# ENVIRONMENTAL STEWARDSHIP

We have an unwavering commitment to addressing climate change and other environmental impacts through strategic actions.

We are making significant investments in adopting renewable energy, use of biomass fuel, energy efficiency measures, water conservation and waste management.



# Environment

# **Protect. Restore. Thrive**

#### At the heart of our corporate strategy lies a steadfast commitment to environmental sustainability, which we prioritise as a strategic imperative.

We actively pursue focused initiatives to minimise the environmental impact of our operations, acknowledging our responsibility to mitigate any adverse consequences.

We are committed to the responsible stewardship of natural resources and leverage our influence throughout the business value chain to drive progress toward a sustainable future.

#### Aligned with UN SDGs



# Target 6.3

Improve water recovery by minimising release of untreated wastewater through recycling and reuse. Additionally, 16 of our manufacturing sites have achieved zero liquid discharge status.

# Target 7.2

Renewable energy contributes 38% to the overall energy mix.

# Target 13.2

We are a signatory to the India CEO Forum on Climate Change to promote collaboration between the Government of India and the private sector. We integrate climate change initiatives into our policies and strategies.

# Target 15.5

Biodiversity risk assessment conducted at 5 manufacturing locations.



#### **Environmental Performance FY24**

To minimise our environmental footprint and create a positive impact, we have set ambitious goals. By employing efficient technologies, investing in renewable energy, and adopting industry best practices in waste, water, and carbon emissions management we aim to achieve these targets within the timelines envisaged.



#### **Energy Efficiency and Carbon Emissions**<sup>45</sup>

#### Targets

Reduction of 35% in absolute carbon emissions (Scope 1 and Scope 2) by 2030 (baseline year of 2020)

#### Highlights

**1,520,492 GJ** total energy sourced from Renewable Sources in FY24

Replacement of fossil fuel with biomass, **567,363 GJ** of energy sourced from biomass ISO 50001:2018 Certified six sites

#### Achievements

#### 18.23%

Reduction in absolute carbon emissions (Scope 1 and Scope 2) compared to baseline year 2020

#### 32%

Reduction in energy intensity compared to baseline year 2020

42%

Reduction in GHG intensity (Scope 1 and Scope 2) compared to baseline year 2020 38%

Energy sourced from renewable sources

#### Water Stewardship

#### **Targets**

Reduction of 10% in water consumption by 2025 (baseline year of 2020)

#### Highlights

Continued focus on **4R's - Reduce**, **Reuse**, **Recycle**, **and Recharge** for water conservation **Reduced** dependency on groundwater by using alternate sources

#### Achievements

#### 20.96%

Reduction in water consumption compared to baseline year 2020

44%

Reduction in water intensity compared to baseline year 2020

## Environment



Waste Management

#### Targets

Co-processing of 30% hazardous waste by 2025

#### Highlights

#### 50%

Hazardous waste diverted from disposal, by using recycling and other recovery options

#### **95%**

Non-hazardous waste diverted from disposal

#### Achievements

#### 20.68%

Hazardous waste co-processed

#### **Environmental Governance Framework**

Our environmental governance framework consists of a comprehensive Environment, Health, and Safety (EHS) Policy, supported by a structured EHS Management System, and Energy Management System. These robust frameworks enable us to achieve our goals of reducing carbon emissions, water consumption, and waste generation.

Our robust EHS governance framework evaluates our environmental initiatives and monitors EHS performance against set targets. We conduct regular internal and external audits and inspections to ensure compliance with EHS standards and regulations. Additionally, we have established a comprehensive emergency response plan at all sites for prompt and effective action in case of an accident or EHS incident. Our EHS Management System is aligned with the ISO 14001:2015 framework. During FY24, 18 sites have been certified with ISO 14001: 2015, 7 sites have been third-party certified and all our sites have been internally certified for their EHS management systems. Six of our manufacturing facilities have also been ISO 50001:2018 certified.

We are committed to strictly complying with all relevant local, state, and national regulatory requirements, prioritising the identification and reduction of potential or actual risks from non-compliance. In FY24, there were zero instances of environmental non-compliance<sup>46</sup>.

Our employees play a crucial role in achieving our environmental goals. To support this, we have established various engagement forums to raise awareness and promote sustainable practices. These platforms help employees identify and address risks, assess and reduce environmental impact, and advocate workplace safety. Additionally, we also conduct periodic EHS training programmes for our employees to enhance responsible and environmentally conscious behaviours.

Aligned with our Enterprise Risk Management (ERM) framework's strategic approach, we recognise that environmental impact and climate change both pose risks as well as opportunities for our operations. We have integrated various mitigation strategies and environmental enhancements across our manufacturing facilities.

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#### **EHS Governance Framework**



#### **Our Climate-smart Vision**

We are committed to aligning with the India's Nationally Determined Contributions (NDCs) targets. Our climate change strategy emphasises energy efficiency, greenhouse gas emission management, waste, and water management, R&D for sustainable products and processes, and optimising resource use through digitalisation.

We aim to reduce our Scope 1 and Scope 2 carbon emissions by 35% by 2030, considering 2020 as our baseline, through energy efficiency

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and clean energy investments. Additionally, we are committed to achieving Net Zero emissions by 2050.

In line with our commitment to integrate climate resilience across our operations, we recognise and address physical and transition climate risks per the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. We will be developing targeted mitigation strategies to enhance resilience against various climate risks.

# 35%

Reduction target in Scope 1 and Scope 2 carbon emissions by 2030 compared to baseline of 2020

Net Zero Emissions by 2050

# Energy Efficiency Monitor. Minimise. Decarbonise.

At Sun Pharma, we are committed to improving our energy efficiency by ensuring energy conservation across our operations.

Recognising that our energy demands and fossil fuel consumption is linked directly to greenhouse gas emissions, we have adopted a three-part strategy: **monitor**, **minimise**, **and decarbonise**.





#### Monitor

Monitoring energy consumption helps identify patterns and deviations, validate energy savings, and informed decision-making. It also aids in analysing trends of forecasting future demand, setting reduction goals, and evaluating the success of energy-saving initiatives.



The data below shows trends in our annual energy usage over the past four years, highlighting a consistent decline in non-renewable energy and reduced energy intensity.

Energy Consumption in FY2448

#### Total Energy from Non-renewable Sources

(in GJ)



#### Total Energy from Renewable Sources

(in GJ)

FY24		1,520,492
FY23		1,376,682
FY22		1,383,094
FY21		1,308,767

#### **Total Energy Consumption**

(in GJ)



#### **Energy Intensity**

(GJ/revenue in ₹ Mn)49



# **Energy Efficiency**





Energy Mix FY24 (in %)

**Total Energy from** 

#### Renewable Energy Mix FY24 (in %)



# Non-renewable Energy Mix FY24 (in %)



- Biomass
- Captive solar (including rooftops & solar lights)
- Captive wind energy
- Renewable sources power purchased
- Steam purchased (biomass based)
- Captive hybrid energy (solar+wind)



#### **Minimise and Decarbonise**

We are committed to integrating renewable energy into our operations to reduce our carbon emissions and reliance on fossil fuels. In FY24 we invested significantly in energy-efficient and clean energy initiatives, leading to a reduction in high-speed diesel, furnace oil, and coal consumption by transitioning to a carbon-neutral energy source.



#### **Energy-efficiency Measures**<sup>50</sup>

We have taken various initiatives for energy conservation. Few of them are mentioned below:

- Utilising heat pumps for hot water generation to reduce steam consumption
- Demand side management of compressed air to reduce power consumption of air compressors
- Replacing old chillers with energy efficient chillers
- Use of variable frequency drives to improve pumping and compressor energy performance
- Use of energy efficient dryer to minimise power consumption
- Improving condensate recovery to reduce fuel and water usage at various sites

- Lowering hot water temperatures to decrease steam requirements
- Replacing old inefficient motors with energy efficient motors
- Replacement of old energy inefficient pumps with energy efficient pumps in cooling towers
- Motion sensor installed at various locations to minimise energy wastage
- Piping modification for energy efficient distribution
- Heat recovery at Multi Effect Evaporator (MEE) and Agitated Thin Film Dryer (ATFD) to preheat boiler feed water

- Utilisation of flash recovery system to reduce steam requirement
- Replacement of existing dehumidifier with energy efficient dehumidifier
- Energy efficient lighting system
- Use of Electronically Commutated (EC) blower at air handling units
- Commissioned captive solar rooftop at various locations
- Replacement of boiler fuel from conventional sources like furnace oil and high-speed diesel to renewable biomass briquettes for steam generation

In FY24, the energy consumption was 12.68 GJ per million rupees of turnover as compared 15.04 GJ per million rupees of turnover in FY23. We reduced energy consumption by 2.4 GJ per million rupees in turnover compared to previous financial year through targeted energy efficiency measures which accounts for 16% reduction in specific energy consumption.

## **Emissions Management**

#### Scope 1 GHG Emissions<sup>51</sup>

We regularly monitor and report emissions from the usage of direct fuels (HSD, furnace oil, petrol, CNG, LPG, LDO, and coal) in our processes. The past four years have seen a decline in both the absolute levels and intensity of our Scope 1 emissions.

#### Scope 1 Emissions



#### **Emission Intensity for Scope 1**

(tCO₂e/revenue in ₹ Mn)



Total biogenic emissions in FY24 was 63,547 tCO<sub>2</sub>e.

#### Scope 2 GHG Emissions<sup>52</sup>

We monitor and report our emissions of electricity purchased from the grid. There has been a steady decline in the Scope 2 emissions intensity over the past four years.

#### **Scope 2 Emissions**

(tCO<sub>2</sub>e)



#### **Emission Intensity for Scope 2**

(tCO₂e/revenue in ₹ Mn)



#### Scope 1+2 Emissions

 $(tCO_2e)$ 



#### Scope 1+2 Emission Intensity

(tCO₂e/revenue in ₹ Mn)



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#### Scope 3 GHG Emissions<sup>53</sup>

At Sun Pharma, we track and report the indirect emissions from our value chain across seven Scope 3 categories, following the GHG protocol. The largest impact comes from purchased goods and services, while other categories include business travel, fuel, and energy-related activities, upstream and downstream transportation and distribution, employee commuting, and waste generated in operations.

#### **Scope 3 Emissions**

Source	FY23 (tCO <sub>2</sub> e)	FY24 (tCO <sub>2</sub> e)
Purchased goods and services	182,980	236,932
Fuel- and energy-related activities (not included in Scope 1 or Scope 2)	99,161	87,270
Employee commute	20,115	16,412
Business travel	3,794	4,443
Upstream	7,630	4,242
Downstream	38,311	24,012
Waste generated in operations	5,275	6,477
Total	357,266	379,788

Tracking Scope 3 emissions gives us opportunities to engage across our value chain, spread awareness amongst our business partners, and encourage them to adopt sustainable practices. We have begun using eco-friendly multi-layered cold storage packaging for one of our key products, which after refurbishment/re-qualification post every use cycle can be reused leading to a reduction in carbon emissions and improving overall efficiency.

#### Emission of Ozone-depleting Substances (ODS)<sup>54</sup>

Aligned with the Montreal Protocol guidelines, we are committed to eliminating equipment that uses ozone-depleting substances (ODS). We are systematically transitioning towards alternative equipment that uses gases that have no or limited potential for ozone depletion.

We use R-134a and R-404a as substitutes for R-22 to comply with international standards and adopt the best practices for non-ODS refrigerants.

Our primary source of ODS emissions is refrigerants present in air-conditioners and chiller plants. For the reporting year, the recharge quantity of CFC 11 equivalent ODS was 0.298 MT.

#### Other Air Emissions<sup>55</sup>

We closely monitor emissions from air pollutants like Sulphur Oxides (SOx), Nitrogen Oxides (NOx), and Particulate Matter (PM) to ensure they stay below the thresholds set by central and state pollution control authorities.

#### Stack Emissions (MT)



## Waste and Water Management

#### Waste Management<sup>56</sup>

Our waste management strategy includes monitoring waste at its source, enhancing resource utilisation, and reducing waste generation.

We also divert waste from landfills through methods like recycling and co-processing. Our waste management practices align with our commitment to co-processing 30% of hazardous waste by 2025.

We continue to identify opportunities to minimise any adverse environmental effects from our operations. We have adopted digital solutions to reduce paper consumption in our operations. We have also implemented the Equipment Qualification and Validation Life Cycle Management System (EQVLMS), a software that replaces manual paper-based document archiving with an online repository.

#### Type of Waste Generated (MT)57

Categories	FY21	FY22	FY23	FY24
Hazardous	30,580.18	29,802.89	32,033.69	32,353.58
E-waste	6.22	9.35	9.51	19.53
Non-hazardous	15,508.17	21,494.28	21,407.26	19,817.99

#### Waste Diverted from Disposal (MT)58

Categories	FY21	FY22	FY23	FY24
Hazardous waste				
Reuse	159.06	0	0	0
Recycling	11,801.24	15,445.71	15,448.30	16,021.95
Other recovery options	1,613.53	0	0	13.18
Total	13,573.83	15,445.71	15,448.30	16,035.13
E-waste				
Recycling	7.20	10.71	5.32	19.92
Non-hazardous waste				
Reuse	1.90	1.92	3.08	463.59
Recycling	14,956.40	20,113.92	20,059.71	14,383.29
Other recovery options	834.14	811.19	629.26	3,526.86
Total	15,792.44	20,927.03	20,692.05	18,843.46





#### Waste Directed to Disposal (MT)<sup>59</sup>

Categories	FY21	FY22	FY23	FY24	
Hazardous waste					
Incineration with Energy recovery	251.91	59.79	998.23	150.22	
Incineration without Energy recovery	2,631.76	2,111.36	719.81	617.45	
Landfilling	8,976.61	8,481.45	10,535.78	11,589.68	
Co-processing	3,045.84	2,566.87	2,759.85	3,192.38	
Other disposal operations	0	0	0	351.92	
Total	14,906.11	13,219.47	15,013.67	15,901.65	
Non-hazardous waste					
Incineration with Energy recovery	0	0	0	67.57	
Incineration without Energy recovery	42.66	49.34	41.30	8.82	
Landfilling	1,146.71	1,024.57	552.38	828.89	
Co-processing	0	0	0	0	
Other disposal operations	0	0	0	1.81	
Total	1,189.37	1,073.91	593.68	907.09	

To reduce the disposal of single-use plastic, we have partnered with authorised third-party waste handlers for the collection and management of end-use plastic, thereby ensuring compliance with the pollution control board's guidelines and regulations of Extended Producer Responsibility (EPR).

# Waste and Water Management

#### Water Stewardship<sup>60</sup>

At Sun Pharma, we have set a target to be water-positive by 2030. In the reporting year, we took significant steps to reduce water consumption across our operations. Recognising that cooling towers are major water consumers; we focused on decreasing thermal load at our manufacturing sites by utilising lowgrade heat. We installed heat pumps to capture and repurpose waste heat and enhanced chiller efficiency to minimise water use in cooling towers. Additionally, we have also upgraded our water treatment systems to minimise water loss.

In the reporting year, we had zero liquid discharge (ZLD) systems operational at 16 sites. At non-ZLD locations, we ensure our effluent treatment systems comply with local regulations while monitoring discharges to protect local ecosystems. We also collect and reuse water from Air Handling Unit (AHU) drains and recycle RO reject water, optimising overall water use. Transitioning from groundwater to surface water at various locations, we implemented flow-reducing nozzles, aerators, and sensor-based tap leakages to prevent losses and maintain operational efficiency. Our rainwater harvesting initiatives further reduce reliance on external sources and aid in replenishing local groundwater levels.

#### Watershed Development Project

We have initiated a major CSR project for watershed development in various villages across Ahmednagar and Beed districts in Maharashtra, India. These initiatives aim to enhance the resilience of rural communities facing critical water scarcity challenges, particularly in drought-prone areas. Our strategy supports farmers in reducing dependency on rainfall for irrigation by implementing effective water harvesting and management practices. Covering over 29,000 hectares and benefiting more than 7,800 household (including both farming and non-farming households) and a population of more than 36,000, our projects have led to the construction of vital water harvesting structures, such as farm ponds and check dams, which replenish groundwater aquifers and support agricultural and domestic water needs. In FY24, these efforts have directly benefited over 1,600 farming households, improved soil moisture, and reduced soil erosion. We successfully created water harvesting potential of 1.57 Million kiloliters of water, increased soil moisture, reduced soil erosion in 906 hectares of land and enhanced crop potential through group irrigation wells installation.

**1,600+** Farming households benefitted



Water harvested

Note - All numbers/information are for FY24

Through community engagement, we conducted awareness and capacity-building sessions focused on water conservation, and efficient agricultural practices. We remain dedicated to water stewardship, creating shared value for local communities, and contributing to their socio-economic development.



Our water management approach is based on the principles of the 4Rs:

#### Reduce, Reuse, Recycle, and Recharge



We are committed to decreasing our dependence on groundwater sources, especially in water-stressed areas. Our water withdrawal in water-stressed areas was 11% in FY24 compared to 12% in FY23. In FY24, groundwater usage was 39% of the total water withdrawal compared to 42% in FY23.

#### Water Withdrawal by Sources<sup>61</sup>

Source	FY21	FY22	FY23	FY24
Third-party (KL)	1,598,604	1,556,383	1,454,548	1,631,368
Surface water (KL)	708,714	649,986	696,295	447,578
Groundwater (KL)	1,796,012	1,762,243	1,569,983	1,325,943
Total	4,103,330	3,968,613	3,720,826	3,404,889

Note - All numbers/information are for FY24

# Waste and Water Management



#### Water Withdrawal from Water-stressed Areas

Source	FY21	FY22	FY23	FY24
Third-party (KL)	52,054	51,717	53,998	53,930
Surface water (KL)	6,000	7,200	7,200	7,200
Groundwater (KL)	413,553	448,239	400,341	315,954
Total (KL)	471,607	507,156	461,539	377,084

#### Total Water Consumption<sup>62</sup>





#### Water Discharged in Water-stressed Areas (KL)



#### Total Water Discharge<sup>63</sup>







#### Water Intensity

(KL/revenue in ₹ Mn)



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#### **Biodiversity**

Biodiversity and ecosystem services are interlinked with our operations, influencing factors like freshwater availability, air quality, noise management, and flood mitigation. Diversity amongst flora and fauna is crucial in sustaining ecological balance and serves as an important measure for maintaining a healthy ecosystem.

At Sun Pharma, we recognise the linkage between biodiversity and our operational sustainability and are committed to minimising any negative impacts on biodiversity and ecosystem services. Our commitment to biodiversity management is outlined in our Biodiversity Policy, which is publicly available on our website.

#### Assessing Biodiversity Risks and Ecosystem Health

We have assessed five manufacturing locations for biodiversity risks based on their contribution to their overall business. The biodiversity risk assessment has documented various biodiversity components, ecosystems, and ecosystem services within and around these five locations. We identified biodiversity risks using the Taskforce on Nature related Financial Disclosures Framework (TNFD) VO.4. Floral and faunal biodiversity surveys conducted have established a baseline for biodiversity management.

#### **Stages of Biodiversity Risk Assessment**



#### **Documentation of Biodiversity**

Documentation of floral (trees, shrubs, herbs, and medicinal plants), faunal diversity (mammals, birds – aquatic and terrestrial, herpetofauna, butterflies)



**Analysis of Diversity** Conducting qualitative and quantitative analyses of floral and faunal diversity



#### **Species Identification** Identification of flora and fauna along with rare and endangered species; nationally, regionally, or locally significant species and communities present in the study area as per Wildlife (Protection) Act, 1972

#### Carbon Sequestration Assessment

Evaluating the carbon sequestration potential of the existing green belt within the study area



#### Action Plan Development Formulating a strategic action plan for the conservation and enrichment of biodiversity



Assessment of Invasive Species Identifying non-native or invasive species that may threaten the local ecosystem

#### **Biodiversity Risks and Opportunities**

#### Risks

- Risk due to sourcing of surface water/ groundwater for process requirements
- Risk arising due to the growth of invasive species in greenbelt areas
- Risk from species with high conservation importance reported within the site and nearby areas

#### **Opportunities**

Carbon sequestration in greenbelt areas can reduce residual emissions, and enhance biodiversity conservation

# **Climate Stewardship**

As a leading pharmaceutical company, we are aware of our ecological footprint, as well as our impact on and dependence upon the ecosystem in which we operate. We are committed to leveraging our environmental management systems to mitigate the environmental risks associated with our business operations, while continuously improving our performance and building resilience.

We aim to reduce carbon emissions year on year and promote the use of renewable energy.

#### **Climate Governance**

At Sun Pharma, we implement risk management using a cross-functional approach that promotes collaboration for addressing and managing risk incidents, supported by a multi-layered governance structure.

#### **Our Multi-layered Governance Structure**



#### **Roles and Responsibilities**

#### **Board Oversight**

The Board of Directors has constituted a Board-level Risk Management Committee (RMC) tasked with comprehensive oversight of risk management. Chaired by the Chairman and Managing Director (CMD), this committee is responsible for assessing our risk profile and opportunities, including the identification and monitoring of significant climate-related risks and opportunities. The RMC conducts strategic reviews of risk management policies and measures performance against business objectives using the enterprise risk management (ERM) framework. With extensive corporate experience, our CMD also guides the Company's ESG strategy and regularly oversees climate-related initiatives, including major projects and capital expenditures. The environmental team provides continuous updates to the CMD on these critical areas.

# Management Roles and Responsibilities

The Environment team manages the implementation, monitoring, and assessment of our climate change initiatives, and keeps the Chairman and Managing Director (CMD) informed on climate-related matters.

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#### Climate Risk Management Approach

#### Climate Risk Management<sup>64</sup>

We have conducted a comprehensive assessment of physical and transition climate risks, including scenario analysis aligned with the Task Force on Climate-Related Financial Disclosures (TCFD) framework. This assessment assessed and identified physical climate risks and transition-related climate risks impacting the business. Qualitative and Quantitative analysis were employed during scenario analysis. Sun Pharma's climate risk management approach is based on thorough climate risk assessments, GHG inventorisation, and evaluating current institutional mechanisms.

Through a comprehensive assessment of climate risk assessment, we have covered short, medium and long-term time horizons.

#### Short-term (0-5 years)

The short-term climate risks are defined for a period of 0 to 5 years and are addressed through various initiatives within the organisation, including energy efficiency and renewable energy projects. We have also set environmental targets for 2025 (considering 2020 as the baseline year) in alignment with our climate action strategy.

#### Medium-term (5-10 years)

The medium-term climate risks are defined for a period of 5 to 10 years and are expected to be addressed through various initiatives within the organisation including, energy efficiency and renewable energy projects. We have also set a target of 35% reduction in absolute carbon emissions (Scope 1 and Scope 2) by 2030, considering the baseline year of 2020 in alignment with our climate action strategy.

#### Long-term (10-30 years)

While the long-term horizon presents inherent uncertainties, we proactively address this challenge by integrating our climate action plans into our business growth strategy. By doing so, we ensure that sustainability and climate resilience are ingrained in our operations, allowing us to adapt effectively to emerging situations, including unforeseen events like climate-related supply chain disruptions. We have also set a target to become a Net Zero company by 2050.

#### Physical Risks and Scenario Analysis

We analysed the physical risks for all of Sun Pharma's geographical locations as well as its value chain. This assessment included our offices, manufacturing sites, strategic upstream suppliers, and critical downstream warehouses. Utilising globally recognised models, we analysed acute and chronic risks from droughts, extreme temperatures, thunderstorms, floods, wildfires, precipitation, and wind velocity.

#### **Acute Physical Risks**

We have identified potential acute physical risks that could adversely impact our operations and value chain. To effectively manage these risks, we plan to implement locationspecific mitigation plans. The main objective of evaluating physical climate risk was to assess our vulnerability to immediate threats and mitigate the impact of weatherrelated incidents on our operations and supply chains. By proactively addressing these challenges, we aim to ensure the sustained continuity of our operations and minimise damages arising from the acute physical impacts.

#### **Chronic Physical Risks**

Understanding our exposure to chronic physical risks like precipitation patterns, water availability, and extreme temperature through our physical climate risk assessment helps us minimise its impact on our direct supply chain and operations. We evaluate water stress risks at our manufacturing and research sites using WWF's Water Risk Filter Tool. The climate risk assessment study identified our manufacturing sites in Sikkim as vulnerable to flash flooding. We estimate the financial implications of flooding of Sikkim sites to be ₹ 700-809 Million. In late 2023, an adverse weather event led to large-scale flooding in Sikkim which damaged public infrastructure validating our climate risk study. Our sites remained operational due to their strategic terrain. However, we will continue to consider Sikkim sites critically important and invest in mitigation measures.

<sup>64</sup>GRI 201-2

# **Climate Stewardship**



#### **Climate-related Scenario Analysis**

We analysed historical trends and future projections of various climate hazards with potential impacts on our business locations. To understand the future hazard trends, the Shared Socioeconomic Pathways (SSPs) assessment using SSP 1, 2, and 5 scenarios until the year 2100 were used. The analysis used scenarios from the IPCC Sixth Assessment Report (SAR) published by the United Nations Intergovernmental Panel on Climate Change in 2022. The physical climate risk data has a temporal resolution of every five years from the present till 2100. The SSPs are based on five narratives that describe broad socioeconomic trends likely to influence future society.

#### **SSP - Scenarios**



The scenario analysis provided findings on various long-term climate risks across the value chain. The evaluation process used globally recognised models to evaluate acute and chronic risks related to extreme temperatures, flooding, thunderstorms, droughts, precipitation, wildfires, and wind velocity.

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#### Transition Risks and Scenario Analysis

We conducted a Transition Risk and Scenario Analysis till 2050 to evaluate potential risks to our business arising from anticipated changes in policies, regulations, markets, and technologies driven by the impacts of climate change. We used the Network for Greening the Financial System (NGFS) Scenarios created in partnership with an academic association from the Potsdam Institute for Climate Impact Research (PIK), the International Institute for Applied Systems Analysis (IIASA), the University of Maryland (UMD), Climate Analytics (CA) and the Eidgenössische Technische Hochschule Zürich (ETH) for this assessment. The transition pathways for NGFS Scenarios are differentiated by many key design choices of Net Zero targets, long-term temperature targets, short-term policy, technology available, and overall policy coordination.

#### Different Transition Scenarios as Detailed in the NGFS

#### Nationally Determined Contributions (NDCs) scenario

The scenario envisions India's NDC being executed completely and aligns with the business' emissions per the NDC trajectory.

#### Below 2°C scenario

This scenario gradually increases the stringency of climate policies, giving a 67% chance of limiting global warming to below 2°C.

#### 'Net Zero 2050' scenario

This scenario limits global warming to 1.5°C through stringent climate policies and innovation, reaching global Net Zero by 2050.

#### **Delayed transition scenario**

The scenario follows a haphazard transition where the business as usual (BAU) scenario will be followed until 2030 after which it will suddenly start to decline to restrain global warming below 2°C.

#### **Divergent Net Zero scenario**

By 2050, the world will reach the Net Zero target 2050, but with increased costs due to various policies introduced across sectors, resulting in a quicker phase-out of fossil fuels.



# **Climate Stewardship**

#### Addressing Transition Risks

<b>Transition Risk</b>	Impact	<b>Risk Level</b>
Policy and Legal Risks	Currently, India does not have a carbon price/tax resulting in minimal regulatory implications for Sun Pharma from a policy perspective. However, our operations outside India may be subject to different carbon prices/ tax policies resulting in potential regulatory impacts. To mitigate these challenges, we are actively implementing initiatives aimed at reducing direct and indirect Greenhouse Gas (GHG) emissions across our global sites, in adherence to our targets to reduce absolute Carbon emissions (Scope 1 and Scope 2) by 35% by 2030.	<ul> <li>Low -</li> <li>Medium</li> </ul>
Transition Risk	Impact	<b>Risk Level</b>
Market Risk	Given the rising costs of essential resources at local sites such as electricity/ power, and raw materials, Sun Pharma recognises the need to transition to renewable energy sources. An important consideration is that the Indian Government currently has no immediate plans to phase out coal; hence, the scenario considers the power prices will remain relatively stable aligning with India's NDC target. In contrast, the other three low-carbon transition scenarios mentioned above suggest a significant increase in energy costs particularly after 2030 due to coal usage reduction. These policy changes will likely impact the market price of electricity affecting Sun Pharma's global operations.	<ul> <li>Low - Medium</li> </ul>
Transition Risk	Impact	<b>Risk Level</b>
Technology Risk	Technological advancement and innovation aid the transition to lower- carbon and energy-efficient economic systems, significantly benefiting the Company. In the upcoming years, the share of renewable energy in overall energy consumption is projected to increase, posing a lower transition risk. Currently, renewable energy accounts for approximately 38% of our total energy usage and we are working towards further increasing its share as a part of our total energy mix. We have installed captive hybrid (wind+solar), solar, and wind power plants, and solar rooftops at various locations. Additionally, we are actively upgrading our boilers to utilise biomass energy to further advance our sustainability efforts.	<ul><li>Low</li></ul>
Transition Risk	Impact	Risk Level
Reputational Risk	Climate change presents a potential reputational risk, driven by evolving customer or community perceptions of climate-related risks. However, our commitment to Green House Gas (GHG) reduction and focus on renewable energy mitigates these risks. We have established targets for	•

reducing carbon emissions (Scope 1&2), decreasing water consumption,

and co-processing hazardous waste. Additionally, we are enhancing the share of renewable energy in our overall energy mix and pursuing various energy efficiency incentives. The Company has implemented Zero Liquid Discharge (ZLD) systems at various manufacturing facilities to minimise negative environmental impact by wastewater generation. Currently, 16 of our manufacturing sites have achieved ZLD status.

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#### **Physical Climate Risk Adaptation**

#### **Energy Efficiency**

We are committed to reducing our carbon emissions (Scope 1&2) by 35% by 2030 using 2020 as our baseline. To achieve this goal, we have implemented several energy-saving initiatives like installing energy-efficient zero purge refrigerant type air dryer, the installation of an energyefficient cooling tower, the use of smart and efficient heating ventilation and air conditioning (HVAC) equipment, replacement of chilled water (CHW) and hot water (HW) pumps with an energy-efficient pump equipped with IE3 motor, among others. These measures have successfully reduced fuel and power consumption, optimised water usage, and carbon footprint across multiple sites globally.

#### Water Management

As droughts and water scarcity intensify due to climate change, we recognise that some of our sites may face water-related risks disrupting operations and impacting revenues temporarily. To assess these risks, we used the WWF Water Risk Filter and Central Ground Water Board (CGWB) analysis at all our sites. In India, we focused on CGWB analysis to identify water-stressed areas, while for sites outside India, we applied the WWF Water Risk Filter. We have set a target to reduce our water consumption by 10% by 2025, from the baseline year of 2020.

#### **Metrics and Targets**

We have launched several initiatives aimed at carbon management and energy efficiency to reduce GHG emissions and decrease our carbon footprint. These initiatives aim to help achieve a 35% reduction in absolute Scope 1 and Scope 2 carbon emissions by 2030 compared to the 2020 baseline year.

We have identified several climate-related opportunities to significantly reduce our energy costs. We estimate to save around ₹ 1,604.5 Million annually once all the planned projects are commissioned. We expect to invest approximately ₹ 5,721.5 Million to implement various energy efficiency and renewable energy projects. Some projects planned are hybrid power (Solar+Wind), solar rooftop projects, converting boiler fuel from non-renewable fuel to biomass, upgrading heat pumps, energy efficient chillers, compressors and pumps. In addition to the above projects, we are exploring various projects for carbon offsets to neutralise our residual emissions.

#### **Reduction Target**

Scope Covered by Target

cope 1 + 2

Base Year 2020

451,068 tCO<sub>2</sub>e

Base year emissions

Target Year 2030

**35%** Reduction in absolute Scope 1 and Scope 2 carbon emissions