



We are committed to minimising the environmental impact of our operations through responsible and focused practices. Our efforts include optimising energy and water use, ensuring responsible sourcing of raw materials, and implementing initiatives to reduce emissions and waste, guided by clear processes, robust performance monitoring and a culture of continuous improvement.

Focus areas

- Energy management
- Emission control and climate action
- Water management
- Waste management
- Resource management
- Biodiversity and ecosystem conservation

2025 highlights

1.97%

Renewable energy consumption share

72%

Waste recycled or reused

Stakeholders impacted

- Customers
- Government and regulators
- Vendors and suppliers
- Communities
- Investors and shareholders

Material topics associated

- Climate and energy
- Environmental management, regulations and compliance
- Circularity and innovation

Natural capital

Natural capital

Energy management

We work to optimise energy use, improve efficiency and increase the share of renewable energy in our fuel mix. We leverage cross-functional collaboration and data-driven monitoring to minimise energy consumption.



Enhancing energy efficiency across operations

Annual audits driving continual improvements

We conduct comprehensive energy audits at our facilities every year. These assessments reveal inefficiencies, benchmark performance and lead to the development of structured action plans. Insights from audits support ongoing optimisation efforts and reinforce process discipline across units.

Optimising specific energy consumption

Across our global operations, targeted process optimisation initiatives continue to deliver measurable energy efficiency gain. Some examples include:

Castrop-Rauxel, Germany: In collaboration with customers, an energy-optimised crystallisation process was developed to produce naphthalene with a 78°C melting point, reducing specific energy input from 0.6 MWh per tonne of feedstock to approximately 0.41 MWh per tonne of feedstock.

Zelzate, Belgium: Optimisation of heat exchanger 40W500 reduced steam consumption of the W50 reboiler and enabled energy recuperation, resulting in an estimated 64–87 tonnes of CO₂ reduction per year and €11,000–€15,000 per year in steam-related savings.

Visakhapatnam, India: The condensate extraction pump motor (110 kW) was upgraded from IE-2 to IE-3, delivering approximately 3% energy savings.

Atchutapuram, India: Polycarbonate transparent sheets were installed in selected operational areas, to enable daylight use and reduce the need for indoor lighting during daytime.

Hamilton, Canada: Advanced partial electrification of steam generation, supporting lower energy intensity and contributing to reduced emissions.

Cross-functional collaboration enabling targeted actions

Our energy performance enhancements are executed through coordinated efforts between operations, engineering and maintenance teams. Regular senior reviews ensure that the pace of improvement remains aligned with long-term energy reduction goals.

Strengthening the role of renewable energy

Solar power integration expanding clean energy share

Solar installations contribute to reducing our dependence on power grids while supporting a more sustainable energy mix. Within RAIN's Cement segment, captive solar power plants, supported by robust operations and maintenance practices, continue to strengthen clean energy sourcing while complementing ongoing energy conservation initiatives and system upgrades.

Waste Heat Recovery systems enhancing internal generation

Our Waste Heat Recovery systems capture and convert process heat into usable energy, improving efficiency and reducing reliance on external sources.

18.8 MW
Solar power capacity

1.09 Mn MWh
Energy generated from WHR

Advanced monitoring and energy governance

Real-time, data-driven monitoring

Our Energy Management System enables real-time tracking of electrical and thermal energy use. This visibility helps identify deviations, strengthens control, and supports accurate, consistent reporting of energy performance.

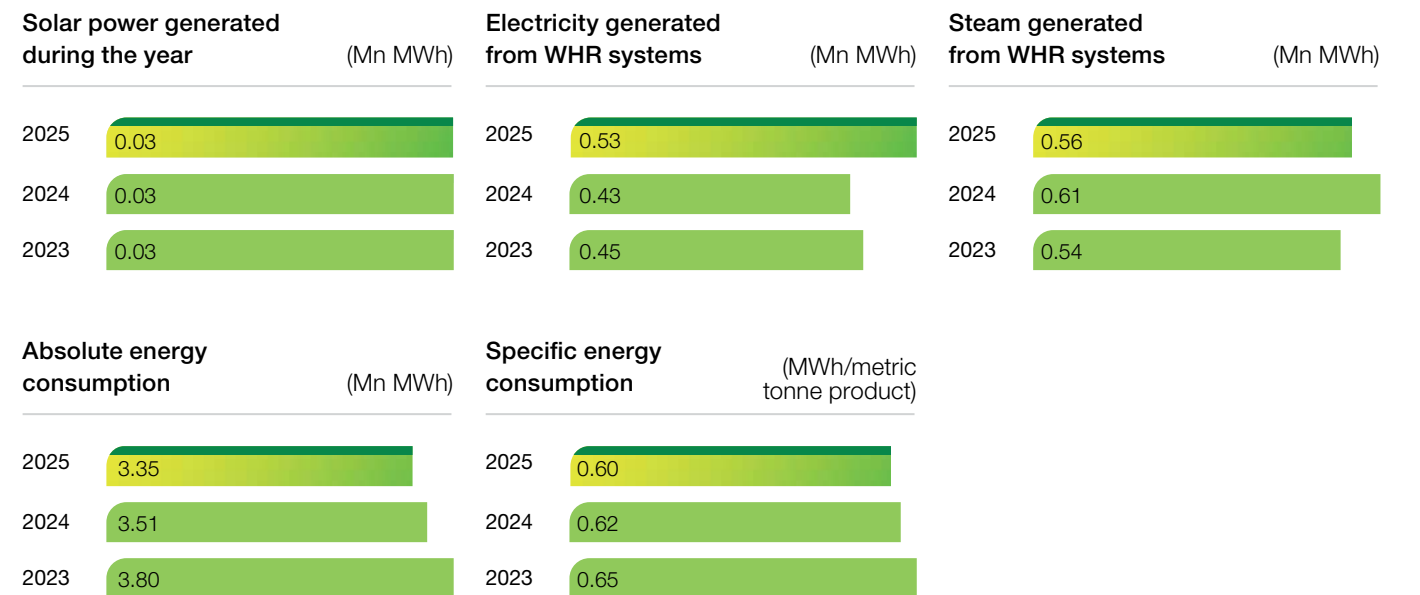
Continuous improvement culture

Insights from monitoring tools and periodic performance reviews inform targeted interventions, deepen operational awareness, and support replication of successful practices across facilities.

ISO 50001

Energy Management System compliant

Our metric map



Looking ahead

Our energy roadmap focuses on expanding renewable energy penetration, deepening process efficiencies and leveraging advanced monitoring tools to further optimise energy consumption across operations.

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Emissions control and climate action

We continue to adopt energy-efficient technologies, improve production processes and build climate resilience across our operations. Transparent reporting on our carbon footprint and progress reflects our ongoing commitment to a low-carbon future.



Advancing Greenhouse Gas (GHG) reduction

Optimising production processes

We continue to integrate cleaner raw materials, such as anhydrous carbon pellets (ACP), along with biochar and bio-oils, resulting in lower process emissions and improved sustainability in production. A techno-economic evaluation of carbon capture, utilisation and storage (CCUS) was also undertaken to assess the feasibility of capturing CO₂ emissions and reducing atmospheric release.

Enhanced monitoring and quantification

Continuous Emission Monitoring Systems (CEMS) with CO₂ analysers are operational across three US facilities, improving data accuracy and strengthening regulatory compliance. Additionally, our Carbon segment facilities in India recently underwent an upgrade to CEMS that improved measurement precision. Emission calculations are further supported by mass-balance methodologies for better emission source understanding.

Energy efficiency improvements reducing emissions

Energy efficiency and fuel optimisation initiatives have translated into tangible reductions in Scope 1 and Scope 2 emissions across operations, driven by the following actions:

- Targeted fuel optimisation at the Atchutapuram, India facility improved vertical shaft operations through modified operating procedures and tighter control of key parameters, resulting in the complete elimination of supplementary LPG and strengthening performance
- Selective equipment upgrades, including the replacement of water pumps with higher-efficiency systems, contributed to lower energy intensity and supported broader emission-reduction outcomes

Mapping our GHG emissions (Scope 3)

Assessing our Scope 3 GHG emissions provides us with a broader understanding of the carbon footprint associated with our upstream and downstream activities across the value chain. This helps identify high-impact categories and guides targeted reduction strategies.

Most relevant categories of Scope 3 GHG emissions are evaluated based on a structured methodology using emission factors from trusted sources, including the US EPA, EU regulatory bodies, Indian government reports and research publications.

Scope 3 emissions in Carbon and Advanced Materials segments

Indirect emissions from our sold products and purchased materials make up a large part of our carbon footprint, representing 90% of our total Scope 1, 2 and 3 GHG emissions.

12.20 Mn tonnes CO₂e

Scope 3 GHG emissions from the Carbon and Advanced Materials segments

Most contributing Scope 3 categories

Scope 3 categories	Remarks	Percentage of contribution
Category 11 Use of sold products	<ul style="list-style-type: none"> • Related to anode consumption in the aluminium industry 	58.8%
Category 1 Purchased goods and services	<ul style="list-style-type: none"> • Related to the processing of raw materials and certain operating materials 	24.8%
Category 12 End-of-life treatment of sold products	<ul style="list-style-type: none"> • Related to the incineration of resins and carbon black 	8.4%
Category 10 Processing of sold products	<ul style="list-style-type: none"> • Related to anode production for the aluminium industry 	4.2%
Category 4 Upstream transportation and distribution	<ul style="list-style-type: none"> • Includes multiple assumptions based on country average distance and worst-case assumption for mode of transport 	2.1%
Category 9 Downstream transportation and distribution	<ul style="list-style-type: none"> • Includes multiple assumptions based on country average distance and worst-case assumption for mode of transport 	1.1%

Natural capital

Scope 3 emissions in Cement segment

The Scope 3 emissions from transportation, energy use and raw material procurement make up 8% of our total Scope 1, 2 and 3 emissions.

0.15 Mn tonnes CO₂e
Scope 3 GHG emissions from the Cement segment

Most contributing Scope 3 categories

Scope 3 categories	Remarks	Percentage of contribution
Category 3 Fuel- and energy-related activities	<ul style="list-style-type: none"> All upstream fuel and energy-related activities 	48.9%
Category 4 Upstream transportation and distribution	<ul style="list-style-type: none"> All upstream transportation-related activities (including dispatch to dealers since the Cement segment is paying) 	24.7%
Category 10 Processing of sold products	<ul style="list-style-type: none"> All sold products are considered as conversions from cement to concrete 	13.2%
Category 1 Purchased goods and services	<ul style="list-style-type: none"> Included: Phosphogypsum Limestone is excluded since it is Scope 1 for the Cement segment 	12.0%
Category 5 Waste from own operations	<ul style="list-style-type: none"> Hazardous and non-hazardous waste which is being sold 	1.1%

Managing non-GHG emissions

Advanced monitoring systems

Our CEMS at the Zelzate, Belgium plant is integrated with local authorities for real-time emission tracking, ensuring accuracy and regulatory compliance. Additionally, our monitoring framework is further strengthened by annual emission reviews at our ISO-certified sites and localised tracking processes across all our global facilities.

Technology for pollution control

We effectively reduced SO_x emissions by deploying advanced technologies, such as flue gas desulphurisation (FGD), pyroscrubbers and baghouses. Additionally, a de-NO_x system installed at our BTX incinerator in Zelzate curtails NO_x emissions, while the newly commissioned VOC control systems at the Hamilton, Canada site minimise volatile organic compounds.

Proactive equipment maintenance

We prevent unintended emissions through leakage detection and repair programmes implemented at our Castrop-Rauxel, Germany and Hamilton facilities. Furthermore, the phased replacement of outdated tank equipment at our Cherepovets, Russia facility ensures compliance with updated safety standards and reduces air pollution risks.

Collaborations and strategic measures

Collaborations with leading research organisations, such as the partnership with CSIR-NEERI for pollution control

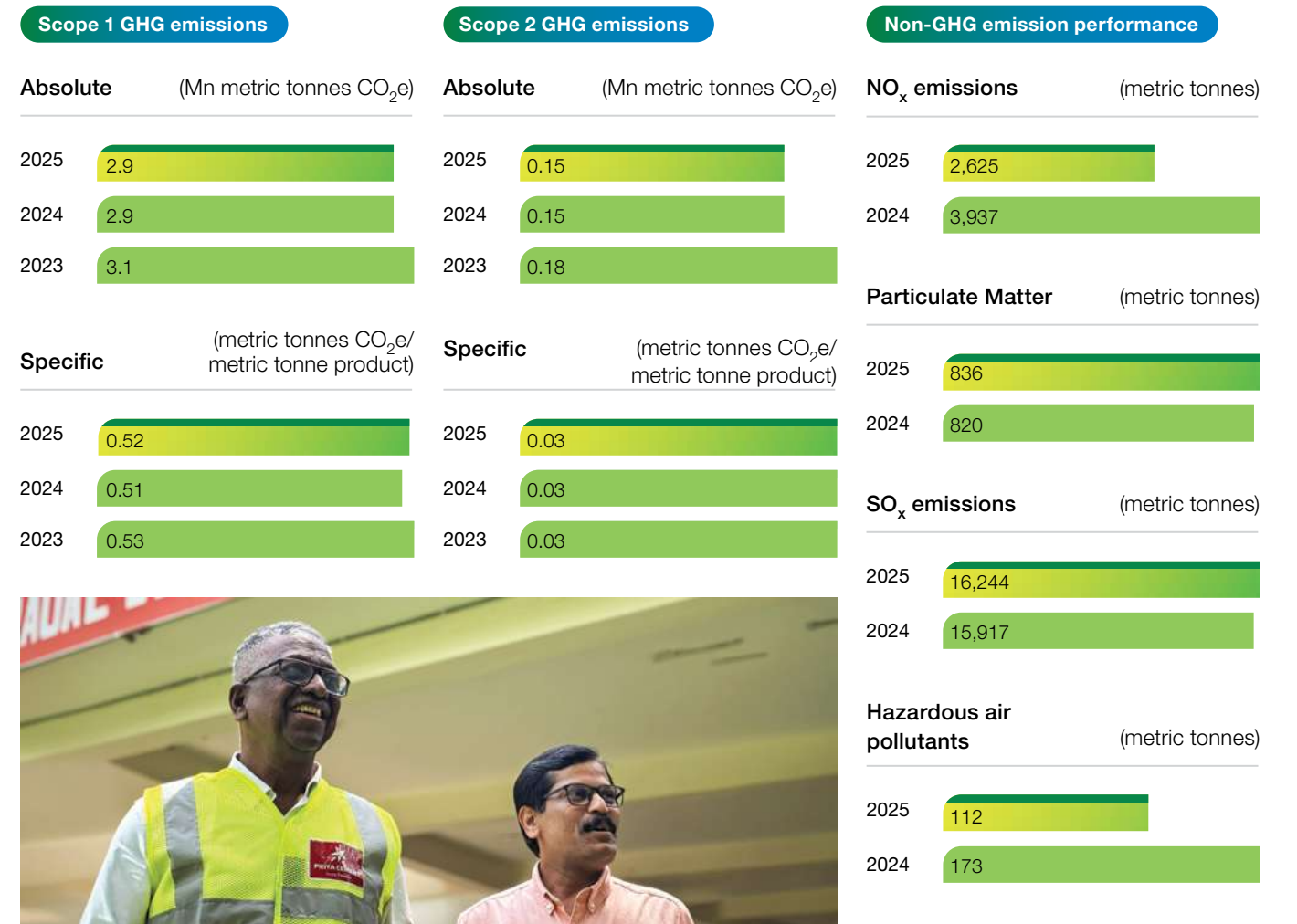
at our Carbon plants in India, have enhanced our efforts. The consolidation of emission sources at our Carbon plant in Russia has also reduced total emission volumes and simplified management.

Particulate Matter (PM) control

We effectively control PM emissions using advanced technologies, including reverse air bag filters (RABF) and electrostatic precipitators (ESP). These systems ensure efficient filtration and capture of fine particles, maintaining regulatory compliance and minimising environmental impact.

Our metric map

GHG and non-GHG emission performance





Case study

Powering a circular battery materials future through partnership

Objective

As Canada's zero-emission vehicle market expands, demand for sustainably sourced battery materials is intensifying. This growth underscores the need to curb reliance on newly mined graphite while developing domestic, circular supply chains capable of supporting electromobility and stationary energy storage. We recognised that addressing these interconnected challenges required collaboration across complementary capabilities rather than a standalone approach.

Actions taken

To advance this objective, Rain Carbon Canada Inc. (RAIN) and Green Graphite Technologies Inc. (GGT) have partnered under the Sustainable Manufacturing Challenge grant from Next Generation Manufacturing Canada (NGen) to advance the development of sustainable graphite

anode active materials (GAAMs) for lithium-ion batteries (LiBs).

- Led feedstock conversion using our LIONCOAT® carbon precursor materials and application process technology
- Integrated Green Graphite Technologies Inc's GraphPure™ and GraphRenew™ purification technologies
- Undertook pilot-scale production and testing at our Technology Innovation Centre in Hamilton, Canada

Impact

By 2030, the project could deliver two new graphite product lines, built on processes designed to reduce waste, increase efficiency and reduce carbon footprint, while generating new IP, expertise and employment across Canada's battery materials sector.

Looking ahead

Our emission control roadmap entails adopting cleaner technologies, deepening the accuracy of emissions measurement, expanding value-chain assessments, and advancing initiatives that support sustained progress toward reduced atmospheric emissions.



Water management

We undertake numerous initiatives across our global sites to conserve water, including the implementation of improved recycling processes and responsible wastewater treatment to minimise waste.

Driving water efficiency across our global operations

Water conservation and recycling

At our Castrop-Rauxel, Germany site, treated wastewater is recirculated for steam generation and cooling. Our Zelzate, Belgium site uses advanced resin renewal systems to ensure wastewater meets discharge standards, while the Hamilton, Canada facility uses reverse osmosis systems to recycle stormwater for boiler feed, significantly reducing freshwater usage.

- Initiatives at the Purvis, US facility are focused on improving the site's water balance and optimising water use over the coming years

Zero-effluent policy at our facilities in India

Our operations in India, under our Carbon and Cement segments, maintain a zero-effluent discharge model, ensuring that all wastewater is treated and reused on-site. Recovered water is utilised for developing green belts.

Wastewater treatment and third-party collaboration

Where internal treatment is not feasible, we work with authorised third-party treatment facilities to ensure compliant wastewater handling, supported by site-specific processes that strengthen wastewater management including:

- At Zelzate, projects to reduce the operational environmental footprint included the removal of accumulated sludge from wastewater buffer tanks, improving wastewater quality and reducing PFAS-related contaminants

Augmenting water availability through rainwater harvesting

Across our Cement segment, rainwater harvesting systems help recharge groundwater and significantly reduce dependence on external freshwater sources. Additionally, we operate a sewage treatment plant that successfully recovers treated water for landscaping and various other non-potable applications.

1 Mn m³
Rainwater harvesting capacity across RAIN's operations

300 KLD
Sewage treatment plant capacity in the Cement segment

Advanced monitoring systems

Our facilities deploy advanced monitoring systems to assess water usage, quality, recycling efficiency and discharge compliance.

Guiding metrics

- Water volume reduction
- Recycling efficiency
- Quality benchmarks

3.9 Mn m³
Water consumption

Looking ahead

We remain committed to strengthening water stewardship across all sites by advancing recycling capabilities, expanding rainwater harvesting infrastructure, improving water quality monitoring and integrating innovative treatment technologies.

Natural capital

Waste management

Our waste management strategy prioritises reducing waste, increasing recycling and maximising material recovery to minimise waste to landfill and environmental impact. Through improved processing methods, we enhance resource recovery while maintaining full compliance with regulations.

Sustainable waste management initiatives across sites

Tailored solutions for diverse operations

Each of our sites has customised waste management practices aligned with its operational profile.

Hamilton Canada	Zelzate Belgium	United States	Castrop-Rauxel Germany
Recovery of pitch residue eliminates pitch dust and reduces waste.	Recovery of sulphur during benzene production lowers sulphuric acid waste and supports compliant treatment.	Lime byproducts from calcination processes are used in agricultural and geochemical applications, contributing to circularity.	Centralised system for waste collection and categorisation in compliance with German regulations.

Effective management of hazardous waste

Partnering for safe disposal: At our Carbon facilities in the US (Purvis, Robinson, Lake Charles, Chalmette and Gramercy), materials, such as batteries, aerosols and used oils, are managed through partnerships with certified outlets for safe disposal, which is vital for minimising environmental risks.

Adopting cleaner methods: The Norco, US site has replaced chemical cleaning of boilers with dry ice blasting, resulting in a significant reduction of hazardous waste.

Recycling and repurposing across facilities

Material sorting and reuse: At our Carbon segment plant in Cherepovets, Russia, plastics, cardboard, metals and

uncontaminated construction debris are carefully sorted and reused.

Process efficiency: At Zelzate, Belgium, distillation processes are optimised to minimise waste and explore alternate uses for byproducts.

Local compliance and sustainable practices

In India, Cement and Carbon segments lead by example, demonstrating stringent adherence to the State Pollution Control Board's guidelines. This commitment ensures regulatory compliance, as waste at sites is carefully segregated and handled exclusively by authorised processors.

Efficient waste management in Cement segment plants

Waste category	Suryapet	Nandyal
Incoming dry waste	14.5 tonnes	49.8 tonnes
Incoming wet waste	20.9 tonnes	60.6 tonnes
Reject waste burned in kiln	0.0 tonnes	57.3 tonnes
Compost handed over to horticulture	3.3 tonnes	11.3 tonnes

Beyond Cement

Biomedical waste from Pragnya Priya's primary healthcare centre is responsibly transferred to authorised centralised biomedical waste treatment facilities to minimise environmental risks.

Looking ahead

We will continue scaling our waste reduction and repurposing initiatives, contributing to a circular economy and reinforcing compliance frameworks across sites.

Resource management

At the core of our sustainability strategy lies a strong emphasis on responsible resource management, upcycling and material recovery. By reducing waste and maximising the value extracted from raw materials, we ensure that every resource used in our processes is channelled toward its highest possible value.



Embedding resource efficiency across operations

Maximising value from byproducts

Within the Cement segment, we continue to strengthen resource efficiency by increasing the use of fly ash in cement manufacturing, reducing dependence on virgin raw materials and lowering raw material intensity. Process optimisation initiatives further improved material efficiency at the Atchutapuram Carbon site where refinements in operating parameters reduced raw material input from 1.25 tonnes to 1.23 tonnes per tonne of CPC produced. Together, these actions enhance effective byproduct utilisation while delivering associated carbon-intensity benefits, reinforcing circular resource management across operations.

Minimising environmental impacts through upcycling

Our upcycling initiatives lessen the environmental burden of disposal and support cleaner, more efficient operational processes. These efforts span our manufacturing operations, product development teams and supply chain functions.

>98%

Upcycled input materials at our Carbon and Advanced Materials segments



Case study

Scaling biochar integration in calcined carbon products

Objective

Reducing reliance on conventional fossil-based carbon inputs while maintaining product suitability is a key priority for our Carbon segment business. Certain non-anode applications offer greater flexibility in impurity tolerance, bulk density and reactivity requirements, creating an opportunity to integrate alternative carbon sources. Our objective in 2025 was to evaluate the feasibility of biocarbon materials, particularly biochar, as a partial substitute in calcined carbon products for selected applications.

Actions taken

- Prioritised biocarbon materials as a key R&D focus within the Carbon business
- Evaluated biochar across several carbon product applications

- Identified non-anode applications suitable for biochar integration
- Developed product formulations incorporating biochar
- Successfully tested calcined products containing up to 50% biochar

Impact

The initiative confirmed the technical feasibility of integrating biochar at significant blend levels in non-anode applications. This increases feedstock flexibility for calcined products while accelerating the shift towards lower-fossil-carbon material pathways.

Looking ahead

Our focus remains on increasing the share of upcycled materials, deepening resource efficiency across the value chain and integrating circularity more deeply into product development and supply chain operations.



Ensuring raw material security

Reliable raw material supply is crucial for the stability and competitiveness of our manufacturing operations. Through multi-geography sourcing, robust, multi-modal logistics flexibility, responsible supplier engagement and the exploration of bio-based alternatives, we have built a resilient supply chain that supports both operational continuity and long-term sustainability.

Diversified sourcing strategy

- We maintain long-term relationships with suppliers across multiple geographies, ensuring consistent availability of key raw materials
- Access to a broad range of raw material qualities strengthens our blending flexibility
- Continuous quality monitoring ensures all inbound raw materials meet stringent process specifications
- Diversification across regions reduces supply risk and helps navigate volatility in global markets

Infrastructure and logistics backbone

- Our Carbon and Advanced Materials segments benefit from strategically located facilities near ports and an integrated logistics network spanning nearly four continents
- This multi-node structure enables us to sustain operations even during global disruptions
- Freight constitutes a significant share of raw-material cost, making route planning and logistics optimisation critical
- In the Cement segment, outbound freight improvements supported margin resilience
- Expanded sourcing avenues enabled better freight optimisation and reinforced supply stability

Strategic use of alternate raw materials

- Our R&D teams are evaluating several bio-based solid and liquid feedstock options across all three segments
- Trials are explored in collaboration with customers and suppliers to assess technical suitability and supply readiness
- Adoption depends on customer-industry transition timelines toward low-carbon feedstocks
- These initiatives support long-term decarbonisation while enhancing feedstock flexibility

Supplier engagement and responsible procurement

- We work towards ensuring that our sourcing practices are aligned with the RAIN Supplier Code of Conduct, which outlines our expectations regarding environmental stewardship, ethical business conduct and social responsibility
- The Code extends across our supplier base, ensuring consistent governance standards across our value chain
- Through ongoing engagement and communication, we encourage suppliers to strengthen their own sustainability practices and adhere to globally accepted responsible-sourcing norms

Natural capital

Looking back at the year

- Demand and geopolitical fluctuations across customer industries required us to remain agile, aligning sourcing decisions with changing raw material needs and market conditions
- We expanded our network of approved suppliers for key raw materials in our Carbon and Advanced Materials segments, strengthening resilience against global supply volatility
- Our Cement segment focused on securing reliable and cost-effective inputs to boost margins amid evolving regional demand
- Enhanced logistics coordination and freight efficiencies have positioned us well for meeting higher demand with capacity expansions in target markets across all three of our segments

The strategic advantage of CPC blending

In early 2024, two pivotal policy shifts unlocked new levels of raw-material flexibility for our Carbon segment

Import approval for GPC and CPC into our SEZ site in Atchutapuram, India

Operationalised in late 2024, this allowed us to resume full-scale blending operations at the Atchutapuram plant

Increase in national GPC import quota (from 1.4 to 1.9 MnT)

This expansion strengthened material availability for both our Atchutapuram SEZ and Visakhapatnam DTA plants

What this means for us?

With CPC imports now permitted into the SEZ facility, blending activities, which were previously restricted, were revived and expanded. This reactivation has become a central lever in ensuring material security and cost competitiveness.

Multivalent impact

Augmented raw material security	Cost optimisation through flexible input mix	Enhanced performance in US operations
<ul style="list-style-type: none"> • Ability to blend diverse CPC and GPC grades increases sourcing flexibility • Reduces exposure to single-grade or single-supplier volatility • Ensures stable feedstock quality for downstream operations 	<ul style="list-style-type: none"> • Blending enables fine-tuning of raw-material ratios to achieve the optimal cost-quality balance • Helps mitigate global price volatility by enabling substitution across compatible grades 	<ul style="list-style-type: none"> • US CPC facilities benefit from a consistent supply of optimised blends • This has directly contributed to: <ul style="list-style-type: none"> – Higher capacity utilisation – Improved cost competitiveness – Enhanced product reliability for customers

Biodiversity and ecosystem conservation

Our initiatives focus on expanding planting greenery at our sites, improving habitat quality and integrating nature-positive actions across our Cement segment in India.

Focal points	Activities	Outputs
Land availability within and around operational sites	Conducting plantation drives across Cement facilities to enhance green cover in and around operational areas.	<ul style="list-style-type: none"> • Increased green cover around manufacturing sites • Plantation and maintenance of trees across operational locations
Partnerships for plantation and quantification of carbon sequestration potentials	Collaborating with specialised agencies for plantation management and quantification of carbon sequestration potentials.	<ul style="list-style-type: none"> • Verified data and documentation for carbon credit generation • Structured monitoring of plantation and carbon sequestration potential
Cross-functional teams and community involvement	Engaging operational teams and local communities in plantation and maintenance activities.	<ul style="list-style-type: none"> • Improved participation in plantation and upkeep activities • Better maintenance and survival of planted saplings
Environmental planning and integration	Integrating biodiversity considerations into operational planning and site management practices.	<ul style="list-style-type: none"> • Identification of opportunities to enhance biodiversity around operational areas • Improved management of green spaces within site boundaries

Driving biodiversity enhancement through targeted initiatives

Expanding green cover across Cement segment

Our Cement segment in India continues to lead biodiversity enhancement efforts. Throughout the year, approx. 33k trees were planted across our Cement facilities in India.

Linking biodiversity efforts with climate action

We have also initiated the quantification of carbon sequestration potential of our tree plantation activities, reinforcing our climate commitments, improving traceability, and creating additional long-term ecological value.

754,560

Trees planted across our Indian facilities since the beginning of plantation project

Looking ahead

We aim to strengthen our biodiversity strategy by deepening partnerships with environmental organisations and local communities, who play a critical role in ecosystem restoration and long-term ecological resilience.