

Publication of the
**Task Force on Climate-Related
Financial Disclosures (TCFD) 2023**

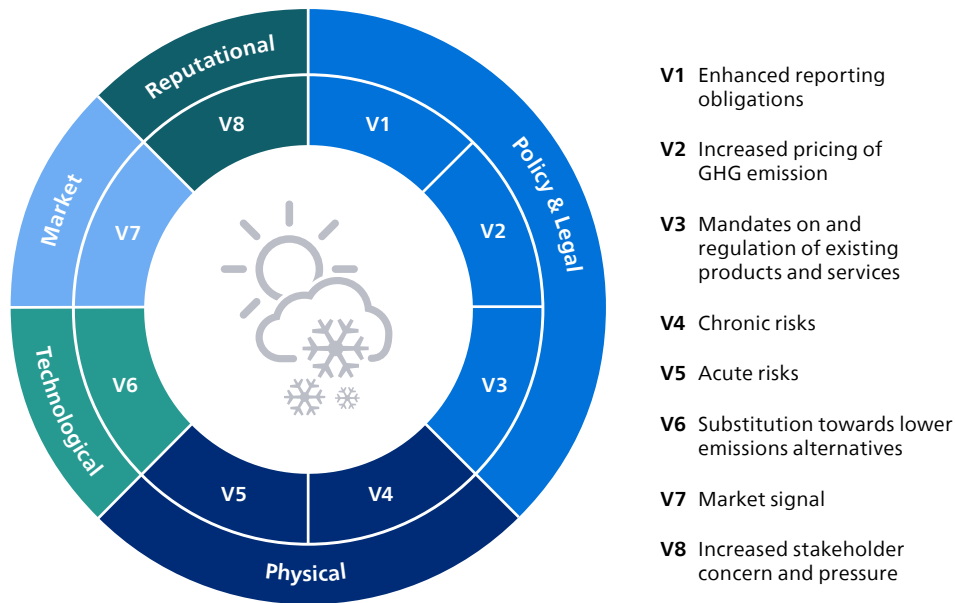
Executive summary

Philips recognizes the importance of identifying, assessing, and mitigating climate-related risks to ensure business continuity and resilience. We release the fourth annual Task Force on Climate-related Financial Disclosures (TCFD) recommendations to provide the information needed by investors, lenders, insurance underwriters and other stakeholders to appropriately assess and price climate-related risks and opportunities.

The recommendations are structured around four thematic areas that represent core elements of how Philips operates: governance, strategy, risk management, and metrics and targets. We provide a comprehensive overview of the climate-related risks and opportunities landscape and how these can be assessed in the context of [Shared Socioeconomic Pathways \(SSPs\)](#), [Representative Concentration Pathways \(RCPs\)](#), and [Global Energy and Climate \(CEC\) Model scenarios](#) by 2025, 2030 and 2050. Combining the different narratives has improved our understanding of Philips' risks and opportunities, allowing us to make more granular assumptions when making climate risk assessments.

Since the release of our first TCFD report in 2020, we have elaborated on Philips' climate physical and transition risk management processes inspired by the TCFD framework. Our 2023 TCFD report focuses on eight (8) climate-related vulnerabilities, encompassing physical, policy and legal, technological, market, and reputational risks, as well as the respective opportunities.

Climate-related hazards and transition events



The following summary may not include all climate-related events that have the potential of impacting Philips. This list is not exhaustive, but a selection based on desk research, expert views, and interviews. Some risks not yet known to Philips, or currently believed not to be material, could ultimately have an impact on Philips' businesses, objectives, revenues, expenses, income, assets, liquidity, or capital resources.

Introduction

Combating climate change and building climate related resilience plays a significant role for Philips, a fact reaffirmed by the Double Materiality Assessment conducted in 2023. This report delves into our exposure to physical and transition risks, outlining the anticipated effects and the measures for mitigation and adaptation, both implemented and planned for the future, using a qualitative approach.

Examining physical risks involves evaluating a range of Philips industrial sites, non-industrial locations, and critical suppliers over short-, medium-, and long-term horizons. Transition risks are globally assessed, encompassing both upstream and downstream activities that directly influence Philips operations, using the same time horizons as applied in the assessment of physical risks.

The assessment of each risk is conducted by a multi-disciplinary team, consisting of members of Philips Group Sustainability, Business Continuity Management, Real Estate, Enterprise Risk Management, Insurance & Risk Management, Innovation & Strategy, Health and Safety and Group consolidation and reporting.

The critical assumptions

As our climate risk management relies on forecasting, this report is contingent upon several key assumptions. Those assumptions that are applicable to the entire report are further elaborated in this section, while those specific to either physical or transition risks/opportunities are explored in the designated chapter.

Our climate risk assessment employs three time horizons, differing from the [European Sustainability Reporting Standard \(ESRS\)](#) due to the expectation of climate impacts and mitigation actions over periods longer than 5 years. Short-term spans the next 2-3 years, medium-term covers 5-10 years, and long-term extends to 10-20 years. While not directly tied to asset lifetime or strategic planning, these horizons, chosen in consultation with other departments, ensure perpetual business continuity. For instance, assessing our portfolio's long-term exposure enhances climate-resilient strategic planning and capital allocation. Please note that due to limited availability of sea level rise models, this risk was assessed for the 2100 time-horizon.

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Time Horizons and Corresponding Target Years of TCFD 2023

Time horizon	Target Year
Short-term	2025
Medium-term	2030
Long term	2050

For Philips' assessment, the scenarios SSP1-1.9, SSP1-2.6 and SSP5-8.5 have been examined. The SSP1-1.9 and SSP1-2.6 scenarios aim to limit global warming to below 1.5°C by 2100 with limited overshoot, above pre-industrial levels, while the SSP5-8.5 scenario represents a world unable to effectively address climate change, resulting in global warming of approximately 3.3°C – 5.7°C by 2100. Each scenario is further explored in its designated chapter.

Other mid-level scenarios were considered but are not included in this report, as our focus is on building resilience based on potential extreme outcomes.

The hot spot analysis for each scenario utilized the geospatial coordinates of our sites. Conclusions are, therefore, location-specific and cannot be extrapolated to the region or country. We employed an external risk insurance tool that leverages the climate models of the Coupled Model Intercomparison Project (CMIP6), forming the basis of the sixth assessment report of the Intergovernmental Panel on Climate Change (IPCC). The reference period used for extrapolation is 1995 – 2014.

Lastly, please note that all monetary impacts are provided in millions of EUR unless stated otherwise.

The scope

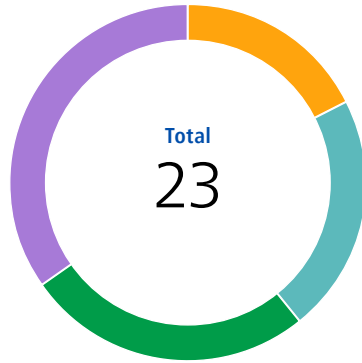
The scope of this resilience analysis is applicable to all of Philips' businesses, regions, and functions. Furthermore, the entire value chain, including suppliers and customers, is in scope. Compared to last year, we have extended the scope of our climate hotspot analysis to 64 Philips sites, including manufacturing, warehouses, offices, research, and service facilities. Additionally, 225 value chain partners (both upstream and downstream) were included in the hotspot analysis. For more information on the sites, please refer to the following at-a-glance pages:

At a glance: Manufacturing facilities in 2023

Philips operates in 74 countries with its ultimate parent entity located in the Netherlands. This overview encompasses Philips main manufacturing facilities that report on their environmental impact (waste, water, energy, chemicals, etc.). Please note this is not a comprehensive overview of all Philips manufacturing activities.

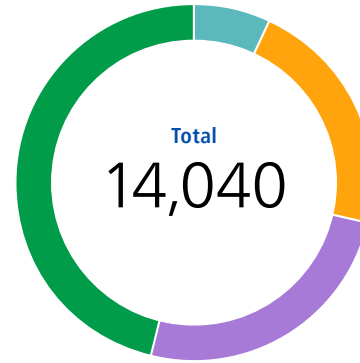
Facilities

- Europe Region
6
- North America
8
- Growth Region
4
- Greater China
5



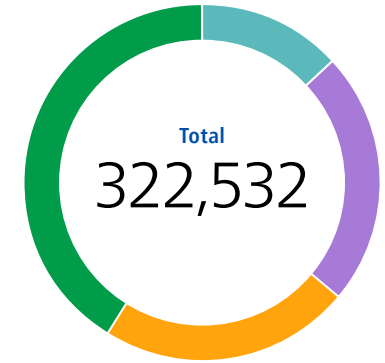
Carbon footprint (scope 1 and 2) in Tonnes CO₂e

- Europe Region
6,511
- North America
3,523
- Growth Region
3,044
- Greater China
962



Energy consumption in MWh

- Europe Region
132,916
75% renewable energy
- North America
73,746
78% renewable energy
- Growth Region
73,798
85% renewable energy
- Greater China
42,073
94% renewable energy



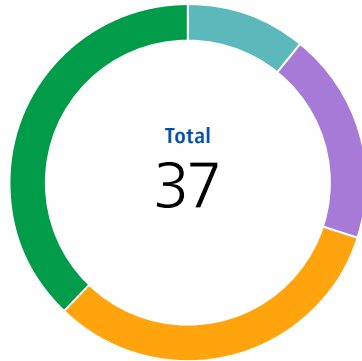
Disclaimer: This diagram provides a high-level overview of Philips' business activities. However, it is not intended to be conclusive or comprehensive, and certain details may not be included. Energy numbers per region might not add up to total due to the rounding logic implemented.

At a glance: Large offices and research facilities in 2023

Philips operates in 74 countries with its ultimate parent entity located in the Netherlands. This overview encompasses Philips large offices and research activities with a headcount over 250 or a total square meter footage of 5000 m² or larger that are required to report on their energy performance. Please note that this is not a comprehensive overview of all Philips office and research facilities.

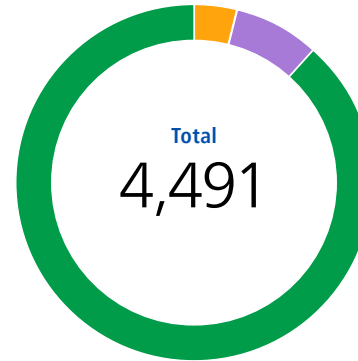
Facilities

- Europe Region
14
- North America
7
- Growth Region
12
- Greater China
4



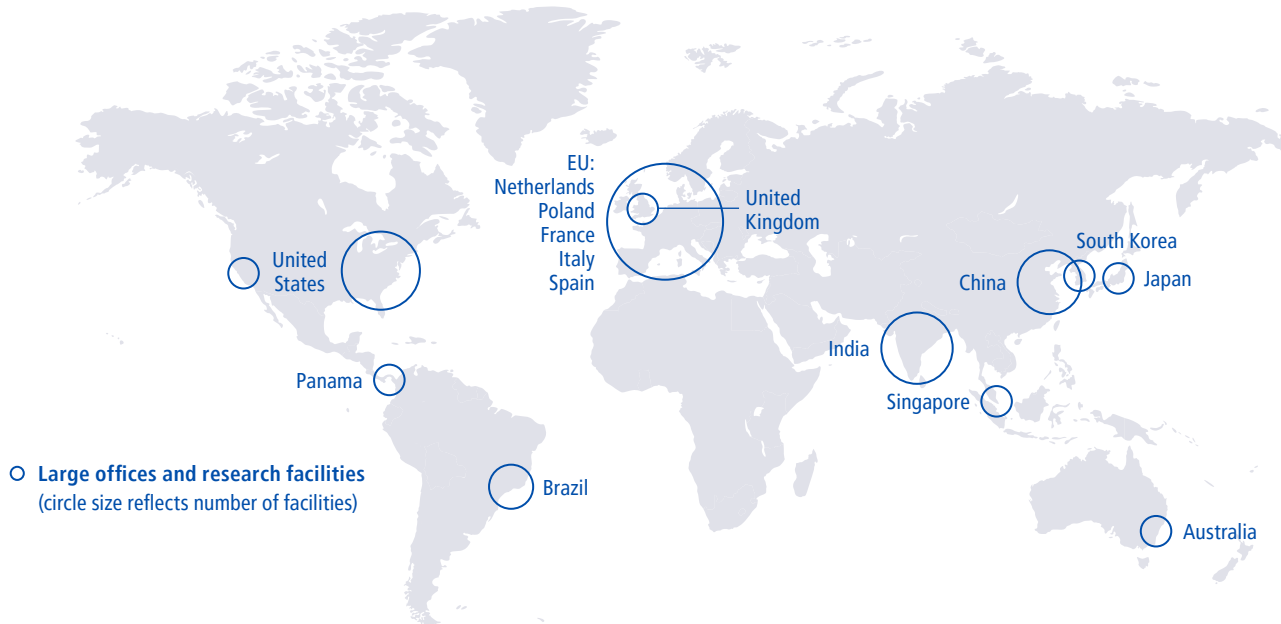
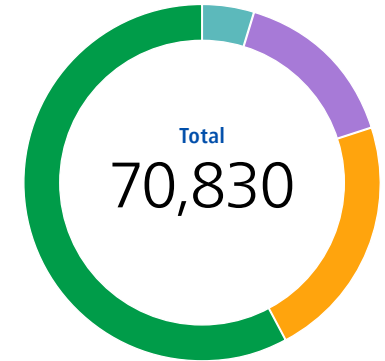
Carbon footprint (scope 1 and 2) in Tonnes CO₂e

- Europe Region
3,972
- North America
356
- Growth Region
163
- Greater China
0



Energy consumption in MWh

- Europe Region
40,999
52% renewable energy
- North America
10,927
84% renewable energy
- Growth Region
15,669
95% renewable energy
- Greater China
3,236
100% renewable energy



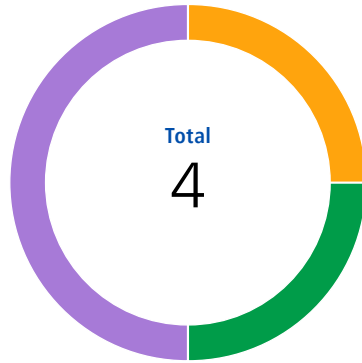
Disclaimer: This diagram provides a high-level overview of Philips' business activities. However, it is not intended to be conclusive or comprehensive, and certain details may not be included. Energy numbers per region might not add up to total due to the rounding logic implemented.

At a glance: Warehouse and service facilities in 2023

Philips operates in 74 countries with its ultimate parent entity located in the Netherlands. This overview encompasses Philips warehouse and service facilities that report on their energy performance. Please note this is not a comprehensive overview of all Philips warehouse and service activities.

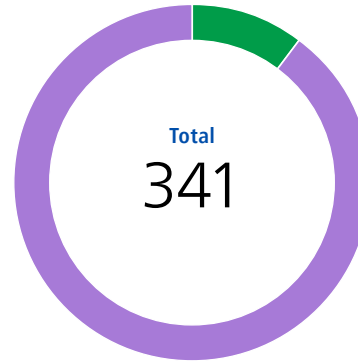
Facilities

- Europe Region
1
- North America
2
- Growth Region
1
- Greater China
0



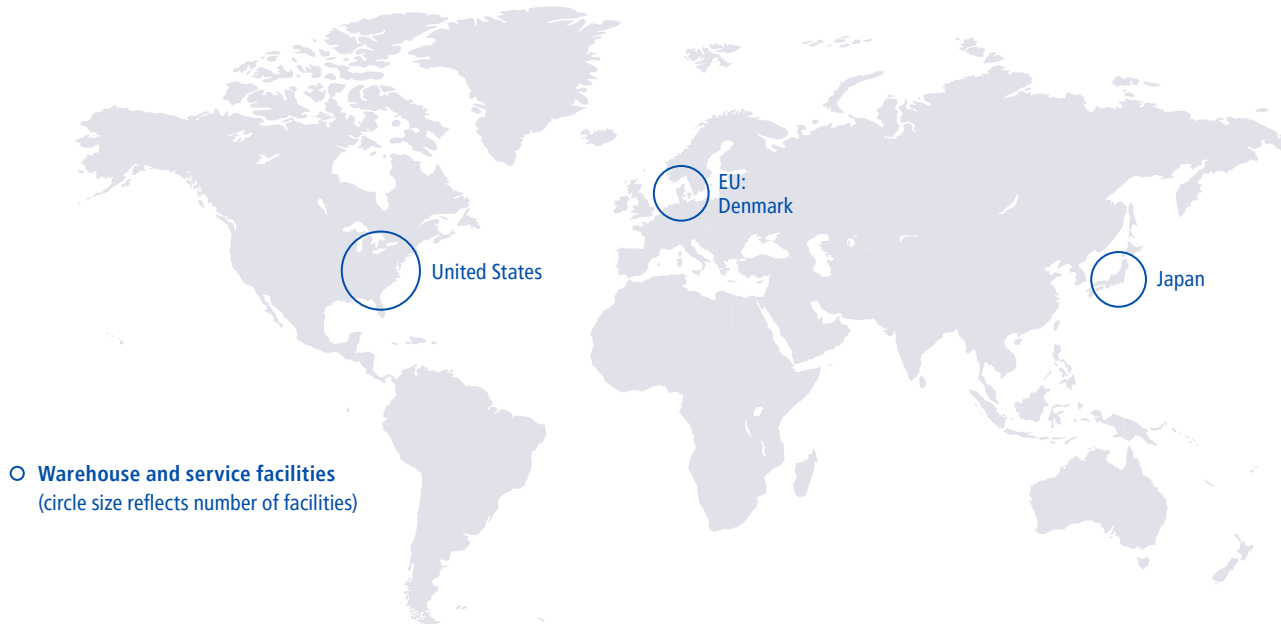
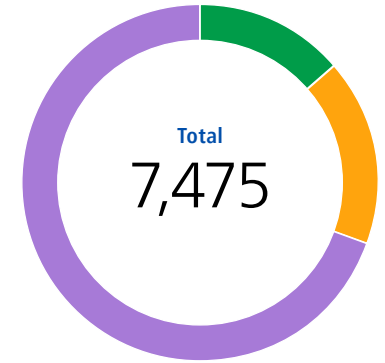
Carbon footprint (scope 1 and 2) in in Tonnes CO₂e

- Europe Region
35
- North America
306
- Growth Region
0
- Greater China
N/A



Energy consumption in MWh

- Europe Region
1,003
100% renewable energy
- North America
5,203
- Growth Region
1,269
100% renewable energy
- Greater China
N/A



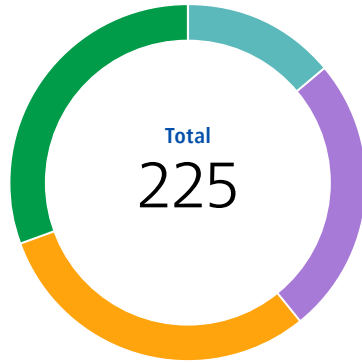
Disclaimer: This diagram provides a high-level overview of Philips' business activities. However, it is not intended to be conclusive or comprehensive, and certain details may not be included. Energy numbers per region might not add up to total due to the rounding logic implemented.

At a glance: Full value chain activities in 2023

As a multinational corporation, Philips has a global supplier base and diverse distribution network. Below is snapshot of our full value chain emissions with a high-level overview of our critical suppliers and external warehouses and distribution centers owned and operated by our partners.

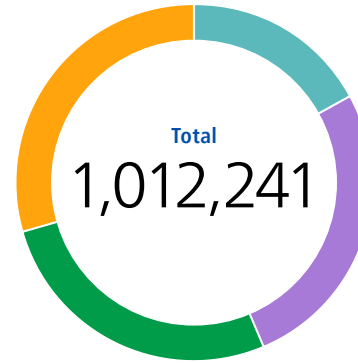
Facilities

- Europe Region
69
- North America
57
- Growth Region
68
- Greater China
31



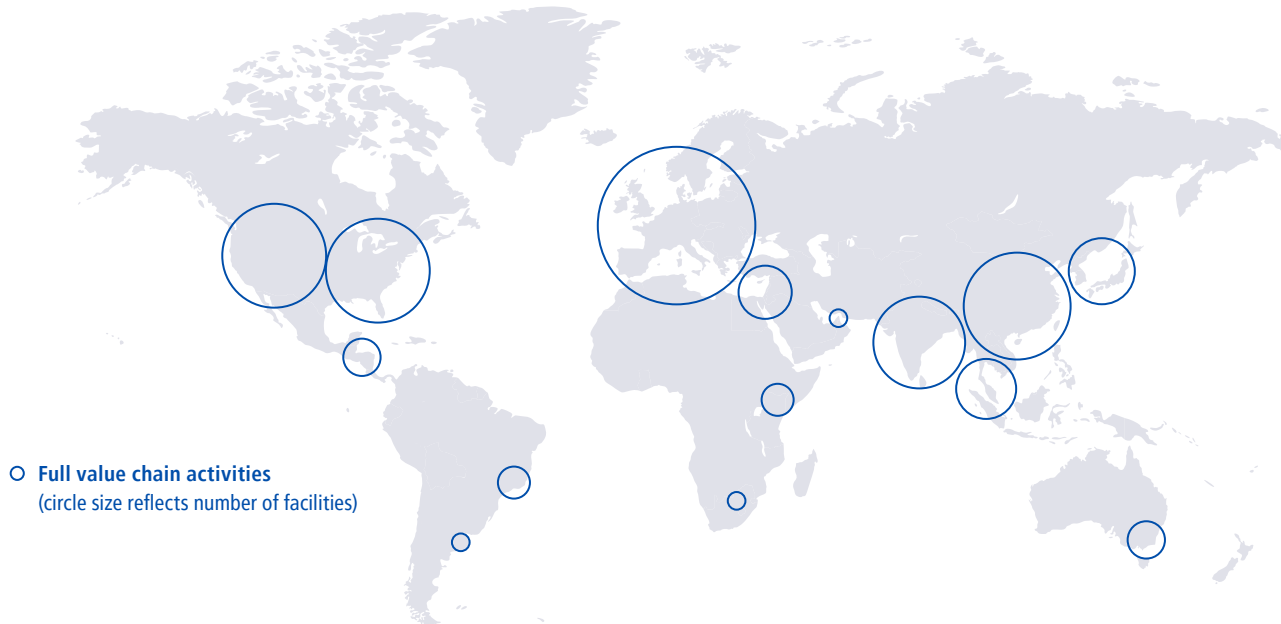
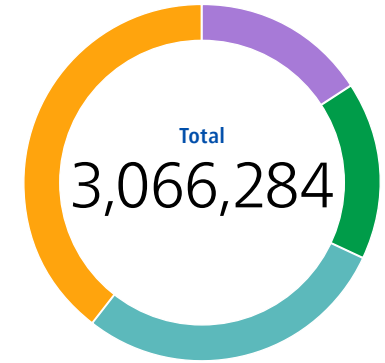
Carbon footprint (purchased goods) in in Tonnes CO₂e

- Europe Region
272,293
- North America
270,180
- Growth Region
298,760
- Greater China
171,008



Carbon footprint (use of sold products) in in Tonnes CO₂e

- Europe Region
486,171
- North America
471,703
- Growth Region
1,219,760
- Greater China
471,703



Disclaimer: This diagram provides a high-level overview of Philips' business activities. However, it is not intended to be conclusive or comprehensive, and certain details may not be included. Energy numbers per region might not add up to total due to the rounding logic implemented.

Governance

Climate Risk Management embeddedness

Climate-related risks and opportunities are the responsibility of the Executive Committee. Climate-related risks and opportunities are managed similarly to other risks outlined in Section 6, "Risk Management," of the Annual Report 2023.

Methodology

Risks are assessed at least annually. For more information on the Executive Committee's oversight of risk, please refer to Section 6.1 "Our approach to risk management", 6.2 "Risk factors", 6.3 "Strategic risks", 6.4 "Operational risks", 6.5 "Financial risks", and 6.6 "Compliance risks" of the Annual Report 2023.

The Executive Committee's approach toward assessing and managing climate-related risks and opportunities is driven by the Environmental, Social & Governance (ESG) commitments, which includes emission-reduction targets that have been assessed and approved by the Science Based Targets (SBT) initiative – thereby contributing to the decarbonization required to limit global warming to 1.5 °C [above pre-industry levels], in accordance with the Paris Agreement). Please refer to section 5.1 "Philips' ESG commitments" of the Annual Report 2023 for more details.

At Philips, Environmental, Social & Governance represent the three key dimensions shaping responsible and sustainable business practices and societal impact. These dimensions reflect a widely held view that companies embracing accountability and transparency will be more viable and valuable in the long term. Our ESG framework provides a detailed plan of action guiding the execution of the company's strategy to address climate-related challenges.

The Board of Management (BoM) oversees ESG matters as the highest governing body, convening quarterly to assess Philips' ESG strategy, commitments, programs, and policies. This includes monitoring progress and taking corrective action when needed. For additional information, please refer to Section 5.4.1, "Corporate Governance," in the Annual Report 2023.

The rapidly evolving field of climate risk analytics empowers the ESG Committee to decide on more quantitative and actionable pathways to enhance Philips' climate preparedness. To support the BoM and functional executives in assessing climate-related risks and opportunities, we collaborate with an internal multi-disciplinary team. This team provides comprehensive overviews of the risks and opportunities landscape, emphasizing climate-change related aspects and their assessment within the context of climate scenario analysis.

Physical Risks

The scenario

In alignment with the ESRS requirements, Philips' exposure to physical climate hazards was assessed using a high emission climate scenario (SSP5 – RCP8.5). This so called "Fossil fuel development" scenario assumes society will use a technocratic approach to tackling the grand challenge of climate change. The economy will continue its dependency on oil, coal and gas and a focus will be on increasing market efficiencies to support the increasing demand for resources. Overall consumption will correspondingly increase as global development progresses. Although inequalities are reduced across and within countries, the results are highly disruptive climate impacts due to frequent and intense extreme weather events. Chronic threats such as temperature increases, and sea-level rise also pose a significant challenge to communities around the globe. The results are high socio-economic challenges to mitigation and low socio-economic challenges to adaptation.

It is important to note that this scenario is not a prediction of the future but rather a plausible storyline to understand the given socio-economic circumstances that are anticipated to result in global warming of around 3.3°C – 5.7°C by the end of the century. From all five SSP scenarios only the SSP5 scenario will lead to emissions with approximate global effective radiative forcing of 8.5 W m⁻² in 2100. It is therefore not just a business-as-usual scenario but rather a worst-case scenario that we can only achieve by having a combination of high population growth and increased dependency on fossil fuels and material growth. Philips is committed to building climate-related resilience under extreme conditions. For more information on the boundaries, constraints, and confidence intervals of the scenario of interest please refer to chapter 4 of the [sixth Assessment report of the IPCC](#).

Under the previous mentioned conditions, we have assessed the following Physical climate risks across the short-, medium- and long-term¹:

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Physical events of interest

Physical event	Definition	Climate Change relevance
Heat Stress	Heat Stress describes the current or future meteorological threat by heat, derived from information about e.g. heat waves, annual maximum temperatures, tropical nights, etc.	With temperatures increasing so does the risk of a heat wave. This can affect our employees, buildings, machinery, and local infrastructure.
Drought Stress	Changes in the water balance that leads to a chronic lack in water (precipitation being below potential evapotranspiration)	Due to climate change we will not only experience increased temperatures but also changing precipitation patterns which can lead to drier weather conditions. This can impact our production processes and employee well-being.
Cold Stress	Cold stress describes the current or future meteorological threat by cold, derived from information about e.g. number of ice days, number of frost days, annual minimum temperatures, etc.	Climate change will not only impact maximum temperatures but also minimum temperatures. This can transform local ecosystems that are currently dependent on cold conditions. With tipping points being breached there could potentially be implications for our sites and the local infrastructure.
Precipitation Stress	Precipitation Stress describes the current or future meteorological threat by high precipitation, derived from information about e.g. single-day high precipitation, maximum daily precipitation, days above 35mm precipitation, etc.	Due to warmer oceans, air contains more moisture which can shift precipitation patterns. This can lead to flash floods and other water related damages.
Wildfire Risk	Fire Weather Stress describes meteorological fire conditions on the basis of fire danger modelling.	With an increase in the number of hot days and risk related to drought so does the risk of wildfires. This can lead to damages as well as business interruption
Flood Stress	Flood Stress describes an areas threat by extreme floods considering the application of flood protection. This can either include a 500, 100 or no return period.	With the intensification of extreme weather events such as extreme precipitation the threat of ravine flooding increases. This can pose a significant threat to our assets including machinery and equipment.
Storm Stress	Storm stress describes the current or future meteorological threat by storms derived from information about e.g. wind speeds, typhoon/cyclones/hurricane intensity, etc.	With increasingly warmer oceans, storms are able to pull in more water while they move over oceans which will lead to stronger winds and heavier rainfall when they hit land. This can pose a risk to all Philips properties.
Sea Level rise	Sea level rise refers to the long-term increase in the average level of the world's oceans. As this is a slow and gradual process this risk was assessed for the year 2100	As temperatures rise, glaciers and polar ice caps melt, contributing to the expansion of seawater and causing a rise in sea levels. This can ultimately pose a threat to our sites located near the coast.

For Philips-owned or leased sites, selection criteria included being a firmly planned asset with a remaining lifetime of more than 2 years. Regarding suppliers, a shortlist of unique suppliers was collaboratively created with Enterprise Risk Management. A hotspot analysis was then conducted for each location using the risk assessment tool from Munich Re². A more in-depth assessment specifically targeted our manufacturing sites, critical for Philips operations, as explored in the next section.

This process helped determine the historical exposure and impacts due to physical risks, along with potential impacts expected over the short-, medium-, and long-term.

For a comprehensive understanding of the hotspot analysis across these timeframes, please refer to the visuals on the next page.

¹ Definitions are based on Munich Re's Location Risk Intelligence Platform (<https://www.munichre.com/rmp/en/products/location-risk-intelligence.html>)

² Munich Re's Location Risk Intelligence Platform (<https://www.munichre.com/rmp/en/products/location-risk-intelligence.html>)

Philips' past and current climate risk exposure

As Philips, we presently confront minimal climate risk, characterized by inconsequential impacts resulting from physical climate-related events. This status is not anticipated to undergo significant alterations in the short term. Nevertheless, we are currently observing shifts in weather patterns and intensified conditions.

1 



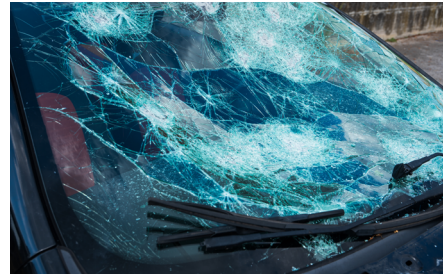
Ongoing water shortages increasing business continuity risk

2 



Health concerns due to air pollution fueled by wildfires in Canada in 2023

3 



Minimal property damage due to hail event in 2023

4 



Deterioration of working conditions due to intensifying heat waves

5 

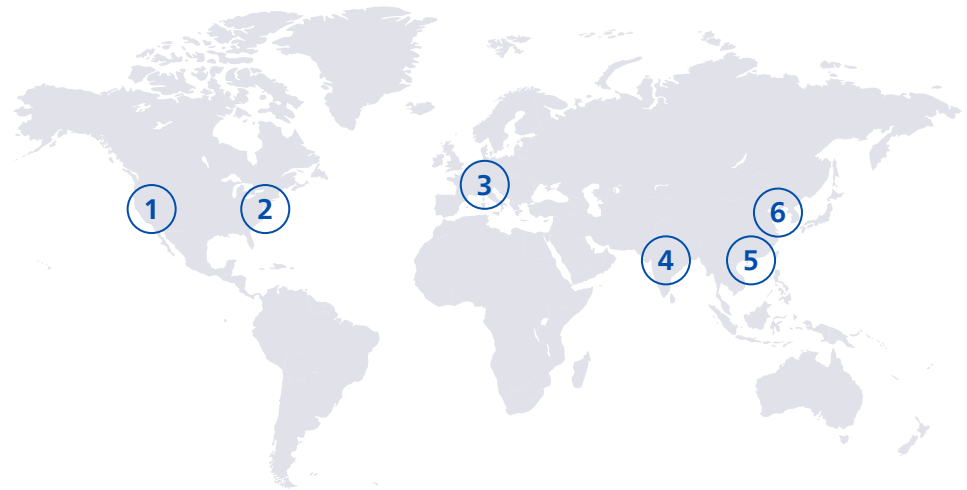


Property damage and business interruption due to Typhoon Hato in 2017

6 



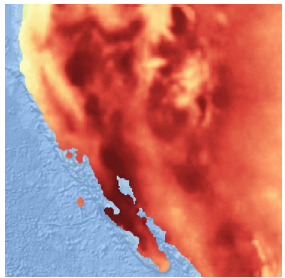
Property damage due to flooding in Shenyang



Philips' future climate risk exposure

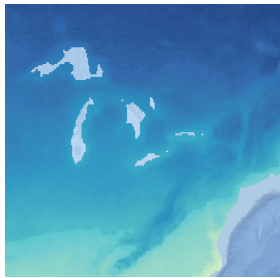
In the medium- and long-term it is expected that under the applied scenario Philips will face harsher environmental conditions that will increase our climate risk exposure. Due to our mature risk management approach and ideal location this will however likely not lead to material climate impacts.

1 



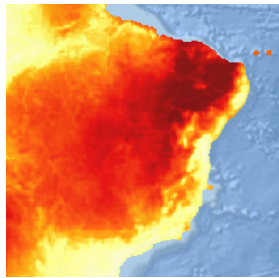
Increased drought duration with up to 6 months of drought per annum leading to business interruption risk

2 



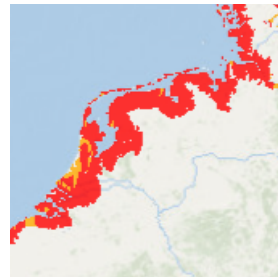
5 to 6 degrees Celsius mean minimum temperature increases leading to mild winters

3 



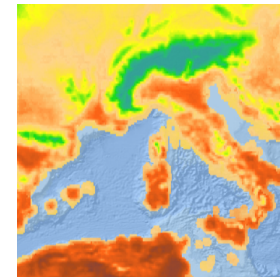
A doubling of the number of fire weather days increasing the risk of property damage

4 



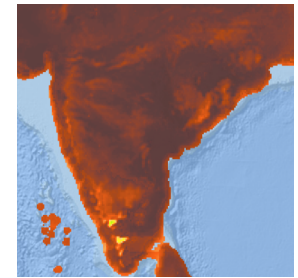
Sea level rise threatening Philips operations

5 



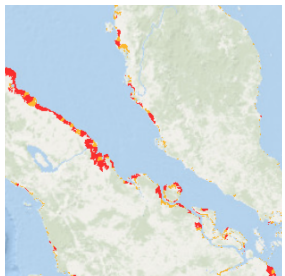
2 degrees Celsius increase in maximum daily temperature leading to risk of business interruption

6 



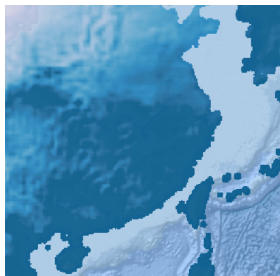
28% increase in the number of heat wave days for Pune

7 



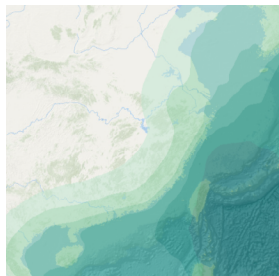
Sea level rise threatening the coastal line of all Indonesian islands

8 



An increase in the maximum daily precipitation of up to 11 mm leading to a surge in flood risk

9 



Increased severity of tropical cyclones due to increased inland movement



Philips manufacturing Facilities

Philips' physical risk screening includes 23 manufacturing sites and as mentioned previously involved a 2-step approach. First a hotspot analysis was conducted to determine the expected future likelihood of risks becoming material. Then as a second step this was enriched through site specific expertise using a focus group. This focus group, among others, included the sites business continuity manager, Environmental Health and Safety officer, Site manager, and Site controller. This helped us to understand the current magnitude and duration of the respective risks. Please note that this was only done on a qualitative basis to help us identify the key climate risks for Philips.

Chronic Physical Risks

According to the TCFD guidance chronic risks are defined as longer-term shifts in climate patterns that may cause sea level rise or chronic heat waves³. When exploring chronic risks, Philips took a systems approach acknowledging our sites dependency on the local ecosystems. Due to the nature of these risks, we do not expect any impact in the short- or medium-term.

Under the high global warming scenario, we anticipate mean daily maximum temperatures to increase by approximately 1.3°C – 2.8°C compared to the reference period in the long term. Specifically, our sites in the United States are expected to undergo a significant rise in chronic heat, with an average maximum temperature increase of 2.4°C. In contrast, our Dutch sites are projected to experience an average maximum temperature increase of 1.6°C, and our Chinese sites, 2°C. We are well-prepared for these temperature changes, having invested in adaptation machinery such as air conditioning, and diligently monitoring all applicable laws and regulations. In the face of severe threats, we have implemented internal measures, including heat working guidelines.

Similarly, daily average minimum temperatures are expected to rise by approximately 1.3°C – 6°C. Sites in colder environments will witness sharp increases in minimum temperatures, while those near the equator will experience only slight increases. Consequently, our sites in the northern United States are anticipated to undergo long-term minimum temperature increases of 5°C, leading to milder winters and reducing the risk of prolonged disruptions due to ice and snow.

In terms of annual precipitation patterns, we anticipate a reduction at 6 sites and an increase at 17 sites. Notably, three sites—Coyol (Costa Rica), Pune (India), and Latham (United States)—stand out with significant changes in yearly precipitation levels. While Pune and Latham are expected to experience increased precipitation, Coyol will face an estimated reduction of 188 mm annually.

This impact is limited when considering that Coyol currently receives the highest levels of precipitation among all locations. In contrast, Haifa (Israel) is estimated to experience only a slight reduction of approximately 39 mm annually, corresponding to a relative reduction of 7%, with the impact on Haifa anticipated to be more significant due to its current low levels of precipitation.

Counterintuitively, despite a general increase in precipitation, the average annual drought duration is not expected to decrease. With the exception of Pune, all our sites are projected to experience prolonged droughts, leading to more erratic rainfall patterns. Colorado Springs (United States) and Haifa stand out, expected to face drought conditions for over 6 months annually in the long term—an increase of around 3 months compared to the reference period. Varginha (Brazil) and Coyol also highlight extended drought durations of around 4.5 months per year, representing a 50% change for Varginha and over 100% change for Coyol. While this poses a societal risk rather than a Philips-specific threat, as a responsible company, we have set targets to reduce our 2025 water withdrawal by 5% compared to our 2020 baseline and have been recognized by the international non-profit organization CDP, making it to the CDP "A-list" for water in 2023.

Regarding sea level rise, none of our manufacturing sites are considered at risk at the end of the century according to the risk assessment tool. However, certain locations, including our Drachten site (Netherlands), Hamburg site (Germany), and Batam site (Indonesia), are in proximity to extreme risk areas. Sea level rise poses a significant risk for us and the communities in which we operate.

In conclusion, we recognize that these chronic shifts present a significant challenge to the world and our operations. We are committed to doing our utmost to adapt to these changing environmental conditions. Operational risks, including climate-related risks, are managed by our sites as part of the Business Continuity Management program. Annually, a wide array of risks are screened to determine their materiality for Philips and the site in the short term. If necessary, actions and key stakeholders are identified. Moving forward, we will translate the long-term environmental changes into potential site-specific implications to determine necessary key actions.

Acute Physical Risks

According to the TCFD guidance acute risks refer to those that are event-driven, including increased severity of extreme weather events such as cyclones hurricanes or floods⁴. In contrast to chronic risks these can lead to immediate damage, business interruption and losses and are already under scrutiny through Philips' Risk Engineering Manual (PREM) process. Risk assessments are made by our Insurance Risk Management Department, jointly with our insurers. Where possible, risks are mitigated and otherwise monitored. Our Business Continuity Management team is aligned to step up in case of disruptions in our supply chain.

³ Recommendations of the Task Force on Climate-related Financial Disclosures ([FINAL-2017-TCFD-Report.pdf \(bbhub.io\)](#))

⁴ *ibid*

With regard to fluvial flooding, three sites are considered at risk in the short term: Zhuhai, Suzhou, and Shenzhen (China). In response, the decision was made to raise/elevate the factory floor of the Suzhou and Zhuhai sites and to install flood gates at the Shenzhen site to mitigate the risk. In Zhuhai, this entailed transitioning from our old site to a new elevated facility during the period 2021–2023. Due to our swift action, any potential damage was prevented. Concerning the medium- and long-term, no other sites are expected to face this risk.

Regarding the risk of pluvial flooding, multiple sites are currently considered at risk. However, we have not experienced any major losses due to pluvial flooding in recent history, making us well-equipped to handle this risk in the short term. In Klagenfurt, for example, we have installed multiple water pumps to efficiently redirect surplus groundwater away from our premises, preemptively mitigating the potential hazard of flooding. In other locations, we benefit from our strategic topographic position. However, with climate change, we anticipate that all sites will face an intensification of maximum precipitation in the medium- and long-term. This could pose a risk for some of our sites, a forecast exacerbated by the increased population concentration in urban areas, thus increasing societal vulnerability. We will, therefore, continue to monitor extreme precipitation events and advocate for community-wide defense mechanisms to build collective resilience.

Our storm assessment is limited to typhoons, hurricanes, and cyclones. Given that these storms require warm oceans to form, only some of our coastal sites are at risk, including the Shenzhen and Zhuhai sites. Both locations, situated in the Guangdong province, are known for their typhoon seasons and are well-equipped to handle such events. As a control measure, each site follows a strict storm guideline protocol with clear roles and responsibilities. The province also has an effective warning system known as '31631.' Each number indicates the time between warnings before a typhoon hits land: three days in advance, a weather forecast identifies the threat; one day before, the government identifies affected areas and narrows down the timeframe; six hours prior, high-risk areas are identified; three hours in advance, those areas are refined; and one hour before, a final warning names the specific streets likely to be affected. Similar to the fluvial flood risk assessment, no medium- or long-term change in our exposure level is expected according to the NATHAN tool. However, we anticipate these tropical storms to increasingly move inland

With increasing temperatures and prolonged droughts, the risk of wildfires also rises—a threat that already has devastating impacts worldwide (e.g., Australia, Canada, etc.). Within our operational landscape, three sites face a short-term threat of wildfires: Colorado Springs, Ontario (United States), and Haifa, each confronted with extremely dry conditions. To mitigate this risk, each building is 100% sprinkler protected, and annual risk assessments are conducted to identify necessary mitigation actions. Public fire brigades are strategically located in proximity to the sites, with the furthest one being 5.5 km away, conducting regular visits for comprehensive risk management. In the medium- and long-term, we anticipate Varginha and Bothell (United States) to face increased wildfire risks, with both experiencing more than a doubling of the fire season length. This risk is closely monitored through our annual assessments, and if necessary, investments, such as a sprinkler system for

Varginha, will be made. A more material risk for Philips is the exposure of our employees to indirect air pollution caused by distant wildfires. For example, the 2023 wildfires in Canada raised air pollution concerns at our sites in Murrysville, New Kensington, Reedsville, and Latham (United States). Partial ventilation had to be shut down to mitigate this risk. Hence, it is essential for us to monitor global trends and take proactive measures in locations not in direct proximity to our operations.

Lastly, in terms of heat wave days, our Pune site currently stands as the only location considered at very high risk, experiencing around 170 heat wave days per year. This is expected to substantially increase over the medium- and long-term, adding approximately 100 additional heat wave days. To address this risk, we have implemented site-specific heat work protocols, ensuring strict adherence to all governmental rules and regulations. Additionally, we provide safe drinking water to our employees to prevent dehydration, and if necessary, production is halted to mitigate health concerns.

Overall, at the site/asset level, Philips maintains a low-risk appetite, demonstrating our commitment to monitoring exposure to acute risks and taking swift action when necessary. We continually enhance our adaptive capacity on a plant level and advocate for global climate change mitigation. Recognizing that climate resilience can only be achieved through global collaboration with our partners and communities, we remain dedicated to this collective effort.

Large offices and Research Facilities

To broaden our physical risk assessment, we extended the scope to encompass large offices and research facilities. This preliminary evaluation, centered on a hotspot analysis to pinpoint key sites at risk, will be succeeded by a more comprehensive examination to gain a deeper understanding of site-specific circumstances. In total, we assessed 37 sites across 16 countries, with a notable concentration in the Netherlands, the United States, India, and China, reflecting the predominant location of our manufacturing sites in these regions.

Large offices and research facilities are generally of strategic importance, serving as enablers for our manufacturing operations. Situated in proximity to our manufacturing activities, these facilities facilitate cross synergies. It is worth noting that, thanks to our remote work setting, most activities can also be conducted virtually, thereby reducing our business continuity risk.

In terms of chronic physical risks, average maximum temperatures are expected to increase by around 2.3°C. Particularly, our sites in the south of Europe, such as Madrid (Spain), are anticipated to face extreme spikes in temperatures, with long-term increases of around 3°C. This will result in higher, though not substantial, cooling costs. Regarding drought, two sites are expected to be at an elevated risk in the long term: our San Diego (United States) and Madrid offices. This will also impact the length of the fire season. As both sites are not water-intensive, this is not expected to have a direct impact on our operations. Lastly, two sites are at high risk of sea level rise. Collaborating with Real Estate and Enterprise Risk Management, we will explore how to address these findings in the short and medium term.

In the acute risk assessment, we focused on tropical cyclones, river flooding, precipitation stress, and wildfire stress. While some sites face risks of river flooding and tropical cyclones, these are known risks expected to remain stable over the medium and long term. We will continue to monitor our risk exposure to identify any changes in a timely manner. Regarding precipitation, one site, Seoul, is likely to experience a sharp increase in the maximum 5-day high precipitation, rising to 220 mm from the current 200 mm. However, we are confident that the city is well-prepared for such an increase, considering its sophisticated infrastructure.

Warehouse and Service Facilities

In alignment with the assessment conducted for our large office and research facilities, we have also performed a hotspot analysis for our warehouse and service facilities, totaling 4 sites. These sites are crucial for Philips as a customer-centric company, ensuring the timely delivery of our promises. Across both acute and chronic risk assessments, we have identified only limited material risks. Notably, our warehouse in Saitama (Japan) faces high precipitation risk exposure. However, this risk is currently common in the region and effectively managed by various societal actors. Therefore, we do not anticipate a significant change in our risk exposure in the medium- or long-term.

Value Chain Activities

Climate change and the corresponding extreme weather events can not only impact our own sites but also our suppliers and external warehouses. Shortages or delays could materially harm Philips' business and lead to fluctuations in prices and demand. Most of Philips' activities are conducted outside of the Netherlands, and international operations bring challenges. We have therefore started screening our suppliers and external warehouses using the risk assessment tool NATHAN. Results show that although our overall risk exposure is limited, certain sites are in high-risk areas.

In relation to our suppliers, the [Supplier Sustainability Performance program](#) is designed to assist them in enhancing their environmental performance and fostering awareness of the necessity for climate adaptation actions. We support our suppliers through training and sharing best practices in a systemic manner to enhance total value chain transparency. It is important to note that the risk assessment might be slightly misleading, as the locations are determined based on the headquarters of the respective supplier, which may deviate from the actual factory location.

The management of our external warehouses falls under the purview of our Integrated Supply Chain function. They are responsible for collaborating with our partners to optimize their capacity for adaptation.

Transition Risk and Opportunities

The scenario

In accordance with ESRS requirements, we evaluated Philips' exposure to climate-related transition events using three scenarios aligned with the Paris Agreement's goal of limiting climate change to 1.5°C with limited overshoot: SSP1-RCP1.9, SSP1-2.6 and IEA Net Zero Emissions (NZE) 2050. The SSP1-RCP1.9 and SSP1-RCP2.6, also known as 'Taking the Green Road,' envision immediate, rapid, and large-scale reductions in greenhouse gas emissions. This would require an extraordinary global effort, with total global CO₂ emissions projected to decrease by approximately 25% by 2030 and around 50% by 2035. In this scenario, nations act immediately and aggressively to reduce their fossil fuel use, limiting global warming to 1.5°C over preindustrial temperatures with only limited overshoot. While this level of warming may increase the frequency and severity of extreme weather, it helps to avoid more severe climate impacts. Consumption is oriented toward low material growth and lower resource and energy intensity, with effective international cooperation involving stringent environmental laws.

This vision is echoed by the IEA NZ 2050 scenario, emphasizing the imperative for a swift and profound transformation of the global energy sector. This includes a rapid transition away from fossil fuels (coal, oil, and natural gas) towards renewable energy sources such as solar, wind, hydroelectric, and nuclear power. Energy efficiency improvements also play a crucial role.

In line with the physical risk section and its corresponding pessimistic climate scenario, the scenarios used for the transition section, SSP1-RCP1.9, SSP1-RCP2.6, and IEA Net Zero Emissions (NZE) 2050, provide an optimistic yet challenging socio-economic overview of the circumstances Philips might encounter in its transition to a lower carbon economy and in achieving its aligned SBTi targets. For more detailed information on these scenarios, please consult Chapter 4 of the [Sixth Assessment Report of the IPCC](#) or the [Net Zero by 2050 roadmap published by the IEA](#).

Under the above-mentioned conditions, we have assessed the transition risks across the short-, medium- and long-term. Please note that the transition risk categories correspond to the ones proposed by the ESRS. As a result of our transition risk assessment, we provide a qualitative pre-assessment in the following table and text, illustrating Philips' potential risks within a swift decarbonization pathway. For clarity, we differentiate between Upstream, Operations, and Downstream. These risks have been evaluated through interviews conducted with internal subject matter experts.

Philips Climate related transition events

Transition domain	Event	Upstream	Operations	Downstream
Technology	Substitution towards lower emissions alternatives	Challenges in the substitution of traditional raw materials or components with environmentally sustainable alternatives	Obstacles in transitioning manufacturing processes, like the complete phase-out of fossil fuels or addressing grid congestion	Technological limitations in balancing environmental responsibility with the need to maintain product quality and performance
Market	Market signals	Availability, cost, and sustainability of raw materials and components	Internal processes and costs associated with manufacturing and producing healthcare and personal health products	Shifting demand for sustainable healthcare and personal health solutions may influence market dynamics
Reputation	Increased stakeholder concern and pressure	Perceived shortcomings in commitment to sustainable sourcing and production if upstream entities are not aligned	Visible deficiencies in climate-friendly manufacturing methods and energy sources	Failure in delivering expected climate-friendly solutions may hinder the establishment of positive relationships with external stakeholders
Policy and Legal	Increased pricing of GHG emissions	Obstacles in adapting upstream processes to comply with regulatory requirements, which could affect the sourcing of materials and substances	Higher operational costs driven by increased prices for energy, manufacturing processes, and other activities associated to GHG emissions	Competitiveness in the market due to increased product prices and reduced purchasing power of customers
	Enhanced emissions-reporting obligations	Challenges in ensuring that upstream partners adhere to the enhanced emissions-reporting obligations	Continuously shifting guidelines and standards increasing potential of noncompliance	Exposure to litigation due to product sustainability claims
	Mandates on and regulation of existing products and services	Obstacles in adapting upstream processes to comply with regulatory requirements, which could affect the sourcing of materials and substances	Adjustments in manufacturing, quality control, and operational protocols to align with regulatory standards	Need to adapt product offerings to comply with minimum regulatory requirements

Technology

Philips faces technological climate transition events involving risks and opportunities arising from the convergence of advancing technologies and the worldwide move towards sustainability. In the upstream domain, the adoption of sustainable practices and green technologies has the potential to disrupt the supply chain for raw materials and components. The challenges may include identifying suitable alternatives with lower carbon footprints, ensuring these substitutes meet the necessary quality and safety standards, and addressing potential cost implications associated with the adoption of new technologies. However, successfully managing this transition risk presents an opportunity for us, with our ambitious [circular economy program](#), which aims to decouple economic growth from the use of natural resources and ecosystems. In 2025, we aim to generate 25% of our revenue from circular products, services and solutions. With increased circular practices including reusing components and parts of our products at their end of life we are able to reduce our supply chain risk exposure.

Within our own operations, we face technological climate risks that impact our daily processes. The ongoing transition to a low-carbon economy requires adaptations in manufacturing practices and energy consumption. Despite achieving carbon neutrality within our operations, Philips has yet to fully eliminate reliance on fossil fuels. Potential grid congestion poses a challenge in this regard as

more companies aim for electrification. Additionally, sustainable fuels are faced with the concern of limited scalability. A fear that, for example, has already led to soaring Sustainable Aviation Fuel (SAF) prices. Monitoring and periodic assessments are crucial to address scalability concerns and explore alternative solutions.

Downstream, Philips is committed to innovation while acknowledging existing technological constraints. We adapt our product offerings to meet evolving market demands, changing consumer preferences, and upcoming regulations focused on decarbonizing the healthcare sector. This includes providing a diverse range of energy-efficient solutions through the incorporation of Ecodesign principles in both our Personal Health and Health System divisions. Introduced in 1994, EcoDesign aims to holistically reduce the total environmental impact throughout the product development process. Given that approximately 80% of a product’s total environmental impact is determined during the design phase, EcoDesign plays a crucial role in supporting our customers, hospitals, and partners in their decarbonization journey, presenting a significant opportunity for the company. Green Products within our portfolio demonstrate environmental improvements in areas such as energy efficiency, packaging, hazardous substances, weight, circularity, and lifetime reliability.

Design departments receive training on EcoDesign to drive continuous developments towards more sustainable products. Over the past five years, the sales growth of our Green Product portfolio has surpassed the overall sales growth of Philips

Market

Market transition events for Philips involve changes in industry dynamics that impact on our positioning and competitiveness. Upstream, these risks may manifest as higher prices for raw materials and components, potentially impacting the company's cost structure and overall supply chain resilience. However, Philips is active in more than 100 countries, and we believe that this global footprint allows us to better deal with adverse local market development risks. In addition, we also optimize our integrated supply chain organization, supplier base, and global manufacturing footprint to enable agile responses to shift in demand and supply globally.

Operational market risks for Philips are tied to our vision and strategy and correspondingly to our internal standard way of working. The company may encounter challenges in fostering agility and efficient processes in a dynamic and uncertain market setting. At worst this could lead to component and material shortages requiring increased safety stocks and promoting the usage of air freight. This would be in direct conflict with our sustainability commitments that require a transition from air to ocean. To ensure compliance with environmental commitments, all businesses and functions have set KPIs, to manage and steer them in the right direction. Group Sustainability also engages with each business periodically to ensure sustainability is embedded in the strategic outlook and a topic of discussion.

According to research from the Potsdam Institute for Climate Impact Research, healthcare systems globally contribute over 4% to total CO₂e emissions, rising to approximately 10% in most industrialized nations, surpassing emissions from both the aviation and shipping sectors⁵. Downstream, there is increasing pressure on hospitals to adopt new initiatives for decarbonization. Philips, recognized as a health technology company driving systemic change towards more sustainable and equitable patient care, sees this trend as a significant opportunity. As case studies, in 2023, we established strategic partnerships with the [Champalimaud Foundation](#) and [Vanderbilt University Medical Center](#), supporting them in achieving sustainability targets through a suite of health technologies and innovations. Recent joint research conducted by Philips and Vanderbilt reveals how the decarbonization of healthcare not only aligns with environmental goals but also [contributes to cost reduction](#).

Reputation

Reputational transition events for Philips involve potential negative impacts on the company's image and being under scrutiny from stakeholders, encompassing customers, communities, and society at large, particularly regarding ESG-related matters. Upstream reputational risks are associated with the company's ties to suppliers, partners, and the broader supply chain. Any misalignment with environmentally responsible practices among upstream entities could lead to reputational challenges

for Philips as without decarbonizing our supply chain it will be near impossible to achieve our emission reducing targets. To mitigate this, we have established clear [policies](#), including a [Supplier Sustainability Declaration](#), [Regulated Substances List](#), and [Environmental Policy](#), to ensure our suppliers meet required sustainability standards. Our commitment to transparency and engagement with a diverse range of stakeholders allows us to identify issues and opportunities, gaining insights that inform the refinement of [supplier sustainability strategy](#). We then translate this strategy into dedicated programs aimed at helping our suppliers enhance their social and environmental performance.

Operational reputational risks center around the company's internal processes and practices. Failure to adopt and enforce pollution prevention and control measures within our own operations can negatively impact the brand image. This includes considerations such as waste management, energy efficiency, and general sustainability in manufacturing practices. We address these through our Sustainable Operations program, which aims to improve the environmental performance of our manufacturing facilities. This program, among other things, addresses energy management, water usage, waste recycling, and chemical substance usage. For more information on our performance, please refer to Section 5.2, "Environmental Performance", of the Annual Report 2023.

Downstream reputational risks involve how Philips is perceived by end-users, customers, and the communities we serve. Shifting societal expectations around environmental responsibility may pose challenges if our products are not perceived as contributing to pollution prevention and control efforts, impacting market share, brand perception, and overall competitiveness. To address this, we have elevated our 2025 ESG commitments and adopted a comprehensive framework, regularly monitoring progress and assessing risks aligned with our strategy. Externally, our environmental leadership is recognized, with Philips being the [first health technology company](#) to have its entire value-chain CO₂e emissions reduction targets approved by the Science Based Targets initiative (SBTi). In 2023, we received, for the 11th consecutive year, the prestigious 'A List' award from the global environmental impact non-profit CDP, acknowledging our efforts in emissions reduction, climate risk mitigation, and contributions to the low-carbon economy.

Policy and Legal

Policy and legal risks for Philips involve the potential impact of evolving regulations and legal frameworks related to environmental and sustainability practices, which may necessitate significant adjustments to operations and compliance procedures. In this report, we have elaborated on three potential transition events.

Increased pricing of GHG emissions

In the given scenario, it is expected that the prices for Greenhouse Gas (GHG) emissions will rapidly rise to incentivize the adoption of low-carbon technologies. While we endorse this general policy direction, it comes with associated risks. From an upstream perspective, we expect our suppliers to pass on the additional cost of carbon downstream, resulting in increased procurement costs and reduced profit margins. As response, we actively monitor the life cycle emissions of our purchased

goods and steer our businesses towards sustainable product development through our EcoDesign and Circular Economy program.

Similarly, the pricing of GHG emissions in our own operations would lead to increased costs. However, considering that we are already carbon neutral within our own operations and well underway to achieving our scope 1 and scope 2 target of reducing emissions by 90% by 2040 compared to our baseline 2015, this presents an opportunity to differentiate ourselves from competitors. Through actively phasing out fossil fuels at our sites and procuring 100% renewable electricity, we can minimize the costs related to this.

Downstream, the pricing of GHG emissions may reduce the purchasing power of our customers, potentially impacting the total sales volume. Therefore, it is crucial for us to reduce the life cycle emissions of our products during use. By designing energy efficient products, we can support our customers in their decarbonization journey, helping them to mitigate the risk of increased GHG pricing.

For a preliminary estimation of our full value chain costs related to the pricing of GHG emissions over the short-, medium-, and long-term, please refer to the table **Pricing of GHG emissions**. Please note that, regardless of the time horizon, we are utilizing our 2023 full value chain emissions as proxy, assuming no actions will be taken – thus, thereby applying a worst-case scenario. The prices are selected leveraging the SSP1-RCP1.9 scenario⁵.

Philips Group
Pricing of GHG emissions

	Short-term ⁶	Medium-term	Long-term
Carbon Price (EUR/tonne CO₂e)	EUR 0.00	EUR 282.41	EUR 605.46
Full Value chain Emissions (tonnes CO₂e)	4,995,174 tonnes CO ₂ e	4,995,174 tonnes CO ₂ e	4,995,174 tonnes CO ₂ e
Cost of GHG emissions for Philips full value chain (million EUR)	EUR 0	EUR 1,411	EUR 3,024

⁵ Riahi et al. (2017). The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview, Global Environmental Change – processed by Our World in Data

⁶ Due to no values being available for 2025 we have used the 2020 prices as proxy for the short-term

Enhanced emissions-reporting obligations

Upstream risks entail challenges related to reporting emissions associated with the supply chain, encompassing raw material extraction, manufacturing of components, and transportation of goods. Compliance with enhanced reporting obligations upstream may necessitate heightened transparency and collaboration with suppliers. As part of Philips’ Sustainability Program, we actively encourage our suppliers to disclose emissions, embed board responsibility on climate change, and engage in reduction activities. Our goal is to have **at least 50%** of our suppliers (based on spend) commit to science-based targets for CO₂e emission reduction by 2025, making proper in-house emissions reporting essential. Since 2011, we have partnered with **CDP Supply Chain**, inviting many of our largest suppliers, including first-tier manufacturing and transportation-related suppliers, to disclose their environmental performance and carbon intensity.

Operational risks pertain to emissions reporting within the company’s own processes and facilities. Compliance with more stringent reporting obligations may necessitate the implementation of advanced monitoring systems, data collection methodologies, and enhanced record-keeping practices to accurately measure and report. In various jurisdictions, ESG disclosure requirements are currently being drafted. In Europe, the Corporate Sustainability Reporting Directive and European Sustainability Reporting Standards have been approved. Nonetheless, Philips has a strong track record in ESG disclosures, often ahead of legislation, and has been closely involved in the development of ESRS. The company already has reasonable assurance on most of its ESG disclosures and runs a project to meet the increased requirements of ESRS.

Downstream risks focus on emissions reporting associated with product usage, end-of-life disposal, and the broader impact of the company’s products on the environment. At Philips, we view transparency as an opportunity and a **guiding principle in an evolving ESG landscape**. Leveraging our extensive experience in environmental and social impact measurement and providing transparency on governance, Philips actively collaborates with organizations such as the International Financial Reporting Standards (IFRS) Foundation, the World Economic Forum (WEF), and the European Union (EU). Our aim is to play an active role in driving the evolution towards a standardized ESG reporting framework.

Mandates on and regulation of existing products and services

Upstream risks relate to the impact of regulatory changes on the supply chain, including the sourcing of raw materials and components. Compliance with new mandates may require adjustments in supplier relationships, materials sourcing, and overall supply chain management to meet evolving regulatory standards. Therefore, we define processes such as the Philips sustainable packaging process, which is compliant with all applicable packaging standards, including but not limited to Extended Producer Responsibility (EPR) for Packaging, Product Packaging Waste Regulation (PPWR), and ESRS.

Operational risks center around the implications of regulatory mandates on the manufacturing processes and facilities. Compliance may necessitate modifications to production methods, equipment, and quality control measures to align with updated regulations. This includes ensuring that existing products meet new environmental and sustainability standards. To address this risk, Philips continuously aims to enhance its Green Products portfolio, designed to reduce the environmental impact of products, focusing on four key areas: energy efficiency, respectful packaging, circular design, and hazardous substances. With this initiative, our goal is not only to meet the minimum requirements but also to design all new product introductions in line with our EcoDesign requirements by 2025. Additionally, we closely monitor and incentivize compliance with new regulations, such as the EU Battery Regulation and Right to Repair.

Downstream risks involve the regulatory impact on the products and services offered to end-users. Compliance with mandates and regulations may necessitate product modifications, updates, or even discontinuation of certain offerings. For example, in our effort to address such risks, we performed an assessment of our Scope 3 category, 'Use of Sold Products,' estimating the lifetime energy consumption and applying the Life-Cycle Assessment (LCA) methodology on a country-by-country basis. In 2023, we determined that the locked in emissions from the use of sold products amounted to 3,066 kilotonnes CO₂-e, approximately 7.3 times more than our entire operational carbon footprint. Through energy efficiency initiatives under our EcoDesign program and collaboration with our customers, we aim to magnify our impact and proactively address new mandates and regulations, in this specific example those related to energy efficiency.

Philips Climate Pathway

Philips has established long-term CO₂ emission targets approved by the Science Based Targets initiative (SBTi). This approval confirms that Philips' targets across our value chain align with the goal of limiting global warming to below 1.5 °C.

By collaborating with our customers and suppliers, we can reduce our shared carbon footprint, creating a sustainable and more resilient healthcare industry that adds value for our customers, partners, and society as a whole. We aim to deliver on this target by collaborating with our customers and suppliers to magnify our impact. We will continue to reduce our collective reliance on fossil fuels by using renewable and energy-efficient alternatives. To achieve this, we will act on the following key strategic pillars:

- Minimizing our operational carbon footprint as part of our climate change mitigation journey.
- Phasing out fossil fuels, investing in energy efficiency measures, and sourcing renewable energy as part of our climate change mitigation journey.
- Building climate resilience as part of our climate change adaptation journey.
- Decarbonizing our value chain both upstream and downstream as part of our climate change mitigation journey. This includes increasing energy efficiency and reducing the material footprint of our product base.

As part of our Climate Risk Management Program, in the coming year, we will further deep dive into Philips' critical physical and transition risks, focusing on quantifying the impacts of each risk. We will also continue to advocate internally as well as externally for the pressing need for change and strengthen our collaboration with suppliers and customers to build a resilient, future-proof business model based on the principles of 'use less, use longer, and use again'.

