

TCFD Report

In our TCFD disclosure for the year 2024, we detail the climate-related risks and opportunities that affect our business. This report highlights the potential impacts of various climate change scenarios on our operations and outlines our strategy for addressing these challenges, underscoring our commitment to resilience in an evolving environment.

The structure of this report aligns with TCFD recommendations, covering our governance frameworks, strategic approaches, risk management practices, resilience assessments, metrics and targets, as well as a summary of our environmental performance. More information regarding our climate scenario analysis can be found in our Sustainability Statement under [E1](#).

Governance

Leadership and responsibilities in climate strategy

Our Executive Board holds Group-wide responsibility for our sustainability strategy, including climate-related issues such as establishing our climate protection targets. Each Executive Board member is tasked with overseeing sustainability within their respective areas, reviewing established priorities, and making decisions on the implementation of initiatives.

Our Sustainability Board, led by Member of the Executive Board and CEO of Healthcare, guides and oversees the Group-wide execution of the sustainability strategy. It ensures alignment between the overarching strategy and individual business strategies, defines priorities, and establishes globally applicable sustainability guidelines. Additionally, the board is responsible for integrating climate-related considerations into the company's strategy and monitoring progress toward climate-related corporate targets:

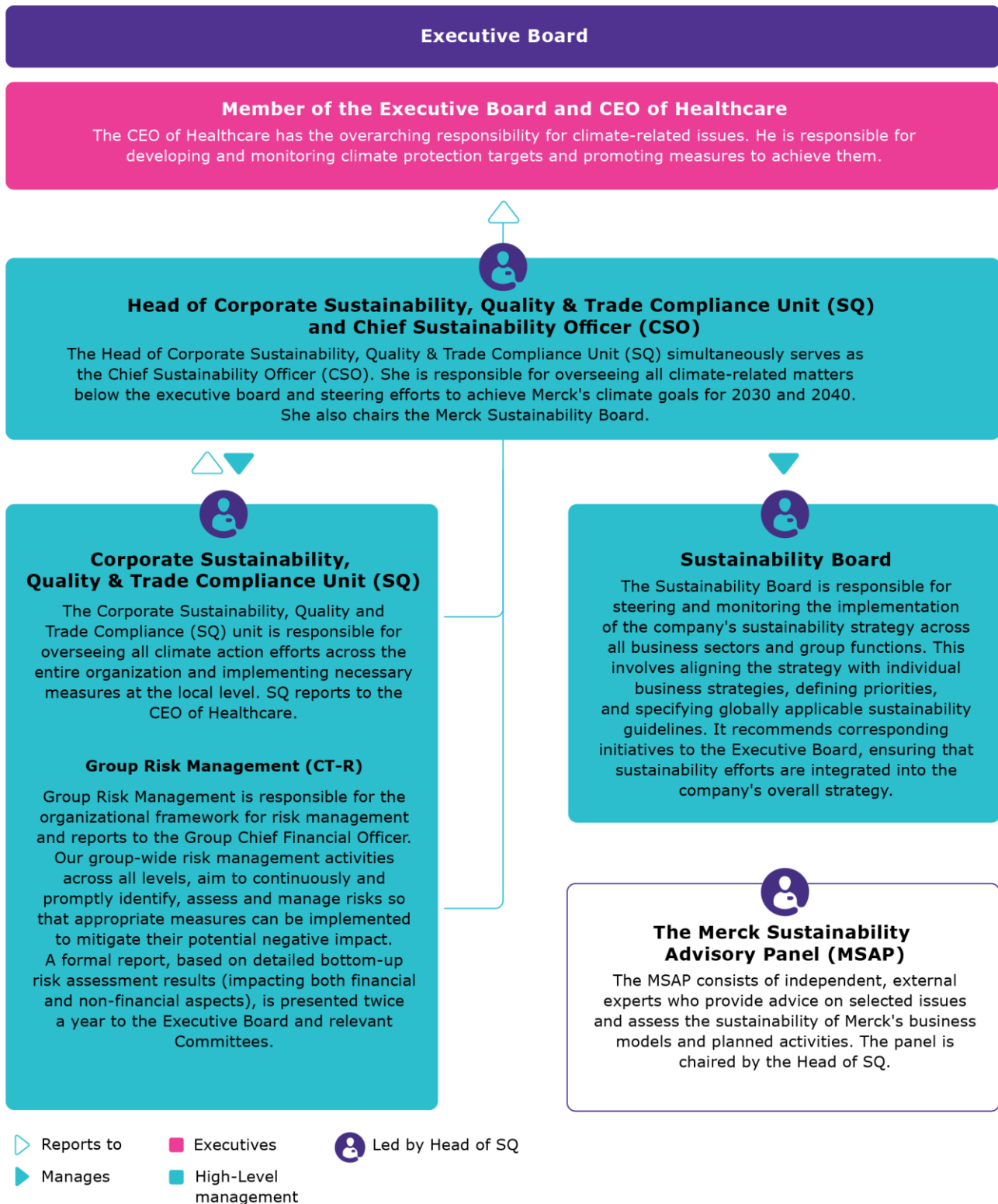
By 2030, we intend to lower our direct (Scope 1) and indirect (Scope 2) greenhouse gas emissions by 50% each compared with the basis year 2020. Moreover, we aim to reduce our Scope 3 emissions across the entire value chain by 52% compared with 2020 (measured in metric tons CO₂eq per € million gross profit) by 2030. These targets were approved by the Science Based Target initiative (SBTi).

Coordinated sustainability oversight

The Merck Sustainability Board is composed of representatives from our business sectors and key Group functions, including Procurement, Communications, Controlling, and Risk Management. Members from Europe, the United States, and Asia contribute insights on regional sustainability issues. This board ensures that initiatives from our various business sectors, Group functions, and subsidiaries are aligned with our global sustainability strategy and recommends relevant initiatives to the Executive Board.

Group Corporate Sustainability is responsible for coordinating the Merck Sustainability Board (MSB), which is chaired by the Head of Corporate Sustainability, Quality and Trade Compliance (SQ), who also serves as the Chief Sustainability Officer. The Merck Sustainability Board convenes monthly, with performance on Key Indicators reviewed quarterly. Additionally, SQ coordinates and drives efforts to implement our climate protection program to achieve our 2030 and 2040 climate targets. For example, SQ regularly monitors greenhouse gas (GHG) emissions through a centralized IT platform and tracks the progress of energy efficiency and GHG reduction projects.

Our governance structure



Climate-related remuneration

Climate-related considerations are integral to the remuneration of our members of the administrative and management bodies. Specifically, the performance of the Executive Board is assessed against greenhouse gas (GHG) emission reduction targets. Please see our passage on climate-related remuneration in our Sustainability Statement under [E1-1](#) for further information.

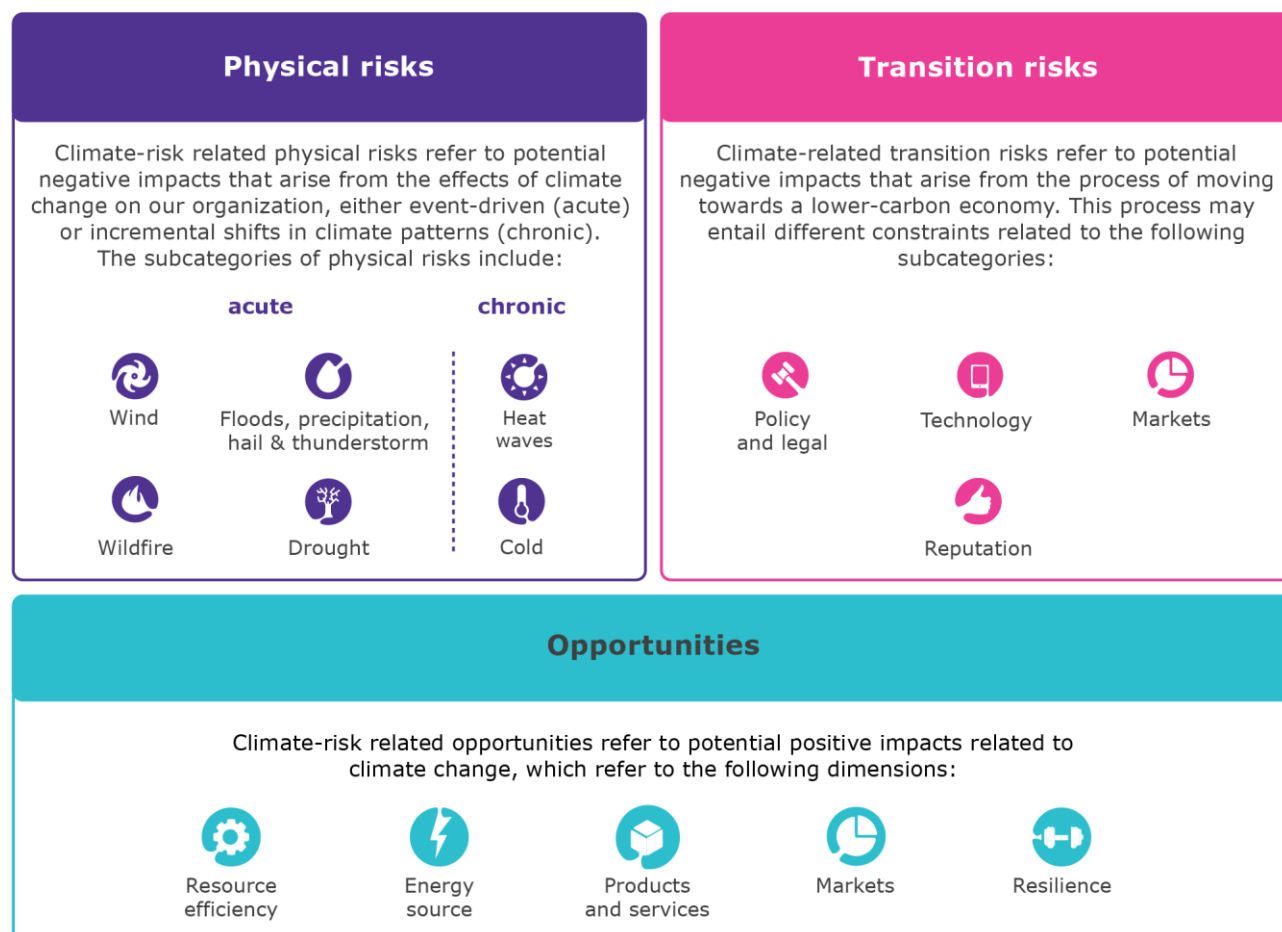
Strategy

Climate Resilience Analysis

Climate resilience analysis is a vital tool for identifying and evaluating the risks and opportunities that climate change presents to our business. In 2022, we conducted a qualitative assessment of climate risks and vulnerabilities across our upstream, own operations, and downstream activities. Building on this foundation, we aligned our efforts with TCFD recommendations in 2023 and 2024 by undertaking quantitative climate scenario analyses, specifically focusing on upstream activities and our own operations, excluding downstream activities. This assessment identified climate-related risks and opportunities across two potential climate pathways: a 1.5°C Paris Agreement-aligned scenario and an IPCC-based 4.0°C scenario, until 2050. Our analysis, guided by the TCFD framework, encompasses both transition and physical risks and opportunities related to our business activities. We focus on time horizons of 2030 and 2050 to align with key milestones in global climate policy and our internal sustainability targets.

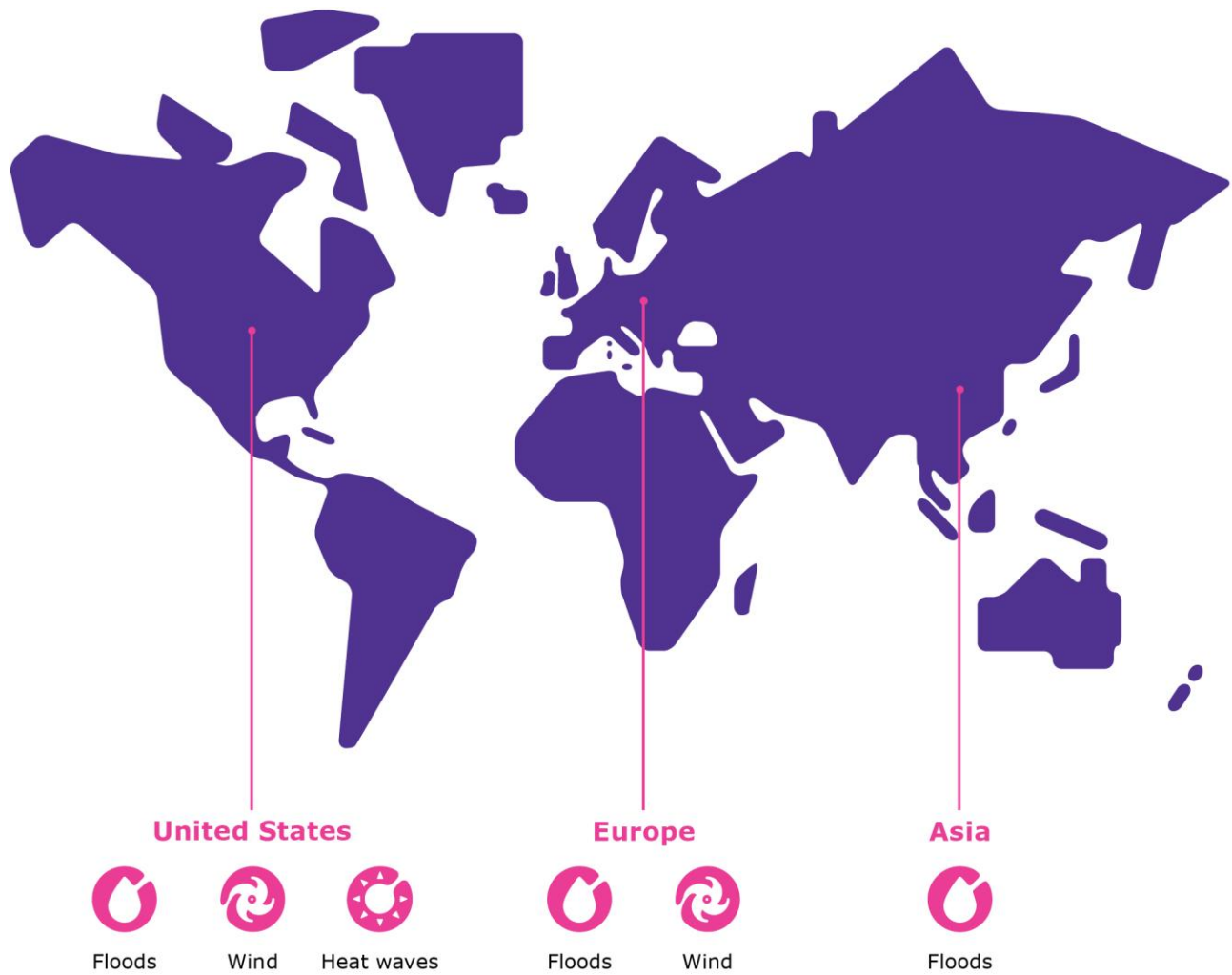
Climate risks and opportunities refer to potential financial impacts stemming from climate change, categorized as follows:

Distinguishing physical and transition risks as well as opportunities

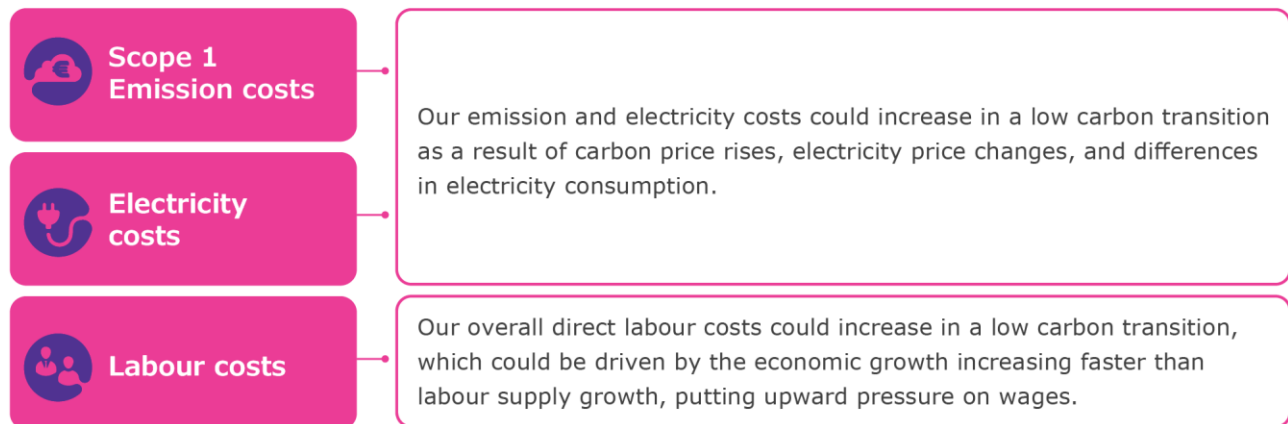


Results

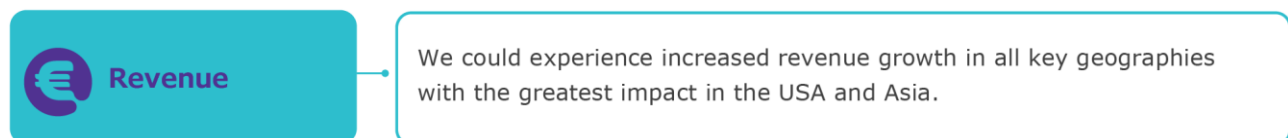
The resilience analysis indicates that we are well-positioned to adjust and adapt our strategy and business model to climate change, with important aspects including managing assets, shifting products and services, and demonstrating resilience through securing ongoing access to finance in the future. For the time horizon until 2050, we found that the impact of physical risk on our sites is limited under a 4°C scenario. The analysis of transition risks has provided valuable insights that will inform our ongoing strategic planning and adaptation efforts. Moving forward, we will work on linking the resilience analysis with our transition plan to even more strongly integrate climate-related issues into our decision-making and strategy.

Key physical risk identified by region

Key transition risks identified



Key transition opportunities identified



Carbon Pricing

While GHG emissions are generally considered in our R&D and product development processes, a dedicated carbon pricing scheme is applicable for major investment projects. In the respective CapEx projects, we use a shadow price of € 100 per ton of CO₂ equivalent which is applied globally. This shadow price is informed by the guidance of EU ETS (the European Union Emission Trading System) on carbon price monitoring and was also determined through a peer review analysis. It ensures the integration of greenhouse gas emission criteria early in the project development stage and is used for CapEx projects exceeding € 10 million, and those over € 2 million with high sustainability impact.

Risk Management

We are currently developing a comprehensive risk management strategy to strengthen our capacity to adapt to climate-related challenges and opportunities. More details on the actions and resources allocated to climate initiatives can be found in our Sustainability Statement under [E1-3](#).

Metrics and targets

We are dedicated to transparently reporting on our environmental goals and the impact of climate change on our business. To execute our long-term climate strategy, we are concentrating on minimizing our greenhouse gas emissions, and enhancing resilience across our operations. Metrics and targets serve as essential tools for measuring and tracking our progress toward achieving our environmental objectives. Consequently, we have established specific targets and metrics to assess and improve our environmental performance. For more detailed information, please refer to the our Sustainability Statement under [E1](#).