

2022 Taskforce on Climate-related Financial Disclosures Statement

In 2020, Biogen decided to support the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) to enhance transparency on climate-related matters. This statement represents our third disclosure aligned with the TCFD recommendations. It covers all facilities and operations globally which are owned by Biogen or for which the company has operational control. Our [2022 CDP Climate Change disclosure](#) provides further background on our approach to climate change and should be read alongside these disclosures. Our CDP responses are available at <https://www.cdp.net>.

Governance

TCFD recommendations for disclosures on Governance

- a) Describe the board's oversight of climate-related risks and opportunities.
 - b) Describe management's role in assessing and managing climate-related risks and opportunities.
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Biogen's Board of Directors has oversight of environment, social and governance (ESG) issues. Biogen's CEO is ultimately responsible for assessing and managing Biogen's climate-related risks, strategies and initiatives, including Biogen's performance on our climate-related commitments. Biogen's environmental efforts are managed and tracked by a formal Governance Committee comprised of executive-level members from across the business. The Committee meets quarterly to guide and deliver on Biogen's environmental efforts and provides regular updates to the full Executive Leadership Team and to Biogen's Board of Directors. Nicole Murphy, Head of Pharmaceutical Operations & Technology, a direct report of the CEO, is executive sponsor and Chair of the Committee.

Biogen's Enterprise Risk Management (ERM) process helps ensure climate-related risks and opportunities are integrated into our overall business strategy. Our ERM team monitors strategic climate-related risks across all aspects of our business and utilizes climate scenarios as part of its assessments. The ERM team evaluates identified risks, including any climate-related physical and transitional risks, by engaging the leaders who oversee and run the day-to-day environmental programs. The ERM team provides annual updates on their findings and activities to the Biogen Executive Team, including those with environmental oversight, as well as the Board of Directors.

Starting in 2021, to support Biogen's strategic management of climate-related issues and ESG generally, a portion of the compensation of every executive officer and all other employees has been tied to advancing our ESG strategy, which includes climate-related targets.

Strategy

TCFD recommendations for disclosures on Strategy

- a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
 - b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
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TCFD recommendations for disclosures on Strategy

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

As a standard business practice, Biogen regularly evaluates our climate-related commitments and initiatives, which includes taking a strategic approach to identifying and responding to climate-related risks and opportunities and their impacts on our business. This encompasses considerations of any potential impacts on our financial planning, products and services, supply chain management, investment in R&D and operations. Our responses are guided by our commitment to human health, our understanding of the complex interplay of health and environmental issues, our focus on delivering operational efficiencies, climate science and other factors. Additional details and our progress in advancing our environmental goals are available on www.Biogen.com.

Based on our most recent assessments, including climate scenario analyses conducted in 2021, we have identified the following short-, medium- and long-term risks and opportunities:

Risks and Opportunities Identified	Time Horizon (short, medium, long term)	Potential Impacts	Management Approach
Increased frequency of extreme weather and climate-related natural disasters	Short, medium and long term	<p>The majority of Biogen sites are not expected to be exposed to an increased material risk of extreme weather through 2040.</p> <p>Four third-party manufacturing sites are “at-risk” due to their location in southern Europe and California.</p>	We began developing a Responsible Supplier Program, which includes an analysis of multiple ESG factors. Suppliers “at risk” for potential climate impacts will be prioritized for assessment to understand mitigation steps being taken and needed in the future.

Risks and Opportunities Identified	Time Horizon (short, medium, long term)	Potential Impacts	Management Approach
Expectation for sustainable and/or low-carbon products and services from healthcare providers in some countries	Medium and long term	As national health systems specify lifecycle impacts for products they purchase, competitive products having lower environmental impacts might succeed in various markets, which could impact Biogen’s market access and revenue in some countries. The potential risks and opportunities to Biogen relate to our ability to demonstrate and/or improve the sustainability of our products and packaging with sufficient speed, while maintaining or improving health outcomes and meeting other customer requirements.	<p>Biogen introduced principles of Sustainable Drug Development to incorporate green chemistry into all stages of therapy development by 2023 and set 2025 goals for sustainable packaging. As part of these efforts, Biogen labs piloted a My Green Lab program in 2021, achieving certification of “gold” or better. In 2022, 41 Biogen labs participated in My Green Lab, a certification recognized by the United Nations’ Race to Zero campaign for setting the standard for best practices in laboratory sustainability. Ninety-eight percent of our participating labs became My Green Lab certified and, of those certified labs, 93% of them obtained a gold certification or higher. As of Q1 2023, more than 80% of Biogen labs have participated in the program.</p> <p>In 2022, Biogen conducted life cycle assessments (LCAs) on three biosimilar products in four markets. We are also working to evaluate alternative materials and approaches for primary medicine delivery with a reduced environmental footprint. Biogen has published updates on these efforts in our 2022 ESG Report.</p>
Ban and/or restrictions on the sale or use of petrol and diesel vehicles	Short and medium term	Approximately 1,900 leased vehicles in Biogen’s commercial fleet rely primarily on petrol and diesel fuel. Some local, state and national governments are banning or restricting sales of internal combustion engine (ICE) vehicles, which could	In 2020, we completed a market readiness study across all markets where we operate with the ambition to transition to 100% battery electric vehicles (BEVs) by 2025 for new leases. We are implementing a phased rollout strategy, starting with 13 markets that are comparatively EV ready today, with the help of existing and new e-mobility partners.

Risks and Opportunities Identified	Time Horizon (short, medium, long term)	Potential Impacts	Management Approach
in some markets		translate into an increase in duties on fossil fuels and other limitations associated with our commercial fleet. For example, an increase in the number and/or scope of clean air zones being established at the local and/or regional level might restrict Biogen’s fossil fuel vehicles from entering those regions or require us to pay a surcharge for access. Either development might limit our access to specific markets or increase our costs of access for legacy vehicles with ICEs. However, we monitor developments closely and do not anticipate a material impact from either of these potential changes.	<p>Many Biogen employees are embracing the transition, with more than 180 Biogen EVs on the road today. We see potential for additional progress as current leases expire and with the reduction of meaningful external barriers, including lack of sufficient charging infrastructure and constraints pertaining to vehicle cost and availability in major markets.</p> <p>BEVs also provide an opportunity for Biogen to decrease the total cost of ownership of our vehicles and maintain future access to restricted clean air zones. As we are signatories to the Climate Group’s EV100 commitment, our management approach aims to address identified risks and capitalize on potential business benefits from the EV transition in relevant markets, including those that have banned or are expected to limit fossil fuel vehicles and/or establish clean air zones.</p>
Carbon pricing and future environmental taxation	Medium and long term	We expect that carbon pricing and/or environmental taxation will increase in many large markets where we operate.	We see increasing efficiencies as one part of well-run business operations, with emissions reductions an important consideration as we make decisions about equipment, energy, materials and other matters. Our long-term ambition has been to eliminate emissions within our operations by 2040, and we also are working toward a net-zero supply chain by 2045. Our climate strategy can mitigate our exposure to future carbon pricing and/or environmental taxation and might also create an advantage relative to peer

Risks and Opportunities Identified	Time Horizon (short, medium, long term)	Potential Impacts	Management Approach
			companies that have yet to establish a pathway toward decarbonization.
Access to capital on favorable terms	Medium and long term	Some financial institutions are signaling a long-term shift in their approach to capital allocation away from projects or organizations with higher climate risk. Growth in sustainable finance mechanisms, such as green bonds, might result in greater access to capital and more favorable terms for more sustainable businesses.	Biogen seeks to favorably position itself to access sustainable finance mechanisms as and when we seek new sources of funding.

Risk Management

TCFD recommendations for disclosures on Risk Management

- a) Describe the organization's processes for identifying and assessing climate-related risks.
 - b) Describe the organization's processes for managing climate-related risks.
 - c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management
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We identify and assess climate-related risks — both physical risks and transitional risks — by utilizing the Global Enabling Sustainability Initiative (GeSI)-CDP Scenario Analysis Toolkit (the Toolkit). Our most recent assessment of physical risks included screening studies of two future climatic scenarios to explore our physical climate-related risks, notably water scarcity, inland/coastal floods, extreme heat, tornados, hurricanes and wildfires.

Representative Concentration Pathways (RCP) 4.5 (+2°C) and RCP 8.5 (+4°C) were the selected scenarios for this study with projected impacts out from 2020 to 2030 and 2040 or 2050 depending on the criteria data set available. These scenarios were applied to Biogen's three manufacturing and R&D locations and 10 of the contract manufacturing organization sites we rely on to manufacture our products. Commercial sites, which consist of leased office space, were not included in the screening studies, because we determined that they posed a low material risk. The outcome of these studies across the 13 sites was combined with a revenue-based assessment to identify short-, medium- and/or long-term risks. Subsequently, we expanded our assessment of physical risks to include our broader value chain, specific to our most critical suppliers.

We also utilize the Toolkit to identify and assess the risks and opportunities associated with the transition to a low-carbon economy. For this purpose, in 2020, we adopted two climate scenarios: the IEA INDC Scenario (~3°C) as a base case and the IEA WEO 450 Scenario (~2°C) as a higher ambition case toward meeting the Paris Agreement to understand policy and technology impacts through 2040. Risks and opportunities were assessed at an enterprise level as well as specific to our biosimilar product segment.

Identified material risks and opportunities are reported to the Enterprise Risk Management team and Environmental Governance Committee overseeing our environmental goals, which reports to the Executive Leadership Team and Board of Directors. Through this layered accountability, we consider and address material risks and opportunities that may impact our business model, as well as mitigation measures that are in place or need to be refreshed and/or adopted.

Metrics and Targets

TCFD recommendations for disclosures on Metrics and Targets

- a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
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TCFD recommendations for disclosures on Metrics and Targets

b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

There is increased attention to decarbonization among a variety of stakeholders, including some investors, regulators and customers. Therefore, our overall strategy to manage and mitigate climate-related risks includes a focus on the following metrics and targets, which are consistent with the aims of the Paris Agreement and keeping temperature rise to 1.5°C.

- In 2020, we committed to reduce absolute Scope 1 and 2 emissions by 55% by 2032 compared to 2019 and 100% by 2040 through the Science Based Targets initiative.
- We are also committed to working with our suppliers to reduce our indirect climate impacts from purchased goods, services and capital equipment, where 80% of suppliers by spend¹ will have a science-based target by 2025. We also are committed to strengthening our resilience through the mitigation of environmental risks throughout our global supply chain and are currently expanding our Responsible Sourcing Program, which includes the establishment of sustainable procurement principles.
- In September 2022, we issued a progress report which details our efforts to advance our goals, including engagement with our employees and suppliers, and ongoing collaborations with renowned institutions to improve health – especially for vulnerable populations most impacted by climate-related events.

We track our performance and disclose our progress around related climate-related risks and opportunities through our ESG Data Table in our annual ESG Report. The GRI-aligned content provides robust disclosure of our annual environmental metrics, including those we use to assess climate-related risks and opportunities and in efforts to reduce our emissions. Additional annual updates to metrics associated with greenhouse gas emissions, energy and water are disclosed through the CDP Climate Change Questionnaire and the CDP Water Security Questionnaire.

¹ This target addresses emission impacts from Scope 3 for categories 1 and 2, which represents approximately 87% of our 2019 Scope 3 emission baseline.