Environmental Stewardship

A Pledge to Protect Our Planet

Safeguarding the environment lies at the core of our endeavours, signifying an essential strategic priority and an integral pillar of our sustainable development aspirations. Mindful of our duty to mitigate any detrimental effects on the environment, we undertake focused initiatives to reduce our environmental impact.

As a responsible corporate citizen, we also recognise our role in achieving the United Nations' Sustainable Development Goals (UN SDGs). We strongly emphasise the optimum utilisation of our resources and leverage our influence in the business value chain to contribute to a more sustainable future.

Aligned with UN SDGs

Target 7.2

32% of renewable energy contribution in the overall energy mix.

Target 13.2

We are a signatory to the India CEO Forum on Climate Change, which aims to forge a sustainable partnership between the Government of India and the private sector for climate change. As a part of our efforts towards this, we incorporate climate change measures into our policies, strategies, and planning.

Target 6.3

Enhance water recovery by reducing the total discharge of untreated wastewater through recycling and reusing in operations. Additionally, 16 of our 31 manufacturing locations in the reporting boundary have achieved zero liquid discharge status.

Target 6.4

Water conservation measures have helped us conserve 562,189 KL of water in FY23.

Environmental Performance FY23

We have established ambitious targets to create a positive environmental impact. We have undertaken responsible measures and adopted conscientious practices to fulfil these targets effectively.

Energy Efficiency and Carbon Emissions[45]

Highlights

- Energy reduction initiatives, resulting in saving of 90,933 GJ of energy
- Replacement of fossil fuel with biomass 507,071 GJ of energy sourced from biomass
- Total Energy sourced from Renewable Sources during the year was 1,376,682 GJ

Achievements

- 19% reduction in energy intensity by FY23 from baseline year of 2020
- 32% of total energy sourced from renewable sources
- 27% reduction in GHG intensity by FY23 from baseline year of 2020

Targets

- Reduce absolute carbon emissions (Scope 1 and Scope 2) by 35% by 2030 (baseline year of 2020)
- Progress achieved against the target: 6.91%

Water Stewardship

Highlights

- Continued focus on 4Rs (Reduce, Reuse, Recycle, and Recharge) for water conservation
- 7,558 KL of rainwater harvested in FY23
- Reduced dependency on groundwater by using alternate sources

Achievements

- 38% reduction in water intensity by FY23 from baseline year of 2020

Targets

- Reduce water consumption by 10% by 2025 (baseline year of 2020)
- Progress achieved against the target: 21%

Waste Management

Highlights

- 48% of hazardous waste diverted from disposal, by using recycling and other recovery options
- 96% of non-hazardous waste diverted from disposal

Achievements

- Hazardous waste disposed through co-processing and incineration - 4,478 MT

Targets

- Co-processing of 30% hazardous waste by 2025
- Progress achieved against the target: 18.4%

We reinforce the mechanisms that enable us to attain these targets through rigorous governance mechanisms, including a comprehensive Environment, Health, and Safety (EHS) policy and our well-defined EHS Management System and Energy Management System. These robust frameworks provide the necessary support and structure to drive progress and ensure the successful realisation of our environment-focused objectives to manage our greenhouse gas emissions, water consumption and waste generation.

[45]GRI 302-4
Note: Targets are linked to current scale of operations and revenue.

Environmental Stewardship (continued)

Environmental Governance Mechanism

Our environmental governance mechanism includes a comprehensive Environment, Health, and Safety (EHS) policy as well as our well-defined EHS Management System and Energy Management System. These robust frameworks provide the necessary support and structure to drive progress and ensure the successful realisation of our environmentally conscious objectives to manage our greenhouse gas emissions, water consumption and waste generation.

Our robust EHS governance processes guide us in evaluating the effectiveness of our environmental initiatives and help us maintain oversight on the EHS performance vis-a-vis the achievement of our targets. We conduct regular internal and external audits and inspections to track and evaluate compliance with all relevant EHS regulations and standards.

Additionally, we have established a comprehensive emergency response plan across our sites, guaranteeing swift and efficient resolution of any EHS incidents or accidents.

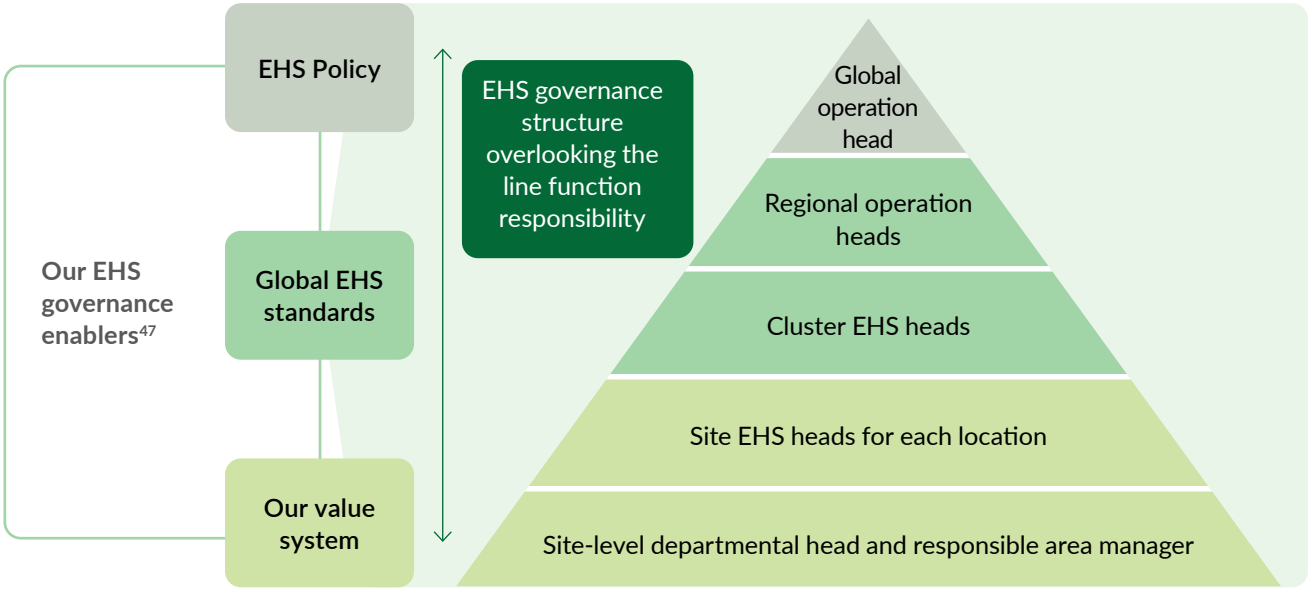
We have aligned our EHS Management System to ISO 14001:2015 norms. In the current reporting period, 19 sites have been ISO 14001:2015 certified. In addition, four sites have undergone a third-party audit, and all our sites have been internally audited for their EHS management systems. In addition, some of our facilities have been ISO 50001:2018 certified.

We strive to adhere strictly to all relevant local, state and national regulatory requirements and focus on identifying and minimising any potential or actual risks arising from non-compliance. In FY23, our facility in Toansa paid a fine of ₹5 Million[46] due to accidental water stagnation. We have implemented immediate corrective actions and incorporated remedial measures to prevent any future risks. We have notified the regulatory authorities of our mitigation measures. We recognise our workforce's important role in achieving our environmental targets and objectives. To facilitate this, we have instituted various engagement platforms to raise awareness and foster a culture of environmentally friendly practices among our employees. These forums empower our workforce to identify and address potential hazards within our operations, evaluate and mitigate environmental impacts, and advocate for a secure and healthy work environment. We also provide focused EHS training to our workforce, encouraging responsible conduct and environmentally conscious behaviour.

[46]GRI 2-27

Additionally, we have enabled our workforce to access resources on EHS practices through the EHS section on our website, interactive quizzes, and collaborative brainstorming sessions.

Aligned with our Enterprise Risk Management Framework's strategic approach, we infer that environmental stewardship and climate action present a significant risk and an opportunity in our operations. We have integrated initiatives and practices throughout our operations to address this risk. Our Board of Directors play a crucial role in overseeing our Enterprise Risk Management Framework (ERM). Some of our senior executives have climate change initiatives as one of the performance parameters in their KPIs. Our Risk Management Committee is responsible for the assessment and management of the risks across our organisation. We have also developed specific mitigation strategies to address climate risks through our EHS governance mechanisms effectively.



Our Climate-smart Vision

As a signatory to the India CEO Forum on Climate Change, initiated by the Ministry of Environment, Forest and Climate Change of the Government of India, we align to India's targets related to climate change adaptation and mitigation. Our climate change strategy focuses on energy efficiency, greenhouse gas emission management, waste and water management, R&D for efficient products and processes, and optimising resource utilisation through digitalisation. We have adopted an ambitious target to reduce our Scope 1 and Scope 2 emissions by 35% by 2030, compared to a 2020 baseline.

Strategic interventions in energy efficiency and investments in clean energy technology will facilitate the achievement of this target.

Aligned with our approach to integrating climate resilience into every facet of our business operations, we duly recognise and address both the physical and transitional risks per the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. We are also developing mitigation strategies for the varied risks and disruptions our businesses may be exposed to due to climate change.

[47]GRI 3-3

Energy Efficiency

Our energy demand and fossil fuel-based energy consumption in our operations are inextricably linked to greenhouse gas emissions and influence the achievement of our decarbonisation targets. To reduce our overall energy demand and leverage clean energy for our operations, we have adopted a three-pronged approach of monitor, minimise, and decarbonise.

Our Approach Towards Energy Management

Monitor
Monitor our energy consumption over the years, analyse the trends, setting internal and external energy benchmarking and set control action plans to achieve our target.

Minimise
Minimise the use of energy-intensive sources by transitioning to energy efficient processes, and recover waste heat for further utilisation.

Decarbonise
Reduce carbon footprint from our energy sources by adopting cleaner fuel alternatives and shifting to renewable energy sources.

Monitor

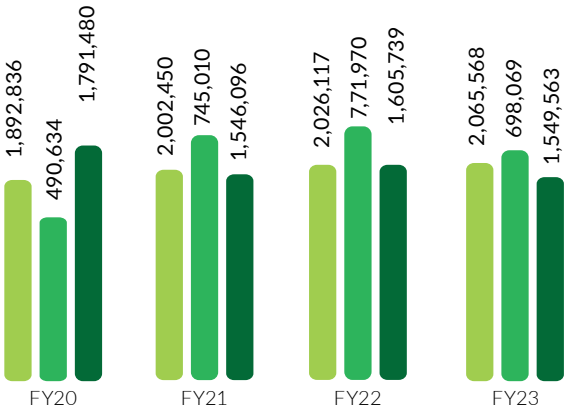
Monitoring our energy consumption helps us identify patterns and irregularities, validate energy savings, and make informed decisions on areas of intervention. Regular monitoring also aids in extrapolating current energy consumption trends to infer and forecast future energy demand, set energy reduction targets, and assess the effectiveness of implemented energy-saving initiatives.

This section highlights our annual energy consumption trends over the past four years. A steady decline in the proportion of non-renewable sources in our energy mix also characterises our overall decrease in energy intensity.

Energy Consumption (in GJ)[48]	FY20	FY21	FY22	FY23
Total energy from non-renewable sources	3,249,576	2,984,789	3,020,730	2,936,517
Total energy from renewable sources	925,374	1,308,767	1,383,094	1,376,682
Total energy consumption	**4,174,950**	**4,293,557**	**4,403,824**	4,313,199
Energy intensity (GJ/revenue in ₹ Million)[49]	**18.67**	**18.67**	**16.81**	15.04

[48]GRI 302-1, [49]GRI 302-3

Energy Consumption FY23 (in GJ)

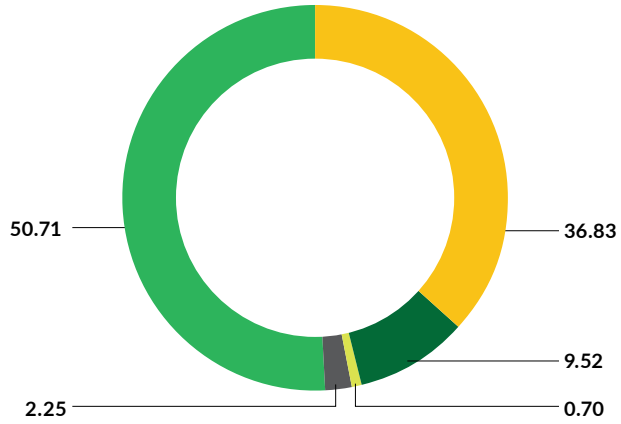


- Electricity consumption
- Steam consumption
- Fuel consumed

Energy Mix FY23 (in %)

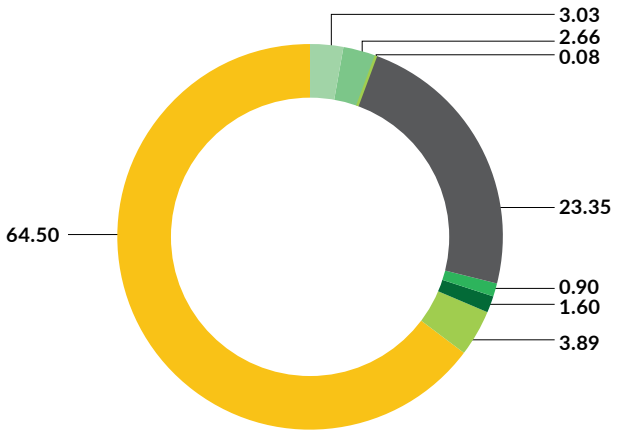
- Total Energy from Renewable Sources
- Total Energy from Non-renewable Sources

Renewable Energy Mix FY23 (in %)



- Biomass
- Solar rooftop (including solar street light)
- Windmills
- Renewable sources - power purchased
- Steam purchased

Non-renewable Energy Mix FY23 (in %)



- High speed diesel (HSD)
- Furnace oil
- Petrol
- Compressed natural gas (CNG)
- Liquefied petroleum gas (LPG)
- Light diesel oil (LDO)
- Coal
- Grid electricity

Minimise and Decarbonise

We have been progressively integrating renewable energy within operations to reduce dependence on fossil fuels and decrease greenhouse gas emissions. In FY23, we invested ~₹2,143 Million in clean energy and energy-efficient projects.

We have successfully reduced our consumption of high-speed diesel (HSD), furnace oil, and coal by transitioning to biomass fuel, a carbon-neutral energy source.

Environmental Stewardship (continued)

In FY23, we have implemented focused energy efficiency measures[50]. Some of these are enumerated below:

1

Installation of Hybrid (Wind + Solar) Power Plant This strategic investment is expected to result in an annual GHG reduction potential of 37,530 tCO_2e.

2

Solar Rooftop Installations, contributing to an annual GHG reduction potential of 3,340 tCO_2e.

3

Energy Efficient Chillers and Heat Pumps at sites are anticipated to lead to an annual GHG reduction potential of 1,788 tCO_2e.

4

Other projects, such as VFD and LED, among others, resulted in a cumulative annual GHG reduction potential of ~10,474 tCO_2e.

Emissions Management

Scope 1 GHG Emissions[51]

We periodically monitor and report on the emissions of direct fuels consumed (HSD, furnace oil, petrol, CNG, LPG, LDO, and coal) in our operations. Our Scope 1 emissions demonstrate a declining trend over the past four years, both in absolute and intensity terms.

Scope 1 Emissions (tCO_2)

Emission Intensity for Scope 1 [tCO_2/revenue (in ₹ Mn)]

The emissions from using biomass in our operations have been classified as biogenic emissions, accounting for a total of 57,577 tCO_2e in FY23.

[50]GRI 302-4 and 305-5, [51]GRI 305-1 and 305-4

Scope 2 GHG Emissions[52]

We monitor and report our emissions of the purchased electricity from the grid. The Scope 2 emissions intensity also demonstrates a steadily declining trend over the past four years.

Scope 2 Emissions (tCO_2)

Emission Intensity for Scope 2 [tCO_2/revenue (in ₹ Mn)]

Scope 3 GHG Emissions[53]

We report on the indirect emissions within our business value chain of seven categories of Scope 3 emissions, as specified by the GHG protocol. The categories of emissions that are most material to our operations and with the highest impact within the value chain are from purchased goods and services. Fuel- and energy-related activities (not included in Scope 1 or Scope 2) business travel, employee commute, upstream transportation and distribution, downstream transportation and distribution, and waste generated during operations.

S. No.	Source	FY22 (tCO_2)	FY23 (tCO_2)
1	Purchased goods and services	169,413	182,980
2	Fuel- and energy-related activities (not included in Scope 1 or Scope 2)[54]	-	99,161
3	Employee commute	16,106	20,115
4	Business travel	513	3,794
5	Upstream	6,138	7,630
6	Downstream	30,030	38,311
7	Waste generated in operations	4,690	5,275
	Total	**226,890**	**357,266**

Monitoring Scope 3 emissions provides us with strategic opportunities to engage with the business value chain and create awareness of sustainable practices for our business partners. It also provides us with insights into sustainable procurement and logistics. We will continue to track our Scope 3 emissions and eventually take targets for addressing specific categories of Scope 3 emissions. For one of our key products, we have initiated the use of an environment-friendly multi-layered cold storage packaging which can be re-used after refurbishment/re-qualification post every use cycle. This results in the reduction of CO_2 emission as well as improves the overall efficiency.

[52]GRI 305-2 and 305-4, [53]GRI 305-3,
[54]In the reporting year, we have added a new category of Scope 3 emissions, which we did not calculate in the previous years

Environmental Stewardship (continued)

Emission of Ozone-Depleting Substances (ODS)[55]

We are committed to phasing out equipment that uses ozone-depleting substances (ODS). Following the guidelines set by the Montreal Protocol, we have been progressively transitioning to equipment that utilises gases with no ozone-depleting potential.

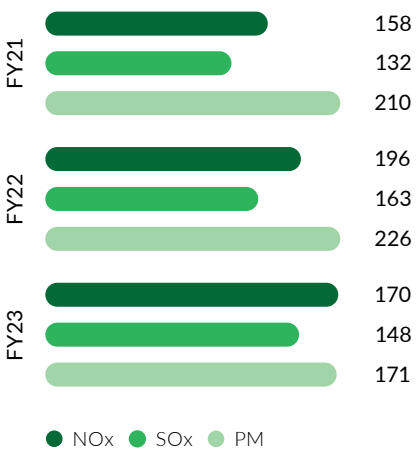
Specifically, we have adopted R-134a and R-404a gases as alternatives to R-22, ensuring compliance with international standards and best practices in adopting non-ODS refrigerants in our operations.

Our sources of emissions of ODS are primarily from the refrigerants in air-conditioners and chiller plants. For the reporting year, the recharge quantity of CFC 11 equivalent ODS was 0.256 MT.

Other Air Emissions[56]

We monitor the emissions of air pollutants such as sulphur oxides (SOx), nitrogen oxides (NOx), and particulate matter from our operations. We continuously maintain these at levels lower than those prescribed by central and state pollution control boards. We are actively exploring initiatives to reduce the intensity of air pollutant emissions and ensure compliance with relevant environmental standards and regulations.

Emissions (MT)



Waste Management[57]

Our waste management strategy involves monitoring waste at its source, optimising resource utilisation and minimising the generation of waste. We prioritise waste diversion from landfills through recycling and other recovery methods, including co-processing. Our waste management practices align with our commitment to co-processing 30% of hazardous waste by 2025.

Additionally, we have embraced digitalisation to reduce paper consumption within our operations. In FY22, we initiated the Equipment Qualification and Validation Life Cycle Management System (EQVLMS), a software mechanism to replace manual paper-based document archiving with an online repository.

Type of Waste Generated (MT)[58]

	FY20	FY21	FY22	FY23
Hazardous	23,448.83	30,580.94	29,786.86	**32,033.46**
E-waste	5.43	6.22	9.37	**9.51**
Non-hazardous	11,734.22	17,027.73	21,471.00	**21,431.22**

[55]GRI 305-6, [56]GRI 305-7, [57]GRI 306-1, 306-2, [58]GRI 306-3

Waste Diverted from Disposal (MT)[59]

Categories	FY20	FY21	FY22	FY23
Hazardous waste				
Reuse	0	0	0	**0**
Recycling	10,201.43	13,543.25	15,451.10	**15,448.30**
Other recovery options	0	0	0	**0**
Total	**10,201.43**	**13,543.25**	**154,51.10**	**15,448.30**
E-waste				
Recycling	5.62	7.20	10.71	5.32
Non-hazardous waste				
Reuse	5.84	1.90	1.92	**3.08**
Recycling	9,930.63	13,495.62	20,156.81	**20,036.02**
Other recovery options	599.33	640.01	811.18	**629.26**
Total	**10,535.8**	**14,137.53**	**20,969.91**	**20,668.36**

Waste Directed to Disposal (MT)[60]

Hazardous waste	FY20	FY21	FY22	FY23
Incineration	3,044.67	2,755.57	2,188.50	**1,717.86**
Landfilling	8,220.46	9,543.03	9,027.90	**10,536.27**
Co-processing	1,452.18	2,540.12	2,377.53	**2,759.88**
Other disposal operations	0	0	0	**0**
Total	**12,717.31**	**14,838.72**	**13,593.93**	**15,014.01**

Non-hazardous waste	FY20	FY21	FY22	FY23
Incineration	43.48	42.66	49.34	**41.49**
Landfilling	511.04	791.31	804.52	**552.38**
Other disposal operations	0	0	0	**0**
Total	**554.52**	**833.97**	**853.86**	**593.87**

To minimise the disposal of single-use plastics, we have collaborated with an authorised third-party waste handler to collect and manage end-use plastic, ensuring compliance with pollution control board guidelines and extended producer responsibility (EPR) regulations.

[59]GRI 306-4, [60]GRI 306-5

Environmental Stewardship (continued)

Water Stewardship[61]

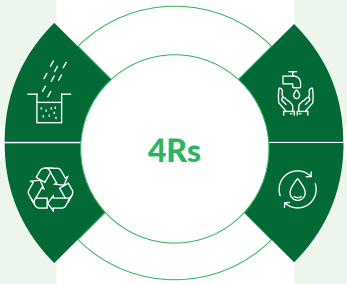
Our approach to water management is based on the principles of the 4Rs: 'Reduce, Reuse, Recycle, and Recharge'.

Recharge

- Rain water harvesting

Reduce

- Increasing efficiency of water treatment system
- Installation of flow reducing nozzles for washing areas
- Use of aerator in water taps, Sensor-based taps in changing rooms and washing areas
- Timely arrest of water leakages



Recycle

- Recycle of treated effluent water
- Increasing COC of cooling tower

Reuse

- Reuse of RO reject water
- Improvement of steam condensate recovery
- Reuse of AHU drain

We are committed to reducing our reliance on groundwater sources, particularly from water-stressed areas. In FY23, only 12% of our water withdrawal originated from water-stressed areas, demonstrating a positive change compared to 13% in FY22. Furthermore, groundwater accounted for 42.2% of our total water withdrawal this year, compared to 44.4% for FY22.

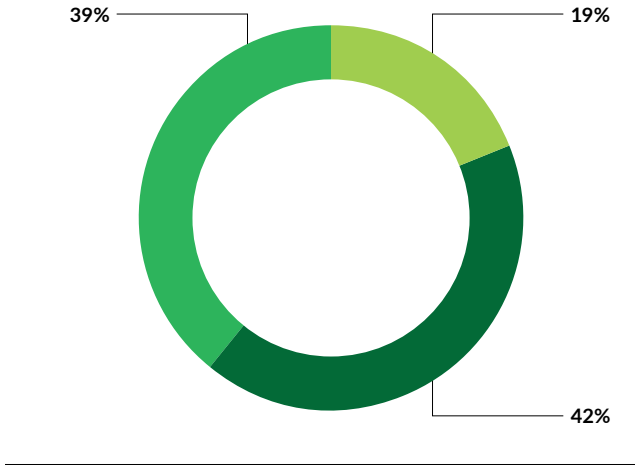
We have implemented zero liquid discharge (ZLD) systems at 16 sites. The remaining sites have efficient effluent treatment systems that comply with local environmental regulations. We closely monitor the effluent discharged by the non-ZLD sites to ensure compliance with relevant environmental requirements. Managing our water also offers possibilities to recycle and reuse it in our operations, thereby decreasing the overall water demand. All these initiatives have helped us in significant reduction of water consumption.

Water Withdrawal by Sources[62]

Source	FY20	FY21	FY22	FY23
Third party (KL)	1,406,394	1,598,604	1,556,383	1,454,548
Surface water (KL)	660,804	708,714	649,986	696,295
Groundwater (KL)	2,151,053	1,796,012	1,762,243	1,569,983
Total (KL)	**4,218,251**	**4,103,330**	**3,968,613**	3,720,826

[61]GRI 303-1, 303-2, [62]GRI 303-3

Water Withdrawal by Sources



Water Withdrawal from Water-stressed Areas

Source	FY20	FY21	FY22	FY23
Third-party (KL)	58,646	52,054	51,717.0	5,3998
Surface water (KL)	6,000	6,000	7,200.0	7,200
Groundwater (KL)	404,111	413,553	448,238.9	400,341
Total (KL)	**468,757**	**471,607**	**507,155.9**	461,539

Water Discharge[63]

Third Party (KL)

Water Discharged in Water-stressed Areas (KL)

Water Consumption[64]

Water Consumption (KL)

Water Intensity (KL/revenue in ₹ Mn)

[63]GRI 303-4, [64]GRI 303-5

Environmental Stewardship (continued)

Biodiversity

Biodiversity and ecosystem services have direct and indirect linkages with business operations, such as freshwater requirements, air purification, noise control, and flood control, among others. The floral and faunal biodiversity plays a critical role in managing nature's balance and acts as an indicator for evaluating the health of an ecosystem.

We at Sun Pharma recognise the relationship between biodiversity and our business sustainability. The Company thus aims to minimise any negative impact on biodiversity and ecosystem services. Our Biodiversity Policy showcases our commitment and position on overall biodiversity management. This policy is publicly available on our website.

Scope and Methodology

In the reporting year, we assessed biodiversity risk through a third-party agency at five manufacturing locations based on their contribution to 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) V0.4. Site-specific biodiversity surveys, floral and faunal, served as the basis of this assessment.

Stages of Biodiversity Risk Assessment

- Documentation of floral (trees, shrubs, herbs, and medicinal plants), faunal diversity (mammals, birds – aquatic and terrestrial, herpetofauna, butterflies)
- Qualitative and quantitative analyses of floral and faunal diversity
- 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 Wild Life (Protection) Act, 1972
- Assessment of the carbon sequestration potential of the existing green belt within the study area
- Development of an action plan for conservation and enrichment of biodiversity
- Identifying non-native or invasive species

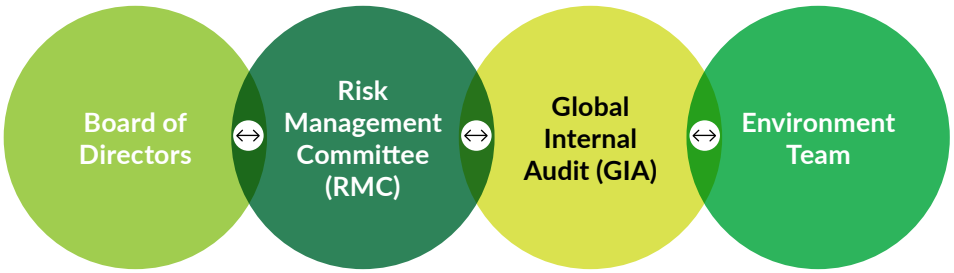
Biodiversity Risks and Opportunities

- 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 area
- Carbon sequestration from greenbelt to address the residual emission as an opportunity through biodiversity conservation

Climate Governance

We undertake risk management through a cross-functional approach that facilitates cohesion in the response and management of risk incidents. This mechanism operates through a multi-layered governance structure.

Our Multi-layered Governance Structure



Roles and Responsibilities

Board Oversight

The Board of Directors have constituted a Risk Management Committee (RMC) with the overall risk management responsibility. The Board-level RMC has the highest level of oversight over Sun Pharma's risk profile and opportunity landscape, including identifying, managing, and monitoring of key climate-related risks. The committee, chaired by the Managing Director (MD), ensures strategic review and implementation of risk management policies and year-on-year performance against overall business goals and targets using enterprise risk framework (ERM). Our MD has multiple decades of corporate experience and guides our ESG strategy. Our MD periodically oversees climate-related issues and reviews/approves major climate-related projects and capital expenditures. The environment team regularly updates the Managing Director on all the above aspects.

Management Roles and Responsibilities

The environment team oversees our climate change-related initiatives' implementation, progress, and performance. It regularly updates the MD on all the above aspects.

Environmental Stewardship (continued)

TCFD and Climate Risk Management Approach

The climate risks included in our Enterprise Risk Management (ERM) undergo the risk management approach mentioned hereunder.

TCFD and Climate Risk Management[65]

In alignment with the Task Force on Climate-related Financial Disclosures (TCFD) Framework, we have conducted a detailed physical and transition climate risk assessment, including scenario analyses. The risk assessment included physical climate risks and transition-related risks to the business. Our initiatives align with leading frameworks and guidelines, such as the TCFD and the Carbon Disclosure Project (CDP). Sun Pharma's TCFD methodology is grounded in rigorous climate risk studies, GHG inventorisation, and analysis of existing institutional arrangements. We are using both qualitative and quantitative climate-related scenario analysis.

We have covered short-term, medium-term, and long-term time horizons in our climate risk assessment.

Short term (0-5 years)	Medium term (5-10 years)	Long term (10-30 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.	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 emissions (Scope 1 and Scope 2) by 2030, considering the baseline year of 2020 in alignment with our climate action strategy.	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.

TCFD – 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 encompassed our manufacturing locations, offices and upstream strategic supplier's manufacturing sites, and critical downstream warehouses. Our assessment process utilised globally recognised models to assess acute and chronic physical risks associated with extreme temperatures, droughts, flooding, thunderstorms, precipitation, wildfires, and wind velocity.

Acute Physical Risks

We have identified potential acute physical risks that may challenge our operations and value chain. Subsequently, we will develop location-specific mitigation plans to address these risks effectively. The primary objective of our physical climate risk assessment was to understand exposure to acute physical risks and minimise the impact of extreme weather events and other climate-related hazards on our operations and supply chain. By proactively addressing these risks, we focus on ensuring the continuity of our operations and mitigate potential damages arising from acute physical impacts.

Chronic Physical Risks

The primary objective of our chronic physical climate risk assessment was to understand exposure to risks such as precipitation patterns, extreme temperature, and water availability and minimise its impact on our direct operations and supply chain. Additionally, we used WWF's Water Risk Filter Tool to evaluate water stress and availability risks at our manufacturing and R&D sites.

We studied the historical trends and future projections of the above-mentioned various climate hazards impacting our business locations.

[65]GRI 201-2

Climate-related Scenario Analysis

We studied the historical trends and future projections of various climate hazards with potential impacts on our business locations. For future hazard trends, our climate risk assessment used the Shared Socioeconomic Pathways (SSPs) assessment using SSP 1, 2, and 5 scenarios until the year 2100. For this analysis, we used these scenarios and the Sixth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC), published in 2022. The data allows physical climate risk to be assessed every five years from the present to 2100.

The SSPs are based on five narratives describing broad socioeconomic trends that could shape future society. We considered SSP 1, 2, and 5 climate scenarios for Sun Pharma's physical risk assessment for all locations.

SSP – Scenarios

SSP 1:
Sustainability – Taking the Green Road

- Low challenges to mitigation and adaptation
- Shift to sustainable practices results in rapid technological development, relative global equality of income and environmental sustainability
- Emissions continue to increase through the end of the century, with resulting warming of more than 1°C by 2100

SSP 2:
Middle of the Road

- Medium challenges to mitigation and adaptation
- Decisive mitigation actions to reduce emissions to half of current levels by 2080
- Emissions will continue to increase through the end of the century, with warming of more than 2 degrees Celsius by 2100

SSP 5:
Fossil-fueled Development – Taking the Highway

- High challenges to mitigation, low challenges to adaptation
- Continuation of business as usual with emissions at current rates
- High-growth energy-intensive emissions result in warming of more than 4 degrees Celsius by 2100

The above three scenario analyses gave us insights into various long-term climate risks across our value chain. Our assessment process utilised globally recognised models to assess acute and chronic physical risks associated with extreme temperatures, droughts, flooding, thunderstorms, precipitation, wildfires, and wind velocity.

Transition Risks and Scenario Analysis

We have conducted a Transition Risks and Scenario Analysis until 2050 to assess the risks to the business posed by upcoming/ anticipated changes in the policies, regulations, markets, and technologies due to climate change impacts. We have used Network for Greening the Financial System (NGFS) scenarios developed in partnership with an academic consortium from the Potsdam Institute for Climate Impact Research (PIK), International Institute for Applied Systems Analysis (IIASA), University of Maryland (UMD), Climate Analytics (CA) and Eidgenössische Technische Hochschule Zürich (ETH) for this assessment.

The transition pathways for the NGFS Scenarios are differentiated by several key design choices relating to long-term temperature targets, net-zero targets, short-term policy, overall policy coordination and technology availability.

Environmental Stewardship (continued)

Different Transition Scenarios

Nationally determined contributions (NDCs) scenario:
This scenario foresees India's NDC is implemented fully and aligns the business' emissions as 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:
This scenario assumes a disorderly transition where emissions until 2030 will follow the business as usual (BAU) scenario, and then it will suddenly start declining to restrict global warming below 2°C.

Divergent net zero scenario:
The world will reach net zero around 2050 but with higher costs due to divergent policies introduced across sectors, leading to a quicker phase-out of fossil fuels.

Addressing Transition Risks

Transition Risk	Impact	Risk Level
Policy and Legal Risks	Currently, there is no carbon price/tax implemented in India. Thus, for Sun Pharma, regulatory implications from a policy perspective are low. On the other hand, our units based outside India might have some regulatory implications on their operations due to different carbon prices/tax policies. We are proactively implementing initiatives for reducing direct and indirect GHG emissions for multiple sites worldwide, aligning with our target for reducing GHG emissions (Scope 1 and Scope 2) by 35% by 2030.	Low – Medium
Market Risk	With an increase in cost for the essentials (power/electricity rates at local sites and cost of raw materials), Sun Pharma needs to transition to renewable energy sources. It is important to note that as the Indian Government currently has no plans to phase out coal, this scenario considers the price of power to not increase significantly. This is similar to the NDC scenario. However, the other three low-carbon transition scenarios mentioned above may steeply increase prices, especially post-2030. These three scenarios indicate the dissuasion of using coal as a source of energy. Sun Pharma's units worldwide would be affected as policies would impact the market price of power to an extent.	Low – Medium
Technology Risk	Technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system can have a significant impact on organisations. The percentage share of projected renewable energy sources would grow in the next few years, posing a lower transition risk. Renewable energy constitutes ~32% of our total energy usage. We are consistently working to increase the share of renewable energy in our overall energy mix. We have recently installed a Hybrid (Solar + Wind) power plant. We have also installed solar rooftops at various locations and are consistently working towards the upgradation of our boilers to use biomass.	Low
Reputational Risk	Climate change has been identified as a potential source of reputational risk tied to changing customer or community perceptions related to climate risks. Our reputational risks are low because of our commitment to GHG reduction and focus on renewable energy. We have set targets for the reduction of GHG emissions (Scope 1 and Scope 2), reduction of water consumption and co-processing of our hazardous waste. Furthermore, we are increasing the share of renewable energy in our overall energy consumption and are also focusing on various other energy efficiency initiatives. The Company has been implementing Zero Liquid Discharge (ZLD) systems at many manufacturing facilities to alleviate any negative environmental impact through wastewater generated. Currently, 16 manufacturing locations have ZLD status.	Low

Physical Climate Risk Adaptation

Energy Efficiency

We aim to reduce carbon emissions (Scope 1 and 2) by 35% by 2030, considering the baseline of 2020. To achieve these targets, we have introduced many energy-saving initiatives like the installation of an energy-efficient zero purge refrigerant type air dryer, the installation of an energy-efficient 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 helped us reduce fuel consumption, optimise water usage and shrink our carbon footprint for many sites worldwide.

Water Management

Since droughts and water scarcity are expected to be exacerbated as a result of the physical impacts of climate change, we are exposed to water risks at some of our sites which have the potential to temporarily disrupt operations and affect our revenues. To comprehensively assess water risk, we have utilised both the WWF Water Risk Filter and Central Ground Water Board (CGWB) analysis for all our locations. For our sites in India, we relied on the CGWB analysis to identify water-stress areas. In contrast, for locations outside of India, we employed the WWF Water Risk Filter to identify water stress sites. We have taken a target to reduce our water consumption by 10% by the year 2025, compared to baseline year of 2020.

Metrics and Targets

We are committed to reducing our carbon footprint, and to accomplish this goal, we have implemented several carbon and energy-related initiatives to manage our GHG emissions. All these initiatives aim to realise our ambitious target of achieving a 35% reduction in absolute GHG emissions for Scope 1 and Scope 2 by 2030 compared to the 2020 baseline.

Scope Covered by the Target

Scope 1 + Scope 2

Target Timeframe

Base Year	Target Year
2020	2030

Base Year Emissions

451,068 MT CO_2

% Reduction Target from Base Year

35%