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SUSTAINABILITY GUIDE FOR SMEs

MAY 2021 // GUIDANCE FOR MANAGING CLIMATE-RELATED FINANCIAL RISKS AND OPPORTUNITIES

The Recommendations of the Task Force on Climate-related Financial Disclosures [1] were used to guide all the writing in this report.

Introduction by Suzie Lyell

Climate Change and SMEs

What are the implications of Climate Change?

Current warming projections by the World Meteorological Organisation estimate a 3-5°C increase in global average temperature by the end of the century [2]. This would have catastrophic implications for many aspects of society. Climate change could cause fresh water shortages, dramatically impact food production, and cause an increase in natural disasters such as flash flooding and heatwaves. This report focuses on the financial risks climate change presents for SMEs, and makes recommendations on how SMEs can mitigate such risks.

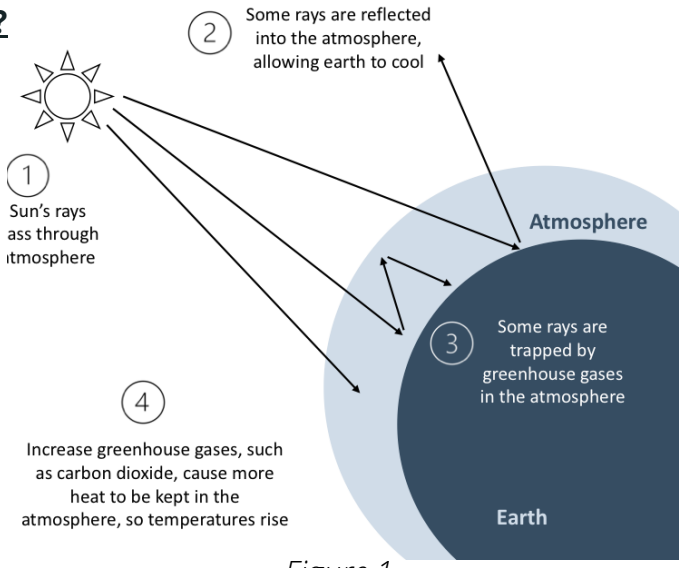


Figure 1

In addition, there is a shift away from the widespread use of fossil fuels towards cleaner energy sources and technologies. While in certain sectors this shift is likely to pose significant challenges, it also presents numerous opportunities.

Those organisations that recognise the financial risks associated with climate change, and that adopt mitigation policies to help combat them, are those most likely to ensure the continued viability and growth of their business.

Causes of Global Climate Change

97% of scientists agree that current global warming is human-induced [3]. Human activities such as industrialisation and large-scale agriculture have increased the rate of greenhouse gas emissions into Earth's atmosphere. These gases, such as carbon dioxide, contribute to the greenhouse effect , in which the higher concentration of greenhouse gases in the atmosphere trap solar radiation, causing planetary warming (figure 1). Recognising the significance of global warming, and the need to stem it within this century, almost 200 countries agreed in the 2015 Paris agreement to reduce greenhouse gas emissions [4]. That same year United Nation member states also committed to adopting 17 Sustainable Development Goals (SDGs), which aim to provide a blueprint to achieving a more sustainable global future [5].

Definitions

Climate Change: The large-scale shifts in weather patterns, largely driven by global warming as a result of anthropogenic greenhouse gas emissions

Sustainability: Meeting our own needs without compromising the ability of future generations to meet their own needs. To achieve this, a balance needs to be sought between environmental protection, social equity and economic development [6].

Climate-related Financial Disclosures: Recommendations made by the TCFD structured around four thematic areas designed to help companies provide better climate-related information to support informed capital allocation.

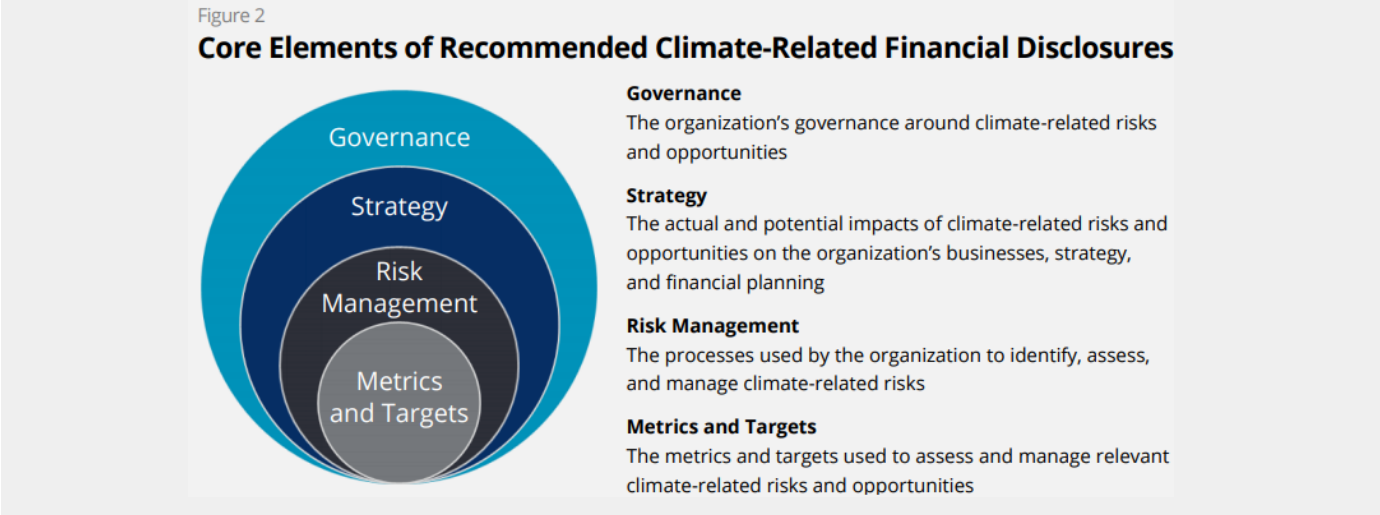


Figure 2; ([1], pp v figure 2)

How will climate change affect SMEs?

Climate change presents environmental and financial risks, and has far-reaching implications for businesses of all sizes, including SMEs. Climate change is likely to affect SMEs directly as supply-chain disruption becomes more prevalent, and the uncertainty surrounding production and availability of natural resources worsens. As governments around the world work to slow these effects, their mitigation policies may also create new costs for SMEs.

What are Climate-related Financial Disclosures and why should SMEs report them?

It is very difficult to accurately quantify the financial risk of climate change on businesses. As such, a global Task Force on Climate-related Financial Disclosures (TCFD) was established to identify the information that companies require to appropriately price and assess climate-related risks. The Task Force structures its recommendations around four thematic areas that represent core elements of how organisations operate: Governance, Strategy, Risk Management, and Metrics and Targets, illustrated in Figure 2.

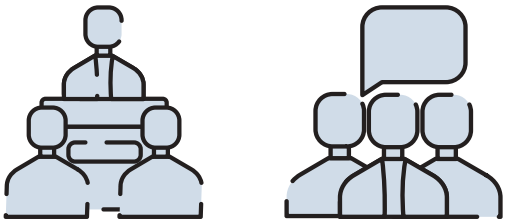
The TCFD recommendations are linked with a number of the UN's aforementioned SDGs. To provide some specific examples: SDG13 (climate action) through addressing climate-related risks, SDG17 (affordable clean energy) through encouraging greater energy efficiency in supply chains, and SDG11 (sustainable cities & communities) by suggesting numerous renewable-energy alternatives [5].

This report will be centred on the initial TCFD report by describing the Climate-related Financial Disclosures (CFDs) under these four headings, and expand on how they can be applicable to SMEs.

There are a number of reasons for SMEs to engage with CFDs. Economically, the greater the availability of climate-related financial impacts, the more accurately financial markets can price the costs and benefits of opportunities. This will help facilitate the transition to a low-carbon economy, helping industries withstand the effects of climate change. In addition, greater demand for transparency among larger companies may increase pressure on partnering SMEs to disclose climate-related information. SMEs that report them, are likely to be more resilient, stable, and thus more attractive investments for lenders and insurers.

Governance

By Ellie Pogrund



Governance is 'about leadership directing the organisation to long-term prosperity, and thus achieving the outcomes that the organisation has pledged' [7]

Governance in the TCFD

Investors, lenders, and insurance underwriters want to gauge the extent to which climate-related issues receive appropriate attention from SME leadership teams. The TCFD recommends that companies disclose the organisation's governance around climate-related risks and opportunities.

What is Governance for SMEs?

Originally associated with large companies, governance is now regarded as being equally important for SMEs and their success. There is no approved standard model of corporate governance for SMEs, indicative of the challenges in creating a one-size-fits-all definition for SME governance [8]. Broadly speaking, SME governance is 'about leadership directing the organisation to long-term prosperity, and thus achieving the outcomes that the organisation has pledged' [7].

SME size

The variation in companies classified as SMEs create variation in their governance. For example, a company with two employees will be governed differently to a company with 200, yet both are SMEs. The recommended disclosures in this section target SMEs with less-formal governance practices. Generally, these companies fall under the 'micro-entity' or 'small company' classification of SMEs, as defined by Companies House. The recommendations refer frequently to the company owner because it is assumed that they primarily run businesses of this size. However, for some businesses it may be appropriate for titles such as director or managing director to replace the term 'owner' in the following page's recommendations. 'Medium companies' and larger 'small companies' should refer to the original TCFD guidance because they are likely to follow a traditional governance structure, which the original TCFD guidance caters for.

Micro-entity	Small company	Medium company
IF ANY TWO OF THE FOLLOWING:		
• <10 employees • Annual turnover of £632 or less • £316,000 or less on its balance sheet	• <50 employees • Annual turnover of £10.2 million or less • £5.1 million or less on its balance sheet	• <250 employees • Annual turnover of £10.2 million or less • £18 million or less on its balance sheet

Source: Companies House[9]

Recommendations

If no-one is responsible for climate related risks and opportunities, consider:

- Create responsibilities to oversee climate related risks and opportunities
- How will those responsible assess and monitor climate-related risks and opportunities
  - Use of existing resources will make this task more feasible, for example the SME Climate Hub provides guidance on measuring carbon emissions.
  - Further suggestions can be found in the Strategy, Risk and Metrics and Targets section of this guidebook.
- How the owner(s) can start considering climate-related issues when reviewing and planning strategy, risk management policies, annual budgets and business plans
  - The owner(s) should research climate related risks and opportunities that affect their business and bare findings in mind when making decisions. For example, considering the cost of a new tax on non-renewable energy and so switching to a renewable energy provider.
- Giving the owner responsibility for monitoring and overseeing progress against goals for addressing climate-related issues

Once these measures are in place, your company can use the following guidance to report on the governance aspect of climate related financial disclosures.

Governance disclosures should identify:

- Who is responsible for overseeing climate related risks and opportunities.
- How the individual(s) responsible assess and monitor climate-related risks and opportunities, including a description of any associated organisation structures.
- Whether the owner(s) considers climate-related issues when planning and reviewing strategy, risk management policies, annual budgets and business plans.
- Whether the owner(s) monitors and oversees progress against climate-related goals.

COFFEESHED, BRISTOL - A HYPOTHETICAL CASE STUDY

Carole owns 'CoffeeShed', a café in Bristol's city centre, co-run with her husband Mark. The couple hope to open more cafés, so Carole produces a TCFD-aligned report to give to potential investors. The governance section of her report:

"Mark monitors climate related risks and opportunities. He is subscribed to climate-related business updates. He researches climate opportunities such as switching energy providers and conducts risk assessments. For example, he knows the city centre is increasingly at risk from flooding so wants to open new cafés elsewhere. The owners know they must appeal to environmentally-aware customers because Bristol is the UK's most sustainable city. Climate-related R&Os are used to make decisions and strategy. For example, this year CoffeeShed introduced a 15p discount for bring-your-own-cup customers after research showed the policy reduced costs and attracted customers. Mark updates Carol on the any new climate-related risks and opportunities in their quarterly financial review."

Strategy

By Danielle Cawley

By developing a range of strategic plans for plausible future states, your SME will be better equipped to adapt as the company's strategy will be more flexible and robust to changing climate-related conditions.

Why are climate-related financial disclosures important for strategy?

The business, strategy and financial planning of SMEs will potentially be impacted by climate-related risks and opportunities. Therefore, it is important to consider how both short and long-term climate-related risks and opportunities might affect operations. For any business, TCFD [1] recommends identifying the relevant climate-related risks and opportunities, describing their potential impact, and then evaluate how resilient the organisation's strategy is under each situation. Since the exact timing and magnitude of climate change effects are often uncertain and will depend on the mitigative actions taken, one tool that may support the long-term strategy of a company is scenario analysis.

Scenario analysis aids understanding of the strategic implications of climate-related risks and opportunities by using different emissions trajectories as lenses to assess and prepare for various impacts to business. By developing a range of strategic plans for plausible future states, your SME will be better equipped to adapt as the company's strategy will be more flexible and robust to changing climate-related conditions.

How is Scenario Analysis useful?

The impacts of climate change will vary depending on the socio-economic pathway adopted, which includes factors like population, energy use, and economic growth, as well as the extent of climate change mitigation. This will likely involve large emission reductions and investment in sustainable technologies (e.g., in the renewable energy industry), with governance playing a significant role in achieving climate-related goals. For example, the UK government has committed to reaching net-zero emissions by 2050 [10], in line with the Paris Agreement which aims to limit global warming to under 2 °C [11]. Therefore, SMEs do not only need to consider the physical risks from climate change, such as the increased frequency of extreme weather events, but the wider political implications of enhanced sustainability policies and stricter environmental regulations which may indirectly affect supply chains, imports and energy costs.

Performing Scenario Analysis

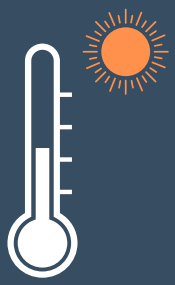
For SMEs, the approach will likely be more qualitative as they may have less exposure to climate-related issues, which will make quantification of SME's strategy resilience to the range of scenarios difficult [1]. As the SME becomes familiar with scenario analysis, as well as more aware of the potential transition risks and/or physical risks (see risk assessment section), they can then add to this and aim for a more sophisticated analysis over time.

RESOURCES TO AID SCENARIO ANALYSIS

Publicly available climate-related scenarios:

- Physical climate risks → Intergovernmental Panel on Climate Change (IPCC)
- Energy transition → International Energy Agency (IEA)

More in-depth information on scenario analysis and additional tools can also be found at: https://www.tcfdhub.org/scenario-analysis/



Unilever Scenario Analysis Example [12]

Unilever reports on their risk exposure using two global warming scenarios for the year 2100:

2 °C 'transition' scenario	4 °C 'physical' scenario
Implications of the policy, technology and market changes required to limit warming and meet the climate Paris Agreement. • *Carbon pricing mechanisms will increase the costs of manufacturing, raw materials and packaging.*	The direct physical risks related to climate change caused by heightened emissions. • *Financial impacts of extreme weather which increases disruption to supply chains.* • *Raised prices of raw materials as water stress reduces agricultural productivity.*

Note that although this method of separating risks may help to reduce complexity, a lot of the impacts are interconnected and will be relevant to both categories.

SME STRATEGY GUIDANCE FOR TCFD DISCLOSURES

Identify the climate-related risks and opportunities for your SME.

- What would you consider the short, medium, and long-term time horizons for your company? Climate-related issues often occur over long timescales, so even though your SME may not have a complete idea of how the company will evolve in the long-term, extending your strategic horizons to 10+ years could help you mitigate and exploit climate-related risks and opportunities.
- What climate-related issues could have a material impact on your SME for each of these timescales? What processes and controls should be in place within your SME to identify climate-related risks and opportunities?

Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

- How could these climate-related issues impact your SME? The effects of climate-related risks and opportunities can be diverse, influencing the supply chain, goods and services, the mitigation/adaptation required, investment opportunities and operations [1].
- How will the identified climate risks affect financial planning? For example, SMEs with limited disposable funding may need to prioritise certain risks and opportunities based on impact, likelihood or frequency.

Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

- How could your SME's strategy for identifying and acting on climate-related risks and opportunities be affected by different future climate scenarios?
- How will your strategies change to address this on the short, medium and long-term? Climate-related issues could alter the company's strategy and adjust financial planning by influencing how money is spent (for example, switching to cheaper, renewable energy sources if current operation costs are high and energy-intensive). SMEs with high energy expenses that might consider this opportunity include car dealerships, food-based businesses and hotels due to the high energy requirements needed to regulate temperature and lighting conditions [12][13].

Risk Management

By Markus Wohlfahrt

*Investors and stakeholders need to evaluate SME's overall risk profile and risk management activities. Risk management involves **three key stages**:*

Identify → Assess → Manage

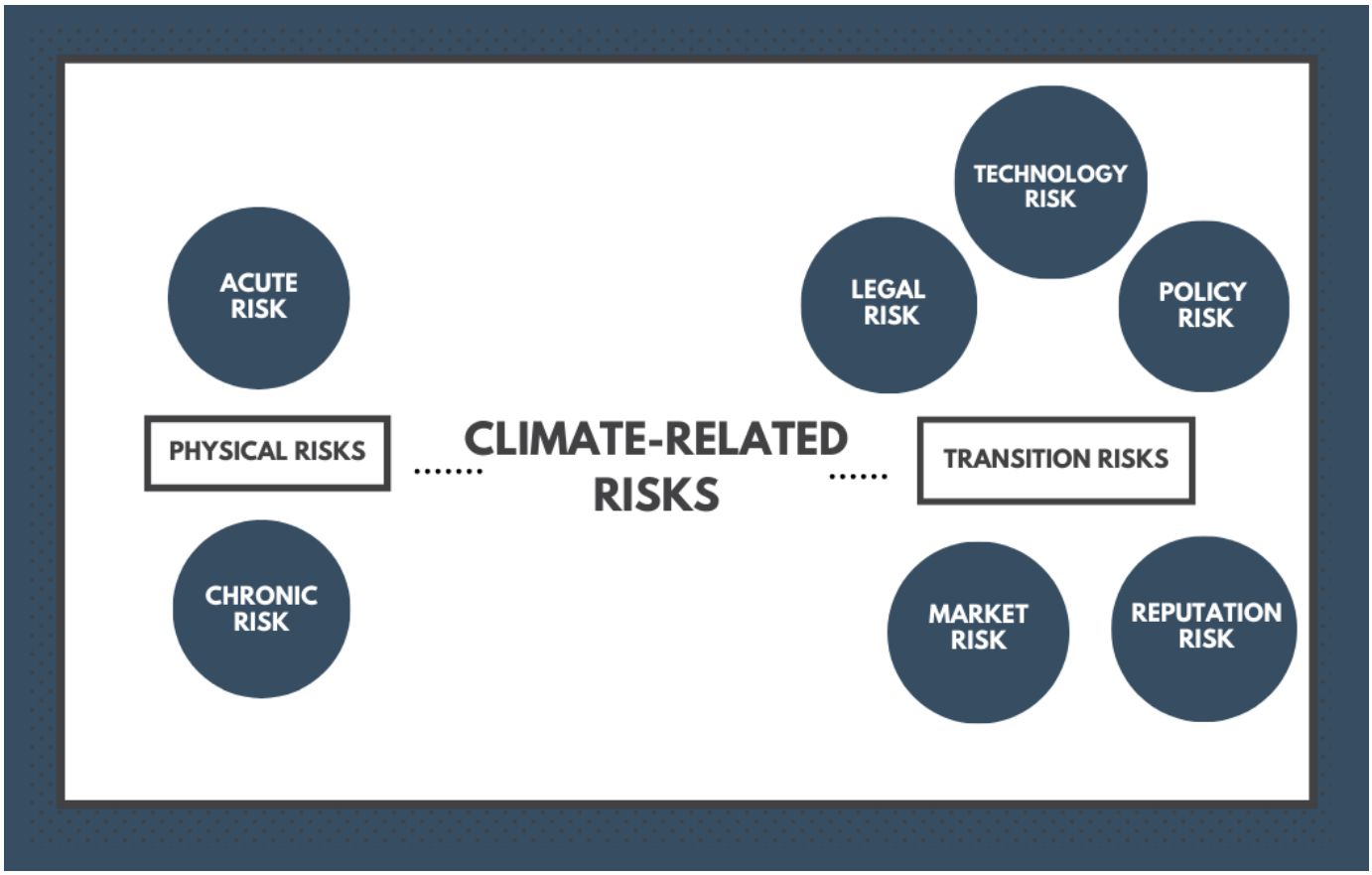
SMEs should consider the following questions in their Risk Assessment:

- How are risks identified and assessed?
- How does the organisation prioritise different risks?
- What processes are used to evaluate the potential size and scope of certain risks?
- What are the key definitions and terminology for risk evaluation?
- How are decisions made to mitigate, transfer, accept, or control risks?

Climate-Related Risks

SMEs that embrace climate change, anticipate government regulation, and adopt climate-beneficial technologies will emerge as the strongest players in the competitive landscape. In the long term, climate risk management is necessary for SMEs to survive.

Risk can be identified as either a 'physical risk' or 'transition risk'.



Physical Risk:

SMEs may be exposed to **acute or chronic** physical risks.

SMEs are **vulnerable** if they have long-lived and fixed assets, operate in acute risk areas, or rely heavily on extensive supply chains.

Different climate-related events and changes impose different financial uncertainties.

Key Climate Drivers

These include disruptions to water availability, food security, or electricity outages from two categories of hazards:

- **Acute Risk:** Extreme weather events, such as storms, floods, heatwaves, wildfires, and droughts.
- **Chronic Risk:** Long-term shifts in climate patterns, such as changes in precipitation patterns, rising sea levels, and temperatures.

Financial Implications

Financial implications of physical risk involve many factors such as:

- **Damages to physical assets**
  Destruction of assets, flooding in buildings.
- **Supply chain disruptions**
  Leading to lost revenues due to reduced sales and missed deliveries of essential goods.
- **Higher costs for workforce**
  Health and safety costs.
- **Increased capital and insurance costs**
  Increased insurance premiums due to a greater likelihood of claims.
- **Write-offs and early retirement of assets**
  Replacement of crucial and destroyed machinery.

Transitional Risks:

Adapting to a **low-carbon economy** exposes SMEs to transitional risks. This involves policy changes, legal exposure, technological prospects, and risks regarding the market and reputation.

1 Policy and Legal Risk

Action: New policies constraining actions contributing to climate change and force adaptions. Litigation for failing to adapt to new regulations.
Financial Consequences: Increased operating costs due to higher compliance requirements, write-offs, assets impairment, early retirement of existing assets, and legal costs.
Examples: Mandates on electric vehicles and shifting energy sourcing, implementing energy and water-efficient solutions, restricted city access, carbon emissions pricing, and reporting.

2 Technology Risk

Action: Emerging technologies affecting the competitiveness of SMEs with high carbon emissions.
Financial Consequences: Costs of transitioning to lower emission technologies, write-offs, and early retirement of assets, as well as R&D expenditure.
Examples: Substituting existing products and services with low emission options, or unsuccessful investment in wrong technologies.

3 Market and Reputational Risk

Action: Shift in supply and demand for certain commodities, products, and services or change in consumers' perception of an SME's climate change contribution.
Financial Consequences: Increased production costs due to changing input prices (such as energy) and output prices (such as waste treatment, abrupt and unexpected shifts in energy costs as well as negative impacts on workforce retention).
Examples: Changing customer behavior, uncertainty in market signals, stigmatization of sector or SME, and increased material costs.

Climate-Related Opportunities

SMEs can be more flexible and quicker in their response to climate-related changes and can seize opportunities. Developing an adaptive capacity to react quickly increases business resilience and may improve their financial situation. This particularly applies to businesses with extensive supply and distribution systems or long-lived assets. Opportunities can be found in different categories:

Efficient resource usage
Reduced operating costs by improving efficiency across production/distribution channels, buildings, machinery/equipment, transport/mobility, material/waste management. Direct cost-saving potential through innovative technologies such as efficient heating and circular economy subsidized by financial local council aid.

Low emission energy sourcing
Transition of the energy generation to low emission alternatives such as wind, solar, wave, tidal, hydro, geothermal, nuclear, and biofuels. In the long run, there could be direct cost savings by switching energy sourcing to lower carbon emission sources.

New products based on market and consumer trends
Competitive advantage and business diversification by developing and innovating new low-emission products/services and capitalize on shifting consumer behavior and preferences, pivoting towards eco-friendly SMEs. New opportunities by collaborating with governments, small-scale local entrepreneurs, and community groups.

Business resilience
Introduce regular meetings to evaluate new actions to tackle climate change and how to better manage associated risks and seize opportunities. This particularly applies to SMEs with long-lived fixed assets, extensive supply chain and distribution networks depend on utility and infrastructure networks or natural resources in their value chain.

COFFEESHED, BRISTOL - A HYPOTHETICAL CASE STUDY

Adapting to physical risk:

- Increased temperatures requiring new fanning and cooling on-site to establish an appropriate working environment.
- Necessary purchase of more resilient outdoor furniture given more frequent storms.

Adapting to transition risk:

- Bristol City Council to introduce new sustainability mandates such as specific waste treatment, e.g. coffee filter recycling, coffee machine wastewater filtering.
- Invention of fully automated barista machines with equal customisation options as offered by CoffeeShed.
- Bad customer perception about single-use cup usage.

Seizing opportunities:

- Operating a reduced number of coffee machines during off-peak times.
- Council-subsidized solar panel sun shade for an outdoor seating area.
- Introducing own multi-use coffee cup to encourage customers to avoid single-use cups.

Metrics & Targets

By Issy Urquhart

Reporting the metrics and targets used to measure and monitor climate-related risks and opportunities helps investors and stakeholders assess your resilience and potential in a changing world.

Why are Metrics & Targets useful?

The TCFD recommends disclosing the metrics and targets used to assess and monitor climate-related risks and opportunities, where this information is available. Using metrics and targets to monitor and mitigate risks can help **enhance resilience**. Identifying and monitoring possible opportunities can **allow for growth** under a changing climate. Reporting these can highlight to investors that your company is **financially sustainable** and **prepared for a changing climate**.

As an SME, you may be limited in how many metrics or targets you can use and monitor, so this section will introduce the different metrics and targets recommended by the TCFD, and explore how best to start reporting these.

THREE TYPES OF METRICS & TARGETS TO DISCLOSE:

1.Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process

This refers to any **metrics used to monitor or measure the various climate-related risks and opportunities** (see pg.8, Risk Management), alongside how these risks and opportunities may impact your organisation's long-term viability (see pg.6, Strategy).

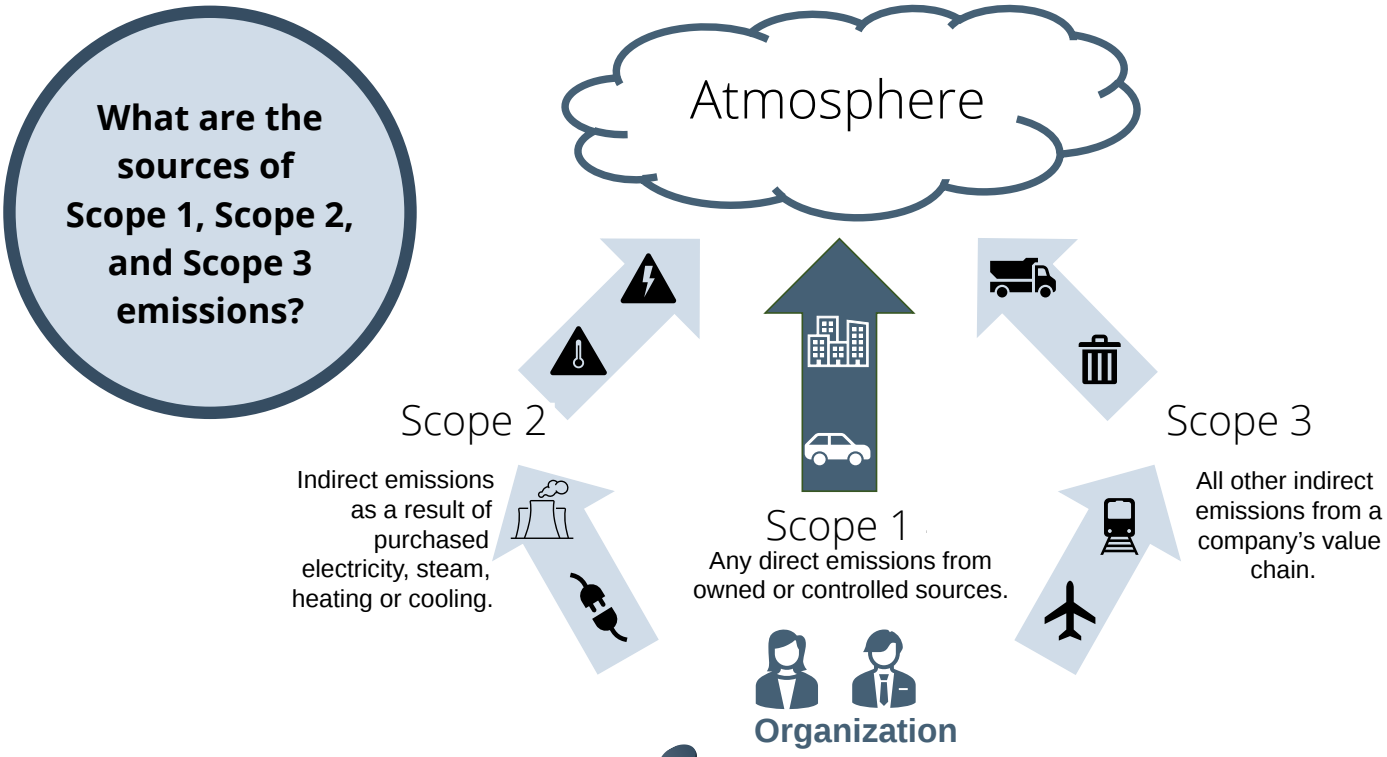
Metrics can be used to monitor risks related to water, energy, land use and waste management. If the price of these commodities change, how will your company's finances be affected? Answering this question allows you to **plan ahead** and **strengthen resilience.**

As a start, will switching to renewable energy allow for more stable energy costs in the future? You can also consider potential revenue streams from alternative good and services made for a low-carbon economy. When reporting these metrics, disclosing historical trends, and the methodology used to derive them, is a good way to show progress and shifts over time.

2. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks.

Disclosing your company's greenhouse gas emissions allows you to **understand the impact your company is having**, and i**dentify areas in which emissions can be reduced** [14]**.** Showing your emissions monitoring approach and any progress in reducing emissions may attract both **customer and investor attention** [14].

When reporting greenhouse gas emissions, it may be relevant to discuss any business risks associated with these. For example, a change in policy which may impact operating cost, or new technology changing the cost of a commodity.



Scope 1 emissions can be calculated by measuring the fuel directly burnt by your organisation [14]. This can include company owned cars and generators [15]. Recording the amount of fuel used in these means you can then calculate the emissions generated from burning a certain fuel using online calculators or DEFRA's greenhouse gas conversion factors.

USEFUL TOOLS FOR EMISSIONS CALCULATIONS:

- DEFRA's greenhouse gas conversion information.
- Tools provided by Greenhouse Gas Protocol's methodology to allow for comparability.
- The UK Government has published user guides supporting small businesses in calculating greenhouse gas emissions.

Scope 2 emissions can be calculated using your energy bills or a smart meter, where it states your electricity and gas usage in kWh [14]. This can be used in an online calculator or with DEFRA's greenhouse gas conversion factors.

Calculating **Scope 3 emissions** includes all indirect emissions aside from energy purchased (Scope 2) – including employee commuting and travel, waste disposal, and emissions associated with the life-cycle of any goods and services your organisation purchases [15]. To monitor these activities, DEFRA's information on greenhouse gas conversion factors outline the emissions from the different activities and materials that may contribute to your organisation's Scope 3 emissions. Moreover, suppliers may have already calculated the emissions associated with goods or services.

As larger companies are more frequently reporting their Scope 3 emissions, they may start asking SMEs in their supply chains to be more transparent and vigilant with their emissions in order to ensure they meet any emissions targets.

As an SME, calculating emissions may be too time consuming initially. Qualitative targets indicating areas in which you are trying to reduce emissions can be an alternative way to show progress.

3. Describe the targets used by the organisation to manage climate-related risks and opportunities (CRRO) and performance against targets.

These are any qualitative or quantitative targets related to the climate risks or opportunities outlined in the Risk Management section.

For example, after recognising a risk or an opportunity, how would you best want to mitigate that risk or utilise that opportunity? This can include goals related to financial goals, financial loss tolerances, greenhouse gases avoided, or net revenue goals.

FOR TARGETS, IT'S IMPORTANT TO INCLUDE THIS KEY INFORMATION:

- The target time frame and base year – between which years would you like to achieve the target?
- Is the target absolute or intensity-based (relative to some economic output, such as number of employees or revenue)? Intensity based targets allow for comparison between organisations, and accounts for economic growth.
- What key performance indicators will be used to evaluate progress?
- The TCFD recommends describing how quantitative targets and measures are calculated.

COFFEESHED, BRISTOL - A HYPOTHETICAL CASE STUDY

"In 2020, 1 kWh / £ of electricity was used. We would like to be more efficient and improve this, and by 2025 we want to decrease this to 0.8 kWh / £. The energy consumption is measured using our energy bills. We can meet this target by turning off unnecessary equipment overnight, or installing more efficient air conditioning units."

This target is quantitative but easy to measure. It is normalised (per £ of revenue) so it can be compared across time and against other businesses. It has a base year to compare the target to, and an end goal year to assess its performance. In 2025, the business can look back and consider how feasible the target was – if it wasn't met – why not? If it was met – could you go further in the next 5 years? The target also gives ways that the business will achieve the goal and describes how the target will be measured. Initially, this may be more accessible for SMEs than measuring greenhouse gas emissions, but still shows that the business is conscious of their emissions, and how best to adapt to a changing world.

Further Research Links

Governance

- SME Climate Hub: https://smeclimatehub.org
- IFC Report: https://www.ifc.org/wps/wcm/connect/acc873c9-5cb2-42da-aa72-0b46e6c1b48b/IFC+SME+Guide+2020+Web.pdf?MOD=AJPERES&CVID=n7bAUbZ
- ACCA Governance Insights: https://www.accaglobal.com/lk/en/professional-insights/risk/governance-needs-of-smes.html
- McKinsey Report: https://www.mckinsey.com/featured-insights/climate-change

Strategy

- Unilever's report - an example showing use of scenario analysis: https://www.unilever.com/Images/unilever-annual-report-and-accounts-2017_tcm244-516456_en.pdf

Links aiding scenario analysis on page 6

Risk Management

- Deloitte report: https://www2.deloitte.com/content/dam/Deloitte/fr/Documents/sustainability-services/deloitte_climate-related-risk-assessments-and-financial-disclosures-2018-tcfd.pdf
- Marsh & McLennan report: https://www.mmc.com/content/dam/mmc-web/Global-Risk-Center/Files/how-climate-resilient-is-your-company.pdf

Metrics & Targets

- DEFRA's greenhouse gas conversion information: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
- Greenhouse Gas Protocol: https://ghgprotocol.org/calculation-tools
- UK Government's Small Business User Guide for measuring and reporting greenhouse gas emissions: https://www.gov.uk/government/publications/small-business-user-guide-guidance-on-how-to-measure-and-report-your-greenhouse-gas-emissions

Future Research Areas

1) Understand how climate-related risks and opportunities apply in different SME industry sectors.

2) Understand how SMEs themselves perceive climate-related financial risks, and the barriers involved in managing these risks effectively.

3) Discuss the interlinkages and means for cooperation between MNCs and SMEs in mitigating climate-related financial risks.

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