# Survey of corporate climate change strategies

*Mitigation and adaption to global climate change, including strategic responses and setting targets for emissions reductions are areas where 'best practice' is developing rapidly. This brief focuses on a leadership group of companies and describes how they articulate:*

- *their operational dependencies on a functional ecosystem;*
- *how they are using climate change scenarios to develop their own strategies; and*
- *the emissions reductions they are seeking (along with timelines).*

*Taken together, this is a group that is following a scientific basis for tackling climate change concerns and they provide a template for what a leadership position constitutes in 2020. Using science-based scenario modelling and emission target setting is becoming the norm and the sample of companies reviewed demonstrates a high degree of sophistication in their approach to climate change resilience.*

## Introduction

This research supports the Climate Resilience Task Force by providing information on how a sample of 'best in class' companies are communicating their climate change strategy to investors. The brief, therefore, does not focus on the positive contributions that the seafood industry brings to a low carbon transition nor does it focus on greenhouse gas emissions reporting: both these topics are important in their own right but are not covered here. Rather, the focus here is on providing evidence of how leadership is being demonstrated by a sample of companies.

The analysis focuses on 22 companies, which were selected using two filters. First, a list of the companies that the World Benchmarking Alliance has identified as being critical to the attainment of the Sustainable Development Goals[ii] was retrieved (2,000 companies), and a sub-group of these companies, namely those that are in the agriculture, food and beverage industries (247 companies) was identified. This sub-group was further reduced to include only those who have been identified by the CDP (see box 1) as having 'a high degree of maturity both in terms of their initiatives and the results obtained in the fight against climate change' (22 of the 84 SDG2000 companies who reported to the CDP in 2019). Using the intersection from these two sources has allowed us to identify companies who are likely to face climate change challenges that are similar to those faced by SeaBOS member companies and who are thought to be the most advanced in terms of their responsiveness to those challenges.

## Research approach and company sample

The 2019 disclosures made by the 22 companies (see Table 1) were obtained from the CDP and analysed. The CDP sells datasets of questionnaire responses to academics for research purposes, but only when companies consent to their responses being shared. In addition, providing information to the CDP is not compulsory. Taking these two restrictions into account, it is likely that there are examples of excellent company management and performance in the area of climate change outside of this sample. That being said, it is difficult to know who these companies may be or to gain an appreciation of the actions being taken by these potentially excellent firms.

Critically, the analysed companies are likely to be exposed to climate change pressures and opportunities in a similar manner as seafood companies. The way in which they respond to these pressures and opportunities, therefore, provides insight into corporate 'best practice' in this area. Table 1 briefly describes the 22 companies, which are headquartered in European countries (10), Japan (6), the USA (5) and Israel (1).

[ii] https://www.worldbenchmarkingalliance.org/the-sdg2000-the-most-influential-2000-companies-for-a-sustainable-future/

## Analysis of climate change strategies

Three themes are analysed here, namely:

- The extent to which the companies depend upon agricultural production that is likely to be affected by climate change along with an estimate of the financial significance of that dependent relationship;
- The use of climate change scenarios by the companies to inform their future strategies; and
- The targets that these companies are setting for climate change reductions.

These themes were selected as being most likely to be of interest to SeaBOS companies. A large number of other questions are asked by the CDP and these are not reflected in this brief.

***Assessing dependencies for business continuity***

The CDP asks companies to indicate what dependencies they have on agricultural commodities in their business operations (i.e. commodities they produce themselves or that they source via supply chains). A dependency means that the company in

### Box 1: Corporate climate change disclosure to investors

***CDP – An introduction*** (https://www.cdp.net/en)

The CDP (originally known as the Carbon Disclosure Project) is an information intermediary that provides a structure and approach to enable investors to have standardised information about the climate change strategies, governance and performance of companies they may wish to invest in. This is achieved by gathering company data through a structured questionnaire and then collating that information so as to enhance learning for climate change. Learning is achieved through three pathways:

1. Reports that gather together all questionnaire evidence into thematic issues, providing the basis of understand corporate climate change responsiveness;
2. Data from the questionnaires are used (with company permission) to inform ESG (environmental, social and governance) ratings which are subsequently used by institutional investors in their decision making; and
3. Individual companies can learn from the process of preparing questionnaire answers and (if they are supporters of the initiative) can obtain one-to-one support for improvement.

The CDP also rates companies according to how mature they are in terms of responsiveness. As of 2020, 515 investors (representing US$106 trillion in investments) use the results of the CDP analysis (particularly the detailed questionnaire responses).

The CDP also has a reporting protocol where cities, states and regions describe their climate change strategies, risks, governance and performance. This data is open access and creates the possibility of seeing how sub-national governance is responding to climate change in particular locations which itself might inform corporate strategy. The open access cities/states/regions portal can be found here: https://data.cdp.net/. CDP was also a founding partner to the Science Based Targets Initiative (SBTi) – for more information see Box 3.

***Financial Stability Board's (FSB) Task-force on Climate Change Financial Disclosures (TCFD)*** (https://www.fsb-tcfd.org/)

Founded in 2015, the FSC is an international body that brings together senior policy makers from Central Banks, Ministries of Finance and other regulatory authorities (who govern banks, insurers and stock exchanges) of the G20 group of countries as well as representatives of other globally important financial centres. The purpose of the FSB is to support its members in their role as guardians of the stability and resilience of the global financial system and to support a transition to a low carbon global economy. The way the FSB saw this happening was through developing consistent climate-related financial disclosures that would be useful to investors, lenders, and insurance underwriters in understanding material risks. This is the job of the TCFD.

The Task Force considered the physical, liability and transition risks associated with climate change and issued (in 2017) three sets of guidance:

1. A general framework for climate related financial disclosures;
2. An implementation guide to support the general framework; and
3. A technical supplement on the use of scenario analysis for understanding climate change risk.

While it is relatively early days for this initiative, it will undoubtedly become more influential as a source of what constitutes 'best practice' in terms of corporate climate change disclosure terms. This influence is due in part to the nature of the founding body and to its close connection to investors who are themselves governed by due diligence legislation.

**Investor due diligence** legal requirements underpin the impetus for and success of these initiatives. That is, institutional investors have a fiduciary duty of care for the money entrusted in them by others and the impacts of global climate change have become part of that duty of care because it is anticipated that these impacts will be material in amount.

| Table 1: A summary of the companies whose disclosures were analysed* | | | |
|---|---|---|---|
| **Company name** | **Country of incorporation** | **Brief description of activities** | **First submission to CDP (note 1)** |
| Asahi Group | Japan | Alcoholic beverages, other drinks and food | 2010 |
| Barry Callebaut | Switzerland | Chocolate and cocoa products | 2010 |
| Danone | France | Dairy and plant-based products; early life nutrition; water; and medical nutrition. | 2010 |
| Diageo | United Kingdom | Alcoholic beverages | 2010 |
| Firmenich | Switzerland | Perfume and flavours | 2018 |
| Fuji Oil Group | Japan | Food ingredients, primarily oils | 2016 |
| General Mills | USA | Natural and organic food | 2010 |
| Givaudan | Switzerland | Flavours and fragrances | 2010 |
| Ingredion | USA | Food, beverage, animal nutrient and brewing sectors | 2016 |
| International Flavours & Fragrances | USA | Flavours and fragrances | 2013 |
| Israel Chemicals | Israel | Fertilizer and speciality chemicals | 2010 |
| Kikkoman Corporation | Japan | Soy sauce and food products | 2015 |
| Kirin Holdings | Japan | Alcoholic beverage and biochemical fields | 2010 |
| Meiji | Japan | Food and pharmaceuticals | 2018 |
| Molson Coors | USA | Alcoholic beverages | 2010 |
| Mowi | Norway | Farmed salmon and seafood processor | 2018 |
| Nestle | Switzerland | Food and beverage | 2010 |
| Orkla | Norway | Supplier of branded consumer goods | 2010 |
| PepsiCo | USA | Food and beverage | 2010 |
| Pernod Ricard | France | Wines and spirits | 2010 |
| Suntory | Japan | Beverages and food | 2014 |
| Symrise | Germany | Fragrances, flavours, active ingredients and aroma chemicals | 2011 |

* These companies have taken part in the CDP process for varying amounts of time with 50% of the cohort having done so since 2010 (our dataset starts in 2010, so they may have been reporting earlier than this). It would seem possible to become highly rated in the CDP in a relatively short period of time.

question is reliant on this raw material being available for business continuity. In addition, the CDP asks companies to estimate the percentage of their revenue that is dependent on the agricultural commodities they identify. Table 2 summarises this data.

The degree of dependency is, naturally, driven by the particular products manufactured by these companies and there is not much to be gained from an analysis of the particular situations of individual firms (five companies in the sample indicated that this issue did not affect them). What is evident, however, is that many of these companies have significant dependency on agricultural products. For example, in the case of barley, corn, hops, cocoa and fish there is at least one firm in the sample who has in excess of 80% of their revenue associated with key product lines of the commodities listed (Barry Callebaut, Ingredion, Molson Coors and Mowi all sit in this category). If the analysis is extended to dependencies of 60-80% of revenue, then milk, soy and sugar become important (and Danone is added to the sample). If one goes the next layer down (the

| Table 2: Highest dependence on agricultural products | | |
|---|---|---|
| **Commodities significant to business** | **Highest percentage of revenue dependent on this agricultural commodity** | **Companies who noted this dependency** |
| Barley | More than 80% | Molson Coors |
| Cocoa | More than 80% | Barry Callebaut |
| Corn | More than 80% | Ingredion and Molson Coors |
| Fish | More than 80% | Mowi |
| Grapes | 20-40% | Pernod Ricard |
| Hops | More than 80% | Molson Coors |
| Milk | 60-80% | Danone |
| Palm oil | 40-60% | PepsiCo |
| Potatoes | 40-60% | PepsiCo |
| Soy | 60-80% | Barry Callebaut |
| Sugar | 60-80% | Barry Callebaut |
| Wheat | 20-40% | Kikkoman |

40-60% of revenue dependence) then palm oil and potatoes are added to the list (and PepsiCo joins the other companies). This data suggests that agricultural and food/drink producers are identifying climate change risks to the extent that they affect the supply, price and quality of raw materials that are critical for their business operations. They also report to the CDP on actions they are taking to deal with these risks: these are beyond the scope of this brief. The focus in this brief is on how these firms are identifying strategic risks.

***Climate change scenarios used***

The CDP asks companies to indicate if they use scenario analysis to help them consider climate-related issues, and 16 of the 22 companies indicated that they had done so. Some of the scenarios used incorporated quantitative information to illustrate potential pathways and futures while others use qualitative analysis (and some a mix of the two). For those who do not currently use climate change scenarios (namely, Diageo, Ingredion, Israel Chemicals, Molson Coors, PepsiCo and Pernod Ricard), there was a stated intention to undertake this work in the next two years. The use of scenarios to inform future business strategy, therefore, might be expected of any company undertaking due diligence in terms of climate change.

The Representative Concentration Pathways (RCPs) used by the IPCC (see Brief 5, Figure 1) are also used by some of the companies (see Table 3 for a summary), sometimes on their own but also in combination. These are what are known as physical risk scenarios: that is, they outline the physical risks that companies may face in the future. In addition to the RCP scenarios, some companies used two 'transition risk' scenarios. Transition risk scenarios are those that examine what climate change policies might be enacted in the next 10-30 years and use this to model what risks this may bring to a company. Table 3 indicates the scenarios used by the sample companies (except for Givaudan who use their own scenario).

The first observation is that five companies report using a range of scenarios analysis both to assess their transition and physical risks (Danone, International Flavors & Fragrances, Barry Callebaut, Kirin Holdings, Nestlé, Suntory). Likewise, several companies (Barry Callebaut, Danone, Kirin, Kikkoman and Suntory) used a range of contrasting scenarios with the most common combination being RCP2.6 and 8.5. Physical risks attract the majority of the attention of these firms (the TCFD recommends that both transition and physical risks should be considered by companies).

Second, some of the companies were able to articulate specific risks and responses that arise from their scenario analysis. These included water stress affecting growing crops and the availability of water for processing plants; changes as to where raw material crops could be grown (and the impact of climate change on yields and quality of raw materials); as well as identification of natural hazards that manufacturing locations might be subject to. These risks also prompted companies to convey details of how they were seeking to mitigate potential problems including investigating new growing zones, breeding programs for crops that

| Table 3: Scenarios used by sample companies | | |
|---|---|---|
| | **Scenarios** | **Companies using the scenario** |
| **Transitional scenarios** | 2DS ($CO_2$ emissions reduce by 60% by 2050 and continued decline until carbon neutrality is reached) | Fimenich; General Mills; & Symise |
| | Sustainable Development Scenario ($CO_2$ emissions peak before 2020 and decline swiftly until 2040) | Kikkoman |
| **Physical scenarios (see Figure 1)** | RCP 2.6 | Asahi; Barry Callebaut; Fuji Oil Group; International Flavours & Fragrances; Kirin; Meiji; Mowi; Nestle; Orkla; & Suntory |
| | RCP 4.5 | Danone; Kirin; & Suntory |
| | RCP 6.0 | Kikkoman; Kirin; & Suntory |
| | RCP 8.5 | Barry Callebaut; Danone; Kikkoman; Kirin; Nestle; & Suntory |

might be able to withstand future growing conditions, through to wider ecosystem protection activities so as to protect water flows for future crop production/ processing. Some of these actions could be described a 'nature-based solutions': that is, the proposed solutions are taking an ecosystem approach to how to remedy the issues they are facing. Box 2 includes some examples of the thinking conveyed by the companies in their CDP disclosures.

The CDP asks respondents to indicate how climate change risks affect their operations as well as potential impacts on financial aspects (revenues, costs, etc). Table 4 summarises the responses of that companies that answered this question (20 of the 22 companies). It is apparent from this table that for some of the sample companies, climate change issues are financially significant as well as operationally important.

### Box 2: Responding to climate change scenarios (each quote related to a different company)

"These two scenarios provide an insight into the possible eventualities and also the most adverse effects to [company name] operations and business overall until the middle and end of this century. This time horizon is relevant to our organization because Cocoa farming is a long-term business that requires planning over several decades. [Company name] operates globally and is most exposed to physical risks due to climate change rather than transition risks … the scenario analysis has directly influenced the formulation of our carbon strategy, which is to become carbon positive by 2025. This goal goes well beyond a 2°C pathway as [company name] has realized that bold action is required to avoid the worst consequences. A specific outcome of the scenario analysis is that the company also aims at becoming forest positive by 2025".

"Our scenario analysis also supported our objective to strengthen our influence to key raw material suppliers in order to manage and reduce their environmental impacts. As such, [company name] aims to transform the entire lifecycle (cradle-to-gate) of our value chain emissions down to the processing and use of sold products by its customers … [company name] committed to engage with 69 key raw material suppliers and 5 other suppliers, comprising of 63% volume and spend of total raw materials purchased, to encourage suppliers to respond to CDP in 2018. Out of those 74 requested, 43 suppliers (58%) responded".

"Inputs considered during the analysis include risks associated with climate change that affect agriculture, such as severe weather events, $CO_2$ and increased temperatures. The analysis considered our entire value chain, not just our own operations. This is important because nearly 2/3rds of the GHG emissions and 99 percent of water use throughout our value chain occur upstream of our direct operations in agriculture, ingredients and packaging … Analytical methods included were in line with the Sector Decarbonization Approach".

| Table 4: Impacts of climate-related issues on financial and strategic categories | | | |
|---|---|---|---|
| **Financial category** | **% companies reporting an impact** | **Strategic categories** | **% companies reporting an impact** |
| Revenues | 80% | Products and services | 75% |
| Operating costs | 75% | Supply chain | 60% |
| Capital expenditures / capital allocations | 95% | Adaptation and mitigation activities | 75% |
| Acquisitions and divestments | 60% | Investment in research and development | 85% |
| Access to capital | 55% | Operations | 65% |
| Assets | 60% | | |
| Liabilities | 25% | | |

| Table 5: A comparison of emission reduction targets | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **Absolute emissions reductions targets (by scope)** | | | | | | |
| | **Baseline year** | **(by scope)** | **Near term target** | **Long term target** | **Scope 3** | **Near term target** | **Long term target** | **Other observations** |
| **Asahi** | 2015 | 30% | 2030 | | 30% | 2030 | | |
| | | 100% | | 2050 | 100% | | 2050 | |
| **Barry Callebaut** | 2018 | 35% | 2025 | | 35% | 2025 | | |
| **Danone*** | 2015 | 30% | 2030 | | | | | Not clear scope 1 and 2 are absolute targets. Additional goal: 50% reduction per ton product sold by 2030 (for scope 1 – 3). |
| **Diageo** | 2007 | 50% | 2020 | | 30% | 2020 | | Scope 3 is supply chain only. |
| **Firmenich** | 2017 | 55% | 2030 | | 20% | 2030 | | Scope 3 is supply chain only |
| **Fuji Oil Group** | 2016 | 40% | 2030 | | 18% | 2030 | | |
| **General Mills** | 2010 | 28% | 2025 | | 28% | 2025 | | |
| **Givaudan** | 2015 | 70% | 2030 | | 20% | 2030 | | |
| **International Flavours & Fragrances** | 2015 | 30% | 2025 | | | | | |
| **Kirin Holdings** | 2015 | 30% | 2030 | | 30% | 2030 | | |
| **Molson Coors** | 2016 | 50% | 2025 | | 20% | 2025 | | |
| **Mowi** | 2016 | 35% | 2030 | | | | | |
| | | 72% | | 2050 | | | | |
| | 2018 | | | | 35% | | 2030 | |
| | | | | | 72% | | 2050 | |
| **Nestle** | 2014 | 12% | 2020 | | 8% | 2020 | | |
| **Orkla** | 2014 | 63% | 2025 | | 20% | 2025 | | |
| | | 77% | | 2040 | 75% | | 2040 | |
| **PepsiCo** | 2015 | 20% | 2030 | | 20% | 2030 | | |
| **Pernod Ricard** | 2018 | 30% | 2030 | | | | | Other goals included increase renewable energy sourcing (scope 2) from 75.5% in 2018 to 100% in 2025. Reduce scope 3 for selected upstream impacts by 50% of value added by 2030 |
| **Suntory** | 2015 | 25% | 2030 | | 20% | 2030 | | |
| **Symrise*** | 2016 | 18% | 2030 | | | | | Not clear these are absolute targets |

* Noted where not explicitly absolute reductions

| Table 6: Comparison of emission reduction ambitions (companies ranked by total reduction) | | | | |
|---|---|---|---|---|
| | Start | Finish | Reduction | Rate / year |
| **Givaudan** | 2015 | 2030 | **70%** | **4.7%** |
| **Orkla** | 2014 | 2025 | **63%** | **5.7%** |
| **Firmenich** | 2017 | 2030 | **55%** | **4.2%** |
| **Diageo** | 2007 | 2020 | **50%** | **3.8%** |
| **Molson Coors** | 2016 | 2025 | **50%** | **5.6%** |
| **Fuji Oil Group** | 2016 | 2030 | **40%** | **2.9%** |
| **Barry Callebaut** | 2018 | 2025 | **35%** | **5.0%** |
| **Mowi** | 2016 | 2030 | **35%** | **2.5%** |
| **Asahi** | 2015 | 2030 | **30%** | **2.0%** |
| **Danone*** | 2015 | 2030 | **30%** | **2.0%** |
| **International Flavours & Fragrances** | 2015 | 2025 | **30%** | **3.0%** |
| **Kirin Holdings** | 2015 | 2030 | **30%** | **2.0%** |
| **Pernod Ricard** | 2018 | 2030 | **30%** | **2.5%** |
| **General Mills** | 2010 | 2025 | **28%** | **1.9%** |
| **Suntory** | 2015 | 2030 | **25%** | **1.7%** |
| **PepsiCo** | 2015 | 2030 | **20%** | **1.3%** |
| **Symrise*** | 2016 | 2030 | **18%** | **1.3%** |
| **Nestle** | 2014 | 2020 | **12%** | **2.0%** |

* Noting that these are unlikely to be absolute emission reduction targets in comparison to the rest of the sample companies.

It can be concluded that, for this sample of companies, climate change presents both opportunities and risks that are material in financial terms and which are prompting strategic and operational actions within the companies and their supply chains. These responses include setting greenhouse gas emission reduction targets.

***Emissions targets***

Table 5 summarises emission reduction targets for this group of companies, drawing from CDP data and that extracted from the Science Based Targets initiative (SBTi – see Box 3). Note: scope 1 emissions are those directly generated from company activities; scope 2 emissions are those that arise from the use of energy (eg: electricity) by companies; and scope 3 emissions are all other emissions that arise in the value chain of a company (ie: in the supply chain and in the use of the product by customers).

A number of points can be made on the basis of this information:

- The majority of these companies are setting absolute reduction targets. This means that they are planning to reduce emissions even if they grow in size. This approach is in contrast to relative emissions targets where reductions are sought on a per unit of output or revenue (some of the targets in Table 5 are also of this type).
- These companies are setting reduction targets for scope 1 and 2 as well as their scope 3 emissions (these emissions are by definition outside of their direct control). This is consistent with disclosures made in conjunction with the scenarios where some of these companies are responding to climate change opportunities and risks through whole ecosystem thinking. Taking joint responsibility for emissions along supply and value chains is consistent with a leadership position.

## Box 3: Emissions reduction initiatives

***Science Based Targets (SBTi)***
https://sciencebasedtargets.org/

Science Based Targets is a joint initiative of CDP, the UN Global Compact, the World Resources Institute and the World Wide Fund for Nature. The initiative supports companies to take climate actions and set corporate GHG reduction targets. These targets are considered 'science based' if they are compatible with a 2° Celsius trajectory (it is important to note that most recent IPCC scientific advice is that the aim should be to keep warming under 1.5° Celsius). There are 973 companies who have joined the SBTi initiative of which 454 have had targets approved.

***Net Zero Carbon***
http://www.netzero-initiative.com/en

The Net Zero Carbon Initiative is a network of companies working to define and encourage corporate carbon neutrality. The initiative is led by Carbone 4: a consulting firm that specialises in low carbon business strategy and climate change adaptation. This initiative is seeking to create a rigorous framework for defining what 'net zero emissions' mean and is seeking to propose a method for how carbon neutrality is to be defined. 'Carbon neutrality' is a phrase that has come to have multiple meanings, with some actions to achieve neutrality (such as offsetting) that remain controversial for some stakeholders.

Given the different base years and varying ambitions of these companies (in terms of percentage reductions sought by future target dates) it is difficult to identify the 'leaders' in this group. Table 6 provides a sense of the relative ambitions of this group with respect to scope 1 and 2 emissions and provides a sense of reduction pathways that companies are following.

The ambition for emissions reductions is also influenced by initiatives that are supporting rapid absolute reductions (see Box 3). 18 companies in this sample group are already engaged in the SBTi and this is reflected in their ambitious reduction trajectories. Cargill, Nutreco and Mowi are SeaBOS companies who have joined the SBTi.

**Authors**: Jan Bebbington[a], Juliette Senn[b]

**Affiliations**: [a]University of Birmingham, [b]University of Burgos

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