small amount of climate change information found was generally ad hoc.**

   Even when climate change information was disclosed, it was inconsistently presented across entities and therefore was not comparable or even complete.

Figure 2: Phases of problem solving

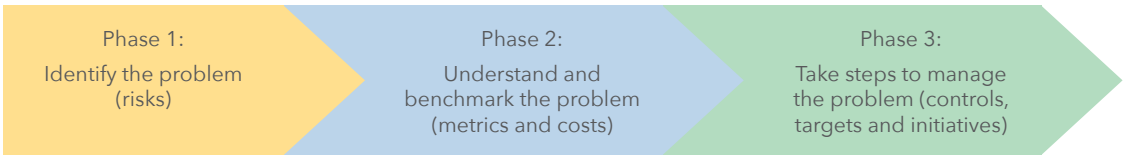
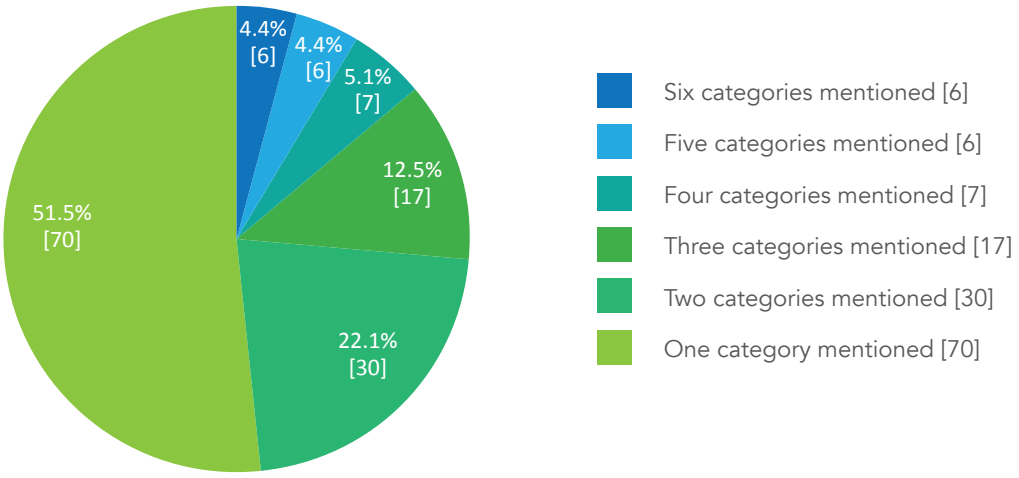


Figure 2 is repeated here to illustrate the categories of information that the Institute considers important. Phase 1 uses governance and risk management to identify the problem (risks), Phase 2 uses metrics and targets to understand and benchmark the problem (metrics and costs) and Phase 3 uses strategy to set out the steps required to manage the problem (controls, targets and initiatives).

Figure 38: Significant New Zealand entity disclosure of climate change information by number of categories [136][8]



7 Please note that four of the state-owned enterprises (KiwiRail Holdings Limited, Landcorp Farming Limited, Transpower New Zealand Limited and New Zealand Post Limited) are on both the 2017 Deloitte Top 200 and state-owned enterprises data sets (data sets 1 and 4). For Figures 37 and 38 we have removed the double counting. This means that adding the totals of Figure 3, Figure 19, Figure 23, Figure 27 and Figure 31 will result in 388 entities: four more than what is shown in Figure 37. Furthermore, both the Crown Research Institutes [7] and district health boards [20] have been grouped and treated as one entity respectively, but each of their individual annual reports were analysed. This aligned the data sets with the original lists taken from the Crown Entities Act 2004. This means in practice that another 25 organisations were analysed, bringing the total to 409.

8 See Footnote 7.

Figures 37 and 38 further illustrate how these six types of climate change information fit within the wider context of the data sets analysed.

- Given the relationship between the three phases outlined in Figure 2, we expected identification of risk to be disclosed by most organisations. The fact that only 40 of the 384 organisations recognised the risks of climate change is of serious concern. It means the board members of 344 of New Zealand's significant organisations either (i) made a decision not to publicly inform their investors and other interested parties about the impact climate change may have on their organisation's operations or goals (i.e. they were not being transparent), or (ii) did not discuss the risk of climate change at their board table (i.e. they were not meeting their governance obligations and responsibilities to explore risks). The Institute of Directors states that 'Risk management is critical to business success and a key responsibility of all boards. At a governance level ... boards are responsible for ensuring the organisation has an effective risk management programme' (Institute of Directors, n.d.). Furthermore,

  > ... board oversight of risk management should also include ensuring that there is an effective risk management programme in place to identify, assess, manage/mitigate, monitor, review and report on all organisational risks including financial risks, IT risks, people risks, operational risks, physical hazards, and environment risks – in fact all risks that impact on an organisation's ability to function (Institute of Directors, n.d.).

- Emission costs (73 organisations out of 384), followed by climate change initiatives (72 organisations), were the most disclosed categories of climate change information, while emission targets were the least disclosed (19 organisations out of 384). Sceptics may argue that disclosure of climate change initiatives tend to be a public relations exercise (i.e. greenwash) and emission costs tend to be a mandatory financial disclosure set by the IASB standard.
- Taking a general overview, the initial results for the number of organisations with annual reports (or financial statements) that contained one or more of the three terms (emission, carbon or climate) are as follows:
  - 58 Deloitte Top 200 companies (31.2%, see Figure 7 and Table 3),
  - 11 government departments (37.9%, see Figure 21 and Table 15),
  - 12 Crown agents and Crown entities (18.5%, see Figure 25 and Table 20),
  - 5 state-owned enterprises (50%, see Figure 29 and Table 24) and
  - 54 local authorities (69.2%, see Figure 33 and Table 28).

  This indicates that local authorities published annual reports and/or financial statements with more climate change information than any other type of organisation.
- The phases of problem solving were not apparent in the research results. There did not seem to be a sequence where reporters first acknowledged the risks (Phase 1), collected data to learn more about the risks (Phase 2) and then developed a strategy to manage the risks (Phase 3). This is reflected in the fact that the disclosures were dispersed throughout the annual report or financial statements on different pages (see tables for each data set in the appendices). Further, very few organisations disclosed information in all categories. The number of organisations that provide information in all of the categories are as follows:
  - 0 out of 200 Deloitte Top 200 companies (see Figure 8 and Table 5),
  - 2 out of 31 government departments (see Figure 22 and Table 17),
  - 2 out of 65 Crown agents and Crown entities (see Figure 26 and Table 22),
  - 0 out of 14 state-owned enterprises (see Figure 30 and Table 26) and
  - 2 out of 78 local authorities (see Figure 34 and Table 30).

  The examples of 'best' practice in Section 8 highlight organisations that disclosed more detailed information in each of the six categories and provide a baseline example for preparers of annual reports and financial statements in 2018 and 2019.

5. **Climate change information was mostly disclosed in annual reports rather than financial statements, meaning the information was not audited.**

   Assurance of climate change disclosure is going to become a significant issue, particularly in terms of ensuring double counting does not occur. This was one of the reasons the Greenhouse Gas Protocol was established: to standardise the way organisations manage and report their GHG emissions.[9] Three categories of emissions were established: Scope 1: direct GHG emissions from sources that are owned or controlled by the company, Scope 2: indirect GHG emissions from the generation of purchased electricity consumed by the company, Scope 3: all other indirect emissions occurring as a consequence of the activities of the company but from sources not owned or controlled by them (World Business Council for Sustainable Development and World Resources Institute, 2004, p. 25).

   This enables organisations to separate GHG emissions and avoid double-counting between organisations. There is no doubt that independent auditing expertise will be in demand to provide assurance to stakeholders, industries and countries that the information provided is accurate and can be relied upon. It is highly likely that practices, such as 'Chinese walls', which have been adopted by prominent accountancy firms in the past, will become less acceptable in the medium term, particularly if taxing emissions becomes a policy option.

Specific observations about the Deloitte Top 200

6. **The electricity, gas, water and waste service industry disclosed the most climate change information.**

   The best reporters after the 'electricity, gas, water and waste services industry' were the 'agriculture, forestry and fishing industry' and the 'transport, postal and warehousing industry' (see Figures 9–14 and Tables 6–11). Please note that the Deloitte Top 200 were categorised into Stats NZ classifications by the Institute, and we acknowledge the subjectivity involved.

   Given the importance of the link between industry type and carbon emissions and impacts, we recommend companies be required to disclose their industry classifications in their annual reports. This could be legislated for by amending s 211 'Contents of annual report' of the Companies Act 1993 to include a requirement for companies to classify the industry where most of their revenue is generated. The Institute prefers emissions as an indicator to trigger mandatory reporting, but a more detailed consideration of the strengths and weaknesses should be undertaken.

7. **More comprehensive reporters tended to be dependent on the environment.**

   As noted above, Figures 9–14 show that organisations that operated in and/or were dependent on the natural environment were more likely to disclose climate change information than those further removed from the natural environment.

8. **Apart from emission costs, NZSX-listed companies tended to disclose more climate change information than non-listed companies.**

   This is illustrated in Figure 15. There may be a number of reasons for this, including:

   - the *NZX Corporate Governance Code* (2017) and a 2017 guidance note relating to environmental, social and governance (ESG) reporting,
   - the *Corporate Governance in New Zealand: Principles and Guidelines* (2014) published by the Financial Market Authority (FMA) and/or
   - the fact that NZSX-listed companies are generally owned by New Zealanders and want to manage their reputation in their major local market.

   It is unclear why emission costs are generally disclosed more by non-NZSX listed companies, but it may be due to these companies being overseas-owned and therefore having more skill-capability for applying the materiality concept to disclosures in financial statements under the IFRS reporting standards.

9 Seven organisations reported against the Greenhouse Gas Protocol using Scopes 1, 2 and 3: Contact Energy Limited, Mercury Energy Limited, Meridian Energy Limited, New Zealand Post Limited (a state-owned enterprise), SKYCITY Entertainment Group Limited, Vector Energy Limited and Z Energy Limited.

9. **Disclosure of controls and targets by NZSX-listed companies appears to have decreased from 2016 to 2017.**

   Figures 17 and 18 explore changes between 2016 and 2017. There is a noticeable decrease in disclosure of climate change controls and targets and in the number of categories disclosed from 2016 to 2017. Importantly, the data set for 2016 only looked at four of the six categories used in 2017 and only 20 companies in total. The reason for this decrease is unclear.

Broader observations about the implications for New Zealand

10. **Climate change scenarios will need to be local and frequently updated and agreed upon.**

    Most standard financial reporting involves consideration of two different measures of time: points in time and periods in time. For example, a balance sheet represents the financial position of an organisation at a specific point of time in the past, while an income statement represents the financial position of an organisation over a specific period of time in the past (between two points in time).

    In contrast, reporting on governance and risks (Phase 1 information in Figure 2) requires a future focus. Effective governance and risk reporting requires the board to explore the size and nature of a risk and how that risk might be managed. In relation to climate change, the uncertainty of its long-term effects presents a significant challenge. If New Zealand is to improve climate change reporting across the public and private sectors, it will be necessary to establish an agreed understanding of the nature of climate change risk. What makes this especially complicated is that New Zealand will not be able to adopt an 'off-the-shelf' scenario (or set of scenarios) from overseas, because the country's unique geographic location will deliver unique impacts.

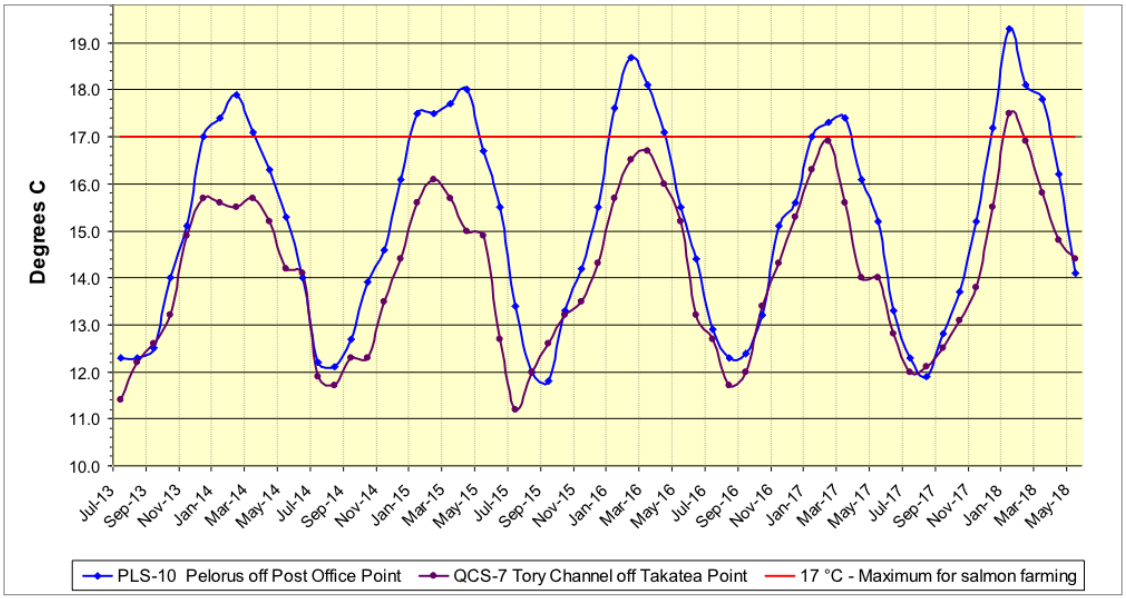
    Another option is not to set a scenario, but a set of high-level assumed outcomes. For example: 'In the year 2048 air turbulence will increase by 5%, water levels will rise by 12 inches, water temperatures will rise by 1% and severe storms and flooding will increase by 5%' (these figures are made up for illustrative purposes only). This would enable local authorities, government and businesses to report against a set of assumptions and answer the following question: If this eventuated, how would these high-level outcomes impact your organisation and what strategy should your organisation implement to eliminate these risks and optimise any opportunities?

    Further, as new research becomes available, the scenario or high-level outcomes could be updated with the same end year (2048 in this example). If all organisations needed to report on a similar scenario or set of high-level assumed outcomes, this assessment would, in turn, drive behaviour and enable comparison between organisations as well as between years (e.g. what changed between the 2018 scenario for 2048 and the 2020 scenario for 2048). This approach is one way to manage the level of change New Zealand may need to contend with.

    In some cases, companies may already be impacted by climate change scenarios. For example, the water temperature in the Marlborough Sounds is increasing. Figure 39 shows that temperatures in Pelorus Sound have consistently exceeded the maximum temperature for salmon farming, since 2013, for several months throughout summer. Furthermore, over the 2017/2018 summer, temperatures have also exceeded 17°C in the Tory Channel. Where temperatures exceed 17°C for extended periods, farmed salmon become stressed and mortalities significantly increase as stressed fish become more susceptible to disease pathogens. For New Zealand King Salmon Investments Limited (NZKS) (listed on the NZSX but not on the Deloitte Top 200), which farms salmon extensively throughout the Marlborough Sounds, this might have significant implications for their operations. Risks of this sort are unlikely to be fully reflected in announcements on the NZSX, which tend to focus on the short-term outlook of a company. This has implications for both the NZX and FMA: how do they ensure investors are fully informed of the risks posed by climate change? Climate change has the potential to disrupt investments, capital markets, infrastructure investments, council initiatives and government strategy. New Zealand needs to apply a rigorous, timely and precautionary approach to climate change, and reporting will be a key tool for improving commercial and public policy decision-making.

Figure 39: Temperature records 2013 –2018 for Pelorus entrance and Tory Channel

Source: Compiled by Kenepuru & Central Sounds Residents Association (KCSRA) based on data supplied by Marlborough District Council.



If New Zealand organisations are to report on risks and develop strategies to minimise risks and optimise opportunities, government will need to provide a view of the future that organisations and individuals can respond to and report against. Scenarios or a set of high-level assumed outcomes of a given scenario can be used to illustrate progress towards a more resilient and sustainable low-emissions economy.

11. Costs and metrics will need to be auditable.

Disclosure of carbon emissions (Phase 2 information in Figure 2) will involve reporting on changes in emissions over a period of time. This is what the Climate Leaders Coalition has agreed to provide (see number 1 of this section). The difference from standard financial reporting is that dollars represent costs (or values) and the metrics are measures of tonnes of carbon dioxide equivalent (CO_2e) emitted. This research of annual reports (and financial statements) found that all costs across all five data sets were generally identified in terms of carbon credits, Emission Trading Scheme units (The New Zealand Unit – NZU) or similar. These were usually reported as an intangible asset or intangible liability in the financial statements. Although we also looked for costs to the entity of implementing schemes (or similar) that would reduce emissions, the vast majority of costs were mentioned in terms of asset value. Only a few organisations reported costs that were unrelated to carbon credits. For example, Ports of Auckland Limited discussed the financial cost of building a carpark in terms of the positive impact it could have on CO_2e emissions.

Any reporting framework arguably should require significant organisations to consider and disclose the financial cost they have incurred as a result of climate change over the previous 12 months. The actual cost, and the subsequent future costs they might suggest, are important items of information for investors and other interested parties. Disclosures of this kind will ensure investors and other stakeholders are able to make informed decisions and monitor trends over time. Reporting Phase 2 information is relatively simple in principle, but the technical side of gathering and auditing costs and metrics is more challenging.

There are some existing frameworks and guidelines that could be used as examples for disclosure of climate change costs. For example, CEMARS allows companies to sign up in order to better measure, report and control carbon emissions and CDP (formerly the Carbon Disclosure Project) helps investors, companies and cities 'build a truly sustainable economy by measuring and understanding their environmental impact' (CDP, 2018). Eight organisations mentioned

CEMARS in their annual report: The Warehouse Group Limited, Ports of Auckland Limited, New Zealand Post Limited, Energy Efficiency and Conservation Authority, Landcare Research New Zealand Limited (who run the programme through Enviro-Mark), Auckland District Health Board, Kapiti Coast District Council and Masterton District Council. Four companies mentioned CDP: Kiwi Property Group Limited, Chorus Limited, Guardians of New Zealand Superannuation and Landcare Research New Zealand Limited.

12. **Clear goals are necessary to drive strategy.**

    The quality of reporting on strategy (Phase 3 information) is highly dependent on how well the strategy's goal is articulated. There are already at least three goals driving existing public policy development: (i) emissions reduction, (ii) making infrastructure more robust and (iii) enabling a fast transition to a low-emissions economy. However, there are other goals that may also be useful to articulate, such as maintaining and improving the wellbeing of those impacted by climate change, ensuring capital-allocation decisions are efficient, making the capital market more effective by correctly pricing and valuing assets and, where possible, minimising the existence of stranded assets (such as coal mines, petrol vehicles or oil refineries) which, in a low-emissions economy, are increasingly likely in the event of 'new government regulations that limit the use of fossil fuels (like carbon pricing)' or even legal action (Matikainen, 2018). It might be useful for the government to put in place standards or protocols to ensure organisations state the goals that are driving their behaviour and report on strategies to achieve those goals, such as managing infrastructure risks and obtaining insurance.

9.2 Final comments

This type of research often generates more questions than answers. Below are five high-level questions likely to drive the future discussion and research.

1. **How do we ensure provision of climate change information is the responsibility of an organisation's mainstream operational team rather than the public relations team?** Implied in this is a move from reporting on initatives to the more challenging Phase 1, Phase 2 and Phase 3 climate change information.
2. **How do we ensure the general public gain free and easy access to climate change information?** Implied in this is how to move to a central or number of central repositories for climate change information for all organsitions (the public and private sectors).
3. **How do we ensure government organsiations report on its own risks, metrics and costs, and set ambitious controls, targets and intiatives given their significant footprint?** Although there is clearly a motivation to improve New Zealand's external response to managing the risks and optimising the opportunities from climate change, this research shows that the internal response by government entities to identify, measure and prepare strategy for their own footprint was surprisingly poor.
4. **Given the poor quality and quantity of climate change reporting to date, what body (new or existing) should be charged with improving the quality of climate change information?** The Climate Change Commission advocated for by the Zero Carbon Bill will need timely and relevant information to drive behaviour. The question remains as to who will provide the standards and/or guidelines, what information should be assured and who is going to police and penalise organsiations when they fail to report or worse still intentionally publish incorrect data.
5. **Given the poor quality and quantity of climate change reporting to date, should climate change reporting be 'mandatory', 'voluntary' or 'comply or explain'?** The idea that 'sunlight is the best disinfectant' and that the 'polluter pays' are two concepts that underpin good reporting. Climate change is creating an uncertain world and, as such, timely and comprehensive reporting is a key part of the solution.

To conclude, the research contained in this working paper indicates New Zealand has a long way to go before we know we are walking the talk. Quality reporting in a timely, comprehensive and regular manner is urgently required so that New Zealanders are informed and make good decisions.

Abbreviations

2°C Scenario	This scenario lays out an energy system pathway and a CO_2 emissions trajectory consistent with at least a 50% chance of limiting the average global temperature increase to 2°C by 2100
CDP	Carbon Disclosure Project
CFO	Chief Financial Officer
CR	Corporate responsibility
EER	Extended External Reporting
ESG	Environmental, social and governance
FMA	Financial Markets Authority
GAAP	Generally Accepted Accounting Practices
GHG emissions	Greenhouse gas emissions
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
IR	Integrated Reporting
Non-GAAP	Not compliant with GAAP – see above
NZX	New Zealand Stock Exchange
NZ IFRS	New Zealand equivalents to International Financial Reporting Standards
NZSX	NZX Main Board: 'the original equities market and home for New Zealand's best known brands and companies' (NZX, 2017b).
SR/SDR	Sustainability reporting/sustainable development reporting
TCFD	Task Force on Climate-related Financial Disclosures
UN SDG	UN Sustainable Development Goals
XRB	External Reporting Board

Glossary

The following key words are used in this working paper with the following definitions in mind:

- Annual report
  Section 211 of the Companies Act 1993 describes the content of an annual report as including the financial statements, an auditor's report (provided it is required under law) and other assorted items. The Act draws a distinction between an obligation to prepare an annual report (s 208) and an obligation to make an annual report available to shareholders upon request by email or post (s 209). Unless otherwise stated, in the context of this research, the term refers to those reports dated in the 2017 calendar year.
- Annual return
  MBIE states 'An annual return is not a tax return or financial statement — it's a yearly update of publicly available information about your company on the Companies Register' (Companies Register, 2018c).
- Carbon dioxide equivalent (CO_2e)
  A common unit for different greenhouse gases. For any type and quantity of greenhouse gas, CO_2e describes the amount of carbon dioxide that would have the equivalent impact on global warming.
- Climate change initiatives
  A statement, reference to an action, or similar that shows the organisation is taking action or planning to take action to curb its emissions or reduce its vulnerability to climate change risks (or the vulnerability of a country or the world).
- Climate change risks
  Any possible impact that climate change may have on the future of the organisation, community, country or world. The organisation may have a response to these impacts as part of its discussion of risk. Refers to a statement on (i) the nature of the risk, (ii) the possible short/medium/long-term impacts on the organisation business model and/or (iii) actions the organisation is considering in response to these risks (its future orientation).
- 'Comply or explain'
  A regulatory approach requiring compliance with a set of standards. Where a company does not comply, a public explanation of why they do not is required.
- Emission controls
  Existing measures that were put in place to control or abate carbon emissions.
- Emission costs
  Existing carbon emission offsets stated in financial figures and/or the number of carbon units used.
- Emission metrics
  The term emission metrics refers to existing carbon emissions data stated in tonnes, percentages or CO_2/m^2 produced and/or abated.
- Emission targets
  The term emission targets refers to specific goals that are put in place to reduce future carbon emissions. This is distinct from initiatives, which are narratives that explain what the organisation is planning to do in a nonspecific way.
- Extended External Reporting (EER)
  Includes all information above and beyond what a company is required to provide under the Companies Act 1993 and the Financial Reporting Act 2013. EER can include information on a company's outcomes, governance, business model, risks, prospects, strategies and its economic, environmental, social and cultural impacts.
- Financial filings
  '... the annual reporting packages in which organizations are required to deliver their audited financial results under the corporate, compliance, or securities laws of the jurisdictions in which they operate. While reporting requirements differ internationally, financial filings generally contain financial statements and other information such as governance statements and management commentary' (TCFD, 2017, p. 17). In New Zealand there are no requirements to file governance statements or management commentary. See Appendix 5 of *Supporting Paper 2018/01 – Methodology for Working Paper 2018/01* for a decision tree demonstrating New Zealand's financial filing requirements.

- Financial statements
  Defined in the Financial Reporting Act 2013, s 6 as 'the statements for the entity as at the balance date, or in relation to the accounting period ending at the balance date, that are required to be prepared in respect of the entity by an applicable financial reporting standard or a non-GAAP standard; and ... any notes giving information relating to those statements that are required by an applicable financial reporting standard or a non-GAAP standard'. MBIE states 'some large New Zealand, and all large overseas companies, must file annual audited financial statements under the Companies Act 1993. All Financial Markets Conduct (FMC) reporting entities must lodge annual audited financial statements under the Financial Markets Conduct Act 2013' (Companies Register, 2018d).
- Greenhouse gas emissions (GHG emissions)
  'Gases that trap heat in the atmosphere' such as carbon dioxide, methane, nitrous oxide, and sulphur hexafluoride, hydro fluorocarbon, perfluorocarbon (EPA, n.d.).
- Integrated reporting
  Integrated representation of a company's performance in terms of both financial and non-financial results. This was presumed to be included as an extended version of an annual report, in a specific document.
- Methane
  The greenhouse gas emitted by livestock.
- Opaque organisations
  Organisations that are likely to be significant in terms of impact on New Zealand's economy and/or natural capital but do not have EER information available in a central repository accessible by the public.
- Preparers (report preparers)
  CFOs of significant companies in New Zealand. The survey focuses on significant companies in New Zealand because of their impact on our economy and because we see them as potential drivers of change in EER practices.
- Significant companies
  This term refers to for-profit companies that have a considerable impact on New Zealand's economy and/or natural capital (for example the 2017 Deloitte Top 200).
- Significant organisations
  This term refers to significant companies and organisations in all five data sets: the 2017 Deloitte Top 200, government departments, Crown agents and Crown entities, state-owned enterprises and local authorities.
- Stakeholders
  Groups or individuals who have an interest in an organisation and can be affected by their actions. Examples include shareholders, employees, suppliers, consumers, neighbours and the general public.
- Users (report users)
  Any interested parties who use the reports of organisations to learn more about their operations.

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Appendix 1: 2017 Deloitte Top 200 companies [200]

Table 1: Deloitte Top 200 document availability

Source: Deloitte. (2017). *2017 Deloitte Top 200 Companies*. Retrieved 6 June 2018 from www.top200.co.nz; Ministry of Business, Innovation and Employment (MBIE). (2018). *New Zealand Companies Register*. Retrieved 6 June 2018 from companies-register.companiesoffice.govt.nz.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Document type found on the Companies Register [172] [c], [d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
1.	Fonterra Co-operative Group Limited*	Financial statements	Annual review	Annual report
2.	Fletcher Building Limited	Annual report		Annual report
3.	EBOS Group Limited	Annual report		Annual report
4.	Woolworths New Zealand Group Limited	Annual report		Annual report
5.	Foodstuffs North Island Limited		Annual report	Annual report
6.	Air New Zealand Limited*	Financial statements	Annual shareholder review	Annual report
7.	Z Energy Limited*	Financial statements	Annual report	Annual report
8.	Fulton Hogan Limited	Annual report		Annual report
9.	Spark New Zealand Limited*	Annual report		Annual report
10.	The Warehouse Group Limited*	Annual report		Annual report
11.	Foodstuffs South Island Limited	Financial statements	Annual report	Annual report
12.	BP New Zealand Holdings Limited	Financial statements		Financial statements
13.	Mainfreight Limited	Annual report		Annual report
14.	Meridian Energy Limited[b]*	Integrated report		Annual report
15.	ZESPRI Group Limited	Annual report		Annual report
16.	ExxonMobil New Zealand Holdings	Financial statements		Financial statements
17.	Farmlands Co-operative Society Limited		Annual report	Annual report
18.	Silver Fern Farms Co-Operative Limited*	Annual report		Annual report
19.	Contact Energy Limited*	Annual report		Annual report
20.	Vodafone New Zealand Limited*	Annual report		Annual report
21.	Genesis Energy Limited	Financial statements	Annual report	Annual report
22.	Infratil Limited	Annual report		Annual report
23.	Mercury NZ Limited	Annual report		Annual report
24.	Downer New Zealand Limited*	Annual report		Annual report

Table 1: Deloitte Top 200 document availability cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Document type found on the Companies Register [172] [c], [d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
25.	ANZCO Foods Limited	Financial statements		Financial statements
26.	British American Tobacco Holdings (New Zealand) Limited			
27.	Nuplex Industries Limited			
28.	Alliance Group Limited	Financial statements	Annual report	Annual report
29.	Vector Limited*	Annual report		Annual report
30.	Toyota New Zealand Limited*	Annual report		Annual report
31.	Datacom Group Limited	Financial statements		Financial statements
32.	Haier New Zealand Investment Holding Company Limited	Financial statements		Financial statements
33.	PGG Wrightson Limited	Annual report		Annual report
34.	Methanex New Zealand Limited			
35.	OJI Fibre Solutions (NZ) Limited*			
36.	Transpower New Zealand Limited*	Financial statements	Annual report	Annual report
37.	Chorus Limited	Annual report		Annual report
38.	Bidfood Limited	Financial statements		Financial statements
39.	Bunnings Limited	Annual report		Annual report
40.	Tasman Steel Holdings Limited	Annual report		Annual report
41.	Trustpower Limited	Financial statements	Annual report	Annual report
42.	SKYCITY Entertainment Group Limited*	Financial statements	Annual report	Annual report
43.	Harvey Norman Limited	Annual report		Annual report
44.	SKY Network Television Limited	Annual report		Annual report
45.	New Zealand Post Limited*	Financial statements	Annual report	Annual report
46.	T&G Global Limited	Financial statements	Annual report	Annual report
47.	Goodman Fielder New Zealand Limited	Financial statements		Financial statements
48.	Fisher & Paykel Healthcare Corporation Limited	Annual report		Annual report
49.	The Colonial Motor Company Limited	Annual report		Annual report
50.	Open Country Dairy Limited	Annual report		Annual report
51.	Mitre 10	Financial statements		Financial statements

Table 1: Deloitte Top 200 document availability cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Document type found on the Companies Register [172] [c], [d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
52.	Ballance Agri-Nutrients Limited	Annual report		Annual report
53.	Shell			
54.	Synlait Milk Limited*	Annual report		Annual report
55.	Apple Sales New Zealand	Financial statements		Financial statements
56.	Two Degrees Mobile Limited	Financial statements		Financial statements
57.	H. J. Heinz Company (New Zealand) Limited			
58.	KiwiRail Holdings Limited[b]*		Annual integrated report	Annual report
59.	Pacific Aluminium (New Zealand) Limited	Financial statements		Financial statements
60.	Ford Motor Company of New Zealand Limited	Annual report		Annual report
61.	Sime Darby Motor Group (NZ) Limited	Financial statements		Financial statements
62.	Coca-Cola Holdings NZ Limited	Annual report		Annual report
63.	Watercare Services Limited*		Annual report	Annual report
64.	Westland Co-operative Dairy Company Limited	Annual report		Annual report
65.	Auckland International Airport Limited*	Financial statements	Annual report	Annual report
66.	Ravensdown Limited*	Annual report		Annual report
67.	Ingram Micro New Zealand Holdings	Financial statements		Financial statements
68.	Tegel Group Holdings Limited	Annual report		Annual report
69.	Briscoe Group Limited	Annual report		Annual report
70.	Holden New Zealand Limited	Financial statements		Financial statements
71.	Market Gardeners Limited	Annual report		Annual report
72.	Lion - Beer, Spirits & Wine (NZ) Limited*	Financial statements		Financial statements
73.	Imperial Tobacco New Zealand Limited[a]	Annual report		Annual report
74.	The A2 Milk Company Limited	Annual report		Annual report
75.	Freightways Limited*	Annual report		Annual report
76.	Restaurant Brands New Zealand Limited	Financial statements	Annual report	Annual report

Table 1: Deloitte Top 200 document availability cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Document type found on the Companies Register [172][c],[d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
77.	Beca*			
78.	Oceana Gold Holdings (New Zealand) Limited	Financial statements		Financial statements
79.	Broadspectrum (New Zealand) Limited	Financial statements		Financial statements
80.	Steel & Tube Holdings Limited	Annual report		Annual report
81.	DB Breweries Limited*	Financial statements		Financial statements
82.	Green Cross Health Limited	Annual report		Annual report
83.	Oregon Group Limited	Financial statements		Financial statements
84.	Taumata Plantations Limited	Annual report		Annual report
85.	Opus International (NZ) Limited	Financial statements		Financial statements
86.	Powerco Limited	Financial statements	Annual report	Annual report
87.	Sanford Limited*	Annual report		Annual report
88.	Waste Management NZ Limited*			
89.	Kura Limited	Financial statements		Financial statements
90.	Kathmandu Holdings Limited	Annual report		Annual report
91.	Coles Group New Zealand Holdings Limited	Annual report		Annual report
92.	LWC Limited	Annual report		Annual report
93.	Samsung			
94.	Kaingaroa Timberlands Limited	Financial statements		Financial statements
95.	Spotless Holdings (NZ) Limited	Financial statements		Financial statements
96.	Frucor Suntory New Zealand Limited	Financial statements		Financial statements
97.	Pan Pac Forest Products Limited	Financial statements		Financial statements
98.	NZME Limited	Annual report		Annual report
99.	Nestle New Zealand Limited	Annual report		Annual report
100.	Matariki Forestry Group	Financial statements		Financial statements
101.	Mitsubishi Motors New Zealand Limited	Annual report		Annual report
102.	Toll Group (NZ) Limited[a]*	Financial statements		Financial statements
103.	Orora NZ Holdings Limited	Annual report		Annual report

Table 1: Deloitte Top 200 document availability cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]	Document type found on the Companies Register [172][c],[d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
104. Scales Corporation Limited	Annual report		Annual report
105. OMV New Zealand Limited	Financial statements		Financial statements
106. Fairfax New Zealand Limited	Annual report		Annual report
107. Mazda Motors of New Zealand Limited	Annual report		Annual report
108. The New Zealand Refining Company Limited	Annual report		Annual report
109. Independent Liquor (NZ) Limited	Financial statements		Financial statements
110. Pact Group Holdings (NZ) Limited[b]	Financial statements		Financial statements
111. Tourism Holdings Limited[b]	Financial statements	Shareholder annual review	Annual report
112. HEB Construction Limited	Financial statements		Financial statements
113. Bupa Care Services NZ Limited	Financial statements		Financial statements
114. CDC Pharmaceuticals Limited	Annual report		Annual report
115. Television New Zealand Limited		Annual report	Annual report
116. DHL Holdings (New Zealand) Limited	Financial statements		Financial statements
117. Wesfarmers Industrial & Safety Holdings NZ Limited	Annual report		Annual report
118. OfficeMax Holdings Limited	Financial statements		Financial statements
119. Orion			
120. City Care Limited		Annual report	Annual report
121. Mondelez New Zealand Investments	Financial statements		Financial statements
122. Mediaworks Investments Limited	Financial statements		Financial statements
123. Xero Limited	Annual report		Annual report
124. IBM New Zealand Limited	Financial statements		Financial statements
125. Mercedes-Benz New Zealand Limited	Financial statements		Financial statements
126. Northpower			
127. Ryman Healthcare Limited	Annual report		Annual report
128. The Tatua Co-operative Dairy Company Limited	Annual report		Annual report

Table 1: Deloitte Top 200 document availability cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Document type found on the Companies Register [172] [c], [d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
129.	Nissan New Zealand Limited	Annual report		Annual report
130.	McConnell Dowell Construction Limited	Financial statements		Financial statements
131.	GPC Asia Pacific (NZ) Holdings Limited	Financial statements		Financial statements
132.	Allied Foods (N.Z.) Limited	Annual report		Annual report
133.	Hewlett-Packard New Zealand	Financial statements		Financial statements
134.	McDonald's Restaurants (New Zealand) Limited	Financial statements		Financial statements
135.	AWF Madison Group Limited	Annual report		Annual report
136.	Port of Tauranga Limited	Annual report		Annual report
137.	Delegat Group Limited	Annual report		Annual report
138.	New Zealand Wool Services International Limited	Financial statements		Financial statements
139.	Treasury Wine Estates (Matua) Limited	Financial statements		Financial statements
140.	Linde Holdings New Zealand Limited	Financial statements		Financial statements
141.	Enviro (NZ) Limited	Financial statements		Financial statements
142.	APHG NZ Investments Limited	Financial statements		Financial statements
143.	Metro Performance Glass Limited	Annual report		Annual report
144.	Nobilo Holdings	Financial statements		Financial statements
145.	Pernod Ricard Winemakers New Zealand Limited	Annual report		Annual report
146.	Kordia Group Limited		Annual report	Annual report
147.	Visionstream Pty Limited (New Zealand Branch)	Financial statements		Financial statements
148.	Hallenstein Glasson Holdings Limited	Annual report		Annual report
149.	Kiwi Property Group Limited*	Annual report		Annual report
150.	Martin-Brower New Zealand Holdings	Financial statements		Financial statements
151.	Sumitomo Forestry NZ Limited [b]	Financial statements		Financial statements
152.	Trade Me Group Limited	Annual report		Annual report
153.	JB Hi-Fi NZ Limited [b]	Financial report		Financial statements

Table 1: Deloitte Top 200 document availability cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Document type found on the Companies Register [172] [c], [d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
154.	Abano Healthcare broup Limited	Annual report		Annual report
155.	C B Norwood Distributors Limited	Financial statements		Financial statements
156.	CablePrice (NZ) Limited	Financial statements		Financial statements
157.	Electrix Limited	Financial statements		Financial statements
158.	Unison Networks Limited		Annual report	Annual report
159.	ACI Operations NZ Limited			
160.	Ports of Auckland Limited*		Annual report	Annual report
161.	New Zealand Sugar Company Limited	Financial statements		Financial statements
162.	Mars New Zealand Limited	Financial statements		Financial statements
163.	Juken New Zealand Limited	Annual report		Annual report
164.	Asaleo Care Limited	Financial statements		Financial statements
165.	Smiths City Group Limited	Annual report		Annual report
166.	Turners Automotive Group Limited	Annual report		Annual report
167.	Compass Group New Zealand Limited	Annual report		Annual report
168.	Weyville Holdings Limited	Annual report		Annual report
169.	Christchurch International Airport Limited*	Annual report		Annual report
170.	Ashburton Trading Society Limited		Financial statements	Financial statements
171.	Dimension Data New Zealand Limited	Annual report		Annual report
172.	Bridgestone New Zealand Limited	Financial statements		Financial statements
173.	Skellerup Holdings Limited	Annual report		Annual report
174.	Sealed Air (New Zealand)	Financial statements		Financial statements
175.	Unilever New Zealand Limited*	Annual report		Annual report
176.	Glencore Agriculture (NZ) Limited	Financial statements		Financial statements
177.	Airways Corporation of New Zealand Limited		Annual report	Annual report
178.	NZPM Group Limited	Financial statements	Annual report	Annual report
179.	Rexel New Zealand Limited	Financial statement		Financial statements

Table 1: Deloitte Top 200 document availability cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]	Document type found on the Companies Register [172] [c], [d] [Column 1]	Document type found on the company's website (if annual report was not found on the Companies Register) [30] [Column 2]	Categorisation of documents for analysis [186] [Column 3]
180. Oceanic Communications Limited			
181. Nelson Forests Limited	Annual report		Annual report
182. Livestock Improvement Corporation Limited	Annual report		Annual report
183. Orion Health Group Limited	Annual report		Annual report
184. OTPP New Zealand Forest Investments Limited	Annual report		Annual report
185. Skyline Enterprises Limited[c]	Annual report		Annual report
186. Philip Morris (New Zealand) Limited	Financial statements		Financial statements
187. Landcorp Farming Limited		Annual report	Annual report
188. Kerbside Papers Limited	Annual report		Annual report
189. Tango Holdings NZ			
190. Seeka Limited	Annual report		Annual report
191. AsureQuality Limited		Annual report	Annual report
192. Amcor Flexibles (New Zealand) Limited	Annual report		Annual report
193. Dairy Goat Co-operative (N.Z.) Limited	Financial statements		Financial statements
194. C 3 Limited	Financial statements		Financial statements
195. Wellington Electricity Distribution Network Limited	Financial statements		Financial statements
196. Huawei Technologies (New Zealand) Company Limited[b]	Annual report		Annual report
197. New Zealand Investment Holdings Limited	Financial statements		Financial statements
198. Tasman Liquor Company Limited	Financial statements		Financial statements
199. Moana New Zealand Limited		Annual report	Annual report
200. Honda New Zealand Limited	Financial statements		Financial statements
Totals	**172**	**30#**	**186**

30 documents were found on the companies' own websites. However, 16 of these were double ups, as there annual reports were already on the Companies Register. Therefore, the documents of 14 additional companies were analysed as a report of the second search (137+14=151).

Notes to be read in conjunction with Table 1

(a) Once the documents were found on the Companies Register, the document type was confirmed through a two-step process. Firstly, the cover was checked. How the document was identified on the cover was how the document was classified for this research (i.e. as an annual report or as financial statements). If the document did not have a cover, the directors' report was checked, and how the directors' report identified the document became the deciding factor. In all scenarios, what was presented on the cover was taken as the document classifier as this is how the company had chosen to publicly present the document. Please note, this rule was necessary as the identification process indicated a number of documents where the directors' report conflicted with the cover. For example:

- #73 Imperial Tobacco presented a document without a cover page. Its directors' report called the document 'the annual report' and the document was therefore classified as an annual report.
- #102 Toll Group (NZ) Limited presented a document without a cover page. Its directors' report called the document 'the report including the consolidated financial statements' and the document was therefore classified as financial statements.
- #196 Huawei Technologies (New Zealand) Company Limited presented a document as an 'Annual Report'. The document was therefore classified as an annual report, despite the directors' declaration referring to the document as 'financial statements', and the contents page indicating the document only includes financial information.

(b) Not all documents found on the Companies Register were presented as annual reports or financial statements. A judgement call was made as to how these documents were categorised for analysis. This decision was primarily based on whether the contents page indicated that the document included content beyond the company's financial information. For example:

- #14 Meridian Energy Limited presented a document titled 'Integrated Report', which was classified as an annual report.
- #58 KiwiRail Holdings Limited presented a document titled 'Annual Integrated Report', which was classified as an annual report.
- #110 Pact Group Holdings (NZ) Limited and Subsidiaries presented a document titled 'Financial Report', which was classified as financial statements.
- #111 THL presented a document titled 'Shareholder Annual Review'. In addition to indication on the contents page, the document states on p. 10 that it, 'in conjunction with the Annual Financial Statements 2017, constitutes the 2017 Annual Report to shareholders of Tourism Holdings Limited'. Hence, the document was classified as an annual report.
- #151 Sumitomo Forestry NZ Limited presented a document titled 'Annual Financial Report', which was classified as a financial statements.
- #153 JB Hi-Fi NZ Limited presented a document titled 'Financial report', which was classified as a financial statements.
- #185 Skyline Enterprises presented a document titled 'Financial Report', which was classified as an annual report.

(c) It is possible that a company may make its annual report (or financial statements) publicly available on another website; however, for the purposes of this working paper the search was limited to the common places a member of the public might look i.e. the Companies Register and the company's own website.

(d) The 26 companies from the Deloitte Top 200 that do not have an annual report or financial statement on the Companies Register are: AgResearch Limited, Airways Corporation of New Zealand Limited, Beca Group Limited, City Care Limited, Dunedin City Holdings Limited Group, Farmlands Co-operative Society Limited, Foodstuffs North Island Limited, Goodman Property Trust, Housing New Zealand Corporation, Kiwirail Holdings Limited, Kordia Group Limited, Landcorp Farming Limited, Moana New Zealand Limited, National Institute of Water and Atmospheric Research Limited, Northpower Limited Group, Orion New Zealand Limited Group, Ports of Auckland Limited, Pumpkin Patch Limited, Solid Energy New Zealand Limited, Te Rūnanga o Ngāi Tahu and Ngāi Tahu Charitable Trust, Te Wānanga o Aotearoa Te Kuratini o Ngā Waka (Te Wānanga o Aotearoa), Television New Zealand Limited, The New Zealand Automobile Association Incorporated, Trustpower Limited, Unison Networks Limited and Watercare Services Limited.

Notes on specific companies

#1 Fonterra Co-operative Group Ltd required two separate documents to make up its annual report: (i) Annual Financial Results (from the Companies Register) and (ii) Annual Review 2017 (from the company's website), as for the purposes of this research the following statement in footnote 1 on p. 1 of the Annual Financial Results was adhered to: 'This document, in conjunction with the Fonterra Annual Review 2017, constitutes the 2017 Annual Report to Shareholders of Fonterra Co-operative Group Limited.' Consequently, these two documents were combined and treated as Fonterra Co-operative Group Ltd's annual report.

#6 Air New Zealand Ltd required two separate documents to make up its annual report: (i) Annual Financial Results 2017 and (ii) Annual Shareholder Review 2017, as for the purposes of this research the following statement in footnote '*' on p. 1 of the Annual Financial Results was adhered to: '[t]his document, in conjunction with the Annual Shareholder Review 2017, constitutes the 2017 Annual Report to shareholders of Air New Zealand Limited.' Consequently, these two documents were combined and treated as Air New Zealand Ltd's annual report.

#7 Z Energy Limited's annual report, found on the company's website, includes the company's financial statements which were filed on the Companies Register.

#21 Genesis Energy Limited's annual report, found on the company's website, includes the company's financial statements which were filed on the Companies Register.

#31 Datacom Group Limited: Two separate documents were found: (i) Financial Statements (found on the Companies Register) and (ii) 2017 Annual Review (found on the company's website). It was confusing to find a document called Annual Review 2017 that did not include a reference to being an Annual Report, despite it having many annual report characteristics, including a set of financial statements (which they denoted as 'Financial Reporting'). However, as there was no instruction to read the documents together in either of the documents found in order to make up an annual report for Datacom (unlike with #111 THL – see note (b)) and as the protocol of this research is to use annual reports only, the decision was therefore made to not use Annual Review 2017.

#169 Christchurch International Airport: Two separate documents were found: (i) 2017 Edition Annual Report Financial Statements (found on the Companies Register) and (ii) 2017 Edition Annual Report (found on Christchurch International Airport's website). This was an accidental finding. Having two different documents with the words 'annual report' on the front cover was confusing – which should be taken as the actual annual report? This issue is raised here to illustrate the lack of consistency in reporting practices, creating a risk for users of these reports. Please note that there was no instruction to read the documents together in either of the documents found (see note above for #1 Fonterra Co-operative Group Ltd and note above for #6 Air New Zealand Limited).

* Companies indicated with this symbol (32 in total) are in the Climate Leaders Coalition, which comprises 60 of New Zealand's leading companies that have committed to reducing greenhouse gas emissions and publicly reporting their emissions.

The companies in the coalition that do not appear in the 2017 Deloitte Top 200 are: 3R Group Limited, 4Sight Consulting, Bank of New Zealand, Countdown (note: Countdown is owned by Woolworths New Zealand Group Limited, which is #4 in the Deloitte Top 200), Deloitte New Zealand, Dempsey Wood Civil Limited, Ecostore, Ecotricity, energyclubnz, Energy and Technical Services Limited, Enviro-Mark Solutions Limited, Flick Limited, Fujitsu New Zealand, Fuji Xerox New Zealand Limited, Hawkins, IAG New Zealand Limited, Microsoft New Zealand, Netlogix Limited, Ngāi Tahu Holdings Corporation Limited, OCS Group New Zealand, Proxima, Stuff, TIL Logistics Group Limited, Toyota Financial Services, true, Wellington International Airport Limited, Wellington Zoo, and Westpac New Zealand.

Table 2: Deloitte Top 200 document searchability

Documents that were searchable using the 'find' function [92]

1. Fonterra Co-operative Group Limited
2. Fletcher Building Limited
3. EBOS Group Limited
4. Foodstuffs North Island Limited
5. Air New Zealand Limited
6. Z Energy Limited
7. Fulton Hogan Limited
8. Spark New Zealand Limited
9. The Warehouse Group Limited
10. Mainfreight Limited
11. Meridian Energy Limited
12. ZESPRI Group Limited
13. ExxonMobil New Zealand Holdings
14. Farmlands Co-operative Society Limited
15. Silver Fern Farms Co-Operative Limited
16. Contact Energy Limited
17. Genesis Energy Limited
18. Infratil Limited
19. Mercury NZ Limited
20. Downer New Zealand Limited
21. Alliance Group Limited
22. Vector Limited
23. PGG Wrightson Limited
24. Transpower New Zealand Limited
25. Chorus Limited
26. Trustpower Limited
27. SKYCITY Entertainment Group Limited
28. SKY Network Television Limited
29. New Zealand Post Limited
30. T&G Global Limited
31. Goodman Fielder New Zealand Limited
32. Fisher & Paykel Healthcare Corporation Limited
33. The Colonial Motor Company Limited
34. Ballance Agri-Nutrients Limited
35. Synlait Milk Limited
36. KiwiRail Holdings Limited
37. Watercare Services Limited
38. Westland Co-operative Dairy Company Limited
39. Auckland International Airport Limited
40. Ravensdown Limited
41. Tegel Group Holdings Limited
42. Briscoe Group Limited
43. Market Gardeners Limited
44. The A2 Milk Company Limited
45. Freightways Limited
46. Restaurant Brands New Zealand Limited
47. Broadspectrum (New Zealand) Limited
48. Steel & Tube Holdings Limited
49. Green Cross Health Limited
50. Powerco Limited
51. Sanford Limited
52. Kathmandu Holdings Limited
53. LWC Limited
54. Spotless Holdings (NZ) Limited
55. NZME Limited
56. Nestle New Zealand Limited
57. Orora NZ Holdings Limited
58. Scales Corporation Limited
59. The New Zealand Refining Company Limited
60. Pact Group Holdings (NZ) Limited
61. Tourism Holdings Limited
62. Television New Zealand Limited
63. City Care Limited
64. Xero Limited
65. Ryman Healthcare Limited
66. The Tatua Co-operative Dairy Company Limited
67. AWF Madison Group Limited
68. Delegat Group Limited
69. Treasury Wine Estates (Matua) Limited
70. Metro Performance Glass Limited
71. Kordia Group Limited
72. Hallenstein Glasson Holdings Limited
73. Kiwi Property Group Limited
74. Trade Me Group Limited
75. JB Hi-Fi NZ Limited
76. Abano Healthcare Group Limited
77. Unison Networks Limited
78. Ports of Auckland Limited
79. New Zealand Sugar Company Limited
80. Smiths City Group Limited
81. Turners Automotive Group Limited
82. Christchurch International Airport Limited
83. Skellerup Holdings Limited
84. Airways Corporation of New Zealand Limited
85. NZPM Group Limited
86. Livestock Improvement Corporation Limited
87. Orion Health Group Limited
88. Skyline Enterprises Limited
89. Landcorp Farming Limited
90. Seeka Limited
91. AsureQuality Limited
92. Moana New Zealand Limited

Table 2: Deloitte Top 200 document searchability cont.

Documents that were not searchable using the 'find' function [94]

1. Woolworths New Zealand Group Limited
2. BP New Zealand Holdings Limited
3. Foodstuffs South Island Limited
4. Vodafone New Zealand Limited
5. ANZCO Foods Limited
6. Toyota New Zealand Limited
7. Datacom Group Limited
8. Haier New Zealand Investment Holding Company Limited
9. Bidfood Limited
10. Bunnings Limited
11. Tasman Steel Holdings Limited
12. Harvey Norman Limited
13. Open Country Dairy Limited
14. Mitre 10
15. Apple Sales New Zealand
16. Two Degrees Mobile Limited
17. Pacific Aluminium (New Zealand) Limited
18. Ford Motor Company of New Zealand Limited
19. Sime Darby Motor Group (NZ) Limited
20. Coca-Cola Holdings NZ Limited
21. Ingram Micro New Zealand Holdings
22. Holden New Zealand Limited
23. Lion - Beer, Spirits & Wine (NZ) Limited
24. Imperial Tobacco New Zealand Limited
25. Oceana Gold Holdings (New Zealand) Limited
26. DB Breweries Limited
27. Oregon Group Limited
28. Taumata Plantations Limited
29. Opus International (NZ) Limited
30. Kura Limited
31. Coles Group New Zealand Holdings Limited
32. Kaingaroa Timberlands Limited
33. Frucor Suntory New Zealand Limited
34. Pan Pac Forest Products Limited
35. Matariki Forestry Group
36. Mitsubishi Motors New Zealand Limited
37. Toll Group (NZ) Limited
38. OMV New Zealand Limited
39. Fairfax New Zealand Limited
40. Mazda Motors of New Zealand Limited
41. Independent Liquor (NZ) Limited
42. HEB Construction Limited
43. Bupa Care Services NZ Limited
44. CDC Pharmaceuticals Limited
45. DHL Holdings (New Zealand) Limited
46. Wesfarmers Industrial & Safety Holdings NZ Limited
47. OfficeMax Holdings Limited
48. Mondelez New Zealand Investments
49. Mediaworks Investments Limited
50. IBM New Zealand Limited
51. Mercedes-Benz New Zealand Limited
52. Nissan New Zealand Limited
53. McConnell Dowell Construction Limited
54. GPC Asia Pacific (NZ) Holdings Limited
55. Allied Foods (N.Z.) Limited
56. Hewlett-Packard New Zealand
57. McDonald's Restaurants (New Zealand) Limited
58. Port of Tauranga Limited
59. New Zealand Wool Services International Limited
60. Linde Holdings New Zealand Limited
61. Enviro (NZ) Limited
62. APHG NZ Investments Limited
63. Nobilo Holdings
64. Pernod Ricard Winemakers New Zealand Limited
65. Visionstream Pty Limited (New Zealand Branch)
66. Martin-Brower New Zealand Holdings
67. Sumitomo Forestry NZ Limited
68. C B Norwood Distributors Limited
69. CablePrice (NZ) Limited
70. Electrix Limited
71. Mars New Zealand Limited
72. Juken New Zealand Limited
73. Asaleo Care Limited
74. Compass Group New Zealand Limited
75. Weyville Holdings Limited
76. Ashburton Trading Society Limited
77. Dimension Data New Zealand Limited
78. Bridgestone New Zealand Limited
79. Sealed Air (New Zealand)
80. Unilever New Zealand Limited
81. Glencore Agriculture (NZ) Limited
82. Rexel New Zealand Limited
83. Nelson Forests Limited
84. OTPP New Zealand Forest Investments Limited
85. Philip Morris (New Zealand) Limited
86. Kerbside Papers Limited
87. Amcor Flexibles (New Zealand) Limited
88. Dairy Goat Co-operative (N.Z.) Limited
89. C 3 Limited
90. Wellington Electricity Distribution Network Limited
91. Huawei Technologies (New Zealand) Company Limited
92. New Zealand Investment Holdings Limited
93. Tasman Liquor Company Limited
94. Honda New Zealand Limited

Table 3: Deloitte Top 200 disclosure of climate change information

Companies that mentioned 'emission', 'carbon' and/or 'climate' in the context of climate change [58]

1. Fonterra Co-operative Group Limited
2. Fletcher Building Limited
3. EBOS Group Limited
4. Foodstuffs North Island Limited
5. Air New Zealand Limited
6. Z Energy Limited
7. Spark New Zealand Limited
8. The Warehouse Group Limited
9. BP New Zealand Holdings Limited
10. Mainfreight Limited
11. Meridian Energy Limited
12. Contact Energy Limited
13. Genesis Energy Limited
14. Infratil Limited
15. Mercury NZ Limited
16. Alliance Group Limited
17. Vector Limited
18. PGG Wrightson Limited
19. Transpower New Zealand Limited
20. Chorus Limited
21. Tasman Steel Holdings Limited
22. Trustpower Limited
23. SKYCITY Entertainment Group Limited
24. New Zealand Post Limited
25. T&G Global Limited
26. Ballance Agri-Nutrients Limited
27. KiwiRail Holdings Limited
28. Pacific Aluminium (New Zealand) Limited
29. Watercare Services Limited
30. Auckland International Airport Limited
31. Tegel Group Holdings Limited
32. Oceana Gold Holdings (New Zealand) Limited
33. Steel & Tube Holdings Limited
34. Oregon Group Limited
35. Taumata Plantations Limited
36. Powerco Limited
37. Sanford Limited
38. Kaingaroa Timberlands Limited
39. Pan Pac Forest Products Limited
40. NZME Limited
41. Matariki Forestry Group
42. Scales Corporation Limited
43. The New Zealand Refining Company Limited
44. Tourism Holdings Limited
45. City Care Limited
46. Port of Tauranga Limited
47. Linde Holdings New Zealand Limited
48. Kiwi Property Group Limited
49. Trade Me Group Limited
50. Unison Networks Limited
51. Ports of Auckland Limited
52. New Zealand Sugar Company Limited
53. Juken New Zealand Limited
54. NZPM Group Limited
55. Nelson Forests Limited
56. Landcorp Farming Limited
57. AsureQuality Limited
58. Moana New Zealand Limited

Table 3: Deloitte Top 200 disclosure of climate change information cont.

Companies that did not mention 'emission', 'carbon', and/or 'climate' in the context of climate change [128]

1. Woolworths New Zealand Group Limited
2. Fulton Hogan Limited
3. Foodstuffs South Island Limited
4. ZESPRI Group Limited
5. ExxonMobil New Zealand Holdings
6. Farmlands Co-Operative Society Limited
7. Silver Fern Farms Co-Operative Limited
8. Downer New Zealand Limited
9. ANZCO Foods Limited
10. Vodafone New Zealand Limited
11. Toyota New Zealand Limited
12. Datacom Group Limited
13. Haier New Zealand Investment Holding Company
14. Bidfood Limited
15. Bunnings Limited
16. Harvey Norman Limited
17. SKY Network Television Limited
18. Goodman Fielder New Zealand Limited
19. Fisher & Paykel Healthcare Corporation Limited
20. The Colonial Motor Company Limited
21. The 3 Motor Company Limited
22. Open Country Dairy Limited
23. Mitre 10 (New Zealand) Limited
24. Synlait Milk Limited
25. Apple Sales New Zealand
26. Two Degrees Mobile Limited
27. Ford Motor Company of New Zealand Limited
28. Sime Darby Motor Group (NZ) Limited
29. Coca-Cola Holdings NZ Limited
30. Westland Co-operative Dairy Company Limited
31. Ravesdown Limited
32. Ingram Micro New Zealand Holdings
33. Briscoe Group Limited
34. Holden New Zealand Limited
35. Market Gardeners Limited
36. Lion - Beer, Spirits & Wine (NZ)Limited
37. Imperial Tobacco New Zealand Limited
38. The A2 Milk Company Limited
39. Freightways Limited
40. Restaurant Brands New Zealand Limited
41. Broadspectrum (New Zealand) Limited
42. DB Breweries Limited
43. Green Cross Health Limited
44. Opus International (NZ) Limited
45. Kura Limited
46. Kathmandu Holdings Limited
47. Coles Group New Zealand Holdings Limited
48. LWC Limited
49. Spotless Holdings (NZ) Limited
50. Frucor Suntory New Zealand Limited
51. Nestle New Zealand Limited
52. Mitsubishi Motors New Zealand Limited
53. Toll Group (NZ) Limited
54. Orora NZ Holdings Limited
55. OMV New Zealand Limited
56. Fairfax New Zealand Limited
57. Mazda Motors of New Zealand Limited
58. Independent Liquor (NZ) Limited
59. Pact Group Holdings (NZ) Limited
60. HEB Construction Limited
61. Bupa Care Services NZ Limited
62. CDC Pharmaceuticals Limited
63. Television New Zealand Limited
64. DHL Holdings (New Zealand) Limited
65. Westfarmers Industrial & Safety Holdings NZ Limited
66. OfficeMax Holdings Limited
67. Mondelez New Zealand Investments
68. Mediaworks Investments Limited
69. Xero Limited
70. IBM New Zealand Limited
71. Mercedes-Benz New Zealand Limited
72. Ryman Healthcare Limited
73. The Tatua Co-operative Dairy Company Limited
74. Nissan New Zealand Limited
75. McConnell Dowell Constructed Limited
76. GPA Asia-Pacific (NZ) Holdings Limited
77. Allied Foods (NZ) Limited
78. Hewlett-Packard New Zealand Limited
79. McDonald's Restaurants (New Zealand) Limited
80. AWF Madison Group Limited
81. Delegat Group Limited
82. New Zealand Wool Services International Limited
83. Treasury Wine Estates (Matua) Limited
84. Enviro (NZ) Limited
85. APHG NZ Investments Limited
86. Metro Performance Glass Limited
87. Nobilo Holdings
88. Pernod Ricard Winemakers New Zealand Limited
89. Kordia Group Limited
90. Visionstream Pty Limited (New Zealand Branch)
91. Hallenstein Glasson Holdings Limited
92. Martin-Brower New Zealand Holdings
93. Sumitomo Forestry NZ Limited
94. JB Hi-Fi NZ Limited
95. Abano Healthcare Group Limited
96. C B Norwood Distributors Limited
97. Cableprice (NZ) Limited
98. Electrix Limited
99. Mars New Zealand Limited
100. Asaleo Care Limited

Table 3: Deloitte Top 200 disclosure of climate change information cont.

Companies that did not mention 'emission', 'carbon', and/or 'climate' in the context of climate change [128] cont.

101. Smiths City Group Limited
102. Turners Automotive Group Limited
103. Compass Group New Zealand Limited
104. Weyville Holdings Limited
105. Christchurch International Airport Limited
106. Dimension Data New Zealand Limited
107. Bridgestone New Zealand Limited
108. Skellerup Holdings Limited
109. Sealed Air (New Zealand)
110. Unilever New Zealand Limited
111. Glencore Agriculture (NZ) Limited
112. Airways Corporation of New Zealand Limited
113. Rexel New Zealand Limited
114. Livestock Improvement Corporation Limited
115. Orion Health Group Limited
116. OTPP New Zealand Forest Investments Limited
117. Skyline Enterprises Limited
118. Philip Morris (New Zealand) Limited
119. Kerbside Papers Limited
120. Seeka Limited
121. Amcor Flexibles (New Zealand) Limited
122. Dairy Goat Co-operative (NZ) Limited
123. C 3 Limited
124. Wellington Electricity Distribution Network Limited
125. Huawei Technologies (New Zealand) Company Limited
126. New Zealand Investment Holdings Limited
127. Tasman Liquor Company Limited
128. Honda New Zealand Limited

Table 4: Deloitte Top 200 disclosure of climate change information by category

Companies that disclosed climate change and/or emission risks [10]

1. Z Energy Limited
2. Meridian Energy Limited
3. Infratil Limited
4. Mercury NZ Limited
5. KiwiRail Holdings Limited
6. Watercare Services Limited
7. Auckland International Airport Limited
8. Sanford Limited
9. Scales Corporation Limited
10. Landcorp Farming Limited

Companies that disclosed climate change and/or emission metrics [23]

1. Fletcher Building Limited
2. Foodstuffs North Island Limited
3. Z Energy Limited
4. Spark New Zealand Limited
5. The Warehouse Group Limited
6. Meridian Energy Limited
7. Contact Energy Limited
8. Genesis Energy Limited
9. Mercury NZ Limited
10. Vector Limited
11. Transpower New Zealand Limited
12. Chorus Limited
13. New Zealand Post Limited
14. KiwiRail Holdings Limited
15. Watercare Services Limited
16. Sanford Limited
17. The New Zealand Refining Company Limited
18. City Care Limited
19. Port of Tauranga Limited
20. Kiwi Property Group Limited
21. Trade Me Group Limited
22. Ports of Auckland Limited
23. Landcorp Farming Limited

Companies that disclosed climate change and/or emission costs [22]

1. Z Energy Limited
2. BP New Zealand Holdings Limited
3. Contact Energy Limited
4. Genesis Energy Limited
5. Mercury NZ Limited
6. Tasman Steel Holdings Limited
7. Trustpower Limited
8. Ballance Agri-Nutrients Limited
9. Pacific Aluminium (New Zealand) Limited
10. Oceana Gold Holdings (New Zealand) Limited
11. Oregon Group Limited
12. Taumata Plantations Limited
13. Powerco Limited
14. Kaingaroa Timberlands Limited
15. Pan Pac Forest Products Limited
16. Matariki Forestry Group Limited
17. Linde Holdings New Zealand Limited
18. Ports of Auckland Limited
19. New Zealand Sugar Company Limited
20. Juken New Zealand Limited
21. Nelson Forests Limited
22. Landcorp Farming Limited

Table 4: Deloitte Top 200 disclosure of climate change information by category cont.

Companies that disclosed climate change and/or emission controls [15]

1. Fonterra Co-operative Group Limited
2. EBOS Group Limited
3. Foodstuffs North Island Limited
4. The Warehouse Group Limited
5. Mainfreight Limited
6. Vector Limited
7. PGG Wrightson Limited
8. New Zealand Post Limited
9. KiwiRail Holdings Limited
10. Watercare Services Limited
11. The New Zealand Refining Company Limited
12. City Care Limited
13. Ports of Auckland Limited
14. Landcorp Farming Limited
15. Moana New Zealand Limited

Companies that disclosed climate change and/or emission targets [7]

1. EBOS Group Limited
2. Spark New Zealand Limited
3. Transpower New Zealand Limited
4. SKYCITY Entertainment Group Limited
5. KiwiRail Holdings Limited
6. Sanford Limited
7. Ports of Auckland Limited

Companies that disclosed climate change and/or emission initiatives [32]

1. Fletcher Building Limited
2. Air New Zealand Limited
3. Z Energy Limited
4. Spark New Zealand Limited
5. Meridian Energy Limited
6. Contact Energy Limited
7. Mercury NZ Limited
8. Alliance Group Limited
9. Vector Limited
10. Chorus Limited
11. Trustpower Limited
12. T&G Global Limited
13. Ballance Agri-Nutrients Limited
14. KiwiRail Holdings Limited
15. Watercare Services Limited
16. Auckland International Airport Limited
17. Tegel Group Holdings Limited
18. Steel & Tube Holdings Limited
19. Sanford Limited
20. NZME Limited
21. Scales Corporation Limited
22. The New Zealand Refining Company Limited
23. Tourism Holdings Limited
24. City Care Limited
25. Port of Tauranga Limited
26. Kiwi Property Group Limited
27. Unison Networks Limited
28. Ports of Auckland Limited
29. NZPM Group Limited
30. Landcorp Farming Limited
31. AsureQuality Limited
32. Moana New Zealand Limited

Table 5: Deloitte Top 200 disclosure of climate change information by number of categories

Note: There were no companies that disclosed six out of six categories.

Companies that disclosed five out of six of climate change risks, metrics, costs, controls, targets and initiatives [3]

1. KiwiRail Holdings Limited
2. Ports of Auckland Limited
3. Landcorp Farming Limited

Companies that disclosed four out of six of climate change risks, metrics, costs, controls, targets and initiatives [4]

1. Z Energy Limited
2. Mercury NZ Limited
3. Watercare Services Limited
4. Sanford Limited

Companies that disclosed three out of six of climate change risks, metrics, costs, controls, targets and initiatives [6]

1. Spark New Zealand Limited
2. Meridian Energy Limited
3. Contact Energy Limited
4. Vector Limited
5. The New Zealand Refining Company Limited
6. City Care Limited

Companies that disclosed two out of six of climate change risks, metrics, costs, controls, targets and initiatives [15]

1. Fletcher Building Limited
2. EBOS Group Limited
3. Foodstuffs North Island Limited
4. The Warehouse Group Limited
5. Genesis Energy Limited
6. Transpower New Zealand Limited
7. Chorus Limited
8. Trustpower Limited
9. New Zealand Post Limited
10. Ballance Agri-Nutrients Limited
11. Auckland International Airport Limited
12. Scales Corporation Limited
13. Port of Tauranga Limited
14. Kiwi Property Group Limited
15. Moana New Zealand Limited

Companies that disclosed one out of six of climate change risks, metrics, costs, controls, targets and initiatives [30]

1. Fonterra Co-operative Group Limited
2. Air New Zealand Limited
3. BP New Zealand Holdings Limited
4. Mainfreight Limited
5. Infratil Limited
6. Alliance Group Limited
7. PGG Wrightson Limited
8. Tasman Steel Holdings Limited
9. SKYCITY Entertainment Group Limited
10. T&G Global Limited
11. Pacific Aluminium (New Zealand) Limited
12. Tegel Group Holdings Limited
13. Oceana Gold Holdings (New Zealand) Limited
14. Steel & Tube Holdings Limited
15. Oregon Group Limited
16. Taumata Plantations Limited
17. Powerco Limited
18. Kaingaroa Timberlands Limited
19. Pan Pac Forest Products Limited
20. NZME Limited
21. Matariki Forestry Group
22. Tourism Holdings Limited
23. Linde Holdings New Zealand Limited
24. Trade Me Group Limited
25. Unison Networks Limited
26. New Zealand Sugar Company Limited
27. Juken New Zealand Limited
28. NZPM Group Limited
29. Nelson Forests Limited
30. AsureQuality Limited

Table 6: Deloitte Top 200 disclosure of climate change risk

Note: The McGuinness Institute used the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 2006) to classify the nature of business of each of the 2017 Deloitte Top 200 companies. There is some subjectivity inherent in making these classifications. The ANZSIC 2006 can be found at archive.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx.

Company name	Text in annual report disclosing risks*	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
1. **Z Energy Limited (#7)**	'We accept the overwhelming scientific evidence on climate change and acknowledge that climate change is one of the biggest material issues facing our company, our industry, our communities, and the world.' (p. 12)	Electricity, gas, water and waste services
2. **Meridian Energy Limited (#14)**	'...The plan includes a consideration of the risk of earthquakes, and our analysis that major flood events are likely to be more frequent in the future due to climate change.' (p. 16) 'As a 100% renewable energy generator, our capacity to generate electricity is reduced in dry weather conditions, creating a commercial risk that revenue from selling into the wholesale market will not match the cost of buying electricity to meet customer commitments.' (p. 29)	Electricity, gas, water and waste services
3. **Infratil Limited (#22)**	'Increasing numbers of elderly people seeking a high quality of life; reduced carbon emissions; increasing air travel; and increasing electronic data storage, processing and communication. These are not transitory and they will outlast the next several U.S. Presidents.' (p. 14)	Electricity, gas, water and waste services
4. **Mercury NZ Limited (#23)**	'To inform our view of the matters material to how Mercury creates value – our What Matters Most, as set out on page 20 of this report – we have considered a broad sustainability context incorporating: • mega trends impacting our customers, company and the country, such as: the Sustainable Development Goals; the Paris Climate Agreement; digitisation; new technology; increasing data use; and ageing population'. (p. 66)	Electricity, gas, water and waste services
5. **KiwiRail Holdings Limited (#58)**	'Within the report we demonstrate how we create value for our stakeholders, our customers, and our business in the short, medium and long term. The report also covers key material issues, the issues that are most important to KiwiRail and its stakeholders: customer relationships, financial performance, work health and safety, operational efficiency, energy and carbon emissions, transport resilience, commercial focus, employee relations, and public safety.' (p. 9)	Transport, postal and warehousing
6. **Watercare Services Limited (#63)**	'Our stakeholders considered the issues be low as material in 2016/17': 'Effects of climate on water supply (Tasman Tempest).' (p. 5)	Electricity, gas, water and waste services
7. **Auckland International Airport Limited (#65)**	'We also undertook a new climate change analysis to increase our understanding and minimise our risk in relation to climate change events.' (pp. 30–31)	Transport, postal and warehousing

* Climate change risk information was never disclosed in financial statements.

Table 6: Deloitte Top 200 disclosure of climate change risk cont.

Company name	Text in annual report disclosing risks*	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
8. **Sanford Limited (#87)**	'We are acutely aware of the risks the future may hold including the possibility of geopolitical shifts that can impact key markets for us and the risks presented by climate change.' (p. 13) (Note: p. 17 features a matrix of issues important to stakeholders, including impacts due to climate change.) 'While a number of issues were ranked comparatively low, stakeholders commented that these rankings were ascribed not because the issues were considered unimportant, but rather because they were considered not urgent, a long term priority (Future protein competition and Climate change impacts).' (p. 18) 'Climate change is affecting every country and the disruption is likely to have a significant impact on all of our stakeholders. We are conscious of the impact that climate change could have on the oceans and the inherent risk to our business model.' (p. 96) 'Climate change is a key business risk for Sanford; it could change the distribution and abundance of fish stocks, increase the number of biosecurity incursions, and increase the ocean's acidity, affecting marine ecosystems and causing a loss of income to our industry. Sanford is committed to responding to the impacts of climate change to our business.' (p. 101)	Agriculture, forestry and farming
9. **Scales Corporation Limited (#104)**	'The Board will continually review the issue of climate change and what it means for each of our businesses, both from the point of view of our inputs and what we can do to make a difference. We will assess how outcomes that impact our sites can be prepared for within our business continuity and crisis management plans.' (p. 28)	Manufacturing
10. **Landcorp Farming Limited (#187)**	'The Ministry for Primary Industries says global climate change will, long term, affect what and how much this country can produce, and weather cycles will be increasingly unpredictable. New Zealand agriculture faces scrutiny for its impact on the natural environment, especially in regard to water quality in streams, rivers, lakes and wetlands, and its contribution to the country's greenhouse gas (GHG) emissions profile. It is widely understood that productive rural land use has contributed to unwanted build-up of phosphates and sediments in many waterways, and to the leaching of surplus nitrogen into ground waters.' (p. 8) 'The foremost issue is climate change. Almost half of New Zealand's emissions total comprises agricultural emissions, overwhelmingly from the farming of ruminant animals. Under the Paris Climate Agreement, these emissions must be reduced to net zero. Since signing the first global climate change agreement 25 years ago, the New Zealand response has emphasised research into reducing emissions from pastoral agriculture, and the use of tree-planting to offset emissions in the meantime. The research is ongoing, but it is clear that there are no easy technological routes to net zero emissions for agriculture.' (p. 9)	Agriculture, forestry and farming

Table 7: Deloitte Top 200 disclosure of climate change metrics

Note: The McGuinness Institute used the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 2006) to classify the nature of business of each of the 2017 Deloitte Top 200 companies. There is some subjectivity inherent in making these classifications. The ANZSIC 2006 can be found at archive.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx.

Company name		Page number(s) of disclosures of metrics	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
1.	**Fletcher Building Limited (#2)**	31	Construction
2.	**Foodstuffs North Island Limited (#5)**	49	Retail trade
3.	**Z Energy Limited (#7)**	39	Electricity, gas, water and waste services
4.	**Spark New Zealand Limited (#9)**	30	Information media and telecommunications
5.	**The Warehouse Group Limited (#10)**	64–65	Retail trade
6.	**Meridian Energy Limited (#14)**	25	Electricity, gas, water and waste services
7.	**Contact Energy Limited (#19)**	38	Electricity, gas, water and waste services
8.	**Genesis Energy Limited (#21)**	19	Electricity, gas, water and waste services
9.	**Mercury Energy Limited (#23)**	45	Electricity, gas, water and waste services
10.	**Vector Limited (#29)**	2, 59	Electricity, gas, water and waste services
11.	**Transpower New Zealand Limited (#36)**	20	Electricity, gas, water and waste services
12.	**Chorus Limited (#37)**	11	Information media and telecommunications
13.	**New Zealand Post Limited (#45)**	94	Transport, postal and warehousing
14.	**Kiwirail Holdings Limited (#58)**	4, 6, 7, 35, 43	Transport, postal and warehousing
15.	**Watercare Services Limited (#63)**	58	Electricity, gas, water and waste services
16.	**Sanford Limited (#87)**	15, 98, 101	Agriculture, forestry and fishing
17.	**The New Zealand Refining Company Limited (#108)**	22	Electricity, gas, water and waste services
18.	**City Care Limited (#120)**	28	Construction
19.	**Port of Tauranga Limited (#136)**	60, 64	Transport, postal and warehousing
20.	**Kiwi Property Group Limited (#149)**	41, 43	Rental, hiring and real estate services
21.	**Trade Me Group Limited (#152)**	41	Retail trade

Table 7: Deloitte Top 200 disclosure of climate change metrics cont.

Company name	Page number(s) of disclosures of metrics	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
22. **Ports of Auckland Limited (#160)**	30	Transport, postal and warehousing
23. **Landcorp Farming Limited (#187)**	27	Agriculture, forestry and fishing

Table 8: Deloitte Top 200 disclosure of climate change costs

Note: The McGuinness Institute used the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 2006) to classify the nature of business of each of the 2017 Deloitte Top 200 companies. There is some subjectivity inherent in making these classifications. The ANZSIC 2006 can be found at archive.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx.

Company name		Page number(s) of disclosures of costs	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
1.	**Z Energy Limited (#7)**	60	Electricity, gas, water and waste services
2.	**BP New Zealand Holdings Limited (#12)**	20, 23	Electricity, gas, water and waste services
3.	**Contact Energy Limited (#19)**	28	Electricity, gas, water and waste services
4.	**Genesis Energy Limited (#21)**	36	Electricity, gas, water and waste services
5.	**Mercury NZ Limited (#23)**	18, 60	Electricity, gas, water and waste services
6.	**Tasman Steel Holdings Limited (#40)**	5, 8, 18, 26	Manufacturing
7.	**Trustpower Limited (#41)**	51	Electricity, gas, water and waste services
8.	**Ballance Agri-Nutrients Limited (#52)**	32, 41,42	Agriculture, forestry and fishing
9.	**Pacific Aluminium (New Zealand) Limited (#59)**	21, 22, 24, 28	Mining
10.	**Oceana Gold Holdings (New Zealand) Limited (#78)**	6, 37	Mining
11.	**Oregon Group Limited (#83)**	3, 10, 20, 21, 23, 24, 25, 26	Nature of business not clear
12.	**Taumata Plantations Limited (#84)**	5, 8 , 19	Agriculture, forestry and fishing
13.	**Powerco Limited (#86)**	23	Electricity, gas, water and waste services
14.	**Kaingaroa Timberlands Limited (#94)**	12, 20, 22	Agriculture, forestry and fishing
15.	**Pan Pac Forest Products Limited (#97)**	18, 25	Agriculture, forestry and fishing
16.	**Matariki Forestry Group Limited (#100)**	6, 7, 8, 17, 19, 21, 22	Agriculture, forestry and fishing
17.	**Linde Holdings New Zealand Limited (#140)**	21	Manufacturing
18.	**Ports of Auckland Limited (#160)**	17	Transport, postal and warehousing
19.	**New Zealand Sugar Company Limited (#161)**	26	Manufacturing
20.	**Juken New Zealand Limited (#163)**	15, 16, 17	Agriculture, forestry and fishing

Table 8: Deloitte Top 200 disclosure of climate change costs cont.

Company name	Page number(s) of disclosures of costs	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
21. **Nelson Forests Limited (#181)**	1, 9	Agriculture, forestry and fishing
22. **Landcorp Farming Limited (#187)**	59	Agriculture, forestry and fishing

Table 9: Deloitte Top 200 disclosure of climate change controls

Note: The McGuinness Institute used the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 2006) to classify the nature of business of each of the 2017 Deloitte Top 200 companies. There is some subjectivity inherent in making these classifications. The ANZSIC 2006 can be found at archive.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx.

Company name		Text in annual report disclosing controls	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
1.	**Fonterra Co-operative Group Limited (#1)**	'Launched this year, Dairy Action for Climate Change was spearheaded by Dairy New Zealand in partnership with Fonterra and supported by the Ministry for Primary Industries. Among other activities, this will see farmers on 100 pilot farms given an indication of their specific footprint and how it changes over time.' (p. 61)	Agriculture, forestry and fishing
2.	**EBOS Group Limited (#3)**	'The partnership between EBOS and Greenfleet has seen the Group offset transport emissions from its Symbion business. 150,000 trees have been planted representing 42,000 tonnes of carbon offset, which is the equivalent of taking 9,800 cars off the road each year.' (p. 18)	Health care and social assistance
3.	**Foodstuffs North Island Limited (#5)**	'All new store construction and major refurbishments over the past three years have had natural refrigeration systems installed. These new systems use CO2 rather than synthetic gases, reducing refrigeration-related greenhouse gas emissions by 99%.' (p. 49)	Wholesale trade
4.	**The Warehouse Group Limited (#10)**	'We have achieved Certified Emissions Measurement and Reduction Scheme (CEMARS®) certification for these emissions, which recognises our commitment to managing and reducing our GHG emissions. To receive this certification our GHG emissions and emissions reduction plan were independently reviewed and audited.' (p. 60)	Retail trade
5.	**Mainfreight Limited (#13)**	'We measure the carbon emissions we generate across our New Zealand and European operations, and over time will establish measurement across our global operations. In seeking to reduce our emissions, Mainfreight's initiatives include: • Moving capacity from road to rail and coastal shipping • Route planning – using GPS in congested international cities, and introducing planning software to bring efficiencies to freight deliveries and pick-ups • Truck size management – using smaller trucks for distribution within cities and larger trucks between cities • Promoting off-peak distribution, particularly between cities and from ports • Efficient driving techniques promulgated through our driver training programmes • Vehicle maintenance guidelines for owner-drivers to promote efficient running of their trucks • The conversion of gas and diesel powered forklifts operating on our docks to electric, and the use of manual pallet trucks to replace forklifts where practicable.' (p. 60)	Transport, postal and warehousing

Table 9: Deloitte Top 200 disclosure of climate change controls cont.

Company name		Text in annual report disclosing controls	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
6.	**Vector Limited (#29)**	'The business has agreed on seven key goals to focus on initially. Each goal can be referenced back to our overarching priorities of climate change and transition to a low carbon economy and/or inclusion and equality.' (p. 44) 'Take urgent actions to combat climate change and its impacts: The transition to a low carbon economy will require commitment from the energy sector. With an extensive network of assets the business is also exposed to the physical risks of climate change. Both of these require a business response.' (p. 44) 'We are currently investigating a range of new technologies to support planned reduction initiatives. We are also using an environmental reporting system (BraveGen) to support the management of our carbon and other environmental data.' (p. 59)	Electricity, gas, water and waste services
7.	**PGG Wrightson Limited (#33)**	'Reduction of energy use and emissions with our vehicle fleet, transport operations, grain and seed processing, and building operations, being our key users of energy. Where possible more energy efficient technologies are employed, reducing our overall energy footprint and related greenhouse gas emissions. Vehicle efficiency is used as a key criteria in selecting our vehicle fleet and as processing operations and buildings are upgraded, more energy efficient technologies are incorporated.' (p. 32)	Agriculture, forestry and fishing
8.	**New Zealand Post Limited (#45)**	'Greenhouse Gas (GHG) Emissions New Zealand Post Limited meets the requirements of CEMARS® certification having measured its greenhouse gas emissions in accordance with ISO 14064-1: 2006 and committed to managing and reducing its emissions in respect to the operational emissions of its organisation within New Zealand. For the purposes of CEMARS certification (FY17). This includes Kiwibank and ReachMedia. Both will be removed from the scope of CEMARS certification in the FY18 reporting year. The Group has applied a baseline year of 2012-13 for its emissions inventory. The operational control consolidation approach has been used to account for operational emissions with reference to the methodology described in the GHG Protocol and ISO 14064-1:2006 standards.' (p. 94)	Transport, postal and warehousing
9.	**KiwiRail Holdings Limited (#58)**	'For example, Driver Advisory System (DAS) advises drivers when to brake, coast and accelerate, achieving significant fuel savings whilst keeping our trains running on-time.' (p. 44)	Transport, postal and warehousing

Table 9: Deloitte Top 200 disclosure of climate change controls cont.

Company name		Text in annual report disclosing controls	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
10.	**Watercare Services Limited (#63)**	'Aligned with Auckland Council's Low Carbon Action Plan, Watercare reports against a 1990 baseline year. In the early 2000s, we significantly upgraded the Mangere Wastewater Treatment Plant. The open-air oxidation ponds and sludge lagoons were replaced by land-based treatment, enabling the capture of methane and nitrous oxide emissions and making biogas generation possible. This resulted in a long-term decrease in greenhouse gas emissions by approximately 80% compared with the 1990 baseline.' (p. 58)	Electricity, gas, water and waste services
11.	**The New Zealand Refining Company Limited (#108)**	'Deliver a world-class Environmental performance: – Energy Efficiency – Emissions to air, water and ground – Greenhouse gas/climate change' (p. 18)	Electricity, gas, water and waste services
12.	**City Care Limited (#120)**	'Citycare Group's stated commitment to the protection of the environment, prevention of pollution and sustainability of natural resources is effected through its ISO14001 certified environmental management system.' (p. 28)	Construction
13.	**Ports of Auckland Limited (#160)**	'For instance, we have partnered with Forum for the Future to develop a sustainability framework that sets clear goals and a roadmap for achieving them.' (p. 29) 'This year we signed a collaboration agreement with the Energy Efficiency & Conservation Authority (EECA) and we are working with EECA to develop an energy management plan with the aim of further reducing energy consumption company-wide. We have completed our first energy audit, which identified potential energy savings (fuel and electricity) of up to four gigawatt hours annually. We have joined the Certified Emissions Measurement and Reduction Scheme (CEMARS) programme and, as part of this, we have prepared an emissions inventory. This will feed into the preparation of our energy management plan and be used to develop emission reduction goals. The emissions inventory is currently being peer reviewed and will be audited later in 2017.' (pp. 29–30)	Transport, postal and warehousing
14.	**Landcorp Farming Limited (#187)**	'Our strategy is to protect waterways and areas of native vegetation, and to plant new forests to capture greenhouse gas emissions.' (p. 26)	Agriculture, forestry and fishing

Table 9: Deloitte Top 200 disclosure of climate change controls cont.

Company name	Text in annual report disclosing controls	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
15. **Moana New Zealand Limited (#199)**	'Moana New Zealand is committed to reducing our impact on climate change by understanding what our carbon footprint is. Effective carbon management is a strong indicator of sustainability delivery, and we are committed to effectively managing all the resources we use, as well as stewardship of the natural resources that our business impacts, and relies on. For us, carbon responsibility and effective measurement of carbon is about taking into account the environmental factors related to atmospheric carbon-containing gases such as refrigerant gases and exhaust emissions from fossil-fuel burning, as well as improving our profitability through operational efficiencies.' (p. 19)	Agriculture, forestry and fishing

Table 10: Deloitte Top 200 disclosure of climate change targets

Note: The McGuinness Institute used the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 2006) to classify the nature of business of each of the 2017 Deloitte Top 200 companies. There is some subjectivity inherent in making these classifications. The ANZSIC 2006 can be found at archive.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx.

Company name	Text in annual report disclosing targets	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
1. **EBOS Group Limited (#3)**	'In June 2017, we expanded our partnership with Greenfleet by committing to offset the transport emissions from all EBOS operational businesses in both New Zealand and Australia.' (p. 18)	Health care and social assistance
2. **Spark New Zealand Limited (#9)**	'Environmental sustainability is key when it comes to Spark driving innovation in New Zealand. With a low-carbon future in mind, Spark is working to reduce its emissions by 25% by 2025 from FY16 levels. Last year Spark set an ambition to reduce carbon emissions by 25% by 2025 from FY16 levels.' (p. 30)	Information media and telecommunications
3. **Transpower New Zealand Limited (#36)**	'Target or Action: Hold sulphur hexafluoride (SF6) emissions at or below 0.8% of installed nameplate capacity'2017/18 Target: ≤ 0.8%' (p. 20)	Electricity, gas, water and waste services
4. **SKYCITY Entertainment Group Limited (#42)**	'GENERAL • Measure and establish baseline data for the 2015–2017 financial years for emissions, energy, waste and water by the end of the financial year ending 30 June 2018 • Improve staff perception of SKYCITY as being responsible with respect to the environment CARBON: • Measure carbon footprint (Scope 1 and 2) for the SKYCITY Group by the end of the financial year ending 30 June 2018 • Measure carbon footprint (Scope 3) by the end of the financial year ending 30 June 2020 • 10% reduction in Scope 1 and 2 emissions by the end of the financial year ending 30 June 2018 (from the 2015 financial year baseline) • 30% reduction in total emissions by the end of the financial year ending 30 June 2025.' (p. 25)	Arts and recreation services
5. **KiwiRail Holdings Limited (#58)**	'In November 2016, KiwiRail entered into partnership with the Energy Efficiency and Conservation Agency (EECA), reaching a key milestone in our sustainability drive. Our agreement commits KiwiRail to energy savings of 20 gigawatt hours (GWh) across the business by 2020, through initiatives that will lower fuel consumption and improve our work place efficiencies.' (p. 44)	Transport, postal and warehousing
6. **Sanford Limited (#87)**	'Reduce our carbon emission intensity by 2.5% across all of our operations.' (p. 25) 'We can reduce climate change impact through our operations and are striving to reduce our greenhouse gas emissions to 30% below 2005 levels by 2030.' (p. 96)'	Agriculture, forestry and fishing

Table 10: Deloitte Top 200 disclosure of climate change targets cont.

Company name	Text in annual report disclosing targets	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
7. **Ports of Auckland Limited (#160)**	'We have set a goal to become a zero-emission port and to become net positive for energy by 2040. This is an ambitious goal and will be difficult to meet, but we have taken our first steps.' (p. 29) 'To help us get started we set a number of short-term (up to three-year) targets. Our 2017 targets were designed to help us to build our internal capability through a number of pilot projects, and measure our current performance so we could set a baseline for our future work. The 2017 targets are summarised below: – Determine metrics and gather baseline data for energy, emissions, waste and water quality. Set 2018 and 2025 targets based on baseline data: In progress, but behind schedule – Begin to develop a plan for a zero-emissions container terminal, then complete and launch plan for zero-emissions terminal: In progress, but behind schedule – Commence the development of an Environmental Management System that is ISO 14001 compliant; work with a relevant local partner to develop and execute improvements to achieve ISO 14001 accreditation by June 2018. On schedule' (p. 29)	Transport, postal and warehousing

Table 11: Deloitte Top 200 disclosure of climate change initiatives

Note: The McGuinness Institute used the Australian and New Zealand Standard Industrial Classification 2006 (ANZSIC 2006) to classify the nature of business of each of the 2017 Deloitte Top 200 companies. There is some subjectivity inherent in making these classifications. The ANZSIC 2006 can be found at archive.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx.

Company name		Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
1.	**Fletcher Building Limited (#2)**	'Reducing carbon emissions is an important target for all Fletcher Building businesses, including Distribution, which is making advances at its PlaceMakers and Mico sites.' (p. 31)	Construction
2.	**Air New Zealand Limited (#6)**	'Continued areas of focus include fuel efficiency and reducing our carbon footprint, as well as the long-term health and wellbeing of Air New Zealand's workforce, which benefits not only our workplace, but the home life of our people.' (p. 11)	Transport, postal and warehousing
3.	**Z Energy Limited (#7)**	'WIN [What Is Next beyond 2020] is more far-reaching than ever before. We're looking at what skills we need to be successful in the next decade and what other market spaces Z could participate in. We're preparing for the gradual increase in the number of electric vehicles, and the need to reduce carbon emissions to combat climate change.' (p. 34)	Electricity, gas, water and waste services
4.	**Spark New Zealand Limited (#9)**	'A commitment to being an environmentally aware, low-carbon business, with a strong culture of diverse and engaged talent, and maintaining a strong governance framework helps differentiate Spark's business from its competitors.' (p. 24) 'Spark enables people and businesses to be more sustainable every day. Through digital services, Spark reduces the need for travel and transport and increases productivity and communication, helping to reduce emissions. Spark is committed to providing energy efficient and low-carbon ICT solutions for customers through the Cloud. By providing a more sustainable alternative to on-premise data servers, Spark enables customers to significantly cut down on their energy consumption. Spark works towards a more sustainable future by supporting Spark people and customers to better manage New Zealand's resources.' (p. 31)	Information media and communications

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name	Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
5. **Meridian Energy Limited (#14)**	'As a company that generates all of our electricity from renewable resources, we contribute meaningfully in New Zealand to two of the UN Sustainable Development Goals that are focused on climate change and renewable energy: SDG13 Climate Action and SDG7 Affordable and Clean Energy.' (p. 8) 'MERIDIAN'S CONTRIBUTION TO CLIMATE CHANGE AND PROTECTING THE ENVIRONMENT • Commitment to 100% renewable energy generation • Reduction target for our corporate emissions • Support transition to electric vehicles • Biodiversity projects related to our assets and local communities' (p. 12) 'Meridian's commitment to generating solely from renewable resources is not only a commercially sound strategy that delivers value for shareholders; it contributes to a better future for our country and helps us to support the urgent need to combat climate change.' (p. 16) 'Through Powershop Australia Meridian is providing maintenance and market service expertise to Hepburn Wind, Australia's first community-owned wind farm. In doing so we're helping a local group to take action on climate change and deliver long-lasting economic and social benefits to their community.' (p. 24)	Electricity, gas, water and waste services
6. **Contact Energy Limited (#19)**	'A key priority is taking the lead in decarbonisation of New Zealand's energy sector and working with industrial companies to find innovative ways for new technology and operational efficiencies to help propel this shift for their businesses and for New Zealand.' (p. 7) 'A competitive retail market, secure supply of electricity at reasonable prices, fresh water, and delivering on New Zealand's energy and climate change targets are important to our government stakeholders.' (p. 20) 'This year we obtained certification from the Climate Bonds Initiative that enables current and future investors the opportunity to invest in certified green debt instruments, recognising our significant level of renewable generation.' (p. 26)	Electricity, gas, water and waste services
7. **Mercury NZ Limited (#23)**	'Climate change and its impacts are a significant global and national challenge and we actively seek to influence better outcomes for all New Zealanders. We do this by focusing on making a positive contribution ourselves, and also by seeking to influence others to move New Zealand towards a low-carbon economy... This dependence on fossil fuel impacts negatively on New Zealanders through our balance of trade, it keeps consumers vulnerable to overseas oil supply and oil price shocks, and it is a constraint to New Zealand's efforts to reduce carbon emissions.' (p. 18)	Electricity, gas, water and waste services

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name		Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
8.	**Alliance Group Limited (#28)**	'Other upgrades are planned as part of our successful application to renew resource consents for Lorneville which will improve water quality in the long-term and also reduce boiler emissions.' (p. 26)	Agriculture, forestry and fishing
9.	**Vector Limited (#29)**	'As we explain later in this report, we have committed to all 17 United Nations Sustainable Development Goals, but for the short to medium term, we're focusing on seven that specifically support our strategic focus on decarbonisation and climate action and social inequalities. The more we pursue this approach, the greater the opportunities that we discover. For example, in an Australasian first, we will be deploying a solution that utilises recycled Nissan Leaf batteries as mobile battery units that act like diesel generators to support customers during planned and unplanned work on the network.' (p. 19) 'V2G [Vehicle to Grid] offers consumers whole new ways to use their vehicle. Charging the electric vehicle this way will change how people think about, and pay for, the energy they use as well as potentially improving the economics of vehicle ownership. This is a tangible example of technology convergence in a world focused on finding sustainable solutions to global challenges. By providing new ways for companies and individuals to think about electric vehicles, we're encouraging electrification of corporate fleets and potentially helping businesses to reduce their carbon impacts. This initiative aligns with our commitments to three United Nations Sustainable Development Goals: Affordable and Clean Energy; Industry Innovation and Infrastructure: and Sustainable Cities Communities.' (p. 27) 'To help manage both the risks and opportunities that we have identified, our board established a new sub-committee during FY17 to provide a governance focus on sustainability. Meanwhile, the business has identified several United Nations Sustainable Development Goals that we will actively pursue. We will also be expanding our ESG reporting. The inclusion of carbon reporting in this year's annual report is an example of this change.' (p. 43) 'During FY18 we will continue to compile data relevant to our indirect scope 3 emissions, establish carbon reduction targets and continue to mature our environmental reporting.' (p. 59)	Electricity, gas, water and waste services
10.	**Chorus Limited (#37)**	'We're an ultra-low carbon business. Our investment in better broadband networks is helping establish a platform for low carbon communities, by enabling communications options that enhance social interaction and change the way businesses operate, including teleworking and less car or plane travel. We're committed to a sustainable operating model and we report our carbon emissions annually to CDP, a global organisation that collects companies self- reported environment information.' (p. 11)	Information media and communications

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name		Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
11.	**Trustpower Limited (#41)**	'The role of hydro generation is particularly important in New Zealand's low carbon future, especially as the transport sector transitions to electric vehicles.' (p. 19)	Electricity, gas, water and waste services
12.	**T&G Global Limited (#46)**	'From environmental issues like energy, emissions, waste, water, biodiversity and transport to social initiatives like health, safety, community and diversity – it's a big part of who we are and how we exist.' (p. 29)	Agriculture, forestry and fishing
13.	**Ballance Agri-Nutrients Limited (#52)**	'This included consulting international experts in the high-efficiency, low carbon footprint technology used now in ammonia-urea production.' (p. 17) 'Ballance is also continuing to grow sales of industrial co-products and by-products including sulphuric acid, hydrofluosilicic acid, industrial urea and the GOCLEAR® exhaust system additive that reduces N0x (Oxides of Nitrogen) missions from diesel engines.' (p. 19)	Agriculture, forestry and fishing

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name	Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
14. KiwiRail Holdings Limited (#58)	'Delivering freight between Auckland and Wellington can require three locomotive services, switching from diesel to electric to diesel again due to a small section of electrified line between Te Rapa and Palmerston North. Effectively, we are operating a railway within a railway, an inefficient method which impacts negatively on our customers' operations. In line with our strategy to standardise, simplify and invest, the KiwiRail Board made the decision to replace an ageing electric locomotive fleet with new generation diesel locomotives after two years of external and internal investigation and consultation. The all diesel fleet is expected to be fully in operation by 2019. While there may be a small increase in carbon emissions in the initial stages of the diesel-only service, improved reliability is the most important criteria for customers deciding to use rail and should see more volumes transported by rail in the longer-term, lowering New Zealand's total emissions.' (p. 32) 'Our Steel Wheels programme for customers provides a transparent report on the environmental impact of rail through avoided truck trips and reduced CO2 emissions.' (p. 40) 'Since 2010, KiwiRail has reduced the carbon intensity of its freight operations by 23%. To maintain this significant momentum, and to boost the natural advantages of our eco-friendly services, KiwiRail is developing a business-wide Energy Management Plan. The plan signals our commitment to bettering our resource and operational efficiency through the implementation of long-term targets and objectives for energy efficient initiatives, including the goal of reducing our direct carbon emissions.' (pp. 43–44). 'The next stage of DAS will investigate use of the programme on passenger trains and the application of specific speed restrictions according to the locomotive's class, further improving fuel efficiency across New Zealand's rail operations. Planning is underway to install a similar fuel efficiency programme on the Interislander ferries and to undertake an efficiency audit which will assess the fuel usage and engine activity of our fleet to deliver fuel savings.' (p. 44)	Transport, postal and warehousing

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name	Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
15. **Watercare Services Limited (#63)**	'Our stakeholders considered the issues below as material in 2016/17: Policy: • Adaptive responses to the impacts of climate change' (p. 5) 'Adapting to climate change impacts: In 2016/17, Watercare increased its activities towards understanding what climate change adaptation is required for water and wastewater services in Auckland. This included: • Secondment of two scientists from National Institute of Water and Atmospheric Research (Niwa) to analyse Watercare's historical water storage data and develop predictive models for future • Collaborating with the Auckland Council group to begin developing a vulnerability assessment for the region • Developing an approach to climate change adaptation and mitigation which will be finalised and implemented in 2017/18.' (p 58)	Electricity, gas, water and waste services
16. **Auckland International Airport Limited (#65)**	'We established a transitional waste facility to improve the sorting of aeronautical biosecurity waste and successfully completed a three-year energy savings agreement with the Energy Efficiency and Conservation Authority (EECA). We also undertook a new climate change analysis to increase our understanding and minimise our risk in relation to climate change events.' (pp. 30–31)	Transport, postal and warehousing
17. **Tegel Group Holdings Limited (#68)**	'Poultry meat production has a significantly smaller environmental footprint than other types of meat protein. It is an environmentally efficient protein when considering such factors as greenhouse gas emissions, feed, and water usage. At Tegel we aim to strengthen these credentials through the way we operate our business.' (p. 14)	Agriculture, forestry and fishing
18. **Steel & Tube Holdings Limited (#80)**	'We also place a strong emphasis on efficient freight management, not only for the efficiency of Steel & Tube, but to reduce kilometres travelled and carbon emissions from our vehicles.' (p. 20)	Manufacturing
19. **Sanford Limited (#87)**	'We have a jointly funded SPATnz Primary Growth Partnership Programme with the Ministry for Primary Industries (MPI), which has been highly successful, yielding a wide range of high performing mussel strains selected for traits valued by farmers, processors and consumers (refer Outcome 1 – Sustainable seafood business). The benefits of SPATnz also include protecting Sanford from the future insecurities of spat supply, which could be created by climate change impacts.' (p. 101)	Agriculture, forestry and fishing

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name	Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
20. **NZME Limited (#98)**	'Our footprint on the environment is something NZME takes seriously. NZME Print has been at the forefront of this for some years now and has again been awarded the Enviro-Mark Gold certificate for excellence in environmental responsibility. This is achieved after satisfying a range of criteria including having environmental objectives, targets and KPIs; implementing environmental programmes; monitoring environmental aspects; having emergency preparedness and response processes; and leadership and commitment from top management. Last year, NZME Print was recognised for the site's longstanding commitment and compliance to the Enviro-Mark scheme of which it has been a participant for the past 11 years. Our building at NZME Central has a 5 Green Star – New Zealand Excellence – rating which is the second highest rating under the Green Star system that takes into consideration the building or fitout's rating in nine categories: Energy, Water, Materials, Indoor Environment Quality (IEQ), Transport, Land Use & Ecology, Management, Emissions, and Innovation.' (p. 29)	Information media and communications
21. **Scales Corporation Limited (#104)**	'Within New Zealand, stakeholders are expecting the agriculture sector to embrace an emphasis on environmentally friendly, sustainable and high value production. These targets will not only ensure New Zealand is making best use of its current natural resources but also create long lasting environmental benefits. This is also reflected in recent government announcements covering areas such as climate change and expectations of foreign investment.' (p. 4)	Manufacturing
22. **The New Zealand Refining Company Limited (#108)**	'With change comes opportunity. In a world of rising carbon prices and with the shift to de-carbonise energy use, we continue to study new business opportunities as they arise. In this respect, we see potential in leveraging our capabilities, equipment and knowledge to produce lower carbon fuels. We are looking closely at options to produce bio-jet fuel and bio-diesel for the New Zealand market, and we believe that, as a key player in the fuels market, we have a real contribution to make in the development of these alternative fuels. We also acknowledge the role we can play in helping New Zealand achieve its ambitions for a low carbon future and have already signalled to the Government our desire to be at the table with the other key players who will be instrumental in driving the next phase of evolution in the fuels market.' (p. 16)	Electricity, gas, water and waste services
23. **Tourism Holdings Limited (#111)**	'We also have five key sustainability foci: • Climate Change' (p. 16)	Arts and recreation services

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name	Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
24. **City Care Limited (#120)**	'This includes a firm commitment to the intent of the 'Paris Agreement' related to mitigation and adaptation of greenhouse gas emissions through the commencement of a change programme around the gradual replacement of petrol-driven hand tools, in preference for electric hand tools and the retrofit of inverters on work trucks/ vans instead of petrol-charged generators, where feasible.' (p. 28)	Construction
25. **Port of Tauranga Limited (#136)**	'The efficiencies that larger vessels bring are significant, with the associated savings in both fuel usage and carbon emissions critical to ensuring shipping services are sustainable, both commercially and environmentally.' (pp. 11–12) 'This relationship with rail is typical of the Port's desire to find long-term solutions to environmental challenges. working with our partners to minimise our impact on our surroundings.' (p. 60)	Transport, postal and warehousing
26. **Kiwi Property Group Limited (#149)**	'Our sustainability efforts mark us as a leader in the New Zealand property sector. To continue our 15-year programme, this year we rolled out 20 new electric vehicle charging stations at our shopping centres, including four Tesla superchargers at The Base (a first for New Zealand).' (p. 35) 'Achieved A- rating in the carbon disclosure project: Retained highest rating of any New Zealand listed entity. Included in the CDP 2016 Climate Disclosure Leadership List.' (p. 41) 'Kiwi Property takes climate change seriously and we understand that as both a business owner and property owner we have a responsibility to treat our planet well. In doing so, we ensure our properties are resilient, and that strategic measures are implemented to reduce our carbon footprint and, ultimately, our impact on the communities and environments in which we operate.' (p. 43)	Rental, hiring and real estate services
27. **Unison Networks Limited (#158)**	'This year we have commissioned three electric vehicle (EV) fast chargers across our network in Hastings, Napier and Rotorua. We have three more planned in the next financial year. We know that for consumers who want to invest in new technologies to deliver environmental benefits, by far the biggest emissions savings can be achieved from EVs. We are continuing to research new technologies and how they will impact the energy future.' (p. 20)	Electricity, gas, water and waste services

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name	Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
28. Ports of Auckland Limited (#160)	'Innovating, doing things better and minimising our impact on the environment are the goals that drive us. Our vision is to become a leading sustainable port at a global level, woven into the fabric of Auckland and driving the city's sustainable growth to improve the environment for future generations.' (p. 12) 'We have a few initiatives underway which will help us take the first, small steps. This year we completed another EECA partnership project, the installation of LED floodlights on our general cargo wharves. This project is now in the evaluation stage, to assess if the actual energy savings match the projected savings of 1.17 gigawatt hours of electricity – which would be enough to run 147 Auckland houses for a year. In the next two years we will install LED floodlights in the container terminal as part of our automation project. All of the energy savings delivered by the LED project are over and above those identified in our CEMARS energy audit. Our new automated straddles, which will enter service in 2019, are expected to deliver up to 10% in fuel savings. Our goal is to outperform our sector where possible, and during the past year we have made a number of key improvements... We have bought our first two electric vehicles (small vans) which are now being used by our Marine and Safety & Well-Being Teams. Over time we will replace all our petrol and diesel auxiliary vehicles with electric vehicles. This approach of replacing older equipment with more sustainable options is being explored across the business. We will need to buy a new tug in the next few years, so we are investigating options for hybrid or alternative fuel propulsion systems to reduce emissions.' (p. 30)	Transport, postal and warehousing
29. NZPM Group Limited (#178)	'The majority of the Group's vehicle fleet is less than four years old with each newer vehicle generally having lower emissions than the older vehicle. Over the past 24 months, a programme to progressively upgrade our forklift fleet has replaced approximately one-half of our forklifts with newer lower emission units generally having lower emissions than the older vehicle.' (p. 17)	Retail trade

Table 11: Deloitte Top 200 disclosure of climate change initiatives cont.

Company name	Text in annual report disclosing initiatives	Nature of business according to the Australian and New Zealand Standard Industrial Classification 2006
30. Landcorp Farming Limited (#187)	'Land and natural resources owned and/or managed by Pāmu, and its impact on the broader environment through greenhouse gas emissions and farm run-off.' (p. 6) 'Primary producers share the concerns of other sectors in New Zealand society. They are taking many actions in response to central and regional government policy requirements, and to industry initiatives including the Sustainable Dairying Water Accord 2013. New Zealand's agricultural scientists are at the forefront of international research into possible methods of biologically created GHG emissions reduction. In late 2016, the Parliamentary Commissioner for the Environment noted that, globally, a scientific solution was not yet in sight. She advocated an increased focus by New Zealand on GHG emissions capture through new plantation forestry and greater allowance for native species regeneration.' (p. 8)	Agriculture, forestry and fishing
31. AsureQuality Limited (#191)	'AsureQuality's approach to corporate social responsibility focuses on three broad strategic objectives: > Reducing the Company's environmental impact... AssureQuality has identified a number of specific programmes and initiatives aimed at contributing to the achievement of these objectives. For example: reducing the Company's carbon footprint, use of diesel cars in the Company's corporate vehicle fleet...' (pp. 22–23)	Professional, scientific and technical services
32. Moana New Zealand Limited (#199)	'One project, involving the installation of LED lighting in the coated products factory, has significantly reduced carbon emissions and energy use' (p. 15)	Agriculture, forestry and fishing

Table 12: Deloitte Top 200 companies listed on the NZSX in 2016 or 2017

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Companies on the NZSX as at 31 December 2017 [51]	Companies on the NZSX as at 31 December 2016 [51]
1.	Fonterra Co-operative Group Limited		
2.	Fletcher Building Limited [FBU]	#	+
3.	EBOS Group Limited [EBO]	#	+
4.	Woolworths New Zealand Group Limited		
5.	Foodstuffs North Island Limited		
6.	Air New Zealand Limited [AIR]	#	+
7.	Z Energy Limited [ZEL]	#	+
8.	Fulton Hogan Limited		
9.	Spark New Zealand Limited [SPK]	#	+
10.	The Warehouse Group Limited [WHS]	#	+
11.	Foodstuffs South Island Limited		
12.	BP New Zealand Holdings Limited		
13.	Mainfreight Limited [MFT]	#	+
14.	Meridian Energy Limited [MEL]	#	+
15.	ZESPRI Group Limited		
16.	ExxonMobil New Zealand Holdings		
17.	Farmlands Co-operative Society Limited		
18.	Silver Fern Farms Co-Operative Limited		
19.	Contact Energy Limited [CEN]	#	+
20.	Vodafone New Zealand Limited		
21.	Genesis Energy Limited [GNE]	#	+
22.	Infratil Limited [IFT]	#	+
23.	Mercury NZ Limited [MCY]	#	+
24.	Downer New Zealand Limited		
25.	ANZCO Foods Limited		
26.	British American Tobacco Holdings (New Zealand) Limited		
27.	Nuplex Industries Limited		
28.	Alliance Group Limited		
29.	Vector Limited [VCT]	#	+
30.	Toyota New Zealand Limited		
31.	Datacom Group Limited		
32.	Haier New Zealand Investment Holding Company Limited		
33.	PGG Wrightson Limited [PGW]	#	+
34.	Methanex New Zealand Limited		
35.	OJI Fibre Solutions (NZ) Limited		

Table 12: Deloitte Top 200 companies listed on the NZSX in 2016 or 2017 cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Companies on the NZSX as at 31 December 2017 [51]	Companies on the NZSX as at 31 December 2016 [51]
36.	Transpower New Zealand Limited		
37.	Chorus Limited [CNU]	#	+
38.	Bidfood Limited		
39.	Bunnings Limited		
40.	Tasman Steel Holdings Limited		
41.	Trustpower Limited [TPW]	#	+
42.	SKYCITY Entertainment Group Limited [SKC]	#	+
43.	Harvey Norman Limited		
44.	SKY Network Television Limited [SKT]	#	+
45.	New Zealand Post Limited		
46.	T&G Global Limited [TGG]	#	+
47.	Goodman Fielder New Zealand Limited		
48.	Fisher & Paykel Healthcare Corporation Limited [FPH]	#	+
49.	The Colonial Motor Company Limited [CMO]	#	+
50.	Open Country Dairy Limited		
51.	Mitre 10		
52.	Ballance Agri-Nutrients Limited		
53.	Shell		
54.	Synlait Milk Limited [SML]	#	+
55.	Apple Sales New Zealand		
56.	Two Degrees Mobile Limited		
57.	H. J. Heinz Company (New Zealand) Limited		
58.	KiwiRail Holdings Limited		
59.	Pacific Aluminium (New Zealand) Limited		
60.	Ford Motor Company of New Zealand Limited		
61.	Sime Darby Motor Group (NZ) Limited		
62.	Coca-Cola Holdings NZ Limited		
63.	Watercare Services Limited		
64.	Westland Co-operative Dairy Company Limited		
65.	Auckland International Airport Limited [AIA]	#	+
66.	Ravensdown Limited		
67.	Ingram Micro New Zealand Holdings		
68.	Tegel Group Holdings Limited [TGH]	#	+
69.	Briscoe Group Limited [BGR]	#	+
70.	Holden New Zealand Limited		
71.	Market Gardeners Limited		

Table 12: Deloitte Top 200 companies listed on the NZSX in 2016 or 2017 cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Companies on the NZSX as at 31 December 2017 [51]	Companies on the NZSX as at 31 December 2016 [51]
72.	Lion - Beer, Spirits & Wine (NZ) Limited		
73.	Imperial Tobacco New Zealand Limited		
74.	The A2 Milk Company Limited [ATM]	#	+
75.	Freightways Limited [FRE]	#	+
76.	Restaurant Brands New Zealand Limited [RBD]	#	+
77.	Beca		
78.	Oceana Gold Holdings (New Zealand) Limited		
79.	Broadspectrum (New Zealand) Limited		
80.	Steel & Tube Holdings Limited [STU]	#	+
81.	DB Breweries Limited		
82.	Green Cross Health Limited [GXH]	#	+
83.	Oregon Group Limited		
84.	Taumata Plantations Limited		
85.	Opus International (NZ) Limited		
86.	Powerco Limited		
87.	Sanford Limited [SAN]	#	+
88.	Waste Management NZ Limited		
89.	Kura Limited		
90.	Kathmandu Holdings Limited [KMD]	#	+
91.	Coles Group New Zealand Holdings Limited		
92.	LWC Limited		
93.	Samsung		
94.	Kaingaroa Timberlands Limited		
95.	Spotless Holdings (NZ) Limited		
96.	Frucor Suntory New Zealand Limited		
97.	Pan Pac Forest Products Limited		
98.	NZME Limited [NZM]	#	+
99.	Nestle New Zealand Limited		
100.	Matariki Forestry Group		
101.	Mitsubishi Motors New Zealand Limited		
102.	Toll Group (NZ) Limited		
103.	Orora NZ Holdings Limited		
104.	Scales Corporation Limited [SCL]	#	+
105.	OMV New Zealand Limited		
106.	Fairfax New Zealand Limited		
107.	Mazda Motors of New Zealand Limited		

Table 12: Deloitte Top 200 companies listed on the NZSX in 2016 or 2017 cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Companies on the NZSX as at 31 December 2017 [51]	Companies on the NZSX as at 31 December 2016 [51]
108.	The New Zealand Refining Company Limited [NZR]	#	+
109.	Independent Liquor (NZ) Limited		
110.	Pact Group Holdings (NZ) Limited		
111.	Tourism Holdings Limited [THL]	#	+
112.	HEB Construction Limited		
113.	Bupa Care Services NZ Limited		
114.	CDC Pharmaceuticals Limited		
115.	Television New Zealand Limited		
116.	DHL Holdings (New Zealand) Limited		
117.	Wesfarmers Industrial & Safety Holdings NZ Limited		
118.	OfficeMax Holdings Limited		
119.	Orion		
120.	City Care Limited		
121.	Mondelez New Zealand Investments		
122.	Mediaworks Investments Limited		
123.	Xero Limited [XRO]	#	+
124.	IBM New Zealand Limited		
125.	Mercedes-Benz New Zealand Limited		
126.	Northpower		
127.	Ryman Healthcare Limited [RYM]	#	+
128.	The Tatua Co-operative Dairy Company Limited		
129.	Nissan New Zealand Limited		
130.	McConnell Dowell Construction Limited		
131.	GPC Asia Pacific (NZ) Holdings Limited		
132.	Allied Foods (N.Z.) Limited		
133.	Hewlett-Packard New Zealand		
134.	McDonald's Restaurants (New Zealand) Limited		
135.	AWF Madison Group Limited [AWF]	#	+
136.	Port of Tauranga Limited [POT]	#	+
137.	Delegat Group Limited [DGL]	#	+
138.	New Zealand Wool Services International Limited		
139.	Treasury Wine Estates (Matua) Limited		
140.	Linde Holdings New Zealand Limited		
141.	Enviro (NZ) Limited		
142.	APHG NZ Investments Limited		
143.	Metro Performance Glass Limited [MET]	#	+

Table 12: Deloitte Top 200 companies listed on the NZSX in 2016 or 2017 cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Companies on the NZSX as at 31 December 2017 [51]	Companies on the NZSX as at 31 December 2016 [51]
144.	Nobilo Holdings		
145.	Pernod Ricard Winemakers New Zealand Limited		
146.	Kordia Group Limited		
147.	Visionstream Pty Limited (New Zealand Branch)		
148.	Hallenstein Glasson Holdings Limited [HLG]	#	+
149.	Kiwi Property Group Limited [KPG]	#	+
150.	Martin-Brower New Zealand Holdings		
151.	Sumitomo Forestry NZ Limited		
152.	Trade Me Group Limited [TME]	#	+
153.	JB Hi-Fi NZ Limited		
154.	Abano Healthcare Group Limited [ABA]	#	+
155.	C B Norwood Distributors Limited		
156.	CablePrice (NZ) Limited		
157.	Electrix Limited		
158.	Unison Networks Limited		
159.	ACI Operations NZ Limited		
160.	Ports of Auckland Limited		
161.	New Zealand Sugar Company Limited		
162.	Mars New Zealand Limited		
163.	Juken New Zealand Limited		
164.	Asaleo Care Limited		
165.	Smiths City Group Limited [SCY]	#	+
166.	Turners Automotive Group Limited [TRA]	#	+
167.	Compass Group New Zealand Limited		
168.	Weyville Holdings Limited		
169.	Christchurch International Airport Limited		
170.	Ashburton Trading Society Limited		
171.	Dimension Data New Zealand Limited		
172.	Bridgestone New Zealand Limited		
173.	Skellerup Holdings Limited [SKL]	#	+
174.	Sealed Air (New Zealand)		
175.	Unilever New Zealand Limited		
176.	Glencore Agriculture (NZ) Limited		
177.	Airways Corporation of New Zealand Limited		
178.	NZPM Group Limited		
179.	Rexel New Zealand Limited		

Table 12: Deloitte Top 200 companies listed on the NZSX in 2016 or 2017 cont.

2017 Deloitte Top 200 companies (as at 31 December 2017) [200]		Companies on the NZSX as at 31 December 2017 [51]	Companies on the NZSX as at 31 December 2016 [51]
180.	Oceanic Communications Limited		
181.	Nelson Forests Limited		
182.	Livestock Improvement Corporation Limited		
183.	Orion Health Group Limited [OHE]	#	+
184.	OTPP New Zealand Forest Investments Limited		
185.	Skyline Enterprises Limited		
186.	Philip Morris (New Zealand) Limited		
187.	Landcorp Farming Limited		
188.	Kerbside Papers Limited		
189.	Tango Holdings NZ		
190.	Seeka Limited [SEK]	#	+
191.	AsureQuality Limited		
192.	Amcor Flexibles (New Zealand) Limited		
193.	Dairy Goat Co-operative (N.Z.) Limited		
194.	C 3 Limited		
195.	Wellington Electricity Distribution Network Limited		
196.	Huawei Technologies (New Zealand) Company Limited		
197.	New Zealand Investment Holdings Limited		
198.	Tasman Liquor Company Limited		
199.	Moana New Zealand Limited		
200.	Honda New Zealand Limited		

Table 13: Deloitte Top 200 companies that cannot file documents on the Companies Register

Note: This list has been included to highlight the fact that companies that are not required to file documents on the Companies Register cannot opt to file their documents voluntarily – the Companies Register will not accept them.

2016 Deloitte Top 200 companies that cannot file documents on the Companies Register [52]

1. Beca Group Limited
2. Bupa Care Services NZ Limited
3. CB Norwood Distributors Limited
4. CDC Pharmaceuticals Limited
5. Christchurch International Airport Limited
6. City Care Limited
7. Comvita Limited
8. Datacom Group Limited
9. Dunedin City Holdings Limited Group
10. EBOS Group Limited
11. ExxonMobil New Zealand Holdings
12. Farmlands Co-operative Society Limited
13. Foodstuffs North Island Limited
14. Foodstuffs South Island Limited
15. Fujitsu New Zealand Limited
16. Genesis Energy Limited
17. Goodman Property Trust
18. Housing New Zealand Corporation
19. Infratil Limited
20. Kiwirail Holdings Limited
21. Kordia Group Limited
22. Landcorp Farming Limited
23. Linde Holdings New Zealand Limited
24. Mercury NZ Limited
25. Methanex New Zealand Limited
26. Moana New Zealand Limited
27. National Institute of Water and Atmospheric Research Limited
28. Northpower Limited Group
29. NZPM Group Limited
30. Opus International (NZ) Limited
31. Orion New Zealand Limited Group
32. Pan Pac Forest Products Limited
33. Port of Tauranga Limited Group
34. Ports of Auckland Limited
35. Powerco Limited
36. Precinct Properties New Zealand Limited
37. Pumpkin Patch Limited
38. Restaurant Brands New Zealand Limited
39. Sealed Air (New Zealand)
40. SKYCITY Entertainment Group Limited
41. Solid Energy New Zealand Limited
42. Te Rūnanga o Ngāi Tahu and Ngāi Tahu Charitable Trust
43. Te Wānanga o Aotearoa Te Kuratini o Ngā Waka (Te Wānanga o Aotearoa)
44. Television New Zealand Limited
45. The New Zealand Automobile Association Incorporated
46. Tourism Holdings Limited
47. Transpower New Zealand Limited
48. Trustpower Limited
49. Unison Networks Limited
50. Watercare Services Limited
51. Wellington Electricity Distribution Network Limited
52. Z Energy Limited

Appendix 2: Government departments [31]

Table 14: Government departments

Source: Schedule 1 of the State Sector Act 1988.

Government Departments [31]	
1.	Crown Law Office
2.	Department of Conservation
3.	Department of Corrections
4.	Department of Internal Affairs
5.	Department of the Prime Minister and Cabinet
6.	Education Review Office
7.	Government Communications Security Bureau
8.	Inland Revenue
9.	Land Information New Zealand
10.	Ministry of Business, Innovation & Employment
11.	Ministry for Culture & Heritage
12.	Ministry of Defence
13.	Ministry of Education
14.	Ministry for the Environment
15.	Ministry of Foreign Affairs & Trade
16.	Ministry of Health
17.	Ministry of Justice
18.	Ministry for Pacific Peoples
19.	Ministry for Primary Industries
20.	Ministry of Social Development
21.	Ministry of Transport
22.	Ministry for Women
23.	New Zealand Customs Service
24.	New Zealand Security Intelligence Service
25.	Oranga Tamariki Ministry for Children*
26.	Serious Fraud Office
27.	State Services Commission
28.	Stats NZ
29.	Te Kāhui Whakamana Rua Tekau mā Iwa–Pike River Recovery Agency*
30.	Te Puni Kōkiri
31.	The Treasury

* Please note that two government departments were only established in 2017 and 2018 and therefore do not have 2017 annual reports.

Table 15: Government department disclosure of climate change information

Government departments that mentioned 'emission', 'carbon', and/or 'climate' in the context of climate change [11]
1. Department of Conservation
2. Inland Revenue
3. Ministry for Primary Industries
4. Ministry for the Environment
5. Ministry of Business, Innovation and Employment
6. Ministry of Defence
7. Ministry of Transport
8. State Services Commission
9. Stats NZ
10. Te Puni Kokiri
11. The Treasury

Government departments that did not mention 'emission', 'carbon', and/or 'climate' in the context of climate change [18]
1. Crown Law Office
2. Department of Corrections
3. Department of Internal Affairs
4. Department of the Prime Minister and Cabinet
5. Education Review Office
6. Government Communications Security Bureau
7. Land Information New Zealand
8. Ministry for Culture and Heritage
9. Ministry for Pacific Peoples
10. Ministry for Women
11. Ministry of Education
12. Ministry of Foreign Affairs and Trade
13. Ministry of Health
14. Ministry of Justice
15. Ministry of Social Development
16. New Zealand Customs Service
17. New Zealand Security Intelligence Service
18. Serious Fraud Office

Table 16: Government department disclosure of climate change information by category

Government departments that disclosed climate change and/or emission risks [6]	Government departments that disclosed climate change and/or emission metrics [5]
1. Department of Conservation 2. Inland Revenue 3. Ministry for Primary Industries 4. Ministry for the Environment 5. Ministry of Transport 6. State Services Commission	1. Ministry for Primary Industries 2. Ministry for the Environment 3. Ministry of Business, Innovation and Employment 4. Ministry of Transport 5. State Services Commission

Government departments that disclosed climate change and/or emission costs [3]	Government departments that disclosed climate change and/or emission controls [3]
1. Ministry for Primary Industries 2. Ministry for the Environment 3. Ministry of Defence	1. Department of Conservation 2. Ministry for Primary Industries 3. Ministry for the Environment

Government departments that disclosed climate change and/or emission targets [3]	Government departments that disclosed climate change and/or emission initiatives [9]
1. Ministry for Primary Industries 2. Ministry for the Environment 3. Ministry of Business, Innovation and Employment	1. Department of Conservation 2. Ministry for Primary Industries 3. Ministry for the Environment 4. Ministry of Business, Innovation and Employment 5. Ministry of Defence 6. Ministry of Transport 7. Stats NZ 8. Te Puni Kokiri 9. The Treasury

Table 17: Government department disclosure of climate change information by number of categories

Note: There were no organisations that disclosed four or five out of six categories.

Government departments that disclosed all six of climate change risks, metrics, costs, controls, targets and initiatives [2]	Government departments that disclosed three out of six of climate change risks, metrics, costs, controls, targets and initiatives [3]
1. Ministry for Primary Industries 2. Ministry for the Environment	1. Department of Conservation 2. Ministry of Business, Innovation and Employment 3. Ministry of Transport

Government departments that disclosed two out of six of climate change risks, metrics, costs, controls, targets and initiatives [2]	Government departments that disclosed one out of six of climate change risks, metrics, costs, controls, targets and initiatives [4]
1. Ministry of Defence 2. State Services Commission	1. Inland Revenue 2. Stats NZ 3. Te Puni Kokiri 4. The Treasury

Appendix 3: Crown agents and Crown entities [65]

Under the Crown Entities Act, there are five different categories of Crown entity. These are: (i) statutory crown agents, (ii) crown entity companies (iii) crown entity subsidiaries, (iv) school boards of trustees and (v) Tertiary Education Institutions.

Please note that, unlike the other Crown agents and Crown entities, the Crown agent listed as 'District Health Boards' and the Crown entity listed as 'Crown Research Institutes' are not individual organisations. 'District Health Boards' is made up of 20 DHBs and 'Crown Research Institutes' is made up of seven CRIs. Each of these DHBs and CRIs produced an individual annual report, which was then analysed as part of the collective.

Table 18: Crown agents

Source: Schedule 1, Part 1 of Crown Entities Act 2004.

Crown agents [27]	
1.	Accident Compensation Corporation
2.	Callaghan Innovation
3.	Civil Aviation Authority of New Zealand
4.	District Health Boards*
5.	Earthquake Commission
6.	Education New Zealand
7.	Energy Efficiency and Conservation Authority
8.	Environmental Protection Authority
9.	Fire and Emergency New Zealand
10.	Health Promotion Agency
11.	Health Quality and Safety Commission
12.	Health Research Council of New Zealand
13.	Housing New Zealand Corporation
14.	Maritime New Zealand
15.	New Zealand Antarctic Institute
16.	New Zealand Blood Service
17.	New Zealand Qualifications Authority
18.	New Zealand Tourism Board
19.	New Zealand Trade and Enterprise
20.	New Zealand Transport Agency
21.	New Zealand Walking Access Commission
22.	Pharmaceutical Management Agency
23.	Real Estate Agents Authority
24.	Social Workers Registration Board

* The 20 individual district health boards that collectively make up the Crown entity District Health Boards (each with an individual annual report) are: Auckland District Health Board, Bay of Plenty District Health Board, Canterbury District Health Board, Capital and Coast District Health Board, Counties Manukau District Health Board, Hawkes Bay District Health Board, Hutt Valley District Health Board, Lakes District Health Board, Mid Central District Health Board, Nelson-Marlborough District Health Board, Northland District Health Board, South Canterbury District Health Board, Southern District Health Board, Tairawhiti District Health Board, Taranaki District Health Board, Waikato District Health Board, Wairarapa District Health Board, Waitemata District Health Board, West Coast District Health Board and Whanganui District Health Board (MoH, 2016).

Table 18: Crown agents cont.

Crown agents [27]	
25.	Sport and Recreation New Zealand
26.	Tertiary Education Commission
27.	WorkSafe New Zealand

Table 19: Crown entities

Source: State Services Commission (SSC). (2015). *Statutory Crown Entities: A Guide for Ministers*. Retrieved 6 June 2018 from www.ssc.govt.nz/cegmos4.

Crown entities [38]	
1.	Accreditation Council
2.	Arts Council of New Zealand Toi Aotearoa
3.	Broadcasting Commission
4.	Broadcasting Standards Authority
5.	Children's Commissioner
6.	Commerce Commission
7.	Crown Irrigation Investments Limited
8.	Crown Research Institutes*
9.	Drug Free Sport New Zealand
10.	Electoral Commission
11.	Electricity Authority
12.	External Reporting Board
13.	Families Commission
14.	Financial Markets Authority
15.	Government Superannuation Fund Authority
16.	Guardians of New Zealand Superannuation
17.	Health and Disability Commissioner
18.	Heritage New Zealand Pouhere Taonga
19.	Human Rights Commission
20.	Independent Police Conduct Authority
21.	Law Commission
22.	Museum of New Zealand Te Papa Tongarewa Board
23.	New Zealand Artificial Limb Service
24.	New Zealand Film Commission
25.	New Zealand Lotteries Commission
26.	New Zealand Productivity Commission

* The seven individual Crown Research Institutes that collectively make up the Crown entity Crown Research Institutes are: AgResearch Limited, Institute of Environmental Science and Research Limited, Institute of Geological and Nuclear Sciences Limited, Landcare Research New Zealand Limited, National Institute of Water and Atmospheric Research, The New Zealand Institute for Plant and Food Research Limited and New Zealand Forest Research Institute Limited (Science New Zealand, n.d.).

Table 19: Crown entities cont.

Crown entities [38]	
27.	New Zealand Symphony Orchestra
28.	New Zealand Venture Investment Fund Limited
29.	Office of Film and Literature Classification
30.	Privacy Commissioner
31.	Public Trust
32.	Radio New Zealand Limited
33.	Retirement Commissioner
34.	Takeovers Panel
35.	Television New Zealand Limited
36.	Te Reo Whakapuaki Irirangi (Māori Broadcasting Funding Agency)
37.	Te Taura Whiri I Te Reo Māori (Māori Language Commission)
38.	Transport Accident Investigation Commission

Table 20: Crown agent and Crown entity disclosure of climate change information

Crown agents and Crown entities that mentioned 'emission', 'carbon' and/or 'climate' in the context of climate change [12]

1. Civil Aviation Authority of New Zealand
2. Crown Research Institutes
3. District Health Boards
4. Electricity Authority
5. Energy Efficiency and Conservation Authority
6. Environmental Protection Authority
7. Fire and emergency New Zealand
8. Guardians of New Zealand Superannuation
9. Maritime New Zealand
10. Museum of New Zealand Te Papa Tongarewa Board
11. New Zealand Antarctic Institute
12. New Zealand Productivity Commission

Crown agents and Crown entities that did not mention 'emission', 'carbon' and/or 'climate' in the context of climate change [53]

1. Accident Compensation Corporation
2. Accreditation Council
3. Arts Council of New Zealand Toi Aotearoa
4. Broadcasting Commission
5. Broadcasting Standards Authority
6. Callaghan Innovation
7. Children's Commissioner
8. Commerce Commission
9. Crown Irrigation Investments Limited
10. Drug Free Sport New Zealand
11. Earthquake Commission
12. Education New Zealand
13. Electoral Commission
14. External Reporting Board
15. Families Commission
16. Financial Markets Authority
17. Government Superannuation Fund Authority
18. Health and Disability Commissioner
19. Health Promotion Agency
20. Health Quality and Safety Commission
21. Health Research Council of New Zealand
22. Heritage New Zealand Pouhere Taonga
23. Housing New Zealand Corporation
24. Human Rights Commission
25. Independent Police Conduct Authority
26. Law Commission
27. New Zealand Artificial Limb Service
28. New Zealand Blood Service
29. New Zealand Film Commission
30. New Zealand Lotteries Commission
31. New Zealand Qualifications Authority
32. New Zealand Symphony Orchestra
33. New Zealand Tourism Board
34. New Zealand Trade and Enterprise
35. New Zealand Transport Agency
36. New Zealand Venture Investment Fund Limited
37. New Zealand Walking Access Commission
38. Office of Film and Literature Classification
39. Pharmaceutical Management Agency
40. Privacy Commissioner
41. Public Trust
42. Radio New Zealand Limited
43. Real Estate Agents Authority
44. Retirement Commissioner
45. Social Workers Registration Board
46. Sport and Recreation New Zealand
47. Takeovers Panel
48. Te Reo Whakapuaki Irirangi (Māori Broadcasting Funding Agency)
49. Te Taura Whiri I Te Reo Māori (Māori Language Commission)
50. Television New Zealand Limited
51. Tertiary Education Commission
52. Transport Accident Investigation Commission
53. WorkSafe New Zealand

Table 21: Crown agent and Crown entity disclosure of climate change information by category

Crown agents and Crown entities that disclosed climate change and/or emission risks [7]	Crown agents and Crown entities that disclosed climate change and/or emission metrics [4]
1. Crown Research Institutes	1. Crown Research Institutes
2. District Health Boards	2. District Health Boards
3. Electricity Authority	3. Energy Efficiency and Conservation Authority
4. Fire and Emergency New Zealand	4. Guardians of New Zealand Superannuation
5. Guardians of New Zealand Superannuation	
6. Museum of New Zealand Te Papa Tongarewa Board	
7. New Zealand Antarctic Institute	

Crown agents and Crown entities that disclosed climate change and/or emission costs [5]	Crown agents and Crown entities that disclosed climate change and/or emission controls [5]
1. Crown Research Institutes	1. Crown Research Institutes
2. Energy Efficiency and Conservation Authority	2. District Health Boards
3. Environmental Protection Authority	3. Energy Efficiency and Conservation Authority
4. Guardians of New Zealand Superannuation	4. Environmental Protection Authority
5. New Zealand Antarctic Institute	5. Guardians of New Zealand Superannuation

Crown agents and Crown entities that disclosed climate change and/or emission targets [5]	Crown agents and Crown entities that disclosed climate change and/or emission initiatives [9]
1. Crown Research Institutes	1. Civil Aviation Authority of New Zealand
2. District Health Boards	2. Crown Research Institutes
3. Energy Efficiency and Conservation Authority	3. District Health Boards
4. Environmental Protection Authority	4. Energy Efficiency and Conservation Authority
5. Guardians of New Zealand Superannuation	5. Environmental Protection Authority
	6. Guardians of New Zealand Superannuation
	7. Maritime New Zealand
	8. New Zealand Antarctic Institute
	9. New Zealand Productivity Commission

Table 22: Crown agent and Crown entity disclosure of climate change information by number of categories

Note: There were no organisations that disclosed two out of six categories.

Crown agents and Crown entities that disclosed all six of climate change risks, metrics, costs, controls, targets and initiatives [2]	Crown agents and Crown entities that disclosed five out of six of climate change risks, metrics, costs, controls, targets and initiatives [2]
1. Crown Research Institutes	1. District Health Boards
2. Guardians of New Zealand Superannuation	2. Energy Efficiency and Conservation Authority

Crown agents and Crown entities that disclosed four out of six of climate change metrics, costs, controls, targets and initiatives [1]	Crown agents and Crown entities that disclosed three out of six of climate change risks, metrics, costs, controls, targets and initiatives [1]
1. Environmental Protection Authority	1. New Zealand Antarctic Institute

Crown agents and Crown entities that disclosed one out of six of climate change risks, metrics, costs, controls, targets and initiatives [6]
1. Civil Aviation Authority of New Zealand
2. Electricity Authority
3. Fire and Emergency New Zealand
4. Maritime New Zealand
5. Museum of New Zealand Te Papa Tongarewa Board
6. New Zealand Productivity Commission

Appendix 4: State-owned enterprises [14]

Table 23: State-owned enterprises

Source: Schedule 1 of State Owned Enterprises Act 1986.

State-owned enterprises [14]	
1.	Airways Corporation of New Zealand Limited
2.	Animal Control Products Limited
3.	AsureQuality Limited
4.	Electricity Corporation of New Zealand Limited*
5.	KiwiRail Holdings Limited
6.	Kordia Group Limited
7.	Landcorp Farming Limited
8.	Learning Media Limited*
9.	Meteorological Service of New Zealand Limited
10.	New Zealand Post Limited
11.	New Zealand Railways Corporation*
12.	Quotable Value Limited
13.	Solid Energy New Zealand Limited*
14.	Transpower New Zealand Limited

* Please note that four state-owned enterprises did not have 2017 annual reports. Electricity Corporation of New Zealand Limited is a transition entity in the process of deregulating NZ Electricity Market (it was split into three SOEs in 1999); it only exists to wind up a series of land title issues. Learning Media Limited appears to have been closed around 2013; it still has a website but does not give information on how to access an annual report. New Zealand Railways Corporation only holds railway land, leases land to KiwiRail so KiwiRail can benefit; it is not a trading entity. Solid Energy New Zealand Limited went into voluntary liquidation in 2015 and sold its mining assets in 2016. See The Treasury. (n.d.). *Electricity Corporation of New Zealand Limited*. Retrieved 11 July, 2018 from treasury.govt.nz/information-and-services/commercial-portfolio-and-advice/commercial-portfolio/electricity-corporation-new-zealand-limited; New Zealand Government. (2016). *Electricity Corporation of New Zealand*. Retrieved 11 July, 2018 from www.govt.nz/organisations/electricity-corporation-of-new-zealand/; *Wellington.Scoop*. (2013, 4 September). After 75 Years, Learning Media to be closed, but School Journal to continue. Retrieved from wellington.scoop.co.nz/; The Treasury. (n.d.). *New Zealand Railways Corporation*. Retrieved 11 July, 2018 from treasury.govt.nz/information-and-services/commercial-portfolio-and-advice/commercial-portfolio/new-zealand-railways-corporation; Kirkness, L. (2018, 20 March). Solid Energy enters final stages of liquidation process. *NZ Herald*. Retrieved from www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12016294.

Table 24: State-owned enterprise disclosure of climate change information

Note: As explained in Table 23, only ten of the 14 state-owned enterprises are analysed.

State-owned enterprises that mentioned 'emission', 'carbon' and/or 'climate' in the context of climate change [5]	State-owned enterprises that did not mention 'emission', 'carbon' and/or 'climate' in the context of climate change [5]
1. AsureQuality Limited	1. Airways Corporation of New Zealand Limited
2. KiwiRail Holdings Limited	2. Animal Control Products Limited
3. Landcorp Farming Limited	3. Kordia Group Limited
4. New Zealand Post Limited	4. Meteorological Service of New Zealand Limited
5. Transpower New Zealand Limited	5. Quotable Value Limited

Table 25: State-owned enterprise disclosure of climate change information by category

State-owned enterprises that disclosed climate change and/or emission risks [3]	State-owned enterprises that disclosed climate change and/or emission metrics [3]
1. KiwiRail Holdings Limited	1. KiwiRail Holdings Limited
2. Landcorp Farming Limited	2. Landcorp Farming Limited
3. New Zealand Post Limited	3. Transpower New Zealand Limited

State-owned enterprises that disclosed climate change and/or emission costs [2]	State-owned enterprises that disclosed climate change and/or emission controls [3]
1. Landcorp Farming Limited	1. AsureQuality Limited
2. New Zealand Post Limited	2. KiwiRail Holdings Limited
	3. Landcorp Farming Limited

State-owned enterprises that disclosed climate change and/or emission targets [2]	State-owned enterprises that disclosed climate change and/or emission initiatives [2]
1. KiwiRail Holdings Limited	1. KiwiRail Holdings Limited
2. Transpower New Zealand Limited	2. Landcorp Farming Limited

Table 26: State-owned enterprise disclosure of climate change information by number of categories

Note: There were no organisations that disclosed three, four or six out of six categories.

State-owned enterprises that disclosed five out of six of climate change metrics, costs, controls, targets and initiatives [2]	State-owned enterprises that disclosed two out of six of climate change metrics, costs, controls, targets and initiatives [2]
1. KiwiRail Holdings Limited	1. Transpower New Zealand Limited
2. Landcorp Farming Limited	2. New Zealand Post Limited

State-owned enterprises that disclosed one out of six of climate change metrics, costs, controls, targets and initiatives [1]
1. AsureQuality Limited

Appendix 5: Local authorities [78]

Table 27: Local authorities

Source: Local Government New Zealand (LGNZ). (2017). *Council maps and websites*. Retrieved 6 June 2018 from www.lgnz.co.nz/nzs-local-government/new-zealands-councils.

Local authorities [78]	
1.	Ashburton District Council
2.	Auckland Council
3.	Bay of Plenty Regional Council
4.	Buller District Council
5.	Carterton District Council
6.	Central Hawke's Bay District Council
7.	Central Otago District Council
8.	Chatham Islands Council
9.	Christchurch City Council
10.	Clutha District Council
11.	Dunedin City Council
12.	Environment Canterbury
13.	Environment Southland
14.	Far North District Council
15.	Gisborne District Council
16.	Gore District Council
17.	Greater Wellington Regional Council
18.	Grey District Council
19.	Hamilton City Council
20.	Hastings District Council
21.	Hauraki District Council
22.	Hawke's Bay Regional Council
23.	Horizons Regional Council
24.	Horowhenua District Council
25.	Hurunui District Council
26.	Hutt City Council
27.	Invercargill City Council
28.	Kaikoura District Council
29.	Kaipara District Council
30.	Kapiti Coast District Council
31.	Kawerau District Council
32.	Mackenzie District Council
33.	Manawatu District Council
34.	Marlborough District Council
35.	Masterton District Council

Table 27: Local authorities cont.

Local authorities [78]	
36.	Matamata-Piako District Council
37.	Napier City Council
38.	Nelson City Council
39.	New Plymouth District Council
40.	Northland Regional Council
41.	Opotiki District Council
42.	Otago Regional Council
43.	Otorohanga District Council
44.	Palmerston North City Council
45.	Porirua City Council
46.	Queenstown Lakes District Council
47.	Rangitikei District Council
48.	Rotorua Lakes Council
49.	Ruapehu District Council
50.	Selwyn District Council
51.	South Taranaki District Council
52.	South Waikato District Council
53.	South Wairarapa District Council
54.	Southland District Council
55.	Stratford District Council
56.	Taranaki Regional Council
57.	Tararua District Council
58.	Tasman District Council
59.	Taupo District Council
60.	Tauranga City Council
61.	Thames-Coromandel District Council
62.	Timaru District Council
63.	Upper Hutt City Council
64.	Waikato District Council
65.	Waikato Regional Council
66.	Waimakariri District Council
67.	Waimate District Council
68.	Waipa District Council
69.	Wairoa District Council
70.	Waitaki District Council

Table 27: Local authorities cont.

Local authorities [78]	
71.	Waitomo District Council
72.	Wellington City Council
73.	West Coast Regional Council
74.	Western Bay of Plenty District Council
75.	Westland District Council
76.	Whakatane District Council
77.	Whanganui District Council
78.	Whangarei District Council

Table 28: Local authority disclosure of climate change information

Local authorities that mentioned 'emission', 'carbon', and/or 'climate' in the context of climate change [54]

1. Ashburton District Council
2. Auckland Council
3. Carterton District Council
4. Central Hawke's Bay District Council
5. Central Otago District Council
6. Christchurch City Council
7. Dunedin City Council
8. Environment Cantebury Regional Council
9. Far North District Council
10. Gisbourne District Council
11. Greater Wellington Regional Council
12. Grey District Council
13. Hauraki District Council
14. Hawke's Bay Regional Council
15. Horowhenua District Council
16. Hurunui District Council
17. Hutt City Council
18. Invercargill City Council
19. Kaikoura District Council
20. Kaipara District Council
21. Kapiti Coast District Council
22. Mackenzie District Council
23. Malborough District Council
24. Masterton District Council
25. Nelson City Council
26. New Plymouth District Council
27. Northland Regional Council
28. Opotiki District Council
29. Palmerston North City Council
30. Porirua City Council
31. Queenstown Lakes District Council
32. Rangitikei District Council
33. Rotorua Lakes Council
34. Ruapehu District Council
35. South Taranaki District Council
36. South Waikato District Council
37. Southland District Council
38. Stratford District Council
39. Taranaki Regional Council
40. Tararua District Council
41. Tasman District Council
42. Tauranga City Council
43. Timaru District Council
44. Upper Hutt City Council
45. Waikato Regional Council
46. Waimate District Council
47. Waipa District Council
48. Waitaki District Council
49. Waitomo District Council
50. Wellington City Council
51. Western Bay of Plenty District Council
52. Westland District Council
53. Whanganui District Council
54. Whangarei District Council

Local authorities that did not mention 'emission', 'carbon', and/or 'climate' in the context of climate change [24]

1. Bay of Plenty Council
2. Buller District Council
3. Chatham Islands Council
4. Clutha District Council
5. Environment Southland Regional Council
6. Gore District Council
7. Hamilton City Council
8. Hastings District Council
9. Horizons Regional Council
10. Kawerau District Council
11. Manuwatu District Council
12. Matamata-Piako District Council
13. Napier City District Council
14. Otago Regional Council
15. Otorohanga District Council
16. Selwyn District Council
17. South Wairarapa District Council
18. Taupo District Council
19. Thames-Coromandel District Council
20. Waikato District Council
21. Waimakariri District Council
22. Wairoa District Council
23. West Coast Regional Council
24. Whakatane District Council

Table 29: Local authority disclosure of climate change information by category

Local authorities that disclosed climate change and/or emission risks [16]	Local authorities that disclosed climate change and/or emission metrics [6]
1. Far North District Council	1. Christchurch City Council
2. Greater Wellington Regional Council	2. Greater Wellington Regional Council
3. Grey District Council	3. Hauraki District Council
4. Hauraki District Council	4. Kaikoura District Council
5. Hawke's Bay Regional Council	5. Kapiti Coast District Council
6. Hutt City Council	6. Wellington City Council
7. Kapiti Coast District Council	
8. New Plymouth District Council	
9. Opotiki District Council	
10. Palmerston North City Council	
11. Ruapehu District Council	
12. South Taranaki District Council	
13. Stratford District Council	
14. Waikato Regional Council	
15. Waipa District Council	
16. Wellington City Council	

Local authorities that disclosed climate change and/or emission costs [42]	
1. Ashburton District Council	26. Rangitikei District Council
2. Auckland Council	27. Rotorua Lakes Council
3. Carterton District Council	28. Ruapehu District Council
4. Central Hawke's Bay District Council	29. South Waikato District Council
5. Dunedin City Council	30. Southland District Council
6. Environment Cantebury Regional Council	31. Tararua District Council
7. Gisbourne District Council	32. Tasman District Council
8. Greater Wellington Regional Council	33. Tauranga City Council
9. Hauraki District Council	34. Timaru District Council
10. Hawke's Bay Regional Council	35. Waimate District Council
11. Horowhenua District Council	36. Waitaki District Council
12. Hurunui District Council	37. Waitomo District Council
13. Hutt City Council	38. Wellington City Council
14. Invercargill City Council	39. Western Bay of Plenty District Council
15. Kaikoura District Council	40. Westland District Council
16. Kaipara District Council	41. Whanganui District Council
17. Kapiti Coast District Council	42. Whangarei District Council
18. Mackenzie District Council	
19. Malborough District Council	
20. Masterton District Council	
21. Nelson City Council	
22. New Plymouth District Council	
23. Northland Regional Council	
24. Porirua City Council	
25. Queenstown Lakes District Council	

Table 29: Local authority disclosure of climate change information by category cont.

Local authorities that disclosed climate change and/or emission controls [11]	Local authorities that disclosed climate change and/or emission targets [4]
1. Greater Wellington Regional Council 2. Hawke's Bay Regional Council 3. Horowhenua District Council 4. Kapiti Coast District Council 5. Masterton District Council 6. Timaru District Council 7. Waitaki District Council 8. Wellington City Council 9. Whangarei District Council	1. Auckland Council 2. Kaikoura District Council 3. Kapiti Coast District Council 4. Wellington City Council

Local authorities that disclosed climate change and/or emission initiatives [22]	
1. Auckland Council 2. Carterton District Council 3. Central Otago District Council 4. Christchurch City Council 5. Dunedin City Council 6. Far North District Council 7. Greater Wellington Regional Council 8. Hawke's Bay Regional Council 9. Hutt City Council 10. Kapiti Coast District Council 11. Masterton District Council	12. Nelson City Council 13. New Plymouth District Council 14. Palmerston North City Council 15. Taranaki Regional Council 16. Tasman District Council 17. Tauranga City Council 18. Upper Hutt City Council 19. Waikato Regional Council 20. Waipa District Council 21. Waitaki District Council 22. Wellington City Council

Table 30: Local authority disclosure of climate change information by number of categories

Local authorities that disclosed all of six of climate change risks, metrics, costs, controls, targets and Initiatives [2]	Local authorities that disclosed five out of six of climate change risks, metrics, costs, controls, targets and Initiatives [1]
1. Kapiti Coast District Council 2. Wellington City Council	1. Greater Wellington Regional Council

Local authorities that disclosed four out of six of climate change risks, metrics, costs, controls, targets and Initiatives [2]	Local authorities that disclosed three out of six of climate change risks, metrics, costs, controls, targets and Initiatives [7]
1. Auckland Council 2. Hawke's Bay Regional Council	1. Dunedin City Council 2. Hauraki District Council 3. Hutt City Council 4. Kaikoura District Council 5. Masterton District Council 6. New Plymouth District Council 7. Waitaki District Council

Local authorities that disclosed two out of six of climate change risks, metrics, costs, controls, targets and Initiatives [13]	
1. Carterton District Council 2. Christchurch City Council 3. Far North District Council 4. Horowhenua District Council 5. Nelson City Council 6. Palmerston North City Council 7. Ruapehu District Council	8. Tasman District Council 9. Tauranga City Council 10. Timaru District Council 11. Waikato Regional Council 12. Waipa District Council 13. Whangarei District Council

Local authorities that disclosed one out of six of climate change risks, metrics, costs, controls, targets and Initiatives [29]	
1. Ashburton District Council 2. Central Hawke's Bay District Council 3. Central Otago District Council 4. Environment Cantebury Regional Council 5. Gisbourne District Council 6. Grey District Council 7. Hurunui District Council 8. Invercargill City Council 9. Kaipara District Council 10. Mackenzie District Council 11. Malborough District Council 12. Northland Regional Council 13. Opotiki District Council 14. Porirua City Council 15. Queenstown Lakes District Council	16. Rangitikei District Council 17. Rotorua Lakes Council 18. South Taranaki District Council 19. South Waikato District Council 20. Southland District Council 21. Stratford District Council 22. Taranaki Regional Council 23. Tararua District Council 24. Upper Hutt City Council 25. Waimate District Council 26. Waitomo District Council 27. Western Bay of Plenty District Council 28. Westland District Council 29. Whanganui District Council

Appendix 6: Task Force on Climate-related Financial Disclosures (TCFD) recommendations

Source: (TCFD, 2017, pp. 18, v)

Excerpt from TCFD report, *Recommendations of the Task Force on Climate-related Financial Disclosures*[1]

The Task Force's Remit

The FSB called on the Task Force to develop climate-related disclosures that 'could promote more informed investment, credit [or lending], and insurance underwriting decisions' and, in turn, 'would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks.'[2,3] The FSB noted that disclosures by the financial sector in particular would 'foster an early assessment of these risks' and 'facilitate market discipline.' Such disclosures would also 'provide a source of data that can be analysed at a systemic level, to facilitate authorities' assessments of the materiality of any risks posed by climate change to the financial sector, and the channels through which this is most likely to be transmitted.'[4]

1 TCFD (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Retrieved from www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf.

2 FSB (2015). *Proposal for a Disclosure Task Force on Climate-Related Risks*. P. 4. Retrieved from www.fsb.org/wp-content/uploads/Disclosure-task-force-on-climate-related-risks.pdf.

3 The term carbon-related assets is not well defined, but is generally considered to refer to assets or organisations with relatively high direct or indirect GHG emissions. The Task Force believes further work is needed on defining carbon-related assets and potential financial impacts.

4 FSB (2015). *Proposal for a Disclosure Task Force on Climate-Related Risks*. P. 2. Retrieved from www.fsb.org/wp-content/uploads/Disclosure-task-force-on-climate-related-risks.pdf.

5 TCFD (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. P. 18. Retrieved from www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf.

Principles for Effective Disclosures

1. Disclosures should represent relevant information
2. Disclosures should be specific and complete
3. Disclosures should be clear, balanced, and understandable
4. Disclosures should be consistent over time
5. Disclosures should be comparable among companies within a sector, industry, or portfolio
6. Disclosures should be reliable, verifiable, and objective
7. Disclosures should be provided on a timely basis

The seven principles for effective disclosures, as developed by TCFD, can apply to any type of disclosure.[5]

Core Elements of Recommended Climate-Related Financial Disclosures

Governance
The organization's governance around climate-related risks and opportunities

Strategy
The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

Risk Management
The processes used by the organization to identify, assess, and manage climate-related risks

Metrics and Targets
The metrics and targets used to assess and manage relevant climate-related risks and opportunities

If certain [core] elements of the recommendations are incompatible with national disclosure requirements for financial filings, the Task Force encourages organizations to disclose those elements in other official company reports that are issued at least annually, widely distributed and available to investors and others, and subject to internal governance processes that are the same or substantially similar to those used for financial reporting. (TCFD, 2017, p. 17).

[Footnote 36]: The Task Force encourages organizations where climate-related issues could be material in the future to begin disclosing climate-related financial information outside financial filings to facilitate the incorporation of such information into financial filings once climate-related issues are determined to be material (TCFD, 2017, p. 17).

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