

Briefing: task force for climate financial disclosures (TCFD) for the property and construction industry

Renard Siew*

University of New South Wales, Australia

Received: 16 April 2020 / Accepted: 14 June 2020

Abstract. The property and construction industry are known to be a main contributor to climate change contributing more than 40% of the world's emissions. In direct response to this, there has been a call for corporations to be more transparent and align themselves to the requirements of the task force for climate financial disclosures (TCFD). This paper seeks to provide a briefing on the requirements of the TCFD. It highlights common challenges faced by the property and construction industry in implementing TCFD such as the difficulty in integrating climate related risks and translating them into quantitative measures, lack of capability within the industry to understand the complexities of climate risks and data collection issues among others. Recommendations are proposed to address these issues including setting up an industry specific network to share best practices in TCFD, harmonisation of existing frameworks to include TCFD requirements and exploring opportunities for incentivisation and rewards for early movers. This paper will be useful to property and construction industry practitioners who are looking at aligning to the requirements of the TCFD.

Keywords: TCFD / climate change / property / construction / challenges / recommendations

1 Introduction

Climate change is recognised as the defining issue of this era. From shifting weather patterns which threaten food security [1] to rising sea levels that increases the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented [2]. This phenomenon is caused by the release of heat-trapping gases, primarily carbon dioxide produced by a wide range of human activities [3]. As populations, economies and standard of living continue to grow, so does the cumulative level of greenhouse gas (GHG) emissions. The Fifth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC) estimates the cumulative CO₂ emissions since pre-industrial times and provides a carbon budget for future emissions to limit temperature from increasing beyond 2 degrees Celcius. Given current ongoing emissions, it has been predicted that the global mean temperature will continue to rise above pre-industrial level. With polar ice cap melting and warmer oceans, average sea levels are estimated to rise between 24 and 30 cm by 2065 and 40–63 cm by 2100 relative to the reference point of

1986–2005 [2]. The reality is that the impacts of climate change will continue to persist for many centuries even when emissions have stopped.

Given the urgency of the issue, different stakeholder groups have gathered to formulate solutions to address the challenges presented by climate change. The Climate Bonds Initiative [4] was formed as a not-for-profit with the intention of mobilising the \$100 trillion dollar bond market towards climate solutions. CBI's primary work focuses on the promotion of investment in projects and assets necessary to accelerate the transition towards a low carbon and climate resilient economy. They deploy a three-prong approach in terms of strategy: (i) they aim to develop a large and liquid Green and Climate Bonds Market that will help drive down the cost of capital for climate projects [4] in both developed and emerging markets; (ii) to grow aggregation mechanisms for fragmented sectors; and (iii) to support governments seeking to tap debt capital markets. Climate Action 100+ [5] is an investor led initiative to ensure that the world's largest corporate greenhouse gas emitters accounting for two-thirds of annual global industrial emissions take necessary action on climate change [6,7].

Back in April 2015, G20 Finance Ministers and Central Bank Governors made a request to the Financial Stability Board (FSB) to convene public and private sector participants to review how the financial sector can

* e-mail: rensiew10@gmail.com

account for climate-related issues. The FSB identifies several gaps including: the need for better information to support informed investment; lending and insurance underwriting decisions; and improved understanding of climate-related risks. To price climate related risks and opportunities, FSB established an industry-led task force: The Task Force for Climate related Financial Disclosures [8]. The aim of TCFD is to provide guidance for consistent climate-related financial risk disclosures by companies that are meaningful to stakeholders including investors, lenders and insurers among others. The recommendations provided by TCFD are intended to help companies better understand what financial markets want from such disclosures in order to monitor and respond to climate change risks.

The construction industry has coined the term ‘sustainable construction’ which dives into the practice of creating structures and using processes that are environmentally friendly and, in a resource efficient manner. Despite the rise of green building indexes such as the Leadership in Energy and Environmental Design (LEED), Building Research Establishment Environmental Assessment Method (BREEAM) and Green Star inter alia which spell out the requirements of what constitutes a ‘sustainably designed’ or low carbon building [9], anecdotal evidence seems to suggest that there is still poor climate disclosures (little to no reporting on carbon emissions reduction target, strategy or governance initiatives in place) among property and construction companies [10–12]. The adoption of TCFD is low among key industry players, one possible reason is due to the lack of awareness on the requirements of TCFD among practitioners. This paper aims to bridge this gap accordingly.

2 TCFD

A survey conducted by South Pole [13] revealed that while two thirds of responding organisations recognised the first mover advantage of early adoption of TCFD but less than one in ten have decided on a disclosure strategy. 40% of respondents believe that TCFD will improve the understanding of both physical and transition risks connected with climate change but only 25% have developed scenarios to explore how these risks will impact their business. Another landmark study by [8] revealed that there has been a 10% increase in the number of companies (1126 sample companies) disclosing relevant climate information between 2016 to 2018 (see [8,14]).

TCFD is structured around four thematic areas as depicted in Figure 1 representing the core elements that an organisation should focus on namely [8]:

- Governance: An organisation’s governance and climate-related risks and opportunities
- Strategy: Actual and potential impacts of climate-related risks and opportunities on an organisation’s business, strategy and financial planning



Fig. 1. TCFD Structure [8].

- Risk Management: The process of identifying, assessing and managing an organisation’s climate-related risks
- Metrics and targets: metrics and targets used to assess and manage an organisation’s climate-related risks and opportunities

The recommended disclosures for each of these elements are captured in Table 1.

3 Challenges

The property and construction industry face a few challenges in responding to the TCFD. First, given the fragmented nature of the construction industry, it is difficult to fully integrate understanding of climate related risks and translate them into quantitative measures across the whole supply chain. A supplier of building materials will face a very different set of climate related risks compared to a developer. As it is, there is a lack of capability in terms of understanding climate risks let alone translating them into quantifiable financial impacts. Second, data collection is a challenge especially when there are several parties (i.e. contractors, subcontractors) involved in the same project. It is challenging for property and construction companies to obtain relevant data along the supply chain for their climate models (or scenario analysis in the language used in TCFD). Third, the broader risk concept which includes sustainability aspects such as climate change has always received resistance at a psychological level. Given the cut-throat environment that the property and construction industry operate in, cost effectiveness is always prioritised before other pillars of sustainability.

4 Recommendations

A few recommendations are put forth based on a few virtual workshops conducted with 20 industry practitioners (with at least 5 years of experience) to help drive

Table 1. TCFD Recommended Disclosures [8,15].

Elements	Disclosures	Guidance
Governance	Describe the board's oversight of climate-related risks and opportunities	<p>In describing the board's oversight of climate-related issues, organizations should consider including a discussion of the following:</p> <ul style="list-style-type: none"> • processes and frequency by which the board and/or board committees (e.g., audit, risk, or other committees) are informed about climate-related issues, • whether the board and/or board committees consider climate-related issues when reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, and business plans as well as setting the organization's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures, and • how the board monitors and oversees progress against goals and targets for addressing climate-related issues.
	Describe management's role in assessing and managing risks and opportunities	<p>In describing management's role related to the assessment and management of climate-related issues, organizations should consider including the following information:</p> <ul style="list-style-type: none"> • whether the organization has assigned climate-related responsibilities to management-level positions or committees; and, if so, whether such management positions or committees report to the board or a committee of the board and whether those responsibilities include assessing and/or managing climate-related issues, • a description of the associated organizational structure(s), • processes by which management is informed about climate-related issues, and • how management (through specific positions and/or management committees) monitors climate-related issues.
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	<p>Organizations should provide the following information:</p> <ul style="list-style-type: none"> • a description of what they consider to be the relevant short-, medium-, and long-term time horizons, taking into consideration the useful life of the organization's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms, • a description of the specific climate-related issues for each time horizon (short, medium, and long term) that could have a material financial impact on the organization, and • a description of the process(es) used to determine which risks and opportunities could have a material financial impact on the organization.
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	<p>Organizations should discuss how identified climate-related issues have affected their businesses, strategy, and financial planning.</p>

Table 1. (continued).

Elements	Disclosures	Guidance
Risk Management	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<p>Organizations should consider including the impact on their businesses and strategy in the following areas:</p> <ul style="list-style-type: none"> • Products and services • Supply chain and/or value chain • Adaptation and mitigation activities • Investment in research and development • Operations (including types of operations and location of facilities) <p>Organizations should describe how climate-related issues serve as an input to their financial planning process, the time period(s) used, and how these risks and opportunities are prioritized. Organizations' disclosures should reflect a holistic picture of the interdependencies among the factors that affect their ability to create value over time. Organizations should also consider including in their disclosures the impact on financial planning in the following areas:</p> <ul style="list-style-type: none"> • Operating costs and revenues • Capital expenditures and capital allocation • Acquisitions or divestments • Access to capital <p>If climate-related scenarios were used to inform the organization's strategy and financial planning, such scenarios should be described</p> <p>Organizations should describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a lower-carbon economy consistent with a 2°C or lower scenario and, where relevant to the organization, scenarios consistent with increased physical climate-related risks.</p> <p>Organizations should consider discussing:</p> <ul style="list-style-type: none"> • where they believe their strategies may be affected by climate-related risks and opportunities; • how their strategies might change to address such potential risks and opportunities; and • the climate-related scenarios and associated time horizon(s) considered.
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks	<p>Organizations should describe whether they consider existing and emerging regulatory requirements related to climate change (e.g., limits on emissions) as well as other relevant factors considered.</p> <p>Organizations should also consider disclosing the following:</p> <ul style="list-style-type: none"> • processes for assessing the potential size and scope of identified climate-related risks and • definitions of risk terminology used or references to existing risk classification frameworks used. <p>Organizations should describe their processes for managing climate-related risks, including how they make decisions to mitigate, transfer, accept, or control those risks. In addition, organizations</p>
	Describe the organization's processes for managing climate-related risks.	

Table 1. (continued).

Elements	Disclosures	Guidance
Metrics and Targets	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	<p>should describe their processes for prioritizing climate-related risks, including how materiality determinations are made within their organizations.</p> <p>Organizations should describe how their processes for identifying, assessing, and managing climate-related risks are integrated into their overall risk management.</p>
	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	<p>Organizations should consider including metrics on climate-related risks associated with water, energy, land use, and waste management where relevant and applicable.</p> <p>Where climate-related issues are material, organizations should consider describing whether and how related performance metrics are incorporated into remuneration policies.</p> <p>Where relevant, organizations should provide their internal carbon prices as well as climate-related opportunity metrics such as revenue from products and services designed for a lower-carbon economy. Metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organizations should provide a description of the methodologies used to calculate or estimate climate-related metrics.</p>
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	<p>Organizations should provide their Scope 1 and Scope 2 GHG emissions and, if appropriate, Scope 3 GHG emissions and the related risks.</p> <p>GHG emissions should be calculated in line with the GHG Protocol methodology to allow for aggregation and comparability across organizations and jurisdictions. As appropriate, organizations should consider providing related, generally accepted industry-specific GHG efficiency ratios. GHG emissions and associated metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organizations should provide a description of the methodologies used to calculate or estimate the metrics.</p>
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	<p>Organizations should describe their key climate-related targets such as those related to GHG emissions, water usage, energy usage, etc., in line with anticipated regulatory requirements or market constraints or other goals. Other goals may include efficiency or financial goals, financial loss tolerances, avoided GHG emissions through the entire product life cycle, or net revenue goals for products and services designed for a lower-carbon economy.</p> <p>In describing their targets, organizations should consider including the following:</p> <ul style="list-style-type: none"> • whether the target is absolute or intensity based, • time frames over which the target applies, • base year from which progress is measured, and • key performance indicators used to assess progress against targets.

the adoption of TCFD by property and construction companies:

- i). Setting up of an industry specific network- TCFD could help accelerate the adoption of its requirements by setting up a specific property and construction network with representation across different regions. The aim of this group is to share best-in-class practices for TCFD disclosures and to help build capabilities within this industry. If the network is established, it would also be able to push for Board of Directors of companies to adopt the TCFD (under the governance element-see [Tab. 1](#)).
- ii). Harmonisation of frameworks- The reality is that there are many green rating tools for buildings which creates confusion among property and construction practitioners. There needs to be a coordinated effort to harmonise these tools including integrating the TCFD framework.
- iii). Incentivisation and rewards- TCFD came about because banks and institutional investors were not able to accurately quantify the financial risks as a result of climate change due to poor disclosures by companies. Financial institutions would need to think about innovative ways to spur more complete and accurate disclosures on climate risks. One example is through the offering of sustainability-linked or climate-based loans where companies would need to demonstrate achievement of alignment to the TCFD in stages in order to benefit from lower interest rates.

5 Conclusion

TCFD is to provide guidance for consistent climate-related financial risk disclosures by companies that are meaningful to stakeholders including investors, lenders and insurers among others. Yet, very few property and construction companies are aligned to the requirements of the TCFD. This briefing paper explores the challenges faced by this industry and propose recommendations to overcome some these challenges.

References

1. T. Wheeler, J. von Braun, Climate change impacts on global food security, *Science* **341**, 508–513 (2013)
2. United Nations Shaping Our Future Together: Climate Change, assessed: 17 December 2019 2019; <https://www.un.org/en/sections/issues-depth/climate-change/>
3. Nature Conservancy Impacts and Adaptation, assessed: 17 December 2019 2007; <https://www.cbd.int/doc/pa/tools/Impacts%20and%20Adaptation.pdf>
4. Climate Bonds Initiative (2019), assessed; 17 December 2019; <https://www.climatebonds.net/>
5. Climate Action 100+ Global Investors Driving Business Action 2019; <http://www.climateaction100.org/>
6. L. Abubakar, T. Handayani, Implementation of the principles for responsible banking in Indonesian banking practices to realize sustainable development goals, in *Proceedings of the 3rd International Conference on Globalization of Law and Local Wisdom (ICGLOW 2019)*, 2019, <https://www.atlantispress.com/proceedings/icgslow-19/125920774>, assessed: 17 December 2019
7. Bank Negara Malaysia (BNM) Inaugural Meeting of Joint Committee on Climate Change, assessed: 4 April 2020 2019; https://www.bnm.gov.my/index.php?ch=en_press&pg=en_press&ac=4920
8. TCFD Recommendations Overview, assessed: 31 December 2019 2019; <https://www.tcfhub.org/recommendations/>
9. R.Y.J. Siew, M.C.A. Balatbat, D.G. Carmichael, A review of building/infrastructure sustainability reporting tools (SRTs), *Smart Sustain Built Environ* **2**, 106–139 (2013)
10. R.Y.J. Siew, Green township index: malaysia's sustainable township rating tool, *Proc. ICE Eng. Sustain.* **171**, 169–177 (2017)
11. R.Y.J. Siew, M.C.A. Balatbat, D.G. Carmichael, A proposed framework for assessing the sustainability of infrastructure, *Int. J. Construct. Manag.* **16**, 281–298 (2016)
12. R.Y.J. Siew, Briefing: integrated reporting- challenges in the construction industry, *Proc. ICE Eng. Sustain.* **168**, 3–6 (2015)
13. South Pole Disclosing Climate- Related Financial Risks and Opportunities: Are Businesses Ready for TCFD? Accessed: 31 December 2019 2017; https://www.tcfhub.org/wp-content/uploads/2019/07/171221_WhitePaper_TCFD_EN_HR.pdf
14. United Nations Environment Programme Global Status Report 2018, assessed: 17 December 2019 2018; <https://www.unenvironment.org/resources/report/global-status-report-2018>
15. TCFD 2019 Status Report: Task Force on Climate Related Financial Disclosures Status Report, Basel Switzerland. assessed: 14 January 2020 2019; <https://www.fsb-tcf.org/wp-content/uploads/2019/06/2019-TCFD-Status-Report-FINAL-053119.pdf>

Cite this article as: R. Siew: Briefing: task force for climate financial disclosures (TCFD) for the property and construction industry. *Sust. Build.* **5**, 3 (2020).