

## THE OBLIGATION TO REPORT CLIMATE RISKS: WHAT, WHO, AND HOW?

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### ABSTRACT

*The adoption of formalised climate risk reporting, to help identify potential hazards associated with climate-related risks and to enable better management of those events, is increasing. Groups such as the Task Force on Climate-Related Disclosures (TCFD), have a significant role in how identified risks should be communicated to the public. However, the adoption of formal reporting measures; when such measures will in fact be adopted; and whether these are mandated; currently is not consistent across all countries.*

*By reference to selected countries, the authors identify how climate-related risks are being managed by governments and industry, and the direct impacts of this management on the built environment. This enables the presentation of information to enable the understanding of: what is required to enable consistent risk identification, reporting and management; how related risks and mitigation measures can be most effectively communicated to all stakeholders; and what action industry will need to take.*

Keywords: climate risk reporting, corporate responsibility, climate policy

### INTRODUCTION

Climate change *is* coming (Sharma, 2022 [1]). Throughout 2022, for those left in any doubt, merely turning on the nightly news on any given day showed floods, fire, landslides, and other ‘natural’ destruction occurring in various parts of the world. People and property are at risk now from climate change related risks, and others will be in the future due to continued development in at-risk areas (Craddock and Warren-Myers, 2022).

As climate change related risks increase, so too does the requirement for companies to report on how they engage with those risks. This obligation is referred to in this paper as *climate risk reporting* (CRR).<sup>1</sup> CRR is recognised as being a systematic process through which potential hazards associated with climate change-related events, trends, forecast, and or projections are identified (which includes both emissions considerations and physical risks); and for which plans to avoid or manage the identified risks are then developed (Walenta, 2019). In recent years, there has been an increasing, more often industry-led, demand for CRR (IGCC, 2021a). In a property context, the construction sector in particular is very exposed to climate change related risks (Hurlimann et al., 2018); and the direct and indirect financial and physical implications for property can be substantial (Warren-Myers and Hurlimann, 2022). Investors therefore want to understand how climate-related risk information translates into action, and to document both climate-related risks and opportunities.

CRR can assist with prioritising response actions, and for investment in adaptation actions (Lellis, 2018). CRR is actively engaged in within many jurisdictions. This paper is part of the first stage of a broader project that was undertaken during 2021 – 2022; with the first stage being undertaken in the latter part of 2021. In this paper the focus is on three jurisdictions: two from the Pacific Rim – Australia and New Zealand; and in comparison, that of the United Kingdom. After establishing the research methodology, the paper provides an overview of the development of CRR obligations. It then identifies what the CRR process involves. After a discussion of matters for consideration, and issues arising, for CRR participants and those not yet engaged, it concludes by identify issues for the future of CRR.

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<sup>1</sup> It can also be referred to as *climate change risk assessment*.

## METHODOLOGY

This paper is part of broader research undertaken during 2021-2022. This part of the project sought to understand how jurisdictions engage with and implement CRR domestically. This part of the project was undertaken in second half of 2021, and was undertaken in three stages:

*Stage 1:* Involved gathering and reviewing government, industry, and other documents and codes of practice; and domestic laws relevant to CRR.

*Stage 2:* Comprised a desk top study of information relevant to the international implementation of CRR, and then analysis of that information. This included the jurisdictions relevant to this paper of: Australia, New Zealand, and United Kingdom.

*Stage 3:* Identified the methods of implementing CRR in practice.

## Limitations

Only documents located on public websites were able to be reviewed. Any internal documents, or proposed laws or government policies, not located on those websites were not able to be reviewed.

Laws and legal obligations are subject to continual (often quick) change. Noting the stage of the broader research project of which this paper is a part, the laws and policies considered are those of November 2021.

## THE DEVELOPMENT OF CLIMATE RISK REPORTING

CRR commitments are emerging at a significant pace (IAACPG, 2021), as reflected, for example, in numerous related international treaties (i.e., the Paris Agreement). However, the subsequent implementation of obligations within countries is not being undertaken in a consistent manner. The international implementation of CRR to date has been achieved through a range of regulatory instruments. In some jurisdictions climate risk disclosure obligations are mandatory, that is contained within laws or other instruments with legal consequences for any failure to comply with a reporting obligation; while in others are voluntary, as reflected, for example, in industry codes or government targets.

Various CRR initiatives have developed, led by organisations created with the aim of guiding CRR and providing a level of consistency in that reporting. These include the Global Investors Coalition on Climate Change ('GIC'), which also aims to ensure effective climate action on the part of companies linked to GIC investors (Walenta, 2019); and Climate Action 100+, which also engages with companies to achieve greenhouse gas emissions reductions. In undertaking CRR obligations, many companies and businesses have elected to adopt the Task Force on Climate-Related Disclosure (TCFD) recommendations (TCFD, 2021) as their reporting mechanism. In September 2020, for example, Climate Action 100+ established a 'Net Zero Company Benchmark' to allow investors to track the public commitment actions of major companies against the actions required for alignment with the Paris Agreement (2016), with 72% of these companies committed to aligning their disclosures with the TCFD recommendations (IAACPG, 2021; Climate Action 100+, 2021).

The TCFD recommendations are designed to assist businesses disclose climate-related financial information related to physical, liability, and transition risks (CMSI 2020) across the areas of *governance, strategy, risk management, and metrics and targets* (Walenta, 2019; TCFD, 2020; Nordea, 2020; TCFD, 2021). The TCFD recommendations are now widely considered to be international best practice as seen, for example, in Australia, where 58% of ASX100 companies report CRR using the TCFD recommendations. Internationally, approximately 60 of the world's 100 largest public companies support the use of, or report in line with, the TCFD recommendations, or do both (McGrath, 2021). The growing support for use of the TCFD recommendations is seen in the increase from 513 organisations in 2018 to 2,616 globally (TCFD, 2021).

The UK is one of the leading examples for the implementation of mandatory CRR. In 2013, through amendments to the *Companies Act*, the UK made it mandatory to report Scope 1 (direct) and Scope 2 (indirect) emissions; and, since 2016, it has required exchange-traded companies to disclose their carbon emissions. More recently in 2020 (which came into effect in January 2022) premium listed companies are required to make better disclosures about how climate risks affect their business under the recommendations of the TCFD. The UK also has committed to make mandatory TCFD reporting across the economy from 2025 (Feijao, 2021). New Zealand is another example, as its amendment to the *Financial Markets Conduct Act* will require listed companies, large registered banks, and licensed insurers to carry out TCFD from 2023 (IAACPG, 2021). The promotion of TCFD can also be seen in the International Financial Reporting Standards (IFRS) where a formal working group has been established the help guide the convergence of global sustainability standards based in the TCFD recommendations (The Investor Agenda, 2021).

Australia, on the other hand, regrettably, provides an example where, currently, there is no mandatory CRR and TCFD reporting requirements. However, in recent years there has been an increasing awareness and movement towards implementing such requirements. For example, in 2016 Noel Hutley SC and Sebastian Hartford Davis, in considering the obligation of Australian company directors, concluded that directors who do not properly manage and disclose their company's climate risk, may be liable for breaching their legal duty of due care and diligence under the Corporations Act (Hutley and Hartford, 2016). More recently, they opined that it is part of a director's duty of care to report on the foreseeability and materiality of climate risks (Hutley and Hartford, 2021). This is consistent with the position of the (former) ASIC Commissioner (Armour, 2021); and the ASX Corporate Governance Council (ASX, 2021) that directors and officers need to consider and report climate risks, with use of the TCFD supported for this purpose (ASX, 2021; APRA, 2021).

Voluntary obligations are not legally enforced by or against any entity, and (usually) do not carry any sanctions if there is a breach. These, however, are important as evidence of consensus of appropriate action, and industry and client expectations; and, as such, reflected and are encouraged as best practice. The TCFD recommendations is one of the leading examples of *voluntary* CRR standards. Nearly 60% of the world's 100 largest public companies support the TCFD, and report in line with its recommendations (FSB, 2020). The effectiveness of TCFD adoption can be seen when compared to that of the Global Reporting Initiative (GRI) Standards. The GRI Standards while launched by the Global Sustainability Standards Board in 2016, was in fact a move from the guidelines it had issued and updated progressively since 2000 (GRI, 2021). In 2020, in comparison to the TCFD that was only developed in 2015, the GRI Standards were used by approximately 73% of the world's largest 250 companies (G250) for their sustainability reporting (GRI, 2020).

Another form of voluntary obligations is seen in what are referred to as *guidance documents*. These do not have either the effect of a law, or impact of a standard, as these are merely created to assist assessors on their climate reporting journey rather than impose obligations in any form. Guidance documents however can be very useful in ensuring relevant matters are captured and considered. These documents can either originate at quite a small scale, where a specific organisation requires inhouse guidance documents to assist with their sustainability reporting, such as the ones found for Global Green and Healthy Hospitals (GGHH, 2015). Alternatively, guidance documents can have a more global impact, as see for example in the GRI's range of guidance documents (GRI, 2021).

Some guidance documents are industry specific. In the property industry the Global ESG Benchmark for Real Assets ('GRESB'), which is a system measuring and ranking sustainability ESG actions and transparency, has incorporated a section examining transition risk and physical risk impact assessment, with another section examining material financial impact of climate risks (GRESB Real Estate, 2022). However, both the interpretation of transition and climate risks, and their reporting and estimation of financial impact, is left to individual organisations to decide how this is to be achieved.

## THE DRIVERS OF CRR

There are various drivers for CRR reporting. These include: international obligations regarding climate change more generally; domestic government policy; laws; and industry obligations and interests. Separately from any other corporate goals, for industry the legal risks associated with any failure to comply with mandatory obligations is a key driver for corporate behavioural changes (Solana, 2020). An implementation system used by UK is an example of the 'comply or explain' basis. The Financial Conduct Authority expects that companies will ordinarily comply with the disclosure rules, subject to exceptions that need to be explained. A company must either provide a list of the recommendations and/or recommended disclosures for which it has not included disclosures; or an explanation of why it has not included such disclosures; a description of any steps the company is taking or plans to take to be able to make consistent disclosures in the future; and the time frame within which it expects to be able to make those disclosures (Marshal et al. 2021; FCA 2020). A failure to comply, or explain adequately, leads to regulatory action.

Several jurisdictions have declared their commitment to climate change mitigation (CCM) through measures such as greenhouse gas (GHG) emission reduction targets. The Paris Agreement, which came into force in 2016 (Cadman et al., 2017, pp. 8-11), established an enhanced transparency framework (ETF), to be effective in 2024, that will aid the tracking of targets (UNFCCC, 2021). However, instead of setting targets, the Paris Agreement allows for voluntary and nationally determined targets. While its specific climate goals are thus politically encouraged, and influenced (Taraska, 2015); not all obligations are binding on its signatories, which enables countries a degree of flexibility (some may argue too much flexibility) in what

they seek to achieve, and how their goal/s are achieved (Ramajani, 2016; Roberts and Arellano, 2017; Bécault and Marx, 2017; Pouikli, 2021). While recognising extant literature questioning the effectiveness of any stated goal/s (Maizland 2021); the impact of the lack of penalties for failing to achieve a stated goal (Nordhaus, 2020); and the potential need for a new treaty (Stavins and Stowe, 2016), such matters are beyond the scope of this discussion. While mandatory GHG emission regulation is often cited as the key driver for effective CCM, there is still room for improvement. This is evident in the fact that even though some of the CRR laws are mandatory, there is uncertainty surrounding these laws. For example, in the UK, as part of the 2020 Listing Rule, companies are merely required to provide ‘better disclosures’ about climate risk in line with TCFD recommendations. Noting therefore that there is not currently a consistency of approach to international CCM targets, as some jurisdictions mandate these obligations while others do not, there is at least a level of consistency as all have pledged to some degree to support international efforts to combat climate change; albeit not that there is yet consistency of targets. Current commitments to GHG reduction are: UK 78% by 2035, and net zero by 2050 (UK Gov, 2021); New Zealand 41.9% reduction by 2050 (CTA, 2021); and Australia (post-2022 federal election) is now 43% by 2030, and net zero by 2050.

Setting a climate target, however, is not an absolute solution but a steppingstone, and an uncertain one. This is due to the fact that target setting is voluntary, and achieved by use of renewable technologies when many countries do not have sufficient clean-energy technology currently in use, lack raw materials, and or lack financial capacity (Bledsoe, 2021). Separately, these targets mostly concentrate on carbon dioxides as the key GHG emission to cut. As a recent report suggested, there will also need to be reductions in methane, black soot, and hydrofluorocarbons, to effectively mitigate climate change (IPCC, 2021). These, however, tend not be addressed in target setting laws (Murray, 2020). Mandatory legislative measures, on the other hand, can be a key driver for successful CRR adoption, and the UK and New Zealand both have incorporated TCFD in their domestic laws. While the TCFD recommendations are widely accepted as a minimum standard for CRR, and in fact mandatory in some jurisdictions, as their use is primarily only voluntary, the TCFD recommendations’ impact is not as significant or useful as it could be (IAACPG, 2021). For example, in Australia, while as noted 58% of companies now report using TCFD, as TCFD use was voluntary, the adoption of the framework was slow. Between 2017 and 2019, even with growing awareness of CRR issues and the federal government’s support in 2018 for its use, by 2019 only 60 ASX200 companies had adopted the TCFD framework (ACSI, 2020). TCFD promotion continues, as seen in Australia’s draft Prudential Practice Guidance, released in 2021, relating to climate change financial risks, which proposes the use of TCFD. Internationally, while not all companies have adopted the TCFD and or report against all recommended disclosures, the number of adoptees who disclosed climate-related information grew from 45% in 2017 to greater than 70% in 2022 (TCFD, 2022, p.6). The quality of the disclosures also grew.

Other incentives for CRR adoption include investor pressure; mandatory GHG emission reporting; consistent reporting standards; stock exchange integration and growing risk; and acceptance of physical and transition risks associated to climate change (Shakti, 2020; PRI, 2021). The drivers for CRR reporting, and the use of the TCFD recommendations for this purpose, in the selected jurisdictions are identified in Table 1:

**Table 1: Drivers of domestic TCFD adoption per country**

Driver	UK	Australia	NZ
National Govt. Supports TCFD	X	X	X
National Govt. release guidance on climate related disclosures	X	X	X
National Govt. released guidelines on TCFD	X	X	X
Incorporation in legislation	X		X
Mandatory GHG emissions reporting by companies	X	X	X
Mandatory climate related reporting by companies			
Active Carbon Pricing <sup>2</sup>	X	X	X
Risk of litigation		X	

**Source:** (Shakti, 2020; PRI, 2021)

<sup>2</sup> In Australia and New Zealand carbon pricing is voluntary (Clean Energy Regulator, 2021a).

## CLIMATE RISK REPORTING IN PRACTICE

There various (and evolving) approaches giving considerations to CRR can broadly be classified as either a *top-down* or a *bottom-up* approach. (CCME, 2021) A *top-down* approach is typically carried out by an individual or small group, and is usually a desktop study where information is gathered from various sources. A *bottom-up* approach is usually more complex, and takes more time, expertise, and resources. Other forms of assessments can be quantitative; qualitative; a combination of both quantitative and qualitative; comprehensive; or tightly scoped. The selection of the assessment approach will depend on a variety of factors. These include matters such as the context, scale of analysis, intervention targets, availability and quality of information, time, and expertise available etc (European Commission, 2009).

Several initiatives can assist with CRR, for example, *carbon foot printing*, originated in the 1990's, is a technique that assesses business, government, or institution's carbon intensive activities and classifies those activities unto one of three scopes. This evolved in 2000 into the Carbon Disclosure Project, which required companies to disclose annually their corporate climate risks, opportunities, and performances. In 2015 the Financial Stability Board, an international body that monitors and makes recommendations about the global financial system, established the TCFD, which led to the TCFD recommendations, with the objective of making climate-related disclosures more decision-useful and focused on financial impacts.

Key concepts involved with climate risk thinking, which in turn influence what is reported, include those of *vulnerability*, *adaptation*, *mitigation*, and *transition*. In comparison with each other, these relate to:

**Table 2: Climate risk thinking concepts**

<b>Vulnerability</b>	<b>Adaptation</b>	<b>Mitigation</b>	<b>Transition</b>
the degree to which a system is susceptible to, or unable to cope with adverse effects of climate change	adjustments in response to actual or expected climatic effects in: <ul style="list-style-type: none"> <li>• natural systems</li> <li>• human systems</li> </ul>	actions to reduce the magnitude of anthropogenic climate change through reduction in GHG emissions	the actions and costs associated with the transition to a low carbon economy and climate adaptation  Key considerations focus on: <ul style="list-style-type: none"> <li>• CCP and regulatory risks</li> <li>• technological risks</li> <li>• market risks</li> <li>• reputational risks</li> <li>• legal risks</li> </ul>

**Source:** (IPCC, 2020)

The process required to perform a CRR generally consists of a number of key steps, with each having have core actions. Drawing on the work of Lellis (2018) and C40 Cities (2018), and noting these will require adjustment to adapt to the level of assessment required; the type of risk; and whether the CRR is being developed for use by business, industry, or government, these steps can be articulated as:

1. Establish the context for the reporting
2. Define the scope, goals, and objectives
3. Identify the best method to use
4. Identify the tools and resources required to complete the assessment of risks
5. Identify, analyse, and evaluate risks
6. Create a risks, vulnerabilities, and recommendations road map

Depending on the type of assessment, a combination of the approaches then can be selected for use. Using the TCFD recommendations, for example, can include a mix of approaches from *impact studies*, *modelling*, and *risk mapping*. Some of the matters that have been identified as being considered during the CRR process (Jones and Boer, 1995; European Commission, 2009; Walenta, 2019) include:

- *Risk / Hazard Mapping*: A map illustrating the distribution of hazards and vulnerability separately. Risk ‘hot spots’ are identified)
- *Vulnerability Assessment*: Focus on vulnerability in conjunction to hazards. Can be based on qualitative or quantitative indicators
- *Participatory Assessment*: Involves participants who help identify drivers and indicators either through workshops or questionnaires
- *Impact Studies / Modelling*: Technical studies based on climatic modelling
- *Sensitivity Studies*: Examine impacts of plausible changes in key variables
- *Expert Judgement / Review*: External consultants carry out an in-depth review of relevant literature and studies with some additional quantitative or qualitative analysis

While the adoption of CRR and the use of the TCFD recommendations for reporting has increased (McGrath, 2021), there are still several barriers and limitations impacting broader adoption, particularly regarding what is adopted and how that is used. This creates uncertainty regarding government policy and acts as a barrier to investors. Those barriers, which limit and creating uncertainty in the process, means that information gathering and analysis for scenario modelling can vary substantially; resulting, in turn, in variations in the analysis of financial implications how these are reported (Warren-Myers et al., 2021).

## IMPLICATIONS FOR PRACTITIONERS

There is demand for consistency and comparability in reporting (FSB 2020). Despite international support from more than 110 regulators and governmental entities for the TCFD, the UK and New Zealand are two of a handful of jurisdictions that have incorporated the TCFD recommendations into their domestic policy and laws. This lack of consistent implementation of reporting obligations can impact investment opportunities, as it will result provide challenges for investors regarding decisions about, and ease of, deployment of capital (IGCC, 2021b). Absent a change in regulation, or a ‘push’ from investors and companies, governments are unlikely to change their reporting practice requirements; which in turn adversely impacts support in those jurisdictions for CRR. This is evident in that jurisdictions that have mandatory requirements, or a strong regulatory push from the primary government, such as the UK, are performing better in terms of achieving their climate targets and improving their climate risk disclosure protocols (Shakti, 2020).

In addition to the TCFD recommendations, there is an increasing number of guidance documents regarding CRR that can be used to provide support. However, while such documents are useful, their sheer number can be overwhelming. This information overload creates its own barrier to successful CRR uptake, due to the lack of clarity and cohesion between those documents (Shakti, 2020). Initiatives such as GIC, which aims to standardise CRR, will certainly help overcome this barrier, but its effectiveness is still to be seen and its applicability across many jurisdictions is still to be proven.

There is also a need for improved and agreed upon guidance documents; and for consistent climate metrics, scenarios, and targets that allow for greater transparency when it comes to climate disclosures. The current lack of such consistent data is a primary obstacle that hinders effective CRR (PRI, 2021; Willis Towers Watson, 2021) and can lead to inconsistencies, and a lack of quality, in the disclosures made (Nelson, 2020).

The risks from litigation also cannot be ignored. Climate change litigation is on the rise with over a 1,612 cases documented worldwide in August 2020 (Solana 2020). An example of the consequences of a breach of a CRR law is the European Union’s NFRD, which make it is an offence to publish a misleading report. Norwegian domestic law made this offence punishable by up to two years imprisonment; while Italian law imposed fines ranging from a minimum of €50,000 to a maximum of €150,000 (Bateman and Thoma,s 2018). Legal considerations are broader than a failure to comply with CRR obligations, as a failure to report may result in both sanctions under laws prohibiting the making of reckless, misleading, and or deceptive statements under consumer protection laws (Allens, 2020).

The increasing uptake and use of the TCFD recommendations still face challenges. A company's objectives might not align with investor demand for more transparent climate-related disclosures. For example, risk management is a key element of the TCFD, however, climate-related risks may not align with the way a company's corporate planning is conducted (Allied, 2020) or the modelling use (Nelson, 2020).

Finally, and despite the growing number of litigation cases worldwide, the current understanding of the broader impacts from climate change litigation, particularly the financial impacts, is poor (Solana, 2020). The most elaborate articulation of the potential financial impact of climate change litigation is that provided by the TCFD. However, the cost of litigation applies only on a matter by matter (case by case) basis. As with any type of litigation, the actual costs and the party/ies responsible for payment (of their own or others costs, and in what proportion), will depend on the matter's complexity, number of parties participating, and the time it takes for the court to resolve the matter (Solana, 2020).

## CONCLUSION

Voluntary CRR and climate orientated laws are helpful in the fight against climate change, however their effectiveness is limited and (arguably) not adequate to significantly reduce GHG emissions in the short- and long-term (Kube et al., 2019; Gardiner, 2002). In the meantime, there is a need for greater mandatory CRR reporting, as this will help evolve its uptake, will act to better inform investors, and will act to better enable and protect consumers. In this regard, mandatory obligations enshrined in law remains one of the best drivers for CRR's broad adoption and use (Shakti, 2020). If there is no consequence for noncompliance, then voluntary guidelines or processes are ineffective (Hurlimann et al., 2018; Warren-Myers et al., 2020).

The importance of moving from voluntary to mandatory obligations is seen in New Zealand, the first jurisdiction to introduce mandatory disclosure against the TCFD recommendations for organisations across the financial system. As more jurisdictions adopt mandatory obligations, CRR (PRI, 2021) it is important to ensure that best practice measures, as are reflected in the voluntary obligations now, are maintained. The level of detail and accuracy of CRR results lies "*in the ability to create and stabilize shared sets of meaning and quantification of risk*" and reliance on the tools used for their assessments. Future research into CRR tools and frameworks, and their reliability, will be necessary (Nyberg and Wright, 2016); as will the need to understand CRR's application for built environment assets imperative. The built environment contributes over 40% of global GHG emissions (World Green Building Council, 2019); and is at great risk from the adverse effects of climate-related events (Craddock and Warren-Myers, 2022).

For the future, an area that will require more consideration, the risk to property/ real estate, which are important assets for both businesses and governments (Warren-Myers and Hurliman, 2022). How to protect real property assets is a key concern for property ownership, occupancy, and investment. Owing real property also will have considerations in terms of operational carbon emissions, embodied carbon, and exposure to a variety of climate-related risks. Research to examine real estate and property assets in the context of the evolving regulatory environment, and how better standards can be developed to appropriately ensure mitigation and adaptation of the built environment is essential.

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