Danone S.A. (BN:FP)

Climate Transition Analysis





Overall Assessment

According to Planet Tracker's analysis, Danone is aligned with a 1.5°C scenario by 2030.

The firm acknowledges its main CO₂e sources and has a wide variety of disclosures regarding its ambitions. However, despite Danone's high incentives for its Management via variable compensation tied to climate targets, in our view, its Consumer Engagement and Risk Assessment would require a slight improvement.

Also, we believe Danone would benefit from a cohesive Net Zero Roadmap where all the relevant disclosures are grouped in one place. This would facilitate a more user-friendly assessment of its Climate Transition. However, based on Planet Tracker's calculations, Danone's investment of USD 2.4 billion (including tackling its upstream Scope 3 footprint, the main source of its emissions), sets up the firm for a 1.5°C scenario by 2030.







This report is the second of a series examining the climate transition plans of the Consumer Goods companies in the Climate Action 100+ list.

This project is separate to and not affiliated with Climate Action 100+.



Climate Alignment

- By 2030, 96% of Danone's emissions will come from its Scope 3 activities with 91% coming from its Upstream activities.
- Based on Planet Trackers extrapolation of adjusted historical trends, by 2030 Danone's total emissions will be 113% higher than advised by the Science Based Targets Initiative¹ (36,549 vs 17,160 KTCO₂e), with its Scope 3 Upstream emissions being 147% higher (33,149 vs 13,431 KTCO₂e), if not mitigated.



Policy and Governance

- Danone scores well with respect to supplier engagement. However, its less detailed customer engagement and its association with groups with a negative position on climate, raises some questions regarding the company's overall ease to achieve its targets.
- The company has a solid team overviewing its ambitions. To achieve its targets the management is incentivised via variable short and long-term bonuses directly linked to environmental KPIs, which can add an additional 20% to their fixed remuneration.



Risk Analysis

- The material financial impact derived from climate-related risks and opportunities will be equivalent to 47% of the three-year average annual trading operating profit and an additional 5% of the three-year average annual Capex.
- Danone's internal risk assessment fails to cover the risk coming from potential carbon pricing mechanism targeting Scope 3 emissions, which would amount to 42% of Danone's three-year average annual Trading Operating Profit.



Strategy Assessment

- Based on Danone's mitigation investment, by 2030, the company is on track to align with a 1.5°C scenario.
- Nevertheless, Danone lacks a net zero roadmap, which makes the third-party appraisal of its ambitions challenging.

¹ The Science Based Targets initiative (SBTi) drives ambitious climate action in the private sector by enabling organizations to set science-based emissions reduction targets.





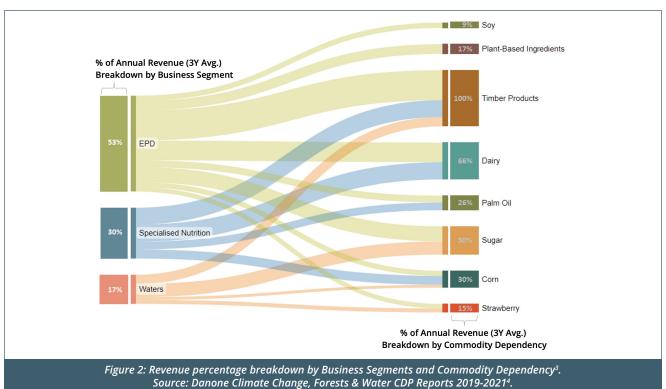
Company Overview

Danone S.A., the leading French multinational food and beverage manufacturer, operates in an industry responsible for a third (34%) of the global greenhouse gas emissionsⁱ. The company operates through three main business segments: Essential Dairy & Plant-based (EDP), Specialised Nutrition, and Waters - see Figure 1.

Averaging a gross profit margin of 14% for the last three years, the company had an annual average revenue of USD 28.3 billion² and an annual average trading operating profit of USD 4.1 billion (2019-2021).

In turn, these segments and margins are dependent on eight key agricultural commodities - see Figure 2.





² For currency conversions we use the exchange rate at the year-end, for each year, in the period 2019-2021.

⁴ Danone Climate Change, Forest & Water Reports present data with a 1-year lag (i.e., 2021 reports cover the 2020 period).



³ 'Dependency' shows the proportion of revenue that depends on a particular commodity (so percentages will sum to more than 100% because products depend upon more than one commodity).

In terms of geographic income sources, half of Danone's revenue and trading operating profit came from five countries, with the United States taking the lead with 20% and 19%, respectively - see Figure 3.



Consequently, when it comes to regulations and climate change events, these five countries (United States, China, France, Russia and Indonesia) represent the highest geographic exposure for Danone's direct operations and downstream activities.

The company does not disclose procurement volume data per country of origin of all its key commodities. However, it does offer data on Timber, Palm Oil, Soy and Dairy, which is used to analyse its upstream geographic dependencies. Based on the disclosed procurement volume of these four main commodities per region of origin for the 2019-2020 periods, four areas and three main supplier countries are identified - see Table 1.

Combining the procurement volume data with the revenue analysis shows that Indonesia accounts

for 41% of Danone's revenue dependent on key commodities. This is followed by Europe with 22% and North America with 21%.

A special mention here should be made to the Commonwealth Independent States, namely Russia and Ukraine. Due to the high volume of dairy sourced from them, up to 8% of Danone's revenue be affected by the conflict in these regions could according to the company.

In short, considering the geographic source of the revenue and the origin of its main suppliers, it could be concluded that Danone has high exposure to Indonesia, United States, and Europe - especially France.

Table 1: Commodity Procurement Volume - Region Matrix. Source: Danone Forests & Water CDP Reports 2020-2021.				
	Timber	Palm Oil	Soy	Dairy
Indonesia	23%	68%		
NorAm (US and Canada)			54%	25%
Europe ⁵			46%	28%
CIS (Russia and Ukraine)				24%
Malaysia		20%		
LatAm (Argentina, Brazil and Mexico)	5%			11%
Papua Nueva Guinea		6%		

⁵ When it comes to Soy sourcing 'Europe' refers to 'France, Italy, Austria, Netherlands and Belgium', with France accounting for 36% of soy procurement volume in 2020; whereas for Dairy sourcing 'Europe' refers to 'Belgium, France, Germany, Poland, Romania and Spain'.



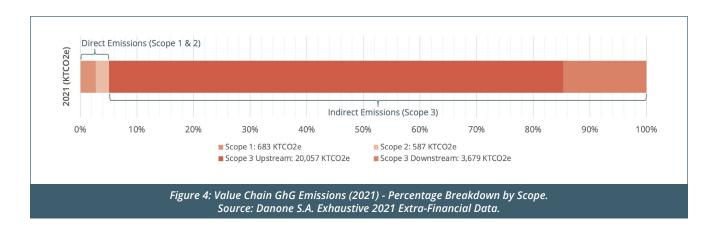


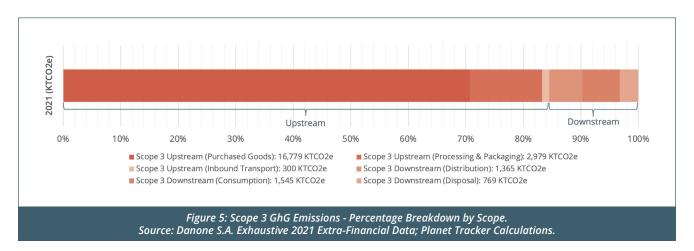
Climate Alignment

EMISSIONS INVENTORY

From 2017 to 2021, Danone's greenhouse gas (GhG) emissions averaged a total of 25,468 KTCO₂e⁶. Overall, the company's emissions went from 21,735 KTCO₂e in 2017 to 25,006 KTCO₂e in 2021, an annual average increase of 3.6%. However, Danone's emissions seem to have peaked in 2019 when they reached 27,510 KTCO2₂e. According to the company, this is due to its actions to align with SBTs. If the change in trend from 2019 to 2021 is considered, the company's emissions decreased at an annual rate of 4.7%.

Of the total of 25,006 KTCO₂e emissions disclosed in 2021, only 5% came from Scope 1 and 2, with approximately 3% and 2%, respectively. The majority, 95%, came from Scope 3, with 80% coming from **Upstream** activities and 15% from **Downstream** activities - see Figure 4. More precisely, for 2021's Scope 3 emissions, the top three sources were "Purchased Goods" (71%)6, "Processing and Packaging" (13%) and "Consumption" (7%) - see Figure 5.





⁶ The sum of annual emissions was calculated by adding up Scope 1, Location-based Scope 2, and Scope 3 emissions.

⁷ For comparability purposes emissions coming from "Purchased Goods" represent the sum of the indirect emissions coming from purchasing "agricultural products" such as milk, dairy ingredients, and other raw ingredients, as well as from purchasing "finished products". Meanwhile, "Processing & Packaging" stands for emissions coming from "Packaging", "Fuel and energy", and "Waste".





In 2021, within "Purchased Goods" emissions, Dairy represents the biggest emissions source with 12,864 KTCO₂e or **54% of the Scope 3 emissions**. Furthermore, in 2020 and 2019, Dairy emissions represented 54% and 53%, respectively, making these results historically consistent. The rest of the agricultural sourced commodities were responsible for 9% of the Scope 3 emissions in 2021 and 2020 and 10% of these in 2019.

Hence, focusing on these Dairy emissions and their mitigation becomes fundamental, with agricultural sourced commodities emissions standing at 14,975 KTCO₂e or 60% of Danone's total emissions.

EXTERNALITIES TRENDS AND TARGETS

In the last five years (2017-2021), Danone had an absolute increase of GhG emissions of approximately 15%. This increase breaks downs as an absolute increase of 6% in Scope 1 emissions and 22% in Scope 3 Upstream emissions, and an absolute reduction of 37% in Scope 2 emissions and 1% in Scope 3 Downstream emissions - see Figure 6.

However, a closer look at the last three years signals a change in the five years trend, as the company reduced its total GhG emissions by 9% from 2019 to 2021. Desegregating this downturn, Scope 1 and 2 emissions were reduced by 5% and 38%, while Scope 3 Upstream and Downstream were reduced by 7% and 16% respectively.

Taking into account the historical trends from a CO₂e intensity (Emissions/Revenue) perspective, the ratio for Scope 1, 2 and 3 Downstream emissions went from a high of 0.22 in 2018 to 0.18 in 2021, close to the intensity ratio back in 2017. Meanwhile, the intensity ratio for Scope 3 Upstream emissions went from a low of 0.58 in 2018 to a high of 0.75 in 2021 - see Figure 78. This ratio defines the amount of GhG emissions relative to the business activity level measured by revenue.

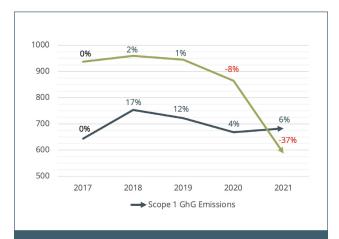
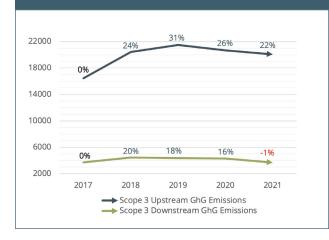


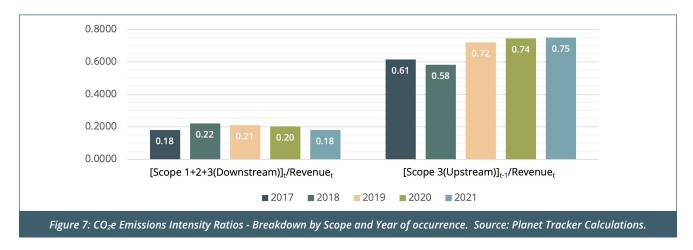
Figure 6: CO₂e Evolution in the last 5 years by Scope. Source: Danone Climate Change CDP Answers & Exhaustive 2017-2021 Extra-Financial Data; Planet Tracker Calculations.



Hence, based on these intensity trends it could be concluded that Scope 1, 2 and 3 Downstream emissions reduction in the last three years is not only a result of Danone's revenue downturn - which decreased a 2.7% from 2019 to 2021 - but is also a result of the company's actions. By contrast, when it comes to the Scope 3 Upstream emissions reduction, it becomes clear that the 7% downturn is mainly the result of the revenue decrease as from 2019 to 2021 the intensity ratio went from 0.72 to 0.75 (despite the 2.7% revenue fall). This relationship is also described in Figure 8, where Scope 3 Upstream emissions lag revenue by one year.

⁸ The Scope 1, 2, and 3 Downstream intensity ratio has been calculated by dividing the KTCO2e produced in a year 't', by the firm's Revenue in the same year 't' covering the 2017-2021 period. Meanwhile, the Scope 3 Upstream ratio has been calculated by dividing the KTCO2e produced in a year 't-1', by the firm's Revenue in the year 't', thus covering the periods 2016-2020 and 2017-2021. This time frame difference is employed as the Scope 3 Upstream emissions are assumed to arise in the previous year (matching inputs into the business).





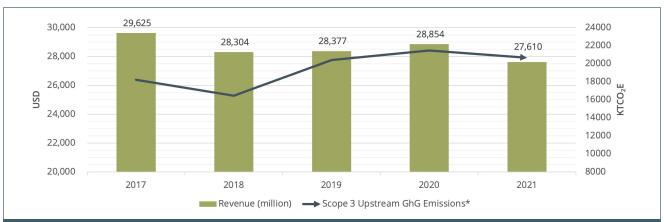


Figure 8: Revenue and Scope 3 Upstream Emissions - Parallel Evolution Comparison. Source: Danone Climate Change CDP Answers & Exhaustive 2017-2021 Extra-Financial Data; Danone Consolidated Annual Reports 2017-2021; Planet Tracker Calculations.

Extrapolating this historical trend of Danone's emissions into the future would by default imply a revenue fall of 2.7% every three years. Thus, to correct for any business slowdown bias, Danone's minimal ambition of growing its revenue at a rate of 3.0% annually9 is considered.

Based on Danone's growth ambitions, to project its emissions up to 2030 we apply a simple extrapolation model of compounding forward the annual rate of change in the emissions intensity ratio of the last three years, to the expected future revenue.

In other words, from 2019 to 2021 the emissions intensity ratio for Scope 1 activities decreased at a rate of 1.4% per year, for Scope 2 at a rate of 20% per year, and for Scope 3 Downstream at a rate of 6.9% per year. Meanwhile the emissions intensity

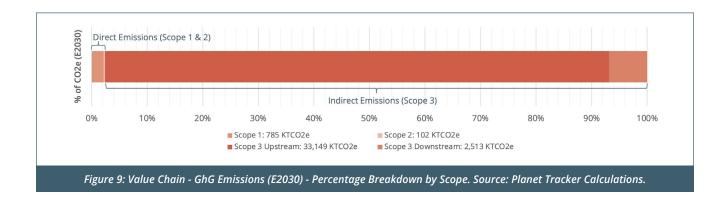
ratio for Scope 3 Upstream activities increased at a rate of 2% per year.

As a result, by 2030, the intensity ratio of Scope 1, 2 and 3 Downstream emissions will be over 0.09. Multiplying it by the expected revenue of USD 36 billion, this ratio will lead to a total of 3,400 KTCO₂e arriving from Scope 1, 2, and 3 Upstream activities by 2030. Meanwhile, the intensity ratio of Scope 3 Upstream emissions will be 0.89, which multiplied by the expected revenue of over USD 37 billion by 2031, will lead to a total Scope 3 Upstream emissions of 33,149 KTCO₂e by 2030. Therefore, by 2030 the adjusted extrapolated trends will total 36,549 KTCO₂e, with 2.1% belonging to Scope 1 activities, 0.3% to Scope 2, 6.9% to Scope 3 Downstream and almost 91% to Scope 3 Upstream - see Figure 9.

⁹ Source - Renew Danone: Restoring Growth, Driving Value Creation (2022)



^{*} The Scope 3 Upstream GhG Emissions line lags Revenue by one year, hence it depicts the period 2016-2020 rather than 2017-2021.



When it comes to Danone's Science Based approved targets (SBTs), the firm committed back in 2017 to reduce its Scope 1 and 2 GhG emissions by 30% by 2030, from a 2015 base year. And also, to reduce Scope 1, 2 and 3 emissions per ton of sold product by 50% by 2030, from a 2015 base year. These targets would align the company with a 2°C scenario by 2030, and becoming Carbon Neutral by 2050 (SBTi).

Nevertheless, in 2019, Danone became a "Business Ambition for 1.5°C" campaign member¹⁰ and pledged to define targets for cutting GhG emissions in line with a 1.5°C climate change scenario. Also, the company stated it is working on setting up new targets. Thus, for up-to-date comparability purposes, this section looks at Forest, Land, and Agriculture Science Based Targets (FLAG), aligned with a 1.5°C scenario by 2030.

Accordingly, the FLAG targets require Danone to reduce absolute Scope 1, 2 and 3 emissions by 18% by 2025 and by 35% by 2030, from a 2020 baseline. Looking at the company's adjusted extrapolated trends, by 2025 the absolute increase in Scope 1, 2 and 3 GhG emissions will be 13%, while by 2030 it will reach 38%. This increase is caused by the raising Scope 3 Upstream emissions which will be 52% higher than advised by FLAG targets by 2025 and 147% higher by 2030. Meanwhile, Scope 1, 2 and 3 Downstream emissions will be 14% lower than recommended by FLAG targets by 2025, and 9% lower by 2030 - see Figure 10.

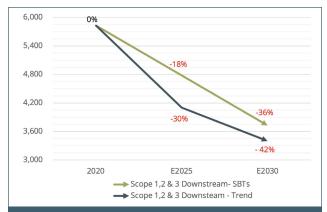
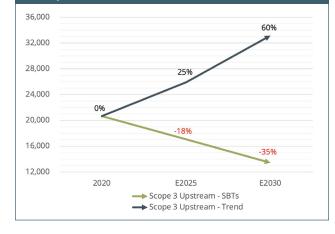


Figure 10: Future GhG Emissions - SBT vs Adjusted Extrapolated Trends. Source: Danone Climate Change CDP Answers and Extra-financial Data 2017-2021; Planet Tracker Calculations.



In conclusion, given that Danone is aiming to grow its revenue in the future (by at least 3% per year) we will need to see evidence of mitigation actions for its Scope 3 Upstream emissions to be confident that the company is on the path to a 1.5°C scenario by 2030.

¹⁰ According to the SBTi, at the time of this publication 1,631 companies committed to the 'Business Ambition for 1.5°C' campaign.





Policy and Governance

ENGAGEMENT AND INFLUENCE

Suppliers' Engagement

Danone engages directly with suppliers via its "Information Collection" strategy, aimed at understanding suppliers' behaviour.

This strategy includes the annual collection of climate change and carbon information and, for the 2020 period, it covered 9% of the company's suppliers. These represent 32% of supplier-related Scope 3 emissions and 16% of the total procurement expenditure (direct and indirect). The main objective of this engagement is to lead Danone's farmers and dairy suppliers to start monitoring and subsequently improving key indicators regarding their environmental footprint. To aid its suppliers in this endeavor Danone provides thematic guidance via a series of factsheets on best practices regarding (a) soil, (b) manure, (c) biodiversity (especially pesticides and weeds management) and (d) water; and also assessment tools via its comprehensive Environmental Score Cards¹¹.

As a result of this direct engagement, the firm was able to account for an overall reduction of 356 KTCO₂e emissions from 2019 to 2020, or the equivalent of around 40% of the reduction in Scope 3 emissions for that period.

Indirectly, Danone engages with its suppliers in relation to eliminating deforestation from its supply chain. Regarding deforestation the company follows two general policies - its Forest Footprint Policy and its Packaging Policy. These policies are segmented further into three categories assessed by the Global Canopy Program, namely Palm Oil, Soy, and Paper and Cardboard Packaging.

Originally the Forest Footprint Policy aimed to eliminate deforestation from its supply chain by 2020. This ambition focused on: palm oil, soy, paper and

cardboard packaging, wood biomass, sugar cane, and bio-based raw materials for packaging. As the company has not achieved its deforestation free¹² targets by the set date, is now reviewing this policy.

When it comes to Palm Oil Danone has pledged to ensure the provenance of the palm oil it uses. In 2021, 93% of the palm oil sourced by Danone was certified **RSPO Segregated, 5% was certified RSPO Mass** Balance and the remaining 2% was "conventional" palm oil purchased in Africa. This is in line with the last five years of data where deforestation free sourced Palm Oil oscillated between 98% and 99%. Also, in the first semester of 2021, Danone reached 99.8% traceability to plantation, up from 84.7% in the second semester of 2020. In 2021, Danone obtained for a second year in a row the highest score possible in the CDP Forests-Palm Oil questionnaire for their transparency and environmental performance in fighting deforestation.

As for its **Soy Policy**, Danone has pledged to contribute to the development of a responsible supply chain for the soy used in its plant-based products, as well as for the soy used in animal feeds. Yet, in the last five years Danone has failed to meet this target. In fact its performance has deteriorated slightly, going from 82% in 2018 to 80% in 2021.

Danone's Paper and Cardboard Packaging Policy was developed with the help of several NGOs (notably Rainforest Alliance). Its aim is to switch to lighter-weight packaging; use recycled fiber where possible; and use FSC certified virgin fibers if recycled fibers use is not possible. In 2021, Danone used 99.8% of paper and board packaging made of recycled or virgin certified fibers. This policy being the one of the most successful as deforestation free sourced timber products moved from 77% in 2017 to 99% in 2021.

¹² We assume that all of the certified sourced commodities are by definition 'deforestation-free'.



¹¹ For more details visit: Danone Regenerative Agriculture tools.



Customers' Engagement

Danone strives to identify environmental topics which constitute a priority for its major customers and to align its Climate Policy targets with these themes.

The firm puts the focus on reducing inefficiencies within the current supply chain model. Thus, projects include maximising payload per truck, truck load maximisation and minimising mileage per kg sold of product, as well as reducing waste (mainly through food waste/loss).

As an example, in 2021, Danone worked with local partners such as Too Good To Go to raise awareness around food waste and inform consumers on date labelling. Danone also started to shift its date labels from "use-by" date to "best-before" date in key European markets.

Influence on Policymakers

Danone supports net-zero "no later than 2050" as founding member of the Transform to Net Zero Initiative since July 2021. This initiative advocates for policies to reduce GHG emissions including carbon pricing mechanisms and green recovery packages.

In Europe, Danone supported the European Green Deal in a position paper on the EU Common Food Policy in May 2020. And although the company does not appear to have taken a position on the EU Emissions Trading System, in the same paper it advocated for the implementation of Carbon Border Adjustments through the European Green Deal.

Meanwhile, in the US the company advocated for carbon pricing as part of the Sustainable Food Policy Alliance (SFPA) in a Climate Policy Principles publication in April 2019. However, this support appears to come with a caveat, which is ensuring that the competitiveness of the industry is upheld. Danone also supported policies to develop more sustainable energy sources in the US in a May 2020 statement as part of the SFPA.

Furthermore, Danone disclosed being part of the following key associations which support the transition to net-zero - see Table 2.

Table 2: Trade Associations Influenced by Danone. Source: Danone Climate Change CDP Answers 2021.				
Organisation	Current Position	Influence		
ANIA (Association Nationale des Industries Alimentaires)	Promotes best practices to fight climate change.	Ambition to become carbon neutral by 2050.		
CGF (Consumer Goods Forum)	Aims to eliminate deforestation from supply chains by 2020.	Member of the environmental working group to address deforestation.		
SAI Platform (Sustainable Agriculture Initiative)	Promotes best Principles and Practices to source key ingredients; Tool aimed at improving mitigation opportunities for cattle.	Founded SAI in 2002; Member of its executive committee.		
RSPO (Roundtable of Sustainable Palm Oil)	Aims for sustainable production of palm oil to prevent forest deforestation.	Permanent representative in the organization.		
The Round Table on Responsible Soy (RTRS)	Promotes the sustainable production of soy to prevent forest deforestation.	Member of workshops and discussions to strengthen demand for certified soy.		
FoodDrink Europe (FDE)	Global cooperation to cut GHG emissions; Increase support for renewable and bio-energy.	Active member.		
We Mean Business Coalition	Catalyse bold climate action and promote smart policy frameworks.	Committed to RE100 for renewable electricity and science-based targets.		
B Team	Emphasise negative lobbying as a main obstacle to climate action at the policy level.	Supports actions to address negative climate lobbying.		
One Planet Business for Biodiversity (OP2B)	To protect biodiversity and accelerate the shift to regenerative farming practices.	Chair of the coalition; Leading the institutional task force for OP2B.		
"SFPA (Sustainable Food Policy Alliance)	Guide policymakers and stakeholders to drive strong action to address climate change.	Crafting and activating SFPA's climate advocacy.		





It is worth emphasizing, however, that through ANIA Danone retains its membership to The French Business Federation (Medef), which actively engaged with climate policy, both in France and at the EU level, with a predominantly negative position. Also, through the Spanish Dairy Federation, Danone is an indirect member of the European Dairy Association (EDA) where a senior member at Danone is a member of the board. Again, this is a trade association that lobbies negatively against key European climate policies. Nevertheless, representatives of Danone acknowledged the opportunity to engage more directly with the EDA on climate, and also do so more vocally rather then privately.

In summary, defined by monitoring and measuring its largest sources of emissions, and by aiming for deforestation-free in sourcing its key commodities Danone scores well with respect to supplier engagement. However, its Soy sustainable sourcing has not improved in the last five years. Moreover, the vague actions regarding customer engagement and the silent association with groups with a negative position on climate, makes it inconclusive whether

Danone's engagement and policy activities fully align with 1.5°C or not.

MANAGEMENT ALIGNMENT

Board Structure and Alignment

Danone's Board of Directors has thirteen members of which eleven have social and environmental responsibilities or climate sector-specific skills – see Table 3.

Also, climate-related issues are ultimately managed by Danone's Chief Executive Officer (CEO), who is responsible for Danone's vision and climate **strategy**, in particular through the "One Planet, One Health" project. On a more granular level, the Chief Financial Officer (CFO) is responsible of ensuring that Danone is creating value while meeting long-range sustainability goals; while, the Chief Procurement and Cycles Officer (CPO) and the Chief Sustainability Officer (CSO) are responsible for assessing and managing climate-related risks and opportunities in Danone's sourcing strategy and operations. These last two positions are key to

Table 3: Board of Directors Organisational Structure & Responsibility. Source: Danone Shareholders' Engagement on Governance 2021.					
	Governance Committee	Engagement Committee	Strategy and Transformation Committee	Audit Committee	Social and Environmental Responsibility
Gilles Schnepp, Chairman	•	•			•
Cecile Cabanis, Vice Chair			•		•
Jean-Michel Severino, Lead Independent Director	Chair				•
Franck Riboud, Honorary Chair				•	•
Guido Barilla			•		•
Frederic Boutteba				•	•
Clara Gaymard	•				•
Gaelle Olivier				Chair	•
Isabelle Sellier			•		
Michel Landel	•	•			•
Bettina Theissig		•			
Serpil Timuray		Chair	•		•
Lionel Zinsou-Derlin		•	Chair		•





environmental targets due to the high materiality of procurement categories, representing nearly 80% of Danone's total emissions.

Moreover, the firm has established the One Planet One Health (OPOH) Integration and Investment Board, a cross-divisions body, made up of internal experts on environmental, social and nutrition issues, responsible for strengthening Danone's integrated approach to achieve its 2030 Goals. This board is chaired by the Executive Vice-President of the EDP department, and by the General Secretary. Also, Danone has a Nature & Water Cycle Department led by the CSO, which is fundamental in (a) implementing

Danone's environmental strategy (including climaterelated strategy), (b) coordinating the reporting of environmental indicators (including carbon), (c) developing policies, processes and tools, to ensure consistency across the company, (d) designing environmental programmes, and (e) supporting divisions, subsidiaries, and brands strategy.

Regarding external control, the firm is monitored and assessed biannually by the "Mission Committee", a group formed by experts from international organisations including The Rockefeller Foundation, Investisseurs & Partenaires, UNESCO, and PRI.

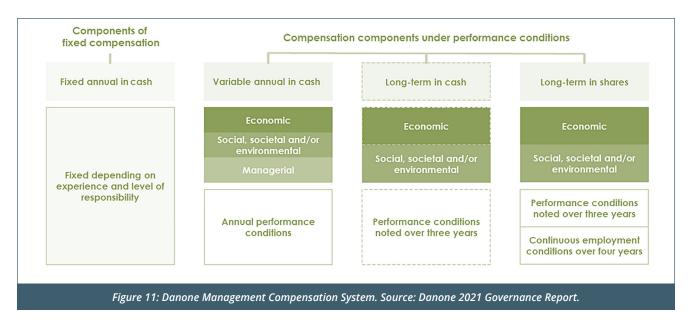
The main objective of this committee is to supervise Danone's execution of sustainability targets.

Management Compensation

Danone started linking social and environmental initiatives to short-term performance-based management remuneration as early as 2017. As disclosed in the "Compensation of Danone's Corporate Officers - 2017", 10% of the management remuneration started being tied to the promotion of societal initiatives, particularly in the area of sustainable agriculture. A year later, Danone expanded these incentives to the long-term performance-based compensation subject to the level assigned to Danone by CDP for the "Climate Change" program over a period of three years.

Most recently (2021), similar criteria apply to the remuneration of around 1,600 general managers and senior executives worldwide. In the short term 10% of the variable remuneration is linked to the annual fulfilment of climate ambitions, while in the long term, 20% is tied to receiving a Score A from the CDP to the Climate, Water and Forests programmes over a period three years – see Figure 11.

In conclusion, Danone's Engagement and Influence has a couple of areas which may detract from its 1.5°C ambitions. However, the firm has a solid team overviewing its ambitions, and both the short and long-term compensation represent high incentives for the management. Thus, based on the Management's Alignment, Danone's Policy and Governance are set to align with a 1.5°C scenario.







Risk Analysis

FINANCIAL IMPACT

Danone assessed its exposure to a series of climaterelated risks and opportunities. Accordingly, the firm assigned a probability denomination that ranges from "unlikely" to "virtually certain". For a quantitative comparison we assigned numeric values to Danone's probability denominations - see Table 4.

Table 4: Danone Probability Denominations - Numeric Equivalent.			
Probability Denomination Numeric Probability			
Unlikely	25%		
About as likely as not	50%		
More likely than not	66%		
Likely	75%		
Very Likely	90%		
Virtually Certain	99%		

Furthermore, these risks and opportunities are categorised into two main drivers of change, namely, **External Policy and Physical Impact.**

External Policy Drivers

Regarding Policy Drivers, Danone's main vulnerabilities and opportunities arise from the implementation of Carbon Pricing Mechanisms (CPMs), leading to changes in direct and indirect operating costs and margins. The financial impacts linked to CPMs and disclosed by the firm are regarded as cumulative until 2030.

Danone focuses on the risks and opportunities tied to its Scope 1 and 2 emissions when it comes to CPMs.

In order to quantify the risk, the firm assumes that if all countries where Danone operates would adopt a tax on Scope 1 emissions of 61 USD per tCO₂e, keeping

current level of Scope1 emissions (around 668 KTCO2e), the disclosed financial impact would amount to USD 41 million per year. Furthermore, according to the company, this risk could be realized in the next three to ten years, with a probability of 66%.

Meanwhile, to quantify the opportunity arriving from reducing its Scope 2 emissions, Danone disaggregates it from the "Cost of Goods Sold" (COGS). To do so, it multiplies the COGS by the percentage assigned to energy costs (which in this case represents less than 5% of the COGS) and also by the hypothetical yearly reduction rate of energy efficiency at production sites (quantified at 4.5%). As a result, Danone identifies that the opportunity arriving from the reduction of Scope 2 emissions would lower costs by USD 34 million per year. Moreover, the firm states this opportunity could be realized within a year with a probability of 66%.

In other words, according to the company, Scope 1 and 2 emissions reductions would lead to the avoidance of around USD 75 million in direct costs or just under 2% of the annual Trading Operating Profit per year, in the next ten years, with a probability of 66%¹³.

Still, Danone does not mention what Scope 3 emissions reductions could mean for the company. As the European Carbon Border Adjustment Mechanism¹⁴ develops, the firm might be required in the future to extend the appraisal of its Scope 1 and 2 emissions risks and opportunities to Scope 3. (something representatives of Danone confirmed are considering to introduce in 2022).

In comparison, Planet Tracker follows a different approach when it comes to the estimation of risks and opportunities coming from Scope 1, 2 and 3 emissions.

For Scope 1 and 2, Planet Tracker employs the Inevitable Policy Response (IPR) GhG pricing for 2030

¹⁴ New regulation taxing produce coming from countries with a lower carbon tax (i.e. EU).



¹³ Calculations based on data from Danone Climate Change CDP Answers 2021 - covering the 2020 period.



applied to the geographic sources of those emissions averaged over the last three years. This leads to a weighted average price of USD 58 per tCO₂e. Multiplying the price by the expected sum of Scope 1 and 2 emissions of 886 KTCO₂e by 2030, the financial impact would amount to USD 51 million per year.

Meanwhile, for Scope 3 emissions, linked to the countries where Danone's revenues originated over the last three years, a weighted average price of USD 60 per tCO₂e is derived¹⁵. Multiplying this price by the expected Scope 3 emissions of 35,662 KTCO₂e by 2030, in the next ten years, Danone could be exposed to an increase in direct costs of USD 2.1 billion per year.

Even when we consider only an 80% cost absorption from suppliers or customers it would still represent over 42% of the three-year average Annual Trading Operating Profit, of which over 39% would be linked to Scope 3 Upstream emissions. So, although it would appear Danone's estimate of its Scope 1 and 2 exposure to CPMs is reasonable, by not taking into account its Scope 3 emissions, the firm could be seriously misjudging the risks arriving from future CPMs.

In conclusion, the omission of Scope 3 emissions from the risk and opportunities assessment might detract from Danone's ambitions to align with a 1.5°C scenario by 2030.

Table 5: External Policy Drivers - Summary of Material Risks by 2030. Source: Danone Climate Change CDP Answers 2021; Planet Tracker Calculations.				
Assessment by	by Value Chain Price of tCO2e Expected of tCO2e Expected (Probabil			
Danone	Scope 1 and 2	USD 61	1,230	USD 50 million
Planet Tracker	Scope 1 and 2	USD 58	886	USD 51 million
Planet Tracker	Scope 3	USD 60	35,662	USD 1,718 million

Physical Impact Drivers¹⁶

Danone divides Physical Impact into two categories, namely, Acute Physical Impact which affects direct operations and Chronic Physical Impact which affects direct operations and upstream activities. The Acute Impact refers to extreme weather events such as storms and flooding which lead to an increase in capital expenditure (Capex). The Chronic Impact refers to the variability in weather patterns, such as extreme temperature and water stress which lead to an increase in operating costs or a decrease in Trading Operating Profit.

When it comes to its **Acute Physical risk**, between 2018 and 2020 Danone derived through its strategic risk identification, an average maximum financial impact of USD 220 million or around 20% of its three-year

average annual Capex. According to the company, this risk would be realized in the next three to ten years, with a probability of 25%17. Thus, the expected financial impact would amount to USD 55 million or 5% of its three-year average annual Capex.

As for Danone's Chronic Physical risk, the company distinguishes between the effect on its direct operations and the effect on its upstream activities.

Regarding its direct operations, Danone's sites at high risk due to drought conditions and water supply shortages grew from 37 in 2018 to 94 in 2020. To calculate the maximum financial impact the firm employs the hypothesis of a full disruption of the operations for 2 weeks per year and per site. Since the average

¹⁷ This likelihood is also supported by the insurance premium paid by the firm, as pointed out in the next section.



¹⁵ In theory Scope 3 - Upstream emissions pricing should be tied to supplier countries. However, based on the new EU regulation taxing produce coming from countries with a lower carbon tax, tying Scope 3 - Upstream emissions pricing to revenues' country of origin is a sensible alternative.

¹⁶ These physical impacts are assessed under the current climate change conditions of 1.1°C, being this the best estimate of global warming since 1850-1900, as stated in IPCC (2020): Summary for Policymakers/Climate Change 2021: The Physical Science Basis.



annual sales per site in 2020 were equal to USD 160 million (based on a total number of 180 sites), the average sales loss per site would be USD 4.4 million for a 10-day full stop of production. Thus, the financial impact to revenues amounts to USD 413 million per year prior to risk mitigation, or a maximum decrease in Trading Operating Profit of USD 58 million per year (the equivalent of 1.4%, based on a 14% profit margin). Moreover, Danone estimates this risk will be realised in the next one to three years with a probability of 66%, putting the expected impact at around 1% of the three-year average annual Trading Operating Profit.

To assess the effect of the **Chronic Physical Impact** on its operating costs, Danone looks at the Dairy price increase caused by water and heat stress related to climate change. From 2018 to 2020, the company estimated an average maximum financial impact of USD 107 million, which the firm calculates will be realised in the next three to ten years with a probability of 66%, leading to an expected impact of USD 71 million or almost 2% of the three-year average annual Trading Operating Profit - see Table 6.

Table 6: Physical Risk affecting Danone's Activity - Expected Financial Impact. Source: Danone Climate Change CDP Answers 2019-2021; Planet Tracker Calculations.				
Туре	Time horizon	Likelihood	Financial impact (max.)	Expected Impact
Acute Physical Impact	3 to 10 years	25%	USD 220 million	USD 55 million
Chronic Physical Impact	1 to 3 years	66%	USD 58 million	USD 38 million
Chronic Physical Impact	3 to 10 years	66%	USD 107 million	USD 71 million

Market Impact Drivers

financial impact coming from its downstream activities, especially from the shifts in consumer preferences towards more sustainable products. As a result, the firm calculated a possible reduction in sales of USD 561 million in 2019 and of USD 574 million in 2020, to be realised in the next one to three years. Although the company views this development as "unlikely", when assessing the net income fall through impact of the shifts in consumer preferences, the firm views it as "more likely than not". Consequently, when calculating the expected financial impact from a Trading Operating Profit perspective, we view it "about as likely as not", and thus, a likelihood of 50% is considered. With a gross margin of 15% in 2019 and 14% in 2020, the average maximum impact will be of USD 83 million, to be realised in the next one to three years. Therefore, the expected financial impact will stand at USD 42 million per year or 1% of the three-year average annual Trading Operating Profit.

Since 2019, Danone also started looking at the possible

Similarly, when it comes to the upside of offering more sustainable products, from 2017 to 2020, the **Trading Operating Profit from plant-based products** increased by USD 153 million. This would equal 4% of the three-year average annual Trading Operating Profit, for a three-year period, which is equivalent to around a 1% increase per year. Hence, looking forward, similar opportunities might be available.

In summary, Danone's Trading Operating Profit stands to be impacted in the next three to ten years by a series of increases in direct costs, reductions in revenues and increases in Capex, linked to Climate Change and Transition. Based on the company's disclosures, without mitigation, its Trading Operating Profit will shrink by 5% per year in the next three to ten years, while its Capex will increase by 5% per year. Yet, the company omits the possible effect of CPMs on its Scope 3 emissions and the associated costs. If we consider it, this would raise the impact to 47% of the three-year average annual Trading Operating Profit, of which over 39% would be due to Scope 3 Upstream emissions costs.





RISK MANAGEMENT

Related to Climate Change and Climate Transition, Danone has three main areas of material risk. The first one is the exposure to the potential CPMs, especially regarding its Scope 3 Upstream emissions. The second one is the dual exposure to extreme weather events and to high variability in climate and weather patterns. And finally, the third one is the resulting impact of shifts in consumers' preferences.

Starting with the last one, in 2017 Danone completed the acquisition of "WhiteWave Foods", a company focused on manufacturing, marketing, and selling plantbased foods and beverages. Thus, it became clear that Danone is aware of the current change in trends towards more sustainable products. What is more, the firm not only acknowledges the change but by taking action is in fact mitigating its effect. Putting things in perspective, from 2018 to 2020 Danone's revenue tied to plant-based ingredients grew from 15% to 20%, while its revenue linked to dairy decreased from 67% to 65% for the same period. Going forward, in 2022 Danone plans to invest USD 49 million (or over 4% of its three-year average annual Capex) in entirely switching its Villecomtal-sur-Arros operations from dairy to plant-based products. This could be considered proof of the company continuing to change its products' portfolio as consumer preferences switch towards more sustainable alternatives.

In regards to mitigating the risk coming from extreme weather events such as storms and flooding, Danone has established a series of programmes aimed at improving the resilience of its facilities. These programmes include conducting (a) risk exposure analyses, (b) a yearly screening, (c) underwriting insurance policies for each plant against natural hazards, and (d) providing Business Continuity Management plans (BCM) to each facility in case of business disruptions. Accordingly, between 2018 and 2020 the company invested an average of USD 42 million per year in these programmes, or the equivalent of 4% of its three-year average annual **Capex** (close to the expected financial impact of this

risk of USD 55 million or 5% of its three-year average annual Capex).

To mitigate the financial impact coming from the high variability in weather patterns, such as water stress and extreme temperatures, Danone employs a dual system. First, for its direct operations, the firm looks at supply chain disruption prevention, especially by avoiding water scarcity. Consequently, between 2019 and 2020 the company targeted the decrease of its water footprint in all its operations by investing an average of USD 14 million per year in two initiatives defined as (i) water consumption reduction projects, and (ii) wastewater management projects. Second, for its upstream activities, the company resorts to regenerative agriculture as the key mitigation mechanism. By transforming agricultural practices the company intends to benefit from a more resilient supply chain that ensures a sustainable supply of agricultural products and reduces the exposure to price volatility. Accordingly, between 2018 and 2020, Danone invested in regenerative agriculture an annual average of USD 19 million. This was done via two main instruments, namely, Danone's Ecosystem Fund and the Likelihood Fund for Family Farming, and targeted key regions that Danone depends on. Thus, the firm focused on the United States and Europe, especially France, but also on regions with a high dairy procurement dependency such as Russia, Brazil and Mexico.

As for Danone's exposure to potential CPMs, the company covers the risks and opportunities linked to Scope 1 and 2 emissions by adopting new, more efficient and more sustainable power generation and distribution technologies. The company aims to deliver on its ambitions by acting on three levers:

1. Improving energy efficiency at the plant level between 2018 and 2020 Danone invested an average of USD 11 million per year in maintenance and new equipment;





- 2. Shifting towards renewable energies The company purchased 54.3% of its electricity from renewable sources vs 42.4% in 2019, and 34% in 2018.
- 3.Innovation source renewable energy locally -Danone invested USD 0.1 million and USD 0.2 million in renewable energy projects, in 2020 and 2019, respectively. Yet, Scope 3 emissions are only addressed indirectly via regenerative agriculture practices.

In conclusion, overall Danone covers sensibly all the material risks and opportunities it discloses. However, these risks only represent 5% of its three-year average annual Trading Operating Profit and 5% of its three-year average annual Capex. Therefore, by not including the potential risk coming from CPMs linked to Scope 3 emission, which would amount to 42% of Danone's three-year average annual Trading Operating Profit the company could be significantly underestimating the risk derived from Climate Change and Climate Transition. As a result, the firm's Risk Analysis does not confirm that Danone aligns with a 1.5°C scenario.



Strategy Assessment

CAPITAL ALIGNMENT

Having identified and disclosed its major sources of CO₂e, including its Scope 1, 2 and 3 GhG emissions, Danone's latest approved SBTs (in 2017) align with a 2°C scenario. However, in 2019 the company pledged to define targets for cutting its GhG emissions in line with a 1.5°C climate change scenario. Furthermore, on the 4th of October 2022 the company submitted for approval to the SBTi its nearterm science-based reduction targets in line with 1.5°C degree pathways, including a FLAG target. Danone also participated in the FLAG working group led by SBTi to define 1.5°C pathways for the Forest, Land and Agriculture sectors. Based on that, following the FLAG draft, Planet Tracker identified that Danone would be required to reduce absolute Scope 1, 2 and 3 emissions by 18% by 2025 and by 35% by 2030, from a 2020 baseline. In order to accelerate this transition in 2020, Danone disclosed that it is planning to invest USD 2.4 billion in these goals between 2020 and 2022.

Extrapolating the adjusted historical trend, by 2030, 96% of emissions will come from Scope 3, with 91% coming from its Upstream activities. Hence, mitigating these becomes essential in the alignment with 1.5°C by 2030 and subsequent net zero by 2050. Moreover, the reduction of GhG emissions from agricultural sourcing (i.e., sourcing of milk, dairy ingredients and other raw ingredients) is paramount since it represents the most significant contribution to the company's full-scope carbon footprint (60% in 2021).

Danone plans to invest a total of USD 2.4 billion by 2022 to improve its packaging (USD 1.1 billion), its brands' sustainability, the digitalization for climatesmart value chains, and its climate and agriculture actions18.

When it comes to **Danone's brands sustainability**, individually their objectives include:

- a.supporting farmers and engaging consumers in the regenerative agriculture movement,
- **b.ensuring water protection** by scaling reforestation and sustainable agriculture programs (i.e., better soil management, farming practices, and land use), as well as
- c.empowering the next generation of farmers and consumers.

As for climate and regenerative agriculture, Danone stated that will focus on:

- a.transforming the agricultural practices of its supply chain,
- b.raising its land carbon storage,
- c. eliminating deforestation from its supply chain, and d.offsetting remaining emissions.

Moreover, these two areas are supported by the digitalization of the value chain, where sensors and monitoring software are used for:

- a.better herd management and
- b.soil health improvement among others.

Therefore, these three interlinked areas with a disclosed investment of over USD 1.3 billion will cover Soils, Forests, and Livestock (especially Dairy) emissions mitigation initiatives. And although Danone does not disclose investment per individual mitigation initiative, it does offer a few case studies (2020):

- a. United States 80 KTCO₂e reduced and 20 KTCO₂e sequestered by reducing tillage and chemical pesticides and expanding cover crops;
- **b.**Mexico 63 KTCO₂e reduced via farm reforestation, biodigesters use in manure management and performance improvement;
- **c.** Brazil and Russia 264 KTCO₂e reduced by manure conversion into compost and preferential procurement arrangements.

¹⁸ Source: Danone <u>SDG 13 - CLIMATE ACTION</u> disclosure.





The cost disclosed by the company to realise these initiatives in 2020 was over USD 18 million. Thus, considering the mitigated quantity (not including sequestration) of 407 KTCO₂e, these case studies have a mitigation cost of USD 45 per tCO₂e. Yet, they may represent best-in-class examples. In 2020 and 2019, Danone's annual average investment in compensating for 200 KTCO₂e per year from projects in Kenya, Peru, Burkina Faso and India was over USD 14 million, or USD 71 per tCO₂e. This cost is closer to Danone's competitors regarding Soils, Forests, Dairy and Livestock emissions mitigation practices, set at a weighted average of USD 76 per tCO₂e¹⁹.

Hence, the firm's cost to align with 1.5°C by 2030 when it comes to agriculture and livestock emissions mitigation initiatives would be between

USD 45 and USD 76 per tCO₂e. Therefore, the company will need to invest between USD 662 million and USD 1.1 billion for a reduction of 14.721 KTCO₂e in its Scope 3 Upstream - agricultural emissions²⁰ to align with 1.5°C by 2030.

To summarise, there is no disclosure of what percentage of the announced investment is dedicated to the direct mitigation of emissions coming from agricultural sourcing. Nevertheless, the USD 1.3 billion assigned to the three areas covering Soils, Forests, and Livestock emissions mitigation sits at the top end of our estimated range of required investment. Hence, it could be concluded that Danone in on the right path to align with a 1.5°C scenario by 2030 and subsequently achieve its net zero ambitions by 2050.

TRANSITION APPRAISAL

To assess Danone's Climate transition, Planet Tracker reviewed its GhG emissions evolution over the last five years (2017-2021). Having identified a change in trend in 2019 we have focused on these last three years (2019-2021).

It is worth emphasizing that although Danone's approved SBT alignment with a 2°C warming scenario, since 2019, Danone pledged to define targets for cutting GhG emissions in line with a 1.5°C scenario. Also, the company is a founding member of the Transform to Net Zero Initiative since July 2021. As a result, Planet Tracker examines the adjusted extrapolated emissions trend from 2019 to 2021 vs the FLAG recommended absolute reductions for a 1.5°C scenario by 2030 from a 2020 baseline. As it has been proven that the linear extrapolation of the change in GhG emissions going forward would be bias due to the fall in revenue, Planet

Tracker goes a step forward. Thus, in order to control for the revenue downfall effect, the extrapolation is calculated considering the carbon intensity ratio. Also, we review the company's Policy and Governance and Risk Management, to gauge Danone's intention of improving those emission trends, but also the investment in mitigating its main emissions going forward.

Ultimately, considering Danone's controlled future extrapolated emissions and Danone's expected emissions based on its mitigation investment, we assess the firm's Scope 3 Upstream emissions from a Temperature Alignment perspective - see Table 7.

Hence, an estimate of climate sensitivity is employed to compare the Global CO₂e remaining budget in 2030²¹ with Danone's CO₂e budget relative to its SBTs in 2030, resulting in relative alignment in °C.

²¹ As stated by IPCC (p. 95) - 'Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development'.



¹⁹ For more details see the Capital Alignment section of Nestlé's - Climate Transition Analysis.

²⁰ The mitigation quantity is derived by assuming in 2030 agricultural sourcing emissions will maintain the 2021 ratio of 75% of Scope 3 Upstream



Table 7: Danone's Temperature Alignment - Estimate of Climate Sensitivity. Source: Planet Tracker Calculations.			
Variables	Danone's Adjusted Trend	Mitigation Investment	
Suggested KTCO₂e budget (SBT)	13,431	13,431	
Expected KTCO₂e emissions (2030)	33,149	13,431	
Target overshoot (undershoot)	147%	0%	
SBT temperature (°C)	1.5	1.5	
Global KTCO₂e remaining budget (2030)	30,000,000	30,000,000	
Danone's Over/(Undershoot) in KTCO ₂ e	44,041,264	0	
Baseline Temperature (°C)	1.1	1.1	
Warming Ratio	1.33333E-08	1.33333E-08	
Danone's Temperature Alignment (°C)	2.1	1.5	

In closing, the company has great initiatives in place, especially since 2019, when it decided to raise its ambitions. Danone provides a broad range of disclosures, from Social and Environmental Responsibility Reports to Score Cards for its suppliers, and to extra financial data. However, by not having a cohesive Net-zero Roadmap and updated SBTs the company might give the impression of lagging behind its peers. Nevertheless, at this stage, we find that Danone is tackling its main source of emissions and is well positioned to achieve net zero by 2050.

We conclude that Danone is on track to align with a 1.5°C scenario by 2030.





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ABOUT PLANET TRACKER

Planet Tracker is a non-profit financial think tank producing analytics and reports to align capital markets with planetary boundaries. Our mission is to create significant and irreversible transformation of global financial activities by 2030. By informing, enabling and mobilising the transformative power of capital markets we aim to deliver a financial system that is fully aligned with a net-zero, nature-positive economy. Planet Tracker proactively engages with financial institutions to drive change in their investment strategies. We ensure they know exactly what risk is built into their investments and identify opportunities from funding the systems transformations we advocate.

PLANET TRACKER'S CLIMATE TRANSITION ANALYSIS - FOOD SYSTEM COMPANIES

As part of its Food & Land Use programme, Planet Tracker is examining the transition plans of the food system (Consumer Goods) companies covered by the Climate Action 100+ list (https://www.climateaction100.org/whos-involved/companies). Our goal is to provide investors with the key information and analysis they need to be able to hold food system companies to account for the quality of their climate transition plans and their execution against those plans, and to encourage them to use this information to engage effectively with these companies with the ultimate aim of driving the sustainable transformation of the global food system.

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For further information please contact:
Nicole Kozlowski, Head of Engagement, Planet Tracker
nicole@planet-tracker.org

www.planet-tracker.org @planet_tracker

