BIOGEN'S SUSTAINABILITY AND CLIMATE DISCLOSURE 2025

Biogen

INTRODUCTION

This report is prepared with reference to the International Sustainability Standards Board (ISSB) International Financial Reporting Standards (IFRS), specifically S2. By aligning our disclosures with ISSB's framework, we aim to provide transparency as part of our broader corporate responsibility reporting.

Biogen

GOVERNANCE

Board of Directors: Oversight responsibilities

As set forth in our Corporate Governance Principles, Biogen's Board of Directors (Board) and its committees are responsible for overseeing the company's corporate responsibility strategy. The Board regularly reviews its composition to ensure it encompasses a range of experiences, skills and backgrounds necessary for effective oversight, including expertise in corporate responsibility matters. The Board receives updates on sustainability, including any relevant climate-related risks and opportunities, at least once each year.

Management: Implementation and oversight

Biogen uses a multi-level governance framework concerning environmental strategies, performance and risks, and defines environmental sustainability as inclusive of climate-related matters. The Executive Team, including the CEO, is responsible for assessing and overseeing Biogen's sustainability-related risks, strategies and performance. They ensure execution of the company's sustainability commitments and provide performance updates to the Board, inclusive of appropriate committees.

Biogen's Enterprise Risk Management (ERM) process helps ensure environmental risks and opportunities are appropriately reflected in broader business planning. With input from Environment, Health and Safety (EHS) leaders, the ERM team evaluates and monitors risks across all aspects of the business, including potential climate-related physical and transition risks; evaluates identified risks; and engages with leaders around any appropriate actions. The ERM team engages with leaders who oversee and run day-to-day environmental programs and provides relevant updates to the Board.

Biogen's EHS and operational leadership incorporates sustainability into relevant decision-making processes, actively considering tradeoffs associated with these risks during strategy reviews and significant transactions. Our Environmental Performance, Risks and Trends Forum also plays an important role in governance and in internal coordination, with quarterly meetings to track progress on environmental efforts and help ensure regulatory compliance. The Environmental Forum is sponsored by the Head of Pharmaceutical Operations & Technology, a member of Biogen's Executive Team, and includes the Head of Sustainability, EHS leaders, site representatives and others.

Management employs a range of controls and procedures to support the oversight of sustainability risks, opportunities and programs. These controls include external landscape monitoring, setting goals and targets, regular assessments and the integration of sustainability considerations into operational functions.

Together, the mechanisms outlined above help to drive a cohesive approach to governance and to ensure our environmental strategy aligns with business objectives, regulatory requirements and compliance requirements, and remains coordinated with our Executive Team and Board.

STRATEGY

Biogen's environmental strategy is informed by an assessment that includes physical and transition climate risks and opportunities based on a scenario analysis (see details in Table 1 and Table 2). We engaged a third party to help identify and consider emerging factors ranging from regulatory shifts to artificial intelligence. By integrating these insights, we believe we are better equipped to adapt our strategies to the evolving business landscape.

Physical risk

Physical risk refers to potential impacts on assets and operations due to climate-related hazards, categorized into:

- **Acute risks:** Arising from extreme weather events such as floods, hurricanes, wildfires and heatwaves.
- **Chronic risks:** Resulting from long-term shifts in climate patterns, including rising sea levels and increasing temperatures.

Physical risk can disrupt the normal functioning of assets, leading to operational delays or shutdowns. These disruptions may require costly repairs, replacements or contingency measures, directly affecting financial performance.

Understanding physical risk is crucial for assessing the vulnerability of assets and promoting operational resilience.

To assess physical risks, including those listed above, Biogen assets were analyzed using geospatial climate models combined with asset-specific hazard models. The methodology involved several key steps:

1. **Data inputs**

- Asset types (e.g., manufacturing facilities, warehouses, research laboratories and offices)
- Asset values
- Geographic locations represented by GPS coordinates

2. **Climate scenarios**

- The analysis examined two climate scenarios based on the Intergovernmental Panel on Climate Change' s (IPCC) Sixth Assessment Report (AR6), covering the period from 2020 to 2090.

Transition risk

Transition risk refers to risks associated with moving toward a lower-carbon economy, including factors such as:

- Changes in regulations
- Technological advancements
- Market dynamics
- Shifts in customer preferences or requirements

As governments and organizations worldwide implement policies aimed at reducing greenhouse gas emissions, companies may face increased costs, reduced demand for certain products or services, and potential liabilities related to their emissions footprint. A number of jurisdictions have introduced or may introduce regulations around corporate greenhouse gas emissions. This may include mandatory emissions limits, carbon pricing, taxation on emissions and/or similar efforts, including requirements for accelerated transition timelines. Understanding and managing transition risk can support long-term sustainability and competitiveness.

Biogen used the following approach to assess transition risks:

- **Emissions data collection:** Scope 1, 2 and 3 emissions data across global locations and financial data, including revenue and expenditure projections, were collected.
- **Projection of emissions:** Emissions data were projected and Biogen' s environment targets taken into account.
- **Carbon-pricing analysis:** Projected emissions were multiplied by carbon prices modeled after three scenarios developed by the International Energy Agency (IEA), extending up to the year 2050 to determine the annual impact.
- **Supplier analysis:** Data from Biogen's top 100 suppliers by spend were analyzed to assess their Scope 1 and 2 greenhouse gas emissions. This was used to help inform Biogen's Scope 3 disclosures and to calculate associated carbon pricing risk. For suppliers lacking data, carbon pricing risk was approximated using industry averages to assess overall exposure to market risks related to carbon pricing.

Table 1: Climate scenario considered for physical risk.

Climate scenarios	
High (SSP5-8.5)	Low mitigation scenario with total greenhouse gas emissions tripling by 2075, leading to global temperature increases of 3.3-5.7 °C by 2100.
Low (SSP1-2.6)	Aggressive mitigation scenario aiming for net-zero emissions by 2050, resulting in temperature increases of 1.3-2.4 °C by 2100.

Table 2: Climate scenarios considered for transition risk.

Carbon-pricing scenarios			
IEA Net Zero Scenario	1.5°C	Low emission pathway	Targets net-zero energy-related and industrial process emissions by 2050.
IEA Announced Pledges Scenario	1.7°C	Medium emission pathway	Assumes all net-zero pledges made by countries are achieved in full and on time.
IEA Stated Policies Scenario	2.4°C	High emission pathway	Reflects policies that are currently in place or have been announced.

Climate risk

Our most recent assessments identified the following climate-related risks and potential impacts.

Table 3: Climate-related risk and impacts on Biogen.

Risk category	Risk description	Impact
	Physical risks	
Extreme temperatures	Financial implications related to extreme heat events affecting operations and assets.	Continued increase in risk level, with projected ongoing risk noticeable but manageable. Impact contained and recoverable at local level.
Water stress	Associated with reduced water availability impacting operations and increasing costs.	Increased risk as water scarcity becomes more prevalent, though minimal operational impact or loss of business.
Pluvial flooding	Risk of flooding due to heavy rainfall events, potentially damaging assets and disrupting operations.	Increased risk, minimal operational impact or loss of business.
Drought	A growing risk projected to more than double over the decades, impacting manufacturing operations and water availability.	Increased risk level with minimal impact on operations and resource availability.
	Transition risk	
Carbon-pricing risk	Higher operating costs due to climate-related policies, such as carbon pricing or taxes on fuel or greenhouse gas emissions. Costs could be passed on, absorbed or mitigated through low-carbon solutions.	Potential increased exposure in some markets, minimal increase in exposure and minimal impact or loss of business.
Market risk	Increased production costs due to rising input prices and changes in revenue mix, resulting in decreased revenues. This risk is assessed using the “EBITDA at Risk” metric, which reflects the financial risk of suppliers under different carbon pricing scenarios.	Potential increased costs impacting pricing strategies and supply chain dynamics, costs and/or profitability. Minimal impact on operations and resource availability.

Climate opportunities

Biogen continues to explore opportunities where climate action and business value intersect. More sustainable and/or low-carbon products might be prioritized by a variety of purchasers, which could impact our competitiveness and/or revenue in some markets. We may be able to minimize risks and capitalize on business opportunities by promoting sustainability across our products and operations while meeting other customer requirements. For example, energy efficiency, packaging alternatives and green chemistry present pathways for innovation and resilience. Steps to reduce emissions or mitigate potential impacts from water stress may result in overall cost savings and/or process improvements.

These efforts may also address the preferences of some customers and evolving regulatory expectations. The carbon-pricing risk scenarios outlined above not only reflect a potential transition risk but may present an opportunity for potential benefit with cap-and-trade schemes.

While the landscape remains dynamic, we believe we are well positioned to identify and respond to emerging trends that align environmental stewardship with long-term growth.

RISK MANAGEMENT

As outlined above, Biogen identifies, assesses and manages climate-related risks as part of our ERM process. Our recent climate assessment provides a foundation for evaluating physical risks, including temperature extremes, water scarcity and flooding, across our manufacturing and R&D locations, leased office locations and top contract manufacturing organization sites we rely on to manufacture our products. By examining both acute and chronic hazards, we gain insights into the potential impacts on our operations and supply chain.

In addition, we assess transition risks associated with the shift to a low-carbon economy, using various climate scenarios to understand potential policy and technology impacts. Material risks and opportunities are reported to our ERM team for integration into Biogen's overall risk management framework. This layered accountability allows us to address climate-related risks more holistically, with ongoing monitoring and evaluation to refine our strategies and mitigate potential impacts.

METRICS AND TARGETS

We continue to align our environmental strategy with science-based targets and transparent reporting practices. We have set clear goals to reduce greenhouse gas emissions across our operations, aiming to support ambition and accountability.

Progress is tracked against a 2019 baseline, and emissions reductions are reported annually to support comparability and decision-useful insights. Table 4 outlines current emissions and associated targets.

Table 4: Emissions table.

Scope	2025 Emissions (MT CO_2e)	Target
Scope 1	56,948	50% reduction of global Scope 1 emissions by 2030 from a 2019 baseline
Scope 2	1,507 (market-based)	Achieve net-zero market-based Scope 2 emissions

Biogen's approach to environmental matters reflects a commitment to continuous improvement, with ongoing efforts to refine data quality. Environmental sustainability can enhance operational efficiency, compliance and risk reduction, helping contribute to business value over the long term.