

# Climate Resilience

At Galaxy, we are strengthening climate resilience by embedding low-carbon transition pathways into our operations and decision-making We systematically measure and manage greenhouse gas emissions across our global footprint, in alignment with recognised standards, to ensure transparency and accountability.

Our transition towards cleaner energy is progressing through renewable energy adoption, Power Purchase Agreements (PPAs), complemented by targeted energy efficiency initiatives.

**Climate-related risks and opportunities are integrated into our strategic planning processes, enabling informed and proactive responses. Through continuous monitoring, disciplined execution and a focus on operational efficiency, we are enhancing resilience while advancing our long-term climate ambitions.**

## Climate Change

We recognise climate change as a defining challenge for the specialty chemicals industry, with implications across operations, supply chains and product lifecycles. At Galaxy, we are embedding decarbonisation into our business strategy by integrating energy transition, process innovation, circularity and responsible sourcing into our operations.

Our approach focuses on reducing emissions intensity, improving energy efficiency and transitioning towards low-carbon alternatives. It not only strengthens long-term business resilience but also delivers sustainable value.

## Physical Climate Risk and Adaptation

We are strengthening our approach to assessing physical climate risks by progressively evaluating exposure across key manufacturing sites and critical suppliers. This includes consideration of risks such as water stress, extreme weather events and supply chain disruptions.

Adaptive measures focus on enhancing operational resilience through water management practices, supply chain diversification and process optimisation. We aim to further strengthen site-level risk assessments and integrate geospatial analysis into our risk management framework, aligning with evolving TCFD recommendations.

## Climate Transition Strategy

We have adopted a structured transition approach to decarbonise our operations and value chain, aligned with evolving regulatory expectations and global climate goals.

### Operational Decarbonisation

- Transition from carbon-intensive fuels to lower-emission alternatives, including natural gas and bio-based fuels such as bio-briquettes
- Implementation of energy efficiency improvements across manufacturing processes
- Scaling adoption of renewable energy across operations

## Value Chain Decarbonisation

- Implementation of Product Carbon Footprint (PCF) assessments to evaluate lifecycle emissions
- Increased sourcing of certified sustainable raw materials with lower emission intensity
- Engagement with suppliers covering over 85% of procurement volume, enabling alignment on emission reduction pathways

## Supplier Decarbonisation

- Strengthening supplier engagement through ESG assessments, audits and programmes such as GalSustain to improve environmental performance
- Enhancing traceability and leveraging lifecycle approaches, including Product Carbon Footprint (PCF) assessments, to identify emission hotspots
- Building data visibility and supplier alignment to advance Scope 3 emissions management and targeted interventions

## Circularity and Resource Efficiency

- Diversion of waste from landfill and incineration towards reuse and preprocessing
- Utilisation of internally generated materials as production inputs
- Reduction in raw material intensity through process optimisation

27%

**Renewable energy adoption in FY 2025-26**



**Climate Strategy**

**Our climate strategy is influenced by objectives of the Paris Agreement, supporting global efforts to limit global warming to 1.5°C above pre-industrial levels.**



## Alignment with Global Climate Goals

We adopt a data-driven approach to climate action by leveraging:

- Product carbon footprint assessment to identify high-impact emission hotspots
- Risk and resource assessment tools to evaluate exposure to climate-related dependencies
- Internal monitoring systems and performance indicators aligned with global disclosure frameworks

This enables us to align our transition pathway with scientific consensus and continuously refine our decarbonisation strategy.

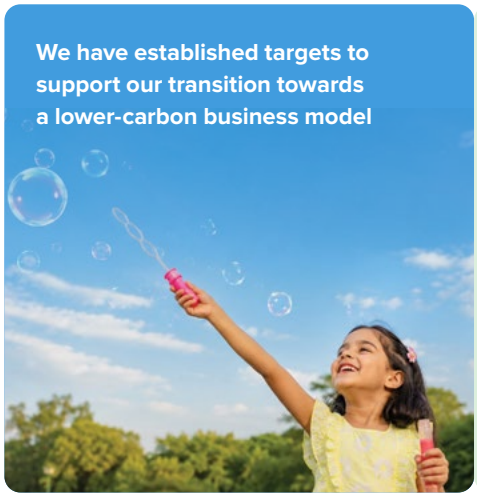
## Climate Leadership and Accountability

Climate action at Galaxy is driven through clearly defined roles and cross-functional ownership, ensuring effective implementation of our transition strategy.

- Oversight is provided through the Sustainability Committee, which reviews climate performance, targets and progress
- Implementation is driven by teams across operations, R&D, procurement and supply chain, ensuring integration into core business functions
- Climate considerations are embedded into strategic planning, capital allocation and operational decision-making

This integrated approach ensures accountability, alignment and consistent execution across the organisation.

## Targets and Progress




| Targets | Progress |
|---|---|
| • Reduction in GHG emissions intensity across Scope 1, Scope 2 **40% by FY 2029-30** | Emissions measurement across Scope 1, Scope 2 and key Scope 3 categories |
| • Increase in renewable energy share across operations | Product-level emissions insights through PCF assessments |
| • Reduction in fossil fuel dependency through fuel transition initiatives | Supplier engagement and performance monitoring |

**40%**
**Scope 1 and 2 Emissions intensity reduction target**

**27%**
**Renewable electricity share**

**All operations**
**Covered across Scope 1, 2 and key Scope 3 categories**

### Investment in Decarbonisation

We continue to invest in climate-related initiatives to support our transition pathway, including:

- Increased expenses to increase the share of renewable energy
- Fuel transition and process optimisation projects
- Circularity and material efficiency initiatives

### Internal Carbon Pricing

We are progressively incorporating an internal (shadow) carbon price into investment screening to factor potential carbon costs into decision-making. This is applied in evaluating energy transition and process optimisation projects, such as renewable energy adoption, fuel switching and efficiency improvements, enabling prioritisation of lower-carbon, cost-resilient investments aligned with our decarbonisation strategy.

### Integration with Business Strategy

Our climate transition strategy is embedded within our broader business priorities, particularly through:

- Sustainable product innovation, driven by green chemistry principles
- Responsible sourcing and traceability initiatives
- Operational excellence and resource efficiency programmes

By integrating climate considerations into our growth strategy, we are strengthening our ability to deliver sustainable solutions while reducing environmental impact.



# Energy Management

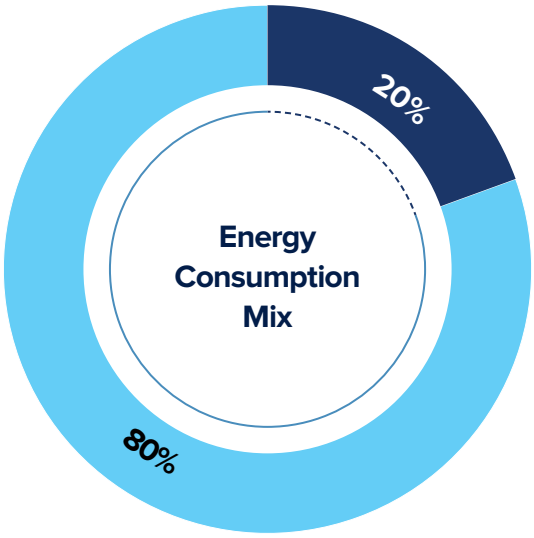
At Galaxy, improving operational efficiency and optimising energy use across manufacturing processes are key priorities. We take a structured approach to reducing energy intensity through continuous improvement initiatives, while progressively incorporating lower-emission energy sources into our operations.

This enables us to enhance overall performance, lower our environmental footprint, and support our transition toward more sustainable operations.

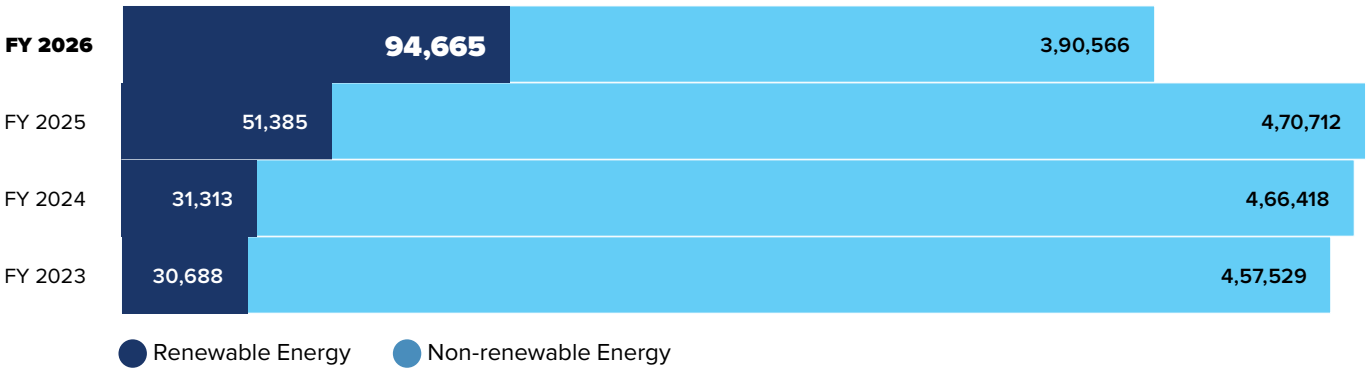
## Energy Consumption and Mix

Our energy consumption includes electricity, thermal energy and process fuels, sourced from both renewable and conventional sources.

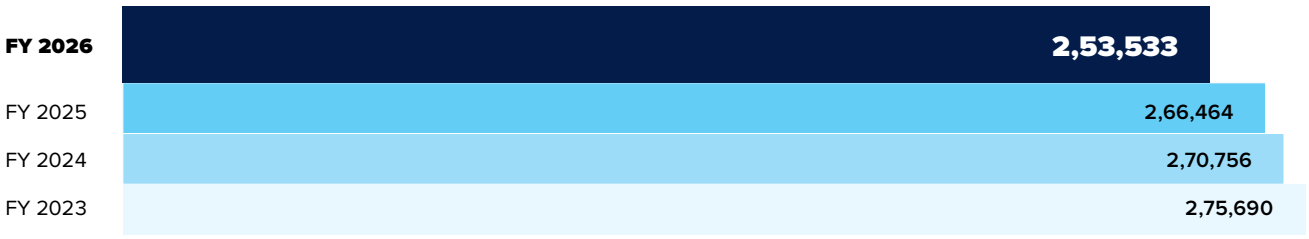
| Energy Category (in GJ) | Consumed |
|---|---|
| **Renewable Energy (RE)** | |
| Purchased and self-generated electricity | 62,101 |
| Bio-based Fuels | 32,564 |
| **Total Renewable Energy** | **94,665** |
| Grid Electricity | 1,69,597 |
| Natural Gas | 2,11,643 |
| Other Fuels | 9,326 |
| **Total Non-Renewable Energy** | **3,90,566** |
| **Total Energy** | **4,85,231** |



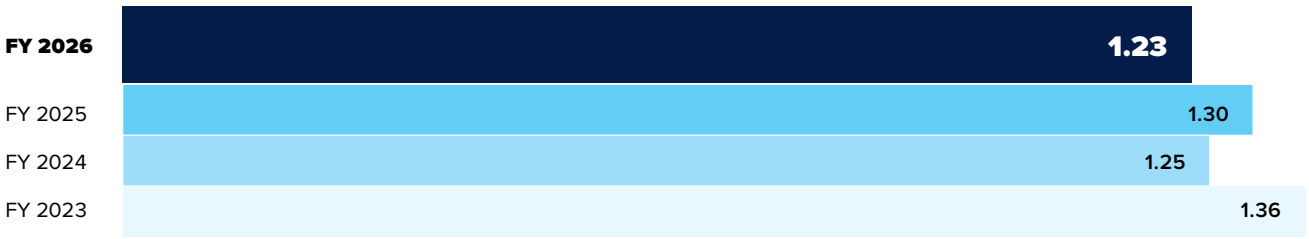

## Renewable and Non-renewable Energy Share (GJ)



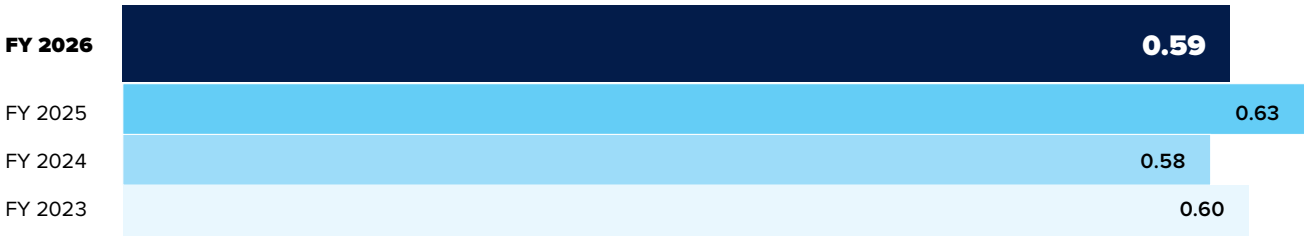
## Total Fuel Consumption for Heating/Cooling/Steam (GJ)




## Energy Intensity (Per Unit of Production/Output GJ/MT)




## Specific Electricity Consumption (GJ/MT)






## Energy Efficiency and Optimisation

We implement various initiatives to improve energy performance across operations.

- 212 MWh energy savings achieved through conservation initiatives
- Process optimisation and heat recovery improvements
- Upgradation of energy-efficient equipment
- Optimisation of utilities and reduction of system losses

These initiatives are driven through continuous improvement programmes and operational excellence frameworks.

**212 MWh**
Energy savings

**5%**
Reduction in energy intensity (YoY)

## Fuel Optimisation

We optimise fuel usage across operations by improving combustion efficiency and progressively increasing the use of lower-emission fuels where feasible.

- Integration of natural gas and bio-based fuels in select operations
- Reduction in fuel consumption through process efficiency improvements
- Continuous evaluation of fuel mix to enhance performance

**2,223 MT**
Increase in use of lower-emission fuels

## Renewable Energy Integration

We are increasing the share of renewable energy across our complete operations through a combination of on-site generation and procurement.

- Integration of renewable electricity across operational locations into the energy mix
- Contribution to avoided emissions of approximately 12,277 $tCO_2e$
- Renewable energy initiatives implemented across applicable operational locations within Galaxy's reporting boundary

**27%**
Renewable electricity share

**12,277 $tCO_2e$**
Emissions avoided

## Energy Measurement and Methodology

We follow a structured methodology to ensure accurate measurement and reporting of energy consumption and savings:

- Energy reductions are calculated by comparing baseline and post-implementation performance
- Baselines are derived from historical operating data and defined benchmarks
- Energy conversion is based on calorific values from recognised sources such as the Bureau of Energy Efficiency (BEE)
- Standard conversion factors are applied for fuels and electricity

**Energy sources considered include**

- Furnace oil, diesel and other process fuels (where applicable)
- Natural gas and bio-based fuels
- Grid and renewable electricity



# GHG Emissions and Decarbonisation

## Our Approach

We quantify and manage greenhouse gas (GHG) emissions across our operations and value chain to improve transparency and support informed decision-making.

Our focus is on strengthening emissions measurement, identifying key emission sources and tracking performance over time.

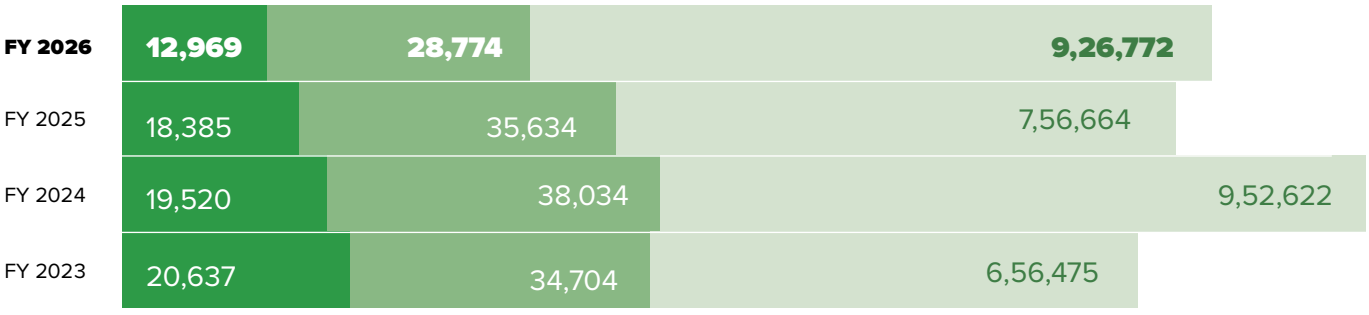
## GHG Emissions Profile

We report emissions across:

**Scope 1**
Direct emissions from fuel use and operations

**Scope 2**
Indirect emissions from purchased electricity

**Scope 3**
Indirect emissions across the value chain




**9,68,515** $tCO_2e$
Total GHG emissions

**12,969** $tCO_2e$
Scope 1 emissions

**28,774** $tCO_2e$
Scope 2 emissions

**9,26,772** $tCO_2e$
Scope 3 emissions

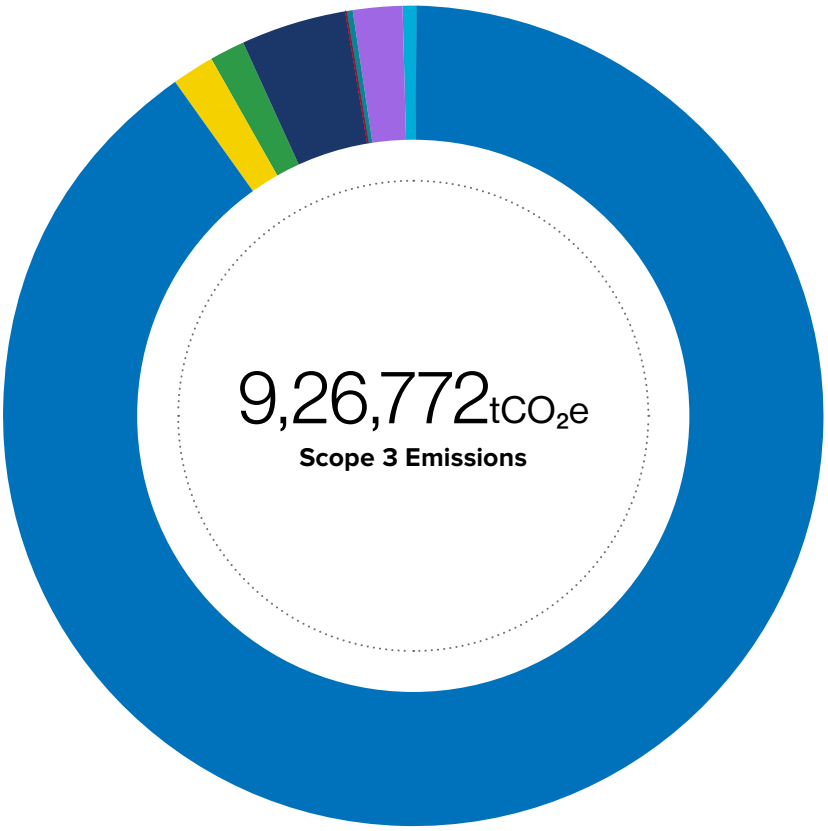
99%

**Coverage: Scope 1, 2 and key Scope 3**



| Scope 3 Category | | Emissions | | | |
|---|---|---|---|---|---|
| | | FY 2022-23 | FY 2023-24 | FY 2024-25 | FY 2025-26 |
| 1 | Purchased Goods and Services | 6,12,596 | 9,06,791 | 6,41,409 | **8,33,937** |
| 2 | Capital Goods | 11,206 | 6,077 | 26,370 | **14,035** |
| 3 | Fuel and Energy-related Activities | Not reported | 15 | 17,698 | **14,081** |
| 4 | Upstream Transportation and Distribution | 7,260 | 8,250 | 35,251 | **37,357** |
| 5 | Waste Generated in Operations | Not reported | 330 | 566 | **582** |
| 6 | Business Travel | 582 | 909 | 1,437 | **1,329** |
| 7 | Employee Commuting | 918 | 968 | 739 | **1,242** |
| 9 | Downstream Transportation and Distribution | 23,913 | 29,283 | 28,253 | **17,895** |
| 12 | End of Life of Sold Product | Not reported | Not reported | 4,940 | **6,314** |

Scope 3 emissions remain a key focus area due to their linkage with raw material sourcing.




## Emissions Measurement and Analysis

We adopt a lifecycle-based perspective to understand emissions across our products and operations.

- Use of Product Carbon Footprint (PCF) to assess lifecycle emissions
- Identification of emission hotspots across raw materials, energy and processes
- Continuous refinement of data quality and coverage

This enables more targeted actions across operations and value chain.

94%

**of SKU PCF computed**

## Operational Emission Reduction Measures

We implement operational measures to improve emissions performance:

- Energy efficiency improvements across manufacturing
- Optimisation of fuel use and process conditions
- Integration of renewable energy into operations
- Focus on direct emissions reduction first, with offsets/removals considered only for residual emissions
- Developing an internal framework to define role, limits and governance of offsets in the decarbonisation pathway

## Value Chain Emissions Management

We extend emissions management beyond operations by engaging with suppliers and improving material-related impacts.

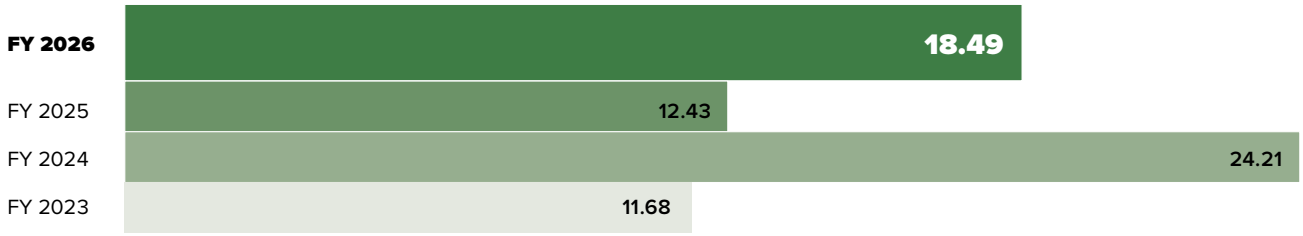
- Inclusion of sustainability parameters in supplier assessments
- Focus on improving sourcing practices and material efficiency

75%

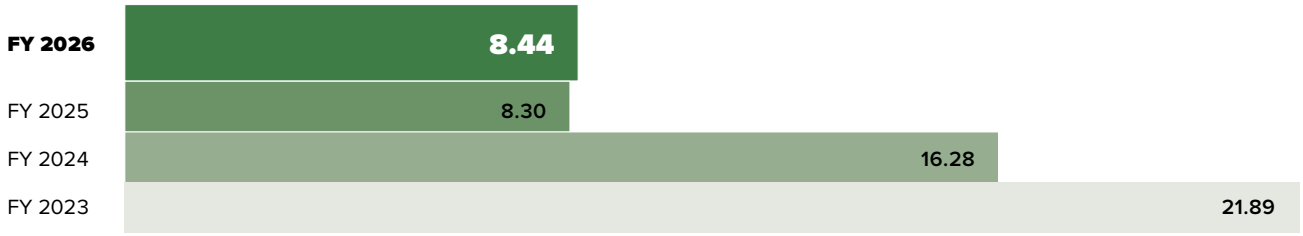
**Targeted supplier engagement across procurement volume**



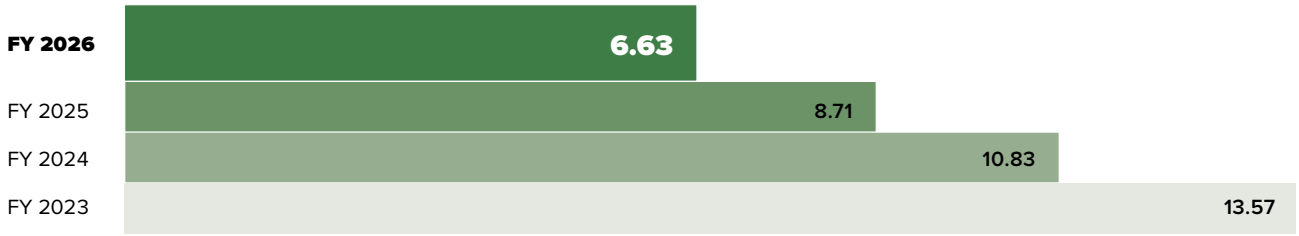
## Nitrogen Oxides (NOx) (tonnes)




## Sulphur Oxides (SOx) (tonnes)




## Particulate Matter (PM) (tonnes)



# Material Management

We manage materials through a lifecycle-based approach across our complete operations and value chain, focusing on responsible sourcing, traceability, material efficiency, circularity and resource optimisation to strengthen sustainability performance and supply chain resilience.



## Sustainable Sourcing and Traceability

Responsible sourcing of palm-based derivatives and other critical raw materials remains integral to our material management approach. We strengthen supply chain transparency through traceability systems, responsible sourcing practices and supplier engagement programmes.

### Our approach incorporates

- 99.7% traceability to mill level (target: 100% by 2027)
- 57% traceability to plantation level Interim target 60% by 2027; long-term target 75% by 2030.
- No Deforestation, No Peat and No Exploitation (NDPE) principles
- RSPO-certified sourcing mechanisms
- ISCC PLUS certification supporting traceable bio-based and circular feedstocks
- 79.1 Sustainable Palm Index (SPI)
- Supplier engagement
- Product Carbon Footprint (PCF) considerations across priority value chains

## Material Usage and Efficiency

We continue strengthening material efficiency through process optimisation, yield improvement and resource utilisation initiatives.

### Material optimisation priorities include

- Conversion efficiency improvement
- Yield enhancement and material loss reduction
- Reduction in impurities
- Manufacturing optimisation initiatives
- R&D-led process improvements
- Renewable feedstock integration

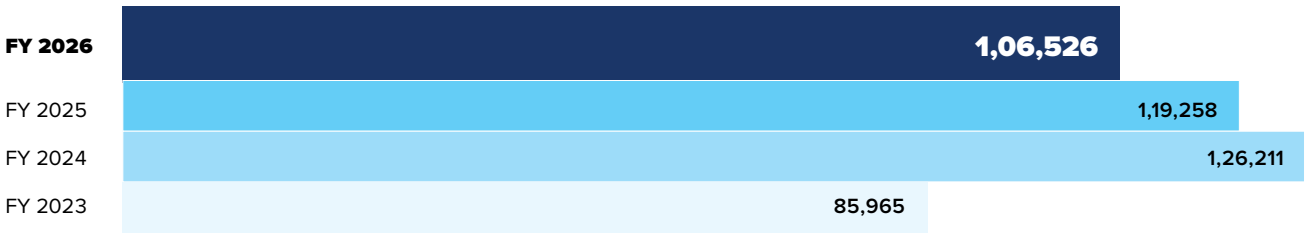
**Material Footprint**

1,06,526 MT

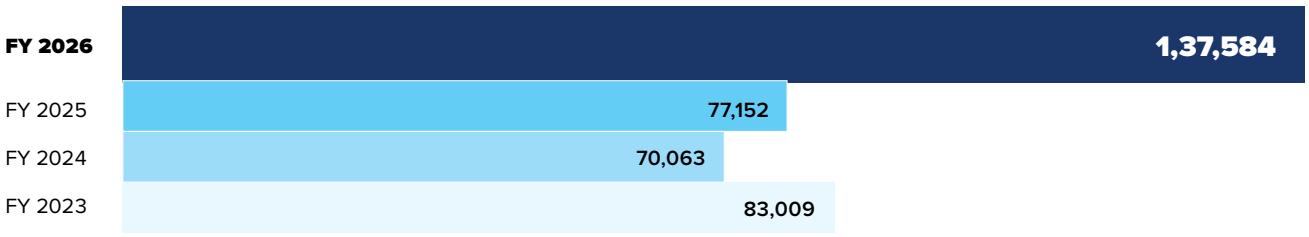
**Increasing share of renewable feedstock**



## Total Renewable Material Used (MT)




## Total Non-renewable Material Used (MT)




### Circularity and By-product Utilisation

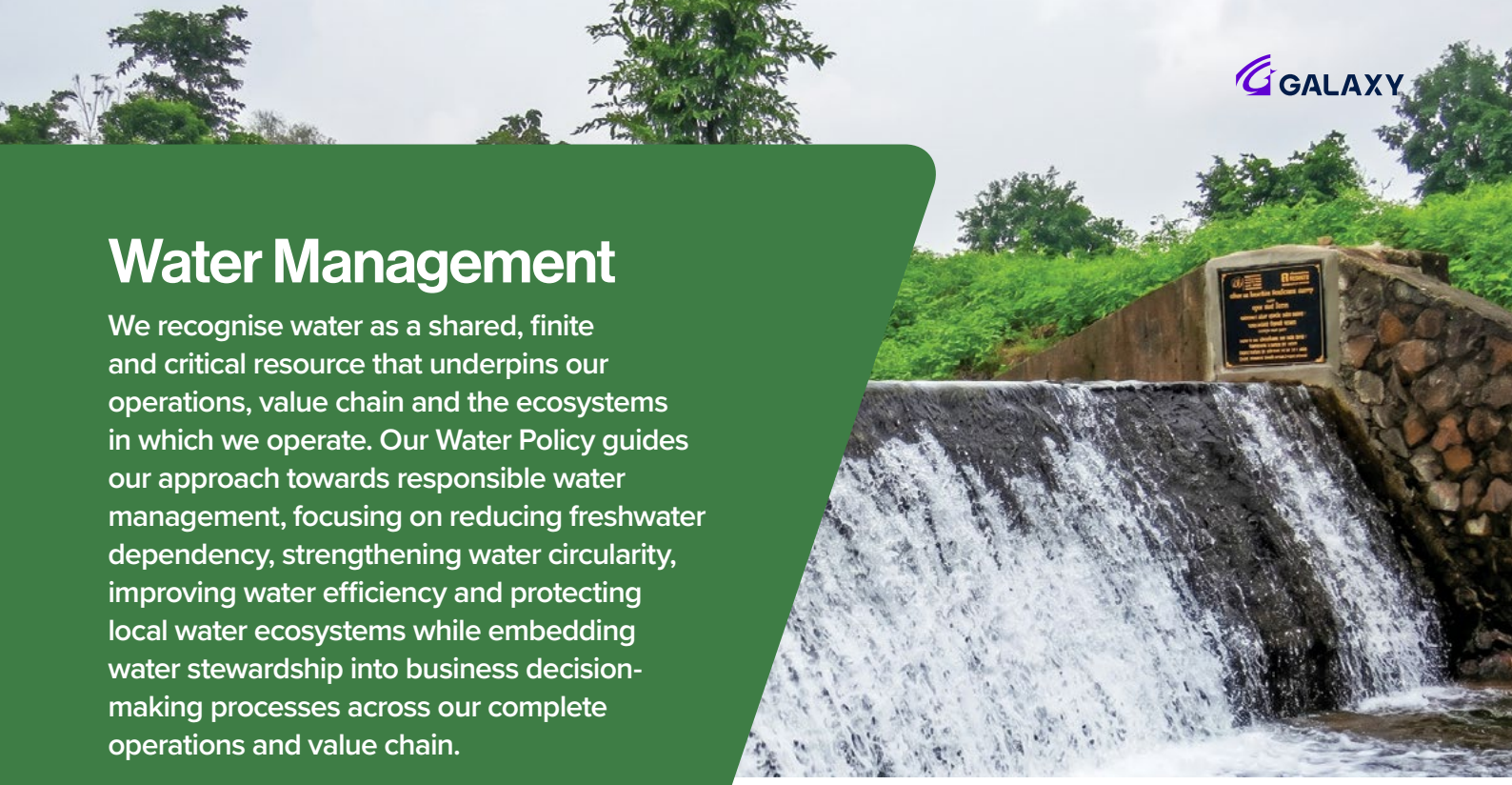
We continue strengthening circularity through resource recovery, by-product utilisation and increased integration of renewable and circular feedstocks.

### Key focus areas include:

- Internal reuse of material streams
- Reduction in virgin material dependence
- ISCC PLUS-enabled circular feedstock traceability
- Alignment with circularity priorities and waste utilisation initiatives
- EPR declaration and regulatory compliance

# RSPO MB raw material





# Water Management

We recognise water as a shared, finite and critical resource that underpins our operations, value chain and the ecosystems in which we operate. Our Water Policy guides our approach towards responsible water management, focusing on reducing freshwater dependency, strengthening water circularity, improving water efficiency and protecting local water ecosystems while embedding water stewardship into business decision-making processes across our complete operations and value chain.

**Our water stewardship ambition is aligned with our broader sustainability agenda and supports responsible resource management priorities under recognised sustainability frameworks, including EcoVadis principles.**

**Through defined targets towards reducing third-party water withdrawal and progressing towards becoming two times water positive, we continue strengthening a resource-efficient and resilient operating model while supporting ecosystem protection and community water security.**

## Our Approach to Water Stewardship

Our approach to water stewardship is structured across four key pillars:

- **Optimising water use efficiency** through process optimisation, reduction of freshwater dependency and integration of rainwater harvesting
- **Strengthening water management systems** through standardised procedures, digital monitoring and alignment with global frameworks
- **Protecting local water ecosystems** by assessing risks at the basin level and implementing mitigation measures
- **Advancing stakeholder collaboration** across employees, suppliers, customers, communities and regulators to promote shared water resilience

## Our Interaction with Water

We interact with water across multiple stages of our operations, reflecting its criticality in manufacturing and auxiliary processes:

- As a raw material and product constituent
- As a reaction medium in manufacturing processes
- For energy transfer through boilers and steam systems
- As a cooling medium in utilities
- For cleaning and sanitation across facilities
- For pollution control in scrubbers and treatment systems
- For domestic consumption (drinking, sanitation and canteen use)
- For greenbelt development and landscaping

This multi-layered interaction highlights the importance of managing water efficiently across its lifecycle within our operations.

## Water Withdrawal, Consumption, Discharge and Management Systems

We manage our water balance through a combination of diversified sourcing, circular usage and structured monitoring systems.

**Our various sources of water that are being used in operations includes**

1. Authorised third-party suppliers
2. Recycled water after treating our process effluents
3. Rainwater harvesting systems

**Water Withdrawal, Water Discharge and Circularity**

| Category | Source | All Areas (Freshwater) | All Areas (other Water) | Water Stress Areas (Freshwater) | Water Stress Areas (other Water) |
|---|---|---|---|---|---|
| Water Withdrawal | Surface water (RWH) | 17.71 | 0 | 0.37 | 0 |
| | Groundwater | 0 | 0 | 0 | 0 |
| | Seawater | 0 | 0 | 0 | 0 |
| | Produced Water | 0 | 0 | 0 | 0 |
| | Third-party Water | 502.59 | 0 | 301.91 | 0 |
| | Total | 520.3 | 0 | 302.28 | 0 |
| Water Discharge and Circularity | **Total** | **520.3** | **—** | **302.28** | **—** |
| | Surface water | 0 | 0 | 0 | 0 |
| | Groundwater | 0 | 0 | 0 | 0 |
| | Seawater | 0 | 0 | 0 | 0 |
| | Third-party Water | 0.98 ML | 7.03 ML | 0 | 3.2 ML |
| | **Total** | **0.98 ML** | **7.03 ML** | **0** | **3.2 ML** |

### Total Water Withdrawal

**520.3** ML




### Total Water Discharge and Circularity

**8.01** ML




Non-water-stress Sites  Water-stress Sites

### Water Consumption

**Water is consumed across**

- Product formulation and process integration
- Utility operations such as cooling and steam generation
- Cleaning and sanitation processes
- Domestic and landscaping applications

### All Sites Water Consumption

**512.28** ML

### All Water stress sites water consumption

**298.99** ML

**We have adopted a circular approach to water management**

- A significant proportion of our operational sites operate under Zero Liquid Discharge (ZLD) principle
- Treated wastewater is recycled and reused across operations, including utility and greenbelt applications
- Wastewater streams from STP and ETP are treated and either recycled for internal use or discharged through appropriate channels in line with applicable requirements
- Recycle and Reuse of treated waste-water has enabled a reduction in freshwater withdrawal by 21.84%, while rainwater harvesting contributed approximately 3.4% of total water withdrawn.
- As per our internal calculation, we are 1.8 times water positive.

**Management Systems and Monitoring**

- Implementation of ISO 46001 Water Efficiency Management Systems across sites.
- Integration of ISO 14001 environmental management systems
- Deployment of digital monitoring tools and online analysers for real-time tracking
- Internal and external audits, regular sustainability monthly meetings, sustainability cell quarterly meeting, including regulatory compliance audits and customer assessments

## Water-related Risk Assessment

We adopt a forward-looking approach to identify and assess water-related risks across our operations and value chain. Our methodology integrates internationally recognised water risk assessment tools such as WRI Aqueduct and WWF Water Risk Filter, along with standards such as ISO 14001 and ISO 46001. These enable assessment of water risks at both site and basin levels, considering water stress, climate variability and regulatory exposure.

Water-related dependencies, impacts, risks and opportunities are identified through a comprehensive process that includes environmental mapping, scenario analysis and stakeholder engagement. Risks are evaluated based on likelihood, impact severity, financial implications and stakeholder sensitivity, enabling prioritisation of risks.

Key risks include physical risks such as water scarcity and flooding, regulatory risks related to tariffs and allocation limits, operational risks linked to water quality, and value chain risks arising from supplier exposure and evolving customer expectations. These risks are continuously monitored and integrated into business planning to strengthen resilience.

## Addressing Water-related Impacts

Water-related impacts are managed through a combination of technological interventions, process optimisation and value chain engagement, guided by the 3R approach, reduce, reuse and recycle.

At an operational level, efforts are directed towards reducing water intensity through process optimisation and efficiency improvements. Reuse and recycle practices are strengthened through ZLD systems and advanced treatment technologies, enabling recovery of water from process streams and reducing dependence on freshwater sources.

Continuous improvement initiatives support tighter control over losses and improve overall water productivity.

Beyond operations, water stewardship is extended at a catchment-level through initiatives such as restoration of water bodies, construction of water retention structures and community-based rainwater harvesting programmes, contributing to local water availability.

Supplier engagement remains a key lever, with a focus on strengthening practices aligned with the 3R principles, including efficient water use, reuse and responsible discharge management. This helps address upstream risks and supports more consistent water management across the value chain.

## Water Quality and Discharge Standards

We maintain stringent controls over effluent quality to prevent adverse environmental impacts. Our effluent management approach is guided by:

- Compliance with local regulatory discharge standards and consent conditions
- Adherence to standards prescribed by Common Effluent Treatment Plants (CETPs)
- Internal protocols for monitoring and controlling water quality
- Effluents generated from operations may contain inorganic constituents such as salts, sulphates, chlorides, phosphates, nitrates and total dissolved solids (TDS). If unmanaged, these can impact aquatic ecosystems, soil quality and groundwater integrity

**To mitigate these risks, we deploy**

- Advanced treatment systems, including membrane-based technologies
- Continuous monitoring through online analysers and laboratory testing
- ZLD systems to eliminate liquid discharge wherever feasible

Our approach ensures that treated water meets or exceeds applicable standards before discharge or reuse, while considering the sensitivity of receiving water bodies.

## Water Targets and Strategic Alignment

We follow a structured, multi-stage process for setting water-related targets, ensuring alignment with business priorities, regulatory requirements and local water stress conditions.

**Target-setting process**

- Baseline assessment using internal data, peer benchmarking and stakeholder inputs
- Cross-functional evaluation and prioritisation of targets
- Alignment with organisational goals and operational feasibility
- Approval at management and board levels

## Water Stewardship Initiatives

We are advancing water stewardship through targeted, high-impact interventions across operations and beyond the fence.

**Zero Liquid Discharge (ZLD)**
ZLD systems across key sites enable recovery and reuse of treated effluent, supporting water circularity and reducing freshwater withdrawal by 21.84%.

**Rainwater Harvesting**
Expanded rainwater harvesting systems contribute approximately 3.4% of total water withdrawn enhancing water availability and reducing dependence on external sources.

**Process Water Efficiency Projects**
Continuous optimisation initiatives, including condensate recovery and utility integration, drive measurable reductions in water intensity across operations.

**ISO 46001 Implementation**
Implementation of ISO 46001 establishes a structured framework for water baselining, monitoring and continuous efficiency improvement across sites.

**Digital Water Monitoring**
Deployment of automation and real-time monitoring systems enhances visibility, control and optimisation of water consumption and discharge.

**Advanced Treatment Technologies**
Adoption of membrane-based systems and improved treatment processes enables higher reuse, improved effluent quality and reduced environmental risk.

**Community and Basin-level Interventions**
Initiatives such as pond restoration, desilting and community rainwater harvesting support basin recharge and contribute to progress towards water positivity.

**Supplier Water Stewardship Programme**
Training and engagement initiatives strengthen supplier capability, improving value chain resilience and alignment with our water stewardship goals.

## Internal Water Pricing

We have established an Internal Water Pricing (IWP) mechanism to assign an economic value to water by incorporating costs associated with water sourcing, treatment, effluent management and utility operations. The pricing is derived using a standardised methodology of total water-related expenditure and volume of water treated, enabling consistent benchmarking across sites. With estimated investments towards water efficiency and treatment infrastructure, this mechanism enables us to quantify financial exposure to water risks, prioritise efficiency projects and strengthen long-term operational resilience in a context of increasing regulatory and climate-related water stress.

## Water Stewardship and Accountability

Water management is reviewed at the leadership level through the sustainability cell, where site-wise consumption, efficiency trends and risk exposure are discussed at defined intervals. This enables closer oversight of high-consumption locations such as Taloja, Tarapur, Jhagadia and GCE where water intensity and regulatory requirements are more critical.

Plant teams are accountable for implementing water management practices, including monitoring intake, reuse and discharge parameters. Performance is tracked through defined internal metrics, enabling the implementation of corrective actions, where required.

## Investment in Water Stewardship

We are improving water stewardship by strengthening water treatment systems, enhancing recovery from process streams and reducing freshwater intake through recycling initiatives.

Priority is given to locations with higher water dependency or regulatory sensitivity, ensuring that investments are aligned with both operational needs and long-term resource availability.

## Integration with Business Strategy

Water considerations are embedded into operational planning, particularly for manufacturing and capacity expansion decisions. Factors such as water availability, discharge norms and local regulatory requirements are assessed during project planning and process design.

Water-related risks, including supply constraints and compliance requirements, are evaluated as part of broader operational risk assessments. This ensures continuity of operations while maintaining alignment with evolving regulatory expectations and priorities for resource efficiency.

### Key Water Targets

5%

**Reduction in third-party water withdrawal intensity**

2X

**Water positivity**

ISO 46001

**implementation across GSL, India and GCE, Egypt**



# Waste Management

We approach waste management through a circular economy lens, focusing on minimising waste generation, maximising resource recovery and reducing environmental impact across our operations.

Our strategy is anchored in transitioning from linear waste disposal practices to circular resource utilisation, with a strong focus on reducing waste at source, enhancing recovery and strengthening value chain integration. We have set a clear ambition to achieve 90% waste circularity by 2030, while progressing towards zero waste to landfill and incineration, reinforcing our commitment to sustainable manufacturing and resource efficiency.



## Waste Management Strategy

Our waste management strategy is built on the principles of circularity, prevention and value recovery, with a clear shift towards reducing waste generation intensity and improving resource efficiency.

We are strengthening our focus on waste generation reduction and intensity improvement, moving beyond circularity metrics to drive absolute reductions in waste generated across operations.




- **Prevention** at source through process design, innovation and green chemistry
- **Reduction** of waste intensity through operational efficiency and material optimisation
- **Reuse** and recycling of waste streams within and beyond operations
- **Responsible** disposal through authorised channels as a last resort

## Operational Integration

Our strategy is operationalised through:

- Cost Efficiency Projects (CEP) identifying and implementing site-level waste reduction projects
- WESAP – Waste Elimination Suggestion Award Programme, enabling employee-driven waste reduction initiatives
- Cross-functional collaboration between operations, conversion and innovation teams to redesign processes and minimise waste generation

We are also targeting high-volume waste streams through site-specific interventions, focused on reducing waste at the point of generation and identifying opportunities for in-process reuse.




## Driving Circularity and Decarbonisation

Our waste management approach is closely integrated with our climate strategy. By diverting waste from landfill and incineration towards reuse and pre-processing, we are able to reduce Scope 3 emissions associated with waste disposal and raw material sourcing.

For instance, initiatives for utilisation of internally generated waste as input material in production processes have reduced dependency on virgin raw materials while lowering overall carbon footprint.

These efforts are further supported by our Product Carbon Footprint (PCF) assessment, which enables us to evaluate emissions across the product lifecycle—including waste generation and end-of-life stages—supporting informed decision-making and alignment with decarbonisation goals.

## Monitoring and Performance Management

We track progress of our circularity goals through monitoring systems:

- Regular waste audits across facilities
- Monthly tracking of waste diversion and circularity performance
- Site-level monitoring of waste generation intensity

**67%**
**of waste is recycled or recovered**

## Waste Stewardship

### Hazardous Waste

Given the nature of our specialty chemical operations, hazardous waste management remains a critical priority. We focus on minimising hazardous waste generation through process innovation, green chemistry principles and material substitution, ensuring that products and processes are designed to reduce harmful by-products at source.

Hazardous waste generated is treated, recycled or disposed of through authorised channels, with strict adherence to regulatory requirements to mitigate risks to human health and the environment.

### Non-hazardous Waste

Non-hazardous waste is managed through segregation, recovery and recycling practices. We actively divert waste from disposal streams by identifying opportunities for reuse within operations and recycling through authorised partners.

Our approach is supported by detailed waste categorisation and monitoring systems, enabling us to track performance across multiple waste streams and improve recovery rates over time.

## Plastic Waste Management

Plastic packaging is a material waste stream within our operations. In compliance with Extended Producer Responsibility (EPR) requirements, we track, report and fulfil obligations across applicable categories.

At the same time, the evolving regulatory landscape and increasing expectations around circularity have introduced operational and compliance considerations across the value chain. Traceability of plastic packaging, particularly in downstream applications, continues to be a constraint due to limited data visibility and fragmented monitoring systems. This is further accentuated in segments involving smaller suppliers, where adoption of traceability solutions and new technologies remains gradual.

Shifts towards higher renewable or recycled content in packaging also present cost and availability challenges, especially in a competitive specialty chemicals market where both domestic and international customer expectations are evolving. In addition, regulatory changes, varying levels of enforcement,

and documentation requirements can create transitional complexities in ensuring consistent compliance.

## Our approach focuses on

- Tracking and reporting plastic packaging across defined EPR categories
- Managing collection, recycling and recovery through authorised partners in line with regulatory requirements
- Strengthening traceability mechanisms across the value chain
- Integrating circularity into packaging design and procurement

## Driving sustainable packaging

Efforts continue to reduce the environmental footprint of packaging through:

- Reduction in virgin plastic usage
- Increasing post-consumer recycled (PCR) content across packaging formats
- Alignment of packaging practices with circular economy principle
- Reducing the environmental footprint of packaging and logistics through material optimisation, efficient packaging design and improved transportation practices.

These efforts contribute to reducing value chain impacts and support broader Scope 3 emissions management.

## Waste Management Initiatives

**Cost Efficiency Projects (CEP)**
Initiatives in different sites focused on reducing waste generation through process optimisation and improved material efficiency.

**(PARIVARTAN WESAP – Waste Elimination Suggestion Award Programme)**
An employee-led platform capturing and implementing waste reduction ideas based on feasibility and impact.

**Process Innovation for Waste Reduction**
Redesign of manufacturing processes to minimise by-product generation and enable reuse of waste streams within operations.

**High-volume Waste Stream Reduction**
Targeted projects to reduce or reuse significant waste streams, including efforts to eliminate landfill disposal of specific process residues.

**Plastic Circularity Initiatives**
Increasing PCR content and reducing virgin plastic usage in packaging to support EPR compliance and circularity goals.

**Supplier Engagement and Circularity Integration**
Engaging suppliers covering over 76% of procurement volume to align on waste reduction, circularity and sustainability practices.

## Types of Waste Generated

| Waste Type | Unit | FY 2022-23 | FY 2023-24 | FY 2024-25 | FY 2025-26 |
|---|---|---|---|---|---|
| Plastic Waste | MT | 468 | 529 | 687 | **813** |
| E-waste | MT | 8.68 | 2.90 | 2.77 | **6.74** |
| Construction and Demolition Waste | MT | 6,382 | 5,260 | 6,493 | **4,177** |
| Biomedical Waste | MT | 0.39 | 0.14 | 0.06 | **0.12** |
| Battery Waste | MT | 9.29 | 10.58 | 22.10 | **7.40** |
| Other Hazardous Waste | MT | 8,277 | 7,414 | 8,536 | **11,953** |
| Other Non-Hazardous Waste | MT | 1,840 | 1,702 | 1,850 | **1,424** |
| **Total Waste Generated** | **MT** | **16,986** | **14,919** | **17,591** | **18,382** |

## Waste Diverted from Disposal

| Parameters | Unit | FY 2022-23 | FY 2023-24 | FY 2024-25 | FY 2025-26 |
|---|---|---|---|---|---|
| Recycled | MT | 4,565 | 4,822 | 3,981 | **4,559** |
| Reused | MT | 8,299 | 6,398 | 8,062 | **6,860** |
| Other Recovery Operations | MT | 435 | — | 1,519 | **838** |
| **Waste Diverted from Disposal** | **MT** | **13,298** | **11,220** | **13,562** | **12,256** |

## Waste Disposed by Nature of Disposal Method

| Parameters | Unit | FY 2022-23 | FY 2023-24 | FY 2024-25 | FY 2025-26 |
|---|---|---|---|---|---|
| Incineration | MT | 2,354 | 3,024 | 3,268 | **5,398** |
| Landfilling | MT | 741 | 675 | 762 | **828** |
| Other Disposal Operations | MT | 592 | — | — | **—** |
| **Total Waste Directed to Disposal** | **MT** | **3,688** | **3,699** | **4,030** | **6,225** |

# Biodiversity

We recognise biodiversity as a critical component of environmental sustainability, closely linked to ecosystem health, resource availability and long-term operational resilience.



## Our Approach

Focuses on minimising ecological impact across operations and value chain, while supporting conservation and restoration initiatives.

All our manufacturing facilities are located within designated industrial zones, ensuring no direct impact on legally protected areas, key biodiversity zones or ecologically sensitive regions. Additionally, none of our operations are located in or near protected areas such as Ramsar sites, UNESCO World Heritage sites or Key Biodiversity Areas, thereby limiting direct biodiversity disturbance.

| Driver | Relevance to Operations and Value Chain | Potential Impacts | Management Approach |
|---|---|---|---|
| **Land-use Change** | Sourcing of palm-based and chemical feedstocks | Deforestation, habitat loss | RSPO certification, NDPE commitments, traceability initiatives |
| **Pollution** | Manufacturing processes and effluent discharge | Water and soil contamination, ecosystem stress | ZLD systems, effluent treatment, waste management practices |
| **Climate Change** | Energy use and emissions across operations and supply chain | Altered ecosystems, biodiversity loss | Decarbonisation initiatives, renewable energy adoption |
| **Resource Use (Water)** | Water-intensive manufacturing processes | Pressure on water ecosystems | Water efficiency, recycling and stewardship initiatives |
| **Invasive Species (Indirect)** | Supply chain and logistics movement | Disruption of local and marine ecosystems | Supplier assessments and responsible sourcing practices |

## Targets and Progress

Kunming-Montreal
GLOBAL BIODIVERSITY FRAMEWORK

**Targets**

We have established clear commitments to improve biodiversity and strengthen ecosystem resilience across our operations and value chain



**Progress**

- Cumulative plantation target of 500,000 trees by 2030
- Commitment to no-deforestation and no ecosystem conversion across key raw material supply chains
- Alignment with the Kunming-Montreal Global Biodiversity Framework

## Biodiversity Risk Assessment and Management

We follow a structured approach to identify, assess and manage biodiversity-related dependencies, impacts and risks across our operations and value chain.

- Assessments conducted annually across operations and value chain
- Use globally accepted risk assessment tools
- Site-specific and regional risk evaluation

**Key risks assessed include**

- Water scarcity and basin-level stress
- Soil health, erosion and land degradation
- Forest productivity and tree cover loss
- Climate variability and extreme events
- Ecosystem condition and biodiversity pressures

This approach enables proactive identification of ecosystem-related risks and supports informed decision-making.

## Biodiversity Management across Operations and Value Chain

We integrate biodiversity consideration across our operations and supply chain to minimise impact and promote conservation.

**At an operational level**

- Maintain greenbelt coverage across sites as per relevant rules and regulations
- Ensure facilities are located in industrial zones to avoid ecological disruption
- Minimise environmental pressures through emissions, waste and water controls

**Across the value chain**

- Implement NDPE (No Deforestation, No Peat, No Exploitation) principles
- Strengthen traceability across mills and plantations
- Engage suppliers and smallholders to adopt forest-friendly practices

These efforts extend biodiversity stewardship beyond our direct operations.

### Targeted Initiatives

**We undertake targeted initiatives to enhance biodiversity and ecosystem quality:**

- Development of greenbelt areas and biodiversity zones within sites
- Plantation of diverse native species, including fruit-bearing and medicinal plants
- Implementation of Miyawaki plantation techniques to accelerate ecosystem restoration
- CSR-led plantation and habitat enhancement programmes
- These initiatives support local flora and fauna, including bird species, while improving ecological balance

## Site-level Biodiversity Considerations

Our operations are located in government-approved industrial areas, ensuring that land use does not overlap with ecologically sensitive zones.

We do not have operations in:

- Protected areas
- Key Biodiversity Areas
- Ramsar or UNESCO-designated sites

At present, no sites are identified with significant adverse biodiversity impacts. We continue to strengthen location-specific assessments to enhance biodiversity risk evaluation over time.

**21,000+**

**Trees planted under biodiversity forest initiatives (legacy projects)**

**3,12,527+**

**Trees planted cumulatively (FY 2025-26)**

**5 lakh**

**Targeted tree plantation by 2030**

