Birla Cellulose
Fibres from nature

ADITYA BIRLA GROUP

FORCE FOR GOOD

RESPONSIBLE SOURCING

RESPONSIBLE MANUFACTURING

CIRCULAR FASHION

RESPONSIBLE CONSUMPTION

RESPONSIBLE DISPOSAL

Sustainability Report 2023-24

Over the years, businesses have adopted circular practices to reuse and recycle waste, natural resources, and use alternative materials and fuels to the extent possible. To this end, we have developed circular products and business models.

In the modern world, the cycle of producing, using, and disposing of items is not sustainable. It is neither economically nor ethically viable. This practice damages the environment, affects communities, and undermines brand equity.

Innovative fashion and textile companies globally are focusing on circularity as it transitions demand from virgin resources to recycled materials, minimises waste, alleviates landfill pressure, and conserves energy and water.

Circular Fashion drives the world forward by providing superior economic, social, and environmental benefits.

Different types of cellulose-based waste can be recycled and transformed into MMCF. This year, we creatively utilised this capability to innovate new products like Liva Reviva with Circulose, Birla Viscose EcoSoft, Liva Reviva M, and other fibres with recycled content.

These 'Future Fibres' incorporate recycled materials and various non-wood alternatives, using a closed-loop system that minimises environmental impact. We collaborate with numerous innovators and the value chain to maximise synergy. This sustainability report showcases our progress in embracing, leading, and advocating for a circular economy model.

By practicing responsible sourcing and manufacturing, forging valuable partnerships, promoting social responsibility, and developing products that enhance the circular economy, we are striving to build a more sustainable future.

As one of the top global producers of Man-Made Cellulosic Fibres (MMCF), Birla Cellulose is committed to leading the change in circularity.

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Performance Highlights

Responsible Sourcing

Birla Cellulose was ranked #1 in Canopy's Hot Button Report 2024 and retained the top category of 'Dark Green Shirt' for the 5th consecutive year.

Supplier Sustainability Assessment Programme - Project Synergy was implemented and suppliers contributing to nearly 70% of procurement spend were assessed.

Responsible Manufacturing

3rd party verified Higg FEM 2022 score of 96% across MMCF manufacturing sites.

EU BAT compliance was achieved at the fibre manufacturing site at Birla Cellulosic, Kharach (India).

By the end of FY24 achieved a reduction of 55% in sulphur-to-air emissions and water consumption in the fibre manufacturing process over the FY15 baseline.

Sustainable Products & Circular Economy

Birla Cellulose launched Birla Viscose Intellicolor - a patented product, addressing a long-standing challenge with conventional reactive dyeing.

Launched Birla SaFR, a phosphate based inherently flame-retardant cellulosic fibre.

Launched Birla EcoSodium, sustainably enhanced sodium sulphate.

109 patent applications/patents in 16 countries belonging to 71 patent families.

Valuable Partnerships

Partnerships with various organisations and not-for-profits to be part of value chain to support both backward and forward players.

SaXcell and Birla Cellulose sign MoU for recycled fibre production to accelerate circularity.

SaXcell

Birla Cellulose partners with TextileGenesis™ to provide traceability and transparency solutions.

Social *Responsibility*

CSR expenditure of about $ 1.70 million in FY24.

Nagda site received the 7th CSR Health Impact Awards in the category of 'Water Harvesting Project-Silver'.

87% reduction in LTIFR over FY15.

Chairman's Message

Dear Stakeholders,

Last year, the world witnessed a global intensification of complex, interconnected issues, ranging from health crises and political unrest to social disparities and high levels of migration owing to extreme natural disasters. Climate change and sustainability are a common denominator in all these issues.

At Aditya Birla Group, we understand that the survival of humanity and all living creatures hinges on sustainability. It is the foundation for a healthy planet and thriving communities. The Group recognises its role in responsible stewardship towards the environment and endeavours to implement best practices for a better world.

At Birla Cellulose, we are resolute in our commitment to sustainability, which remains central to our ethos of being 'A Force for Good'.

Despite the challenging global landscape, we have made significant strides in our sustainability initiatives. We have not only reached but exceeded many of our environmental goals thanks to continued innovation and collaboration.

For the fifth year in a row, Birla Cellulose received the 'Dark Green Shirt' rating in Canopy's Hot Button Report 2024 for sustainable wood sourcing, in recognition of our efforts towards preserving Ancient & Endangered Forests.

In addition, we are accelerating circularity through a number of key initiatives, including strategic partnerships with SaXcell, producing fibre with 30% recycled cellulose, and Circ, securing annual recycled pulp for lyocell.

Our CAP recovery system at Kharach, exceeding EU BAT standards, significantly reduces emissions, advancing our closed-loop goal and setting new MMCF sustainability benchmarks. Additionally, Birla EcoSodium, derived from recycled wastewater, provides a fully traceable, high-safety, sustainable solution.

Birla Cellulose leads the MMCF industry in sustainability by actively implementing its circularity commitments, driving tangible progress, and aligning with Aditya Birla Group's broader vision.

We lead the global industry by pioneering sustainable, innovative, and customer-focused solutions. I applaud the team's commitment to excellence and wish them continued success in the years to come.

Yours Sincerely,

Kumar Mangalam Birla
Chairman, Aditya Birla Group

From the Desk of Business Director

Dear Valuable Partners,

In the fast-paced world of textiles, where trends evolve at a rapid pace, sustainability and circularity are crucial principles that guide responsible innovation and long-term industry growth.

As a globally resource-intensive industry, textiles have a high environmental footprint. Sustainable business practices are no longer merely an ethical responsibility, they are now a strategic imperative. Practices that minimise waste, reduce emissions, ensure responsible sourcing and prioritise renewable resources will help the textile industry lead the charge towards a more sustainable future.

In this context, Birla Cellulose has continued to strengthen its Five Pillars of Sustainability, i.e., Responsible Sourcing, Responsible Manufacturing, Sustainable Products, Valuable Partnerships, and Social Responsibility. Our robust policies and comprehensive frameworks support our commitment to sustainability. Together, these enable us to establish global benchmarks in all our focus areas, spanning sectors and regions. These efforts are grounded in our Group's core purpose and philosophy of business to be a 'Force for Good.'

We remain steadfast in our mission to lead the industry towards a more sustainable future through circularity, responsible innovation, and strategic partnerships.

While working on these pillars of sustainability, there are bound to be some challenges that test our resilience.

Over the past year, we have seen a global surge in inflationary pressures, increased price sensitivity and a turbulent phase for the fashion industry amid a cyclical slowdown. Compounding these challenges, accelerated climate change and geopolitical disruptions have increased the urgency for businesses to adopt sustainable practices.

Post-COVID, there was a spike in consumer demand, owing to 'pandemic savings.' However, following that phase, customers have become more mindful of their spending, opting for eco-friendly, ethical, and cost-effective choices. To stay ahead of shifting demand patterns, Birla Cellulose continues to strengthen its efforts in promoting sustainable value chains that benefit both people and the planet

Reflecting on the past year's sustainability highlights for the business, I am delighted to share with you the following:

- Birla Cellulose received the 'Dark Green Shirt' rating for the fifth year in a row in Canopy's Hot Button Report and was ranked #1 for the year 2024.
- Project Synergy-a Supplier Sustainability Assessment Programme-was initiated with the aim of evaluating and improving environmental and social practices across the value chain.
- Water intensity in the MMCF manufacturing process saw a 55% reduction by FY24, surpassing our target of 50% by 2025.
- Our Kharach site successfully commissioned the H_2S and CS_2 recovery system from exhaust gases meeting the strict EU BAT guidelines. By the end of FY24, Birla Cellulose achieved a 55% reduction in sulphur-to-air emissions.
- Launch of Birla EcoSodium, a sustainably enhanced sodium sulfate by-product of MMCF manufacturing with a fully traceable production process.
- We ensure forest-to-fashion transparency with GreenTrack™, our traceability platform that offers brands real-time, end-to-end mapping of the raw material journey. To reach a broader range of stakeholders, we've also partnered with TextileGenesis™ to offer similar traceability for garments.
- Birla Viscose - Intellicolor, was introduced to revolutionise textile dyeing. By achieving over 95% dye exhaustion and eliminating salt and soda ash usage, this innovation reduces environmental impact and costs, while offering brighter shades, lower chemical usage, and shorter processing times.
- Launched Birla SaFR, a flame-retardant, sustainable cellulosic fibre to produce flame retardant fabrics.
- Key partnerships were inked with SaXcell and Circ to advance sustainable textile solutions. The MoU with SaXcell combines their recycling technology with our expertise to produce 'SaXcell' fibre, made with 30% recycled cellulose. Meanwhile, as per our long-term agreement with Circ, we can purchase up to 5,000 tons of recycled pulp annually for conversion into lyocell fibre, expanding access to sustainable materials.
- Our collaboration with clean textile innovation company Algaeing focuses on developing sustainable, biodegradable, and zero-waste solutions for the fashion industry.

Our journey on the path of sustainability continues with unwavering determination as we further cement our position as a pioneer in sustainable Man-Made Cellulosic Fibres. Our team's innovations endeavour to yield tangible benefits for both people and the planet.

We are now focused on accelerating the transition to a circular textile economy. This involves scaling our Liva Reviva programme, amplifying the use of recycled waste, and investing in advanced fibre-to-fibre recycling technologies. Strategic collaborations with innovators and technology partners will be paramount in driving systemic change.

We will continue to prioritise responsible sourcing, implementing closed-loop solutions, fostering transparency, advancing R&D for low-impact fibres, and spearheading industry-wide collaboration.

We remain steadfast in our mission to lead the industry towards a more sustainable future through circularity, responsible innovation, and strategic partnerships. We invite you to join us in shaping a better tomorrow through conscious manufacturing.

H K Agarwal
Business Director

Q&A - CSO with CXOs

Surya Valluri
Chief Sustainability Officer

CSO

Vadiraj Kulkarni
Business Head (Designate)

BUSINESS HEAD

Surya Valluri:

As the new Business Head (Designate) for Birla Cellulose, how do you see sustainability as a driver of the textile industry?

Vadiraj Kulkarni:
Given the industry's global reputation as being environmentally unfriendly, I believe sustainability is a critical enabler for the textile business. Globally, the textile value chain accounts for 6-8% of overall GHG emissions and 20% of global water pollution. In my opinion, by incorporating sustainability, the textile industry could not only alleviate its negative effects but also drive innovation, increase profitability, and get the social license to operate.

Consumers are increasingly interested in the sustainability of the products they purchase, and their sourcing. On the other hand, fashion brands seek to ensure that the products they order for their apparel are created from sustainable resources, respect human rights, and do not breach sustainability standards. Overall, sustainability could greatly benefit the textile industry by helping overcome environmental and social challenges, while unlocking new opportunities.

Surya Valluri:

How do you see Birla Cellulose's standing in terms of sustainability in the MMCF industry?

Vadiraj Kulkarni:
The Cellulosic Staple Fibre (CSF) Business was one of Aditya Birla Group's initial ventures. For over 75 years, our mission has been to enrich people's lives by providing superior solutions to the demands of consumers of nature-based cellulosic fibres. Birla Cellulose is happy to play a fundamental role in this transformative journey, leading the sustainable practices in the Man-Made Cellulosic Fibre (MMCF) industry.

We are developing global norms for sustainable business practices by actively engaging with our partners, not only within our operations but also throughout the MMCF value chain. Simply put, we are fully committed to doing what is best for both people and the environment.

K. Suresh
Chief Operating Officer,
Global Manufacturing (Fibre)

COO

Surya Valluri:

What are the primary priorities and difficulties related to sustainable operations?

K Suresh:
I feel that incorporating environmental and social responsibility into corporate procedures is critical for long-term operations. Key focuses include resource conservation through the 3R (Reduce, Reuse, Recycle) philosophy, which reduces environmental footprints for traditional challenges. It encourages collaboration and innovation with technology partners to develop tailored solutions for difficult issues. Engaging key stakeholders - employees, customers, society, or regulatory bodies - on a constant basis forms a vital aspect of any site's operating plan and is core to our sustainability strategy.

Businesses can improve their operational efficiency and brand reputation, in addition to lowering their environmental impact, by addressing these priorities and challenges.

Surya Valluri:

What are the primary hurdles in implementing EU BAT at Nagda and Harihar manufacturing facilities, and what are the timelines we are looking at for completion?

K Suresh:
Nagda and Harihar are two of the oldest sites in our business. Nagda particularly is a legacy site, with many of its spinning lines being quite old and of limited capacity, posing numerous technological hurdles for us. Despite this, we are currently working on line modifications at the Nagda site. These adjustments have resulted in optimistic outcomes, and we are proceeding with a scrubber installation at the site. Plans for the Harihar location are also in the works. Once we are confident on the resolution toward the challenges at Nagda, we plan to achieve the EU BAT standards at the Harihar site in a similar manner.

Giancarlo Maroto
Chief Operating Officer,
Pulp Operations

COO

Surya Valluri:

How can we ensure 100% sustainable wood sourcing and further forestry conservation measures for our dissolving pulp mills?

Giancarlo Maroto:
At Birla Cellulose, we adhere to a 'Wood Sourcing Policy', with sustainability, conservation and transparency forming the crux of our operations at our dissolving pulp mills. We ensure conservation and protection of Ancient & Endangered (A&E) forests while working on developing alternative raw materials for MMCF to ease the reliance on forest wood. Furthermore, our long-term supply agreements include ESG and economic criteria for evaluating and selecting suppliers based on our 'Supplier Code of Conduct', as well as a 'Supplier Assessment Process' in which key suppliers are assessed for their sustainability performance.

As a testament to our dedication to responsible sourcing, one of the five pillars of our sustainability strategy, AV Group NB Inc. received Forest Stewardship Council's Forest Management Certification on its freehold land in New Brunswick, Canada. Finally, Canopy's Hot Button Report 2024 recognised our consistent strides toward sustainable wood sourcing, awarding us a 'Dark Green Shirt' rating for the fifth year in a row, indicating the highest level of adherence to responsible wood sourcing procedures.

Surya Valluri:

How are the pulp manufacturing facilities preparing for the upcoming EU Deforestation Regulation (EUDR) and what are the challenges we foresee in aligning with EUDR?

Giancarlo Maroto:
While the regulations were supposed to be set in motion in December 2024, the implementation date has been pushed back a year. That said, we realise the significance of the upcoming EU Deforestation Regulations (EUDR). While this extension allows us more time to fine-tune our existing processes, we remain fully devoted to satisfying the regulatory requirements. With forestry certifications such as FSC® and Canopy's recognition, we are well prepared to face the demands of EUDR compliance. We are certain that by incorporating new technologies while maintaining sustainable practices, we will meet regulatory requirements and continue to lead in responsible sourcing and production in the pulp and fibre industry.

We are currently awaiting additional clarity under EUDR on the HS Code for MMCF, which goes directly into the textile value chain. Furthermore, as part of EUDR, we intend to digitise our forest regions using geo-mapping tools in due course. We have our own traceability technology for the Birla Cellulose business, which our clients can utilise to maintain a transparent value chain. Similarly, we collaborated with TextileGenesis, which uses blockchain technology to facilitate traceability and reach a broader spectrum of stakeholders.

ManMohan Singh
Chief Marketing Officer

CMO

Surya Valluri:

'There is a lot of talk about circularity on a global scale. How much is Birla Cellulose prepared to meet such a demand, and what is the status of various initiatives in this regard?

ManMohan Singh:
Birla Cellulose is well positioned to meet the growing need for circularity in the textile and apparel industry. We are at the forefront of innovation with products such as Liva Reviva, a circular fibre made from textile waste, and Birla Viscose EcoSoft, which is derived from bamboo pulp.

In addition, over the last year, we have embraced value partnerships such as those with SaXcell and Circ to increase the use of recycled pulp in textile manufacturing. Our production techniques adhere to globally accepted sustainability standards, lowering water and energy use. We are committed to promoting sustainability and circularity in the MMCF sector and are prepared to meet the demands of a newer, more sustainable future.

Surya Valluri:

With a strong competitive environment in MMCF industry, how can sustainability be leveraged for promoting Birla Cellulose fibres?

ManMohan Singh:
In this fiercely competitive MMCF industry, sustainability is at the very centre of all conversations. End-consumers, customers, legislators, and garment brands - all want to keep sustainability at the forefront of their decision-making. Sustainability presents a strategic opportunity for us, at Birla Cellulose, to differentiate ourselves.

We integrate sustainability across our value chain, emphasising transparency and environmental responsibility. Our circularity programmes, which aim to decrease waste and promote resource reuse, are key drivers of this approach, as we strive for a closed-loop system while adhering to severe EU BAT guidelines. We also adhere to forestry standards such as FSC® demonstrating our commitment to responsible sourcing.

Furthermore, our GreenTrack™ platform uses blockchain technology to give traceability all the way to the final garment, addressing the growing customer need for transparency. Thus, at every stage, from among consumers to policymakers, we are spearheading the conversation on best sustainable practices, which is the need of the hour.

Dr. Aspi Patel
Chief Technology Officer

CTO

Surya Valluri:

Can you give us a glimpse of some of the key innovative projects that Birla Cellulose is working on to reduce environmental impacts?

Dr. Aspi Patel:
Birla Cellulose has consistently led the way in sustainability, striving to minimise environmental impact throughout our value chain. In recent years, we have launched several key initiatives aimed at reducing the ecological footprint of our raw materials, optimising chemical use, conserving water, and enhancing energy efficiency.

A major focus has been on decreasing our dependence on fresh wood for pulp, a vital raw material for our operations. To tackle this, we have established a robust system for recycling textile waste-materials that would otherwise end up getting incinerated or in landfills. Our advanced processes allow us to convert this waste into high-quality viscose and lyocell fibres, fostering a circular economy within the textile industry.

To further our sustainability efforts, we are collaborating with global innovators like SaXcell and Nanollose to explore greener feedstocks and next-generation solutions. Additionally, our R&D team is pioneering the development of non-wood-based pulp sources, further reducing our reliance on virgin forestry resources.

These collective efforts have earned us widespread recognition, including accolades from leading sustainability organisations like Canopy, where we have outperformed all other MMCF producers-a testament to our dedication to environmental stewardship and responsible innovation.

Surya Valluri:

One of the major challenges before MMCF industry is achieving net zero target in view of extensive use of thermal energy. What projects are being explored to meet this target?

Dr. Aspi Patel:
Achieving net zero in the MMCF industry is a complex challenge, especially due to the significant thermal energy requirements in manufacturing. At Birla Cellulose, we are tackling this challenge by systematically evaluating our energy needs and continuously optimising operations to enhance efficiency and reduce our carbon footprint.

Our approach is twofold: first, reducing energy demand through process optimisation and improved heat integration within our plants; second, exploring breakthrough technologies that can significantly lower energy consumption. A key initiative in this regard is maximising waste heat utilisation and implementing advanced heat recovery systems across our facilities.

Beyond incremental improvements, we are pioneering transformative solutions. One such breakthrough is the pilot-scale development of Membrane Distillation coupled with Mechanical Vapor Recompression (MVR) technology, which has the potential to reduce energy usage in process evaporation by up to 40%. Similarly, we are scaling up a novel continuous dissolver that enables more efficient viscose dissolution, leading to substantial energy savings.

In parallel, we are actively advancing the transition to green power by evaluating and integrating renewable energy sources into our operations. This includes exploring sustainable feedstocks for our power plants and boilers to further decarbonise our energy mix.

Anupama Mohan
Chief Human Resources Officer

CHRO

Surya Valluri:

What are the people development - related programmes that can help with capacity and competency building within the staff, that can help Birla Cellulose reach global leadership?

Anupama Mohan:
Our people are the fibre of our competitiveness. Developing a talented staff is vital to our ability to remain competitive and grow. Our people development initiatives are designed to promote the overall development of individuals while also building capacity for the future. The company strategy and individual unit focus areas serve as the foundation for designing a learning curriculum. Each individual and their management identify the development agenda annually. The development needs are met through a learning schedule that encompasses safety, behavioural, technical, and digital learning concepts. The calendar also includes cohort-specific programmes such as 'Focus 50' for our succession pool, WISE (Women Investing in Skills & Experiences) for our female managers, 'Prayaas' for our technicians, Manager Enablement Programme for our first-time shopfloor managers, 'F1-B10' (first 10, best 10) experiences to focus on the first 10 years of experience, #FFF (Friday For Future) weekly learning snippets, and so on. We also use Gyanodaya, a Group learning centre, for specific career transition/preparatory programmes.

We have specific community engagements and designated external programmes that help in developing expertise in areas such as R&D, Operations, Human Resources, and Sales. To extend an employee's perspective, we implement a full career approach, including job rotations, internal moves, and service recognition programmes. The new measures that began in 2024 and will continue in 2025 include creating a secure and respectful workplace and simplifying workplace transactions. They have been created to inspire trust, which is a key component of our Group's mission and hold great potential to improve workplace interactions, hence influencing performance and productivity.

Surya Valluri:

Social compliance has become the norm; what are the primary objectives for implementing systems and processes to mitigate operational risks?

Anupama Mohan:
Diversity, equity, and inclusion are deeply entrenched in both, the Group and the business philosophy. As a result, we believe that social compliance standards are critical, as they are extremely consistent with our Group Purpose and Five Values. They provide a framework for thought and action. Awareness of these norms and adherence in all our sites allows us to proactively minimise risks linked with labour practices, environmental impact, and community welfare.

To share an example of one of our practices, Birla Cellulose has established the Aditya Birla Group's Human Rights Due Diligence (HRDD) platform. This self-assessment tool helps us recognise, evaluate, and reduce any potential negative impacts on human rights across our activities, and it is accompanied by a robust grievance system to address stakeholder complaints. We piloted it at one of our locations this year, and it will become standard practice in 2025-26.

Our CSR initiatives target healthcare, education, economic development, and social awareness to promote long-term community well-being. These projects foster a self-sufficient community. We also follow international standards like the Higg Facility Social/Labour Module (FSLM), which assures workers' rights and ethical corporate practices. With the Aditya Birla Group's ethos centred at being a 'Force for Good', we are committed to adhering to the highest social compliance standards.

ORGANISATION PROFILE

Aditya Birla Group

The Aditya Birla Group, a US$ 66 billion global conglomerate, is in the League of Fortune 500. Anchored by an extraordinary force of over 187,000 employees belonging to 100 nationalities, the Group is built on a strong foundation of stakeholder value creation.

With over seven decades of responsible business practices, our businesses have grown into global powerhouses in a wide range of sectors - metals, pulp & fibre, chemicals, textiles, carbon black, telecom and cement. Today, over 50% of Group revenues flow from overseas operations that span over 40 countries in North and South America, Africa, Asia and Europe.

Aditya Birla Group endeavours to become the leading Indian conglomerate for sustainable business practices across its global operations. In pursuit of this goal, the Group has set ambitious objectives to achieve as part of its ESG (environmental, social and governance) strategy. The ESG agenda includes, among others, Group-level commitments to achieve net-zero carbon emissions by 2050, attain 'zero harm' at the workplace, and enhance transparency and trust through robust governance mechanisms.

For more details about Aditya Birla Group and its presence across different businesses, please click here.

In India, Aditya Birla Group is among
THE TOP THREE PLAYERS IN

Fashion* & Lifestyle


Mobile Telephone Industry


Viscose Filament Yarn


Chlor-alkali Sector


Non-Banking Financial
In Life Insurance Services


Asset Management

Globally, Aditya Birla Group is among
THE TOP THREE PLAYERS IN


Aluminum Rolling

Cement (excluding China)


Viscose Staple Fibre


Insulators


Carbon Black

ADITYA BIRLA GROUP

*branded apparel

Birla Cellulose

Pulp & Fibre Business is part of 'Aditya Birla Group', India's first truly multinational corporation with a global presence. The group is governed by its strong set of values and has a vision of creating value for its multiple stakeholders through leadership in sustainable business practices.

Fibre manufacturing is one of the oldest businesses of Aditya Birla Group. Present at 7 locations across the globe, today, Birla Cellulose produces dissolving grade pulp in India, Canada & Sweden, and a complete range of man-made cellulosic fibres (MMCF) spanning all three generations of fibres viz. viscose, modal & lyocell in India, Indonesia, Thailand & China. Sodium Sulphate, a co-product from viscose/modal fibre manufacturing, is used in various industries such as detergents, glass etc. From the very onset, global standards were marked both in terms of commitment to quality and the setting up of world-class facilities and processes.

Birla Cellulose is the umbrella brand for Aditya Birla Group's MMCF fibre offerings.

Wood is the most important raw material for MMCF production and is sourced from forests - sustainable, renewable resource - following international forestry standards like FSC® (Forest Stewardship Council), SFI® (Sustainable Forestry Initiative) & PEFC™ (Programme for the Endorsement of Forest Certification).

Birla Cellulose collaborates actively with its upstream and downstream partners to enhance the sustainability performance of the value chain. It also collaborates actively with sustainability focused multi-stakeholder organisations and other global institutions, applying their best practices in its value chain.

VISION

To be the global leader in the man-made cellulosic fibres industry

MISSION

We aim to create superior and sustainable value for all our stakeholders, maintaining the majority of market share in the manmade cellulosic fibre industry globally through:

Innovation in product and process, excellence in quality, service, people development, and focus on sustainability across the value chain

Our Purpose, Principles and Values

At Aditya Birla Group, purpose has been the driving force for all our actions since inception.

Our Group Purpose, provides us with a unique lens to measure our every action and its consequent impact on our stakeholders, community, and the world at large. It has been an animating force for all our actions.

Our Guiding Principles

Our principles are how we bring our purpose to life

- Enduring Bonds
- Grounds Up Entrepreneurship
- Value Maximisation
- Multiple Forms
- Force for Good

The Group's values are the guiding light for our businesses and people. They are at the core of how we operate as an entity and help us make important decisions.

Our five core values are:

INTEGRITY	COMMITMENT	PASSION	SEAMLESSNESS	SPEED
Following the highest standards of financial and intellectual professionalism that is fair and honest	On the foundation of integrity, doing all that is needed to deliver value to all stakeholders	A voluntary, spontaneous and relentless pursuit of goals and objectives with the highest level of energy and enthusiasm	Thinking and working together across functional groups, hierarchies, businesses and geographies	Delivering on time and choosing the best rhythm to optimise organisational efficiencies

Global Footprint

OPERATIONS & MARKETING OFFICES

Birla Cellulose is headquartered in Mumbai while our plantations, factories and marketing offices reach out to several countries, making a positive impact on the global textile and non-woven businesses.

Map not to scale

Innovation Centres at Birla Cellulose

Sustainability and innovation work in tandem at Birla Cellulose. Our in-house research and development centres are the hubs which contribute to bringing versatility in our products and their applications through technology.

Our process innovation centres are working to improve the processes and make them more sustainable like closed-loop or low carbon technologies, sustainable and alternate raw materials, eliminating hazardous chemicals. Our products are the result of carefully listening to our customers, taking their feedback seriously, and delivering sustainable solutions as per their needs.

OUR INNOVATION CENTRES

ADITYA BIRLA SCIENCE & TECHNOLOGY COMPANY PRIVATE LIMITED (ABSTCPL)

ABSTCPL is the corporate research and development centre for the Aditya Birla Group and supports the broad diversity of the Group's businesses through multi-disciplinary teams of expert scientists and engineers who lead fundamental and applied research projects. The centre aims to deliver innovative solutions, continuously improves core competencies and executes effectively.

DOMINNOVA, DOMSJÖ, SWEDEN

DomInnova serves as Domsjö Fabriker's innovation engine with the task of encouraging, capturing and processing ideas from our own company and from national & international research organizations. DomInnova has a wide external network with companies, which gives us access to advanced laboratories, pilot equipment, analytical instruments, etc. DomInnova also cooperates with other research teams within the Aditya Birla Group.

CLONAL PRODUCTION CENTRE, HARIHAR, INDIA

A state-of-the-art Clonal Production Centre at our Harihar mill premises produces and distributes high yielding, fast growing, site specific and disease resistant clones of Eucalyptus to farmers in Karnataka, India.

NEXT GENERATION FIBRE RESEARCH CENTRE, NAGDA, INDIA

The Next Generation Fibre Research Centre (NGFRC) focuses on development of environment-friendly solvent spinning technology for making lyocell fibre (Birla Excel). It houses a pilot plant facility focusing on development of sustainable and energy efficient processes, new product development and technology transfer to the commercial plant.

FIBRE RESEARCH CENTRE, KHARACH, INDIA

Fibre Research Centre (FRC) strengthens the R&D work on the fibre manufacturing process by facilitating innovation, quality upgradation, efficiency improvement, recipe formulation and technology transfer to the commercial plant for all the viscose staple fibre (VSF) units of Birla Cellulose.

TRADC, KHARACH, INDIA

The Textile Research and Application Development Centre (TRADC) was established in 2004 as the key technology-market interface and enables the business to be a leader in cellulosic fibres by creating product-offering innovations and effectively commercializing them across the value chain.

PFIC, TALOJA, INDIA

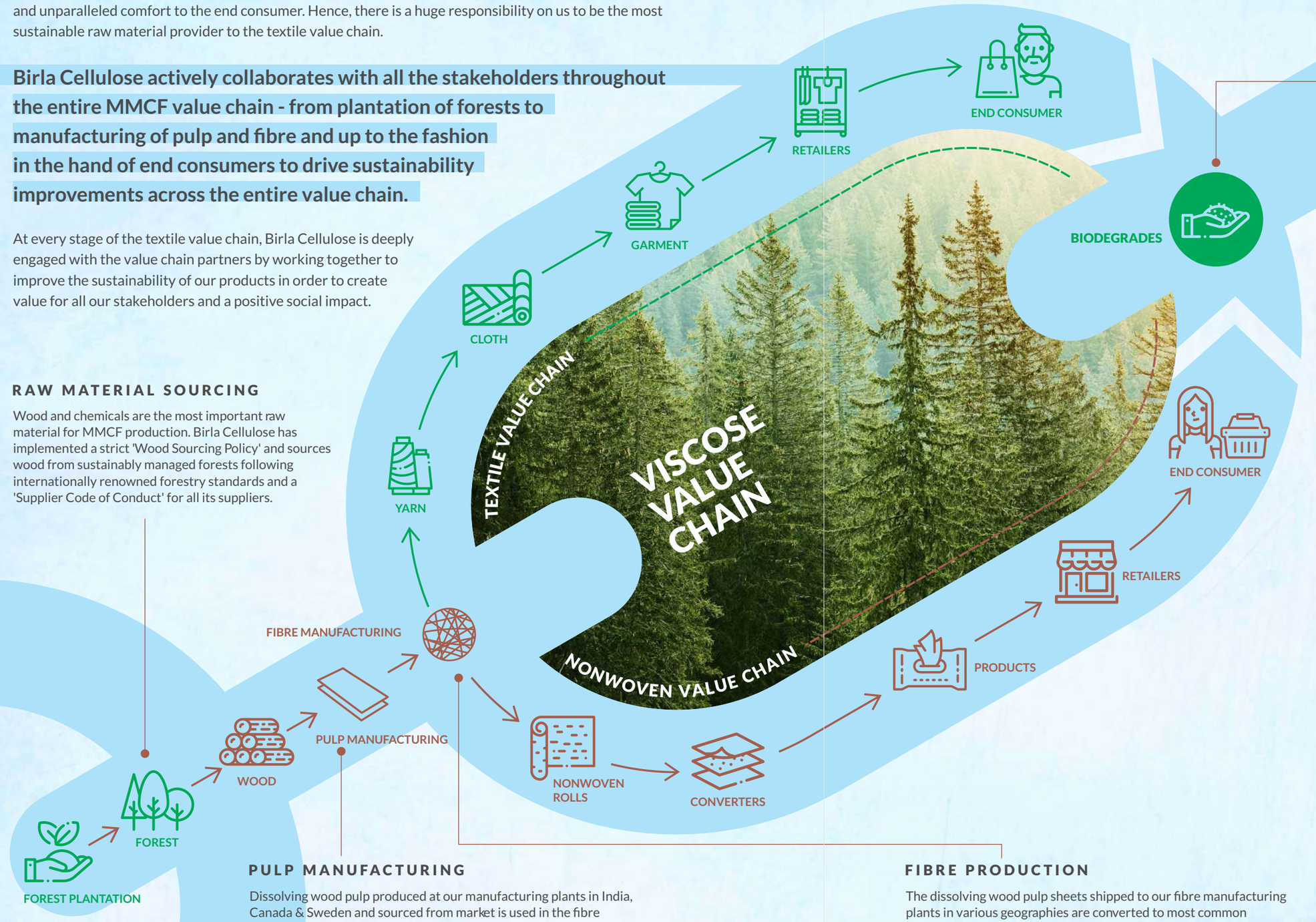
Among the latest and most advanced R&D Centre, Pulp and Fibre Innovation Centre (PFIC) focuses on technology projects in areas of product development and enhancement, sustainable processes, quality improvement, along with reduction in energy footprint.

Value Chain & Us

MMCF is a basic raw material for the textile value chain and is the material which gives the natural feel and unparalleled comfort to the end consumer. Hence, there is a huge responsibility on us to be the most sustainable raw material provider to the textile value chain.

Birla Cellulose actively collaborates with all the stakeholders throughout the entire MMCF value chain - from plantation of forests to manufacturing of pulp and fibre and up to the fashion in the hand of end consumers to drive sustainability improvements across the entire value chain.

At every stage of the textile value chain, Birla Cellulose is deeply engaged with the value chain partners by working together to improve the sustainability of our products in order to create value for all our stakeholders and a positive social impact.



RAW MATERIAL SOURCING

Wood and chemicals are the most important raw material for MMCF production. Birla Cellulose has implemented a strict 'Wood Sourcing Policy' and sources wood from sustainably managed forests following internationally renowned forestry standards and a 'Supplier Code of Conduct' for all its suppliers.

PULP MANUFACTURING

Dissolving wood pulp produced at our manufacturing plants in India, Canada & Sweden and sourced from market is used in the fibre manufacturing process.

FIBRE PRODUCTION

The dissolving wood pulp sheets shipped to our fibre manufacturing plants in various geographies are converted to most common cellulosic fibres such as Viscose, Modal and Lyocell. During viscose / modal production, co-product, sodium sulphate is generated and used in downstream industries such as glass, detergents etc.

END OF LIFE

Viscose fibres made by Birla Cellulose are compostable in home and industrial conditions and biodegradable in water, soil and marine environment. The composability and biodegradability of the final product made by our value chain partners however, depends on the material composition used to make it.

UPSCALING OF INDUSTRIAL AND POST-CONSUMER WASTE

The new development in this area is focused on recycling of cellulosic pre- and post-consumer waste as a raw material for making viscose fibres and reducing reliance on fresh raw material through collaborative efforts with upstream as well as downstream value chain.

TEXTILE / NONWOVEN MANUFACTURING & USE

In textile value chain, viscose fibre is shipped to yarn manufacturers, converted to fabric, processed, and finished in subsequent stages, and used for garment manufacturing. Use phase starts once the garment reaches in the hands of the customers. The nonwoven value chain is a shorter one, where the convertors are our customers involved in roll-goods production and final products like wipes.

Sustainability & Us

About the Report

Reporting Principles

The Sustainability Report seeks to communicate our Environmental, Social & Governance (ESG) performance to our stakeholders. The Report underscores our commitment to sustainability, seamlessly woven into our business strategy. It organises information based on our priorities and the key interests of our stakeholders. By sharing transparent and accountable details about our business practices, supply chain, and products, we can effectively track our progress and insights towards achieving a more sustainable future.

This Report illustrates how Birla Cellulose generates value for stakeholders by embedding sustainability into its policies, operations, and value chain. Our ongoing effort to minimise environmental impact is guided by our sustainability framework, which addresses not only the sustainability aspects of Man-Made Cellulosic Fibre (MMCF) manufacturing but also emphasises collaboration with our supply chain partners to enhance the sustainability of the entire MMCF value chain. These elements are integrated into the five pillars of our sustainability strategy: **Responsible Sourcing, Responsible Manufacturing, Sustainable Products, Valuable Partnerships, and Social Responsibility.**

As our 5th Sustainability Report, it highlights our journey and progress over the years in promoting sustainability within and beyond our operations, contributing to sustainable fashion and creating long-term value for all stakeholders.

In this Report, we have adopted the Global Reporting Initiative (GRI) Standards with reference to Core Option. The GRI Content Index table at the end of this report shows the location within the report.

We are determined to publish our Sustainability Report on a regular basis. The performance disclosures contained in this Report pertain to the period between April 01, 2023 and March 31, 2024. The last report was released for the period from April 01, 2021, to March 31, 2022, maintaining a periodic reporting cycle. We believe that the sustainability report acts as a manifestation of our sustainability journey and the impact generated from sustainability initiatives.

For your valuable feedback and suggestions, please write to

Mr. Surya Valluri on surya.valluri@adityabirla.com

Boundary and Scope

This Report's boundary and scope include the corporate and marketing offices across locations, four dissolving wood pulp and seven MMCF manufacturing units. The Report also covers an array of topics, which have been defined as material to our business and operations.

While our employment data covers our offices, the scope of this Report excludes other environmental and social data relating to our corporate and marketing offices.

ENTITIES WITH FIBRE MANUFACTURING UNITS

- Grasim Industries Ltd. - VSF operations (India)
  - Staple Fibre Division, Nagda (M.P.)
  - Grasilene Divison, Harihar (Karnataka)
  - Birla Cellulosic, Kharach (Gujarat)
  - Grasim Cellulosic Divison, Vilayat (Gujarat)
- Thai Rayon Public Company Ltd. (Thailand)
- PT Indo Bharat Rayon (Indonesia)*
- Birla Jingwei Fibres Co. Limited (China)#

ENTITIES WITH PULP MANUFACTURING UNITS

- Grasim Industries Ltd. – Harihar Polyfibres (India)
- AV Group NB (Canada)
  - Atholville Mill
  - Nackawic Mill
- Domsjö Fabriker AB (Sweden)

**Shareholding with Grasim Industries Ltd. | # JV with Grasim Industries Ltd.*

Independent Assurance

This Report is externally assured by BDO India LLP, excluding economic performance indicators, which are drawn from our annual reports. The assurance is in accordance with the limited assurance criteria of the International Standards on Assurance Engagement's ISAE 3000. The assurance approach, methodology, and observations are presented in the assurance letter attached at the end of the report.

Corporate Governance

The Aditya Birla Group Corporate Principles and Code of Conduct guide our commitment to good corporate governance. These principles and codes are diligently practiced and monitored within the group to uphold the highest standards of ethics and values.

Corporate governance encompasses a set of laws, regulations, and best practices that enable an organisation to operate efficiently and ethically, generating long-term wealth and creating value for all stakeholders.

Please click here to learn more about our Corporate Governance.

Sustainability Policy

Wood Sourcing Policy

Water Stewardship Policy

Environment Policy

Energy & Carbon Policy

Health Policy

Policies and Standards

We have developed policies for our Business taking into account our Group Policies & Values.

We are working to improve our management systems and by doing so, we expect our performance at all levels to improve towards international best practices.

For a deeper understanding of our policies visit - https://www.livabybirlacellulose.com/business/policies-reports

Safety Policy

Global Best Practices Policy

Human Rights Policy

Supplier Code of Conduct

Management's Approach to Sustainability

At Birla Cellulose, sustainability is central to our business strategy and deeply embedded in our organisational culture.

We are committed to a long-term sustainability vision, adopting a 360° approach to enhance sustainability across the entire process-from plantation to pulp, fibre production, fashion, and end-of-life, encompassing both upstream and downstream value chains.

We collaborate with all stakeholders to amplify our positive impact.

Each process is meticulously designed to improve the sustainability attributes of our products, ensuring that the natural cellulose sourced from certified forests is efficiently transformed into fibre that offers unparalleled comfort and a natural feel to consumers.

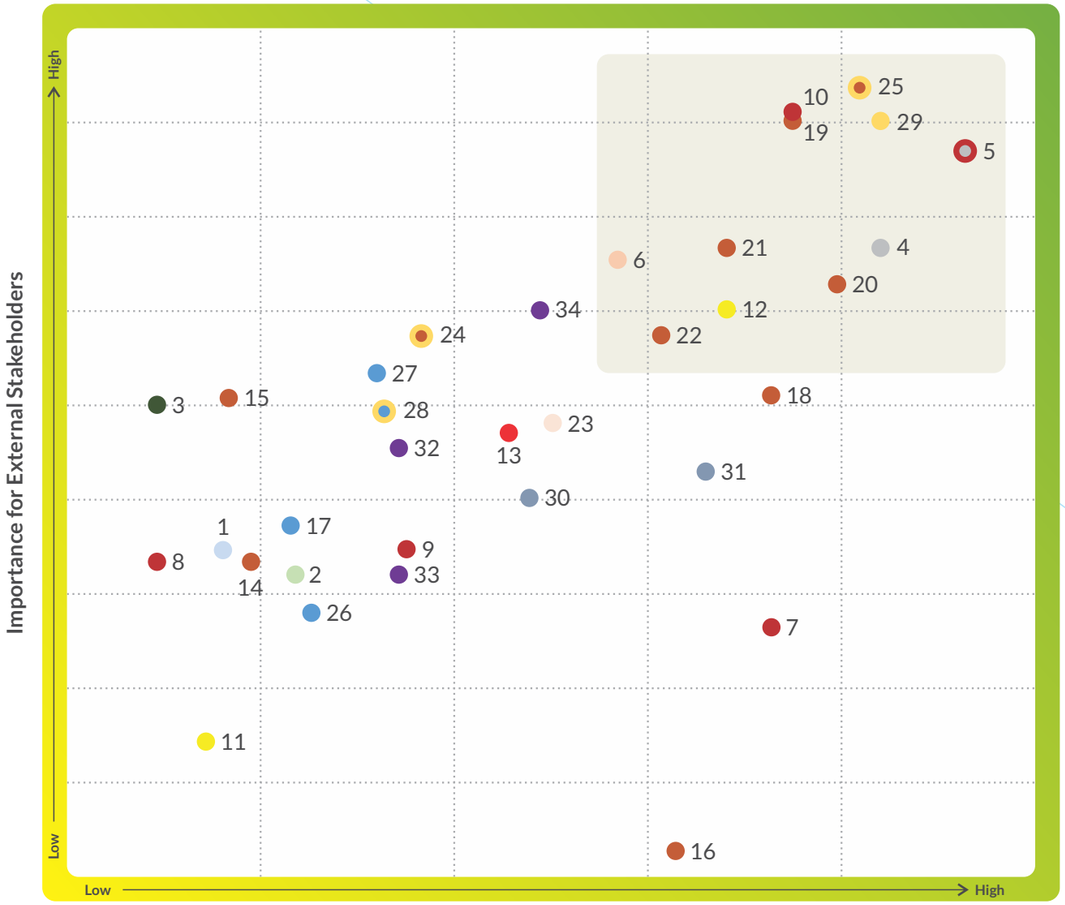
Our Business Sustainability Strategy is framed by the materiality issues identified with internal and external stakeholders, risk assessments, the UN SDGs, and the ABG Sustainability Framework.

Materiality Assessment

To establish a transparent and robust approach aligned with industry needs and to shape our sustainability strategy, a comprehensive materiality assessment was conducted in 2019, identifying key material issues. We continuously gather feedback from both internal and external stakeholders, updating the materiality issues accordingly.

Please click here to refer to the detailed materiality analysis which is available on our website.

Materiality Matrix



Most important material issues

No.	Issue
4	**Water Footprint**
5	**Occupational Health & Safety**
6	**GHG Reduction in Manufacturing**
10	**Fair Labour Practices in Supply Chain**
12	**R&D for Technology Upgradation**
19	**Sustainable Procurement**
20	**Waste Management**
21	**Best Available Techniques (BAT) for Production**
22	**Closed-loop Manufacturing**
25	**Chemical Management**
29	**Responsible Wood Sourcing**

Other key material issues

No.	Issue
1	Welfare of Local Communities
2	Capacity Building in Value Chain
3	Gender Equality
7	Talent Development
8	Collaborating for Human Rights
9	Economic Performance
11	Collaborating for Enhancing Local Supplies
13	Equal Opportunity Employer
14	Global Certifications for Products & Process
15	Circular & Recycled Products
16	Partnership for Sustainable Viscose Promotion

No.	Issue
17	Responsible Supply Chain Management
18	Customer Satisfaction
23	GHG Reduction in Supply Chain
24	Biodiversity & Resources Management
26	Sustainable Product Development
27	Marine Pollution from Microfibres
28	Sustainable Product
30	Transparency in Sustainability Disclosures
31	Transparency in Governance System
32	Collaboration for Value Chain Sustainability
33	Partnership with Multi-stakeholder Organisations
34	Transparency & Traceability

Risk Management

Risk assessment at Birla Cellulose involves three primary steps: risk identification, risk evaluation/assessment, and risk communication, followed by risk management and control based on the risk level. Priorities regarding risks and opportunities are determined based on this assessment.

Please click here to refer to the detailed risk assessment process and various risks identified for the business available on our website.

Sustainable Business Strategy

The framework of our sustainability strategy is built upon the United Nations Sustainable Development Goals (UN SDGs), materiality issues, and Circular Economy principles. To ensure a comprehensive value chain and address all sustainability aspects, we have integrated five pillars into our strategy.

Please click here to learn more about our sustainable business strategy.

Central to this strategy is the well-being of people and the planet, which inspires each of the five pillars.

Sustainability Goals & Targets

Birla Cellulose aims to become a leader in sustainability and the most sustainable MMCF manufacturer through the implementation of its sustainability strategy. Our goal is to stay ahead in key areas such as wood sourcing, closed-loop processes, and sustainable products.

GOAL 1

To achieve 'Net Zero Carbon Emissions' by year 2040

Birla Cellulose aims 'Net Zero Carbon emissions across all its operations by 2040' with an aspiration to reach the target earlier by 2035 and to achieve 50% reduction in its greenhouse gas (GHG) emissions intensity by 2030. Site wise roadmaps are prepared and being acted upon towards decarbonisation.

GOAL 2

Reduce specific water consumption by 50% in VSF manufacturing by the year 2025 over baseline of FY15

We are applying innovative technologies to reduce water consumption, including 'state-of-the-art' membrane-based technologies. Currently, we have set global benchmarks for water intensity which is much lower than even the stringent EU BAT norms for water consumption (35-70 m^3/TF).

Water consumption has reduced by 55% over the years and operating well below the limit prescribed in EU BAT guidelines. Progress of this goal is detailed in the Responsible Manufacturing section.

GOAL 3

Implement closed-loop technologies to achieve EU BAT at all fibre sites

Currently, 4 sites have achieved EU BAT guidelines. By end of FY24, we have reduced sulphur-to-air emission by 55% over FY15. We will be implementing closed-loop technologies by the end of 2027 instead of 2025, at all the fibre sites to achieve the EU BAT guidelines for sulphur-to-air release, due to unforeseen circumstances that impacted the outcomes within the business. Progress of this goal is detailed in the Responsible Manufacturing section.

GOAL 4

Increase the use of alternative feedstock such as pre- and post-consumer waste cellulose

Our R&D team is working on increasing the use of alternative feedstock such as pre- and post-consumer waste as feed to viscose process. The intensive efforts are in progress to increase the share of recycling by working on the technology as well as working on the reverse logistics supply chain to optimise the process. More progress on this goal is detailed in the Sustainable Products section.

GOAL 5

Reduce the Lost Time Injury Frequency Rate (LTIFR) below 90% over the baseline of FY15

We have the highest priority for safety for all, including our employees and the communities where we operate. LTIFR has reduced over time due to a strong focus on safety. From FY15 to FY24, we have reduced our LTIFR by 87%. Progress of this goal is detailed in the Social Responsibility section.

GOAL 6

Assess and improve the sustainability performance of key suppliers by the year 2025

The suppliers will be assessed for their sustainability, safety and health practices, legal compliances, ethics and labour rights. Globally recognised standards will be the criteria for evaluation for supplier selection and suppliers will be encouraged to adopt these best practices. We have assessed around 40 key critical suppliers in the reporting period. Progress of this goal is detailed in the Responsible Sourcing section.

GOAL 7

Empower 50,000 women by making them financially independent on chosen vocations by the year 2030

Gender equality, women empowerment and education of girl children are the key developmental gaps in some of the countries where we operate. We target to empower 50,000 women by capacity building and making them financially independent by 2030. We have supported nearly 30,000 women for livelihood activities between FY15 to FY24.

Responsible Sourcing

Overview

The landscape of supply chain management has fundamentally evolved, emphasising sustainability, technological advancement, resilience, and accountability. These changes are not only responses to past disruptions but also proactive measures to prepare for future challenges in an increasingly complex global environment. Organisations are adopting circular supply chain models that prioritise resource efficiency and waste reduction in response to global challenges.

At Birla Cellulose, sustainable sourcing is central to our business strategy ensuring that procured goods and services align with our sustainability standards. We collaborate with suppliers to promote ethical practices, human rights, climate resilience, and environmental protection.

Our key materials include dissolving pulp from wood and various chemicals essential for pulp and MMCF fibre production. Wood sourcing receives particular attention due to associated risks like deforestation and threats to biodiversity, given forests' crucial role in carbon sequestration and climate regulation.

To address these challenges, we have implemented a comprehensive Wood Sourcing Policy focused on forest conservation and protection of ancient and endangered (A&E) forests. Simultaneously, we are exploring alternative raw materials for MMCF to reduce wood dependency.

Our supplier relationships are built on long-term agreements incorporating ESG criteria alongside economic factors for their evaluation and selection. All suppliers must comply with our Supplier Code of Conduct, and we maintain a robust supplier assessment process to evaluate the sustainability performance of critical partners. Through Project Synergy, we have launched a strategic initiative to enhance supplier sustainability via structured self-assessment, reinforcing our commitment to ethical business practices and elevated ESG standards throughout our supply chain.

Responsible Sourcing for Birla Cellulose

We aim to collaborate with our suppliers to create a positive impact by adhering to globally recognised frameworks and best practices:

Environment: Tackling climate change, protecting the environment and biodiversity, reducing resource consumption through improved efficiency, and adopting circular business models.

Health and Safety: Ensuring better and healthier working conditions for workers and communities, while respecting human rights.

Ethics: Upholding ethical and fair business practices, including fair wages, compliance with labour laws, and anti-bribery measures.

Transparency: Maintaining transparency and traceability of material and service sources.

Multiplier Impact: Encouraging our suppliers to implement similar sustainability requirements with their own suppliers to amplify the positive impact.

Supplier Sustainability Assessment

Supplier Code of Conduct

The 'Supplier Code of Conduct' is designed to promote sustainable business practices throughout our value chain. Adherence to this code is crucial for selecting and developing partnerships with our suppliers. Birla Cellulose expects all material and service suppliers to fully understand and implement the requirements of this code in their operations and interactions with us. The key focus areas of the 'Supplier Code of Conduct' include:

- Human Rights & Labour
- Environment
- Occupational Health and Safety
- Governance
- Community

The 'Supplier Code of Conduct' aims to source all goods and services from sustainable sources that comply with stringent Environmental, Health, and Safety (EHS) standards. It ensures that all transactions are conducted ethically and in accordance with regulatory requirements. Human rights are of utmost importance to us, and we regularly engage with suppliers on these matters. The Supplier Code of Conduct can be accessed here.

Project Synergy

Birla Cellulose initiated Project Synergy to evaluate supplier sustainability. This initiative emphasises key aspects of supplier engagement and evaluation, aiming to drive significant environmental impact and business growth. It starts with identifying critical suppliers essential to our operations and assessing the current sustainability status of our supply chain.

For Project Synergy, we engaged a third party. The process began with a kick-off meeting with all suppliers, introducing them to the assessment process. During this meeting, detailed information on the assessment methodology, requirements, and expectations was provided. Suppliers were also guided through the specially designed Sustainability Supplier Assessment Questionnaire (SAQ) and assisted in creating the necessary action plan. The SAQ aimed to gather comprehensive insights into our suppliers' sustainability practices. As a first-time initiative, virtual audits were conducted with 80 critical suppliers. These audits provided valuable insights into their strengths and areas needing improvement. Based on these assessments, a strategic action plan to enhance suppliers' ESG performance was shared, aligning them with our business sustainability goals.

IDENTIFICATION OF CRITICAL SUPPLIERS

These are the suppliers whose materials / services have a significant impact on the business operations, competitive advantage, and market success of the company. Critical suppliers include high-volume suppliers, suppliers of critical components and non-substitutable suppliers. Their performance will impact our operations and hence need to be monitored on a continuous basis to reduce risk.

SUPPLIERS

Tier 1 Suppliers	Significant Tier 1 Suppliers	Other Tier 1 Suppliers
High-volume suppliers, including raw materials, engineering materials and service providers	Non-substitutable suppliers, including single-source vendors	High-risk suppliers, including suppliers with risks related to environment, safety, and compliance

PROCESS OF PROJECT SYNERGY

A step-by-step process was followed to execute Project Synergy, highlights of which are shared below:

Step 1 Engagement Planning

- Communicated the purpose and guidelines of the assessment to the supplier
- Addressed supplier queries and concerns
- Collected necessary information and documents from the supplier

Step 2 Review and Assessment of Information

- Reviewed the information and documents provided by the supplier for completeness
- Sought additional information or clarification from the supplier if needed
- Shared policy templates with the supplier for incorporation into their existing policies

Step 3 Virtual Meeting with the Supplier

- Conducted online assessments of the supplier's SAQ and compliance documents
- Documented strengths, weaknesses, and improvement recommendations
- Discussed assessment results and recommendations with the supplier

Step 4 Analysis and Reporting

- Prepared comprehensive reports for each supplier, including assessment ratings, areas for improvement, recommended actions, and implementation timelines
- Shared assessment reports with Birla Cellulose for review and feedback

Step 5 Receipt of a Detailed Action Plan

- Provided a detailed action plan based on assessment findings to the supplier
- The supplier may develop an action plan outlining steps as per recommendations and suggestions

PROJECT SUMMARY

Project Synergy was initiated to align the supply chain practices of Birla Cellulose with their Supplier Code of Conduct (SCoC), BRSR Core Framework and other global ESG standards.

Through a structured sustainability Self-Assessment Questionnaire (SAQ), suppliers were evaluated across four critical dimensions: General, Environmental, Social, and Governance.

KEY HIGHLIGHTS

- **80 critical suppliers were assessed, and categorised into seven groups, including Traders, Service Providers, Raw Material Suppliers, and OEMs**
- **73% successful assessments completed, establishing a baseline for ESG compliance.**

  Gaps identified in emissions monitoring, renewable energy adoption, and occupational health and safety practices
- **Tailored Sustainable Code of Conduct (SCoC) shared with suppliers to enhance ESG compliance and promote sustainable sourcing**

CONCLUSION

Project Synergy successfully laid the foundation for sustainable supply chain management by:

- Providing a clear baseline of supplier ESG performance
- Highlighting critical areas for improvement, such as emissions reduction, waste management, and ESG training
- Strengthening supplier awareness of their role in achieving sustainability goals

Responsible Wood and Dissolving Pulp Sourcing

Responsible wood sourcing is our top priority. We ensure that the wood used for dissolving pulp, the primary raw material for manufacturing MMCF, comes from sustainably managed forests.

Wood Sourcing Policy

We actively engage with all our pulp suppliers to verify that their wood is sourced from sustainable forests and plantations. Our commitment is to procure wood exclusively from sustainable sources. Our 'Wood Sourcing Policy' (access here) has laid out that we will not procure wood which is:

- **Illegally harvested**
- **Harvested in violation of traditional and civil rights**
- **Derived from uncertified High Conservation Value Forest**
- **Harvested from plantations established after 1994 through conversion of natural forests or converted to non-forest use**
- **From forests in which genetically modified trees are planted**
- **Harvested in ancient and endangered forests, or endangered species habitat**

We maintain stringent controls on wood sourcing to ensure our sustainability practices begin at the initial stage of procurement. In addition to verifying certifications of harvested wood from leading forest management organisations, we monitor the source of the wood procured across all our operations and pulp suppliers.

All Birla Cellulose pulp and fibre manufacturing sites are FSC® CoC certified.

Biodiversity Management

We recognise that our business can have an effect on the local ecology of the areas where we operate and that we have an important role to play in protecting the fragile ecosystems around us. All the activities right from wood procurement to manufacturing of pulp & fibre and disposal of the product after its useful life can have an impact on biodiversity if not managed in a responsible manner.

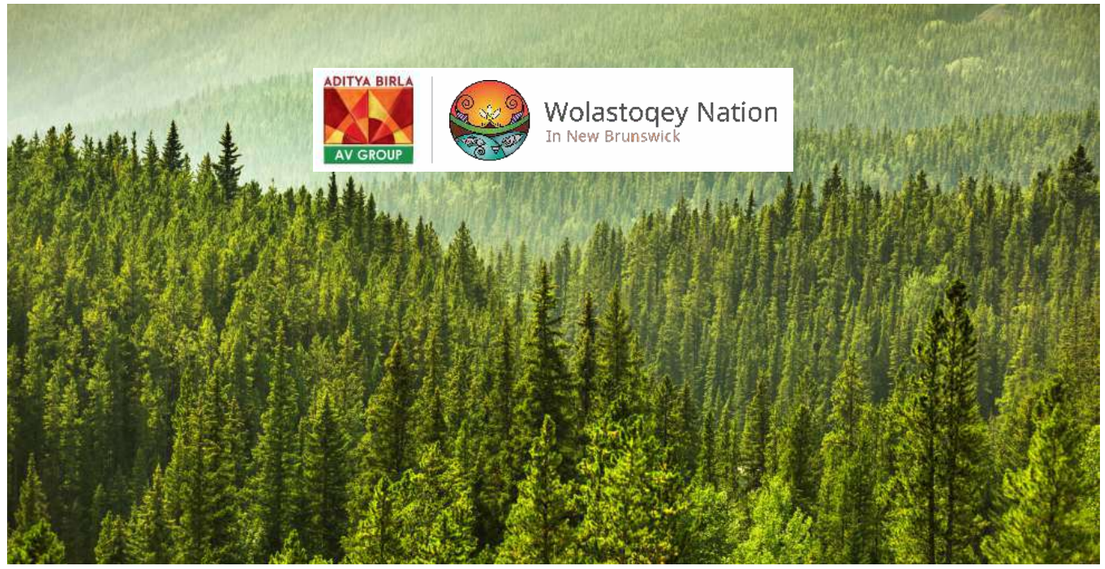
Wolastoqey Nation, AV Group open the door to forest co-management, rights recognition with historic MOU

AV Group NB Inc. and the six Wolastoqey First Nations have signed a memorandum of understanding (MOU) that outlines a path toward mutually-beneficial forest management and economic development opportunities.

The parties have agreed to pursue a greater collaborative approach to forest management and explore alternative forest tenure models that will incorporate meaningful input into decision-making processes. It will explore ways in which Wolastoqey participation in governance, application of Indigenous knowledge, protection of values and sustainability can be brought to bear on management decisions in a spirit of joint responsibility and mutual benefit.

The Wolastoqey Nation filed an Aboriginal title claim in 2021 which names some of New Brunswick's forestry companies, including AV Group, and seeks the return of their land. This MOU is the first step toward what the Wolastoqey Chiefs hope will be a settlement of that claim against AV Group.

The Wolastoqey Nation in New Brunswick offers technical advice and support to help Wolastoqey communities ensure that their constitutional right to consultation is upheld, and that their Aboriginal and Treaty Rights are recognized and implemented. The communities include Matawaskiye (Madawaska First Nation), Wotstak (Woodstock First Nation), Neqotkuk (Tobique First Nation), Bilijk (Kingsclear First Nation), Sitansisk (St. Mary's First Nation) and Welamukotuk (Oromocto First Nation).



CASE STUDY

Birla Cellulose retains highest category in Canopy's Hot Button Report 2024

Birla Cellulose has once again achieved the highest 'dark green shirt' rating in Canopy's Hot Button Report 2024, ranking #1 among global MMCF producers. This recognition is a testament to our ongoing efforts in conserving ancient and endangered forests and our robust initiatives to scale circular business models in the fashion industry.

The dark green rating highlights Birla Cellulose's superior performance in implementing CanopyStyle commitments, making strides in next-generation fibre solutions, and advancing conservation efforts.

This top rating in the environmental report underscores our relentless pursuit of sustainable wood sourcing practices, forest conservation, innovation, next-generation fibre solutions, and transparency across the value chain.

Canopy's Hot Button Report ranks the world's top MMCF producers on their progress on:

- Eliminating endangered forests from their supply
- Contribution to conservation of old growth forests
- Development of 'Next Generation Solutions' from alternative feedstock
- Establishing transparency and traceability

The Hot Button Report is a pioneering tool that allows fashion brands and retailers to thoroughly evaluate MMCF suppliers' forest management practices and their leadership in eliminating endangered forest fibre from the rayon and viscose supply chain.

The significance of eco-friendly business practices in the textile industry has grown substantially. Currently, over 550 global brands are seeking to source from 'green shirt' producers. These brands collectively generate annual revenues exceeding USD 1 trillion, making this demand a powerful catalyst for change.

Chemicals Sourcing & Effective Management

Chemicals play a crucial role in the production of viscose fibre, being used at various stages from converting wood chips into pulp to transforming pulp into fibre. Key chemicals such as caustic soda, sulphur, zinc, and finishing agents are sourced from suppliers with long-term agreements. We recognise the impact of these chemicals and have established a robust chemical management system.

We require our suppliers to adhere to the ZDHC Manufacturing Restricted Substance List (MRSL) in their processes. Whenever possible, we source the majority of our chemicals locally. Some of our sites have co-located caustic soda production, and most are backward integrated, producing sulphuric acid and carbon disulphide on-site to avoid transporting hazardous chemicals over long distances.

Additionally, we are working on closed-loop recycling of chemicals to reduce the environmental impact of our operations and minimise our carbon footprint. We are committed to reducing the impact of chemicals and associated risks on the environment.

Effective Chemical Management Programme

We have implemented a Chemical Management Programme to ensure the safe handling and storage of chemicals in our facilities. Chemicals are segregated based on an interaction matrix and contained within dykes to prevent uncontrolled spills in case of leaks. Special attention is given to labelling requirements and the proper storage of chemicals on-site. Efficient use of these chemicals helps reduce their impact on our operations and the environment.

Key steps in our chemical management include:

Before purchasing materials, we ensure the availability of safety documents such as Material Safety Data Sheets (MSDS), risk assessments, and compatibility studies. Workers who handle and store these materials receive specific training on safe handling practices and are provided with appropriate personal protective equipment (PPE).

Responsible Manufacturing

Overview

Circular manufacturing is now crucial for responsible businesses, driven by eco-conscious consumers, stricter regulations, and investor focus on sustainable models. Progressive companies are innovating to retain product value while embracing circularity.

Aligned with UN SDG 6, 12 and 17, Birla Cellulose collaborates with diverse stakeholders to develop responsible manufacturing practices that promote sustainable consumption and production. This effort is rooted in our philosophy of Responsible Stewardship.

We have continuously refined our manufacturing processes, setting global benchmarks in the efficient use of raw materials such as caustic soda and water. In 2018, we initiated the adoption of closed-loop technologies at all our Man-made Cellulosic Fibre (MMCF) manufacturing facilities to achieve the most stringent global standards for MMCF such as European Union Best Available Techniques (EU BAT) and ZDHC MMCF Guidelines. Currently, four out of seven MMCF manufacturing sites are conforming to EU BAT guidelines.

Management Approach

At Birla Cellulose, we have adopted a holistic approach to sustainable MMCF manufacturing. This includes leveraging advanced processes and technology, following globally benchmarked management practices, and engaging a highly skilled and trained team to produce top-quality fibre in an environmentally friendly and safe manner.

Efficiency improvement projects have been implemented in the past, and new initiatives are currently being executed to reduce the consumption of water and other raw materials.

At many of our fibre plants, process water consumption is 30% to 40% below the EU-BAT lower limit.

We are continuously focused on improving energy efficiency, minimising air emissions (sulphur-to-air) and reducing wastewater across our operations. Our efforts are centred on source abatement to lessen the environmental impact of our activities and advance towards tighter closed-loop manufacturing.

All our pulp and fibre manufacturing sites are certified with the ISO 14001:2015 Environment Management Standard (EMS). Additionally, all Birla Cellulose fibre manufacturing sites are verified for Higg (3.0) FEM.

Sustainable Pulp & Fibre Manufacturing

Sustainably sourced wood serves as an ideal, renewable raw material for producing dissolving grade pulp. This pulp is then converted into MMCF, which have various applications in the textile and nonwovens industries.

Throughout the entire manufacturing process of pulp and fibres such as viscose, modal, and lyocell, the molecular structure of cellulose is preserved, maintaining its nearly pure form (99.9%) as it was in the original wood.

Birla Cellulose produces a range of MMCF including Viscose, Modal, and Dope Dyed fibres, using the traditional viscose process. Additionally, we manufacture Lyocell fibre through a distinct solvent spinning process. The Lyocell technology is notable for its closed-loop system and an impressive solvent recovery rate of over 99.7%.

For further information, kindly refer to our Sustainability Report for FY20.

Closing the Loop in Viscose & Modal Fibre Manufacturing

During the manufacturing process of viscose and modal fibres, the use of carbon disulphide (CS_2) poses significant hazards. To mitigate these risks, we implement a closed-loop process aimed at maximising the recovery of CS_2 from exhaust gases during production and reusing it back in the process. This approach not only reduces sulphur emissions to air but also enhances the working environment and decreases raw material consumption, positively impacting process economics.

For further information, please refer to our Sustainability Report for FY20.

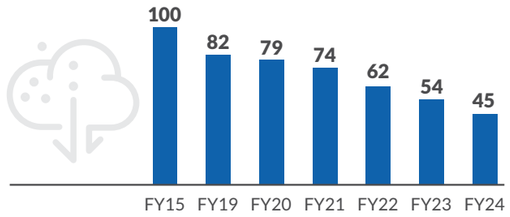
CURRENT STATUS

Currently, in addition to our sites in China and Thailand, two of the four sites in India conform to the stringent EU-BAT guidelines. This includes maintaining sulphur-to-air emissions below 20 kilograms per ton of fibre limit as per EU BAT guidelines.

Overall, the business reduced the sulphur-to-air emissions by 55% by end of FY24.

Sulphur-to-air Emission (kg/TF)

FY15 = 100



WAY FORWARD

Work is underway to implement closed-loop technologies at the remaining three sites - one in Indonesia and two in India. By Q2 2025, the site in Indonesia will complete EU-BAT implementation, while the remaining two sites in India (Nagda and Harihar) are expected to meet EU-BAT guidelines within the next 24 to 36 months.

Setting New Benchmarks in Environmental Performance

Reducing our ecological impact throughout the value chain by conserving resources is our top priority. We strive to set a benchmark in the MMCF industry and have undertaken various initiatives to minimise our environmental footprint.

As our business expands, the demand for raw materials grows, making the conservation of natural resources increasingly vital. Our focus is on reducing resource consumption through 'abatement at source.' In recent years, we have worked to enhance the closed-loop process, implement Best Available Technologies (BATs), and recover and reuse waste and by-products generated during manufacturing.

Water & Wastewater Management

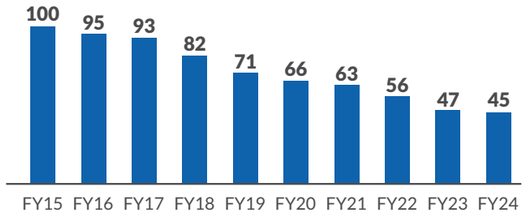
Water scarcity is becoming an increasingly critical issue due to climate change and the overexploitation of existing reserves. With a growing population and the need for higher levels of agricultural and industrial activities, efficient management of water resources is crucial.

The success of our operations is closely linked to water access, impacting every aspect of our business. We continuously monitor, review, and optimise our water consumption through process modifications and the adoption of new technologies.

Water Intensity (m^3/TF)

Index FY15 = 100

Water Consumption



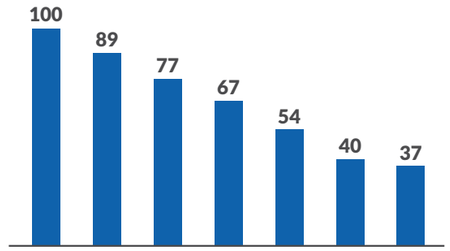
We have adopted the 4R Principles (reduce, reuse, recycle, and regenerate) in our operations to conserve water. This approach has led to significant reductions in water consumption through technological advancements.

The main sources of water for our operations are nearby surface water bodies such as rivers or water utilities. We do not use groundwater for our operations.

The discharge of untreated wastewater poses risks to both human health and the environment. Birla Cellulose is committed to treating and discharging wastewater in accordance with the most stringent global standards, often exceeding regulatory requirements. Our fibre manufacturing sites adhere to EU-BAT BREFs and ZDHC MMCF Wastewater Guidelines, and we have equipped each site with state-of-the-art Effluent Treatment Plants (ETPs) featuring the latest technology.

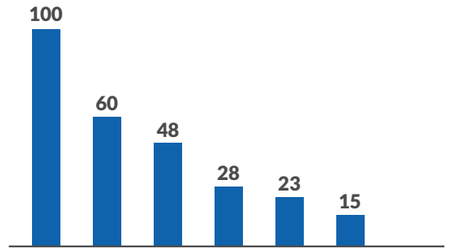
The trends presented here summarise the quality of the effluent that has been discharged. In order to reduce the COD and Zinc levels in the wastewater, we have taken a proactive initiative.

COD (fibre sites)



**FY18 = 100 (as base year)*

Zinc (fibre sites)



#FY19 = 100 (as base year)

SUSTAINABILITY GOAL

Birla Cellulose aims to reduce process water consumption in VSF manufacturing by 50% by 2025. By the end of FY24, we have already achieved a 55% reduction compared to the FY15 baseline.

In alignment with UN Sustainable Development Goals 6 and 12, we are committed to minimising water usage and enhancing water availability for communities and the planet.

CASE STUDY

Reduction of water consumption at our Vilayat plant – world's largest VSF manufacturing site

OBJECTIVE

Our objective is to achieve 'minimum' freshwater consumption and have set a target that surpasses the statutory, regulatory, and / or industry norms.

ACTION

We have, in the last few years, made significant investments to improve processes and systems. This facility is conforming to European Union Best Available Technology (EU-BAT) guidelines. Several initiatives have been implemented to reduce our environmental impact, including:

- ☑ **Installation of RO systems to recover and reuse up to 70% of processed water from various effluent streams.**
- ☑ **Influent and effluent characterisation, closed-loop backwashing, pinch for washing, utilising RO reject for once through quenching.**
- ☑ **Expansion and upgradation of ETP and process improvisation.**

These initiatives demonstrate our commitment to sustainability and our efforts to continuously improve our environmental performance.

OUTCOME

We have significantly reduced our water consumption, thanks to our pioneering measures. Our overall water intensity has been reduced by 81% from the baseline of FY16, in a phase-wise manner.

Waste Management

Our waste management approach is continuously evolving as we strive to better identify and account for our waste. At Birla Cellulose, we adhere to the waste management hierarchy, which prioritises minimising disposal. Our goal is to reduce the amount of waste we generate.

All our sites comply with local waste management regulations for disposal and classification as required in their respective countries. We follow the principles of the circular economy, aiming to use waste as a resource for other processes or industries.

A majority of the waste generated at our sites is recycled, reused, or recovered, with a focus on reducing the amount sent to landfills or incineration.

Any hazardous waste generated at our facilities is either supplied to authorised recyclers, disposed of through Treatment, Storage, and Disposal Facilities (TSDF), or used as raw material by other industries.

By end of FY24, we have reduced waste-to-landfill by 55% over a baseline of FY19.

Energy & GHG

Effective management of energy consumption and carbon emissions is crucial for our operations. These two factors are closely linked, as the use of fossil fuels for energy production is a major contributor to greenhouse gas (GHG) emissions.

The production of viscose fibre is energy intensive. Our operations utilise both renewable and non-renewable energy sources. However, the use of non-renewable energy leads to CO_2 emissions, contributing to climate change.

We currently monitor Scope 1 and Scope 2 GHG emissions. Scope 1 emissions arise from the use of primary fuels, while Scope 2 emissions are primarily from purchased electricity. We are dedicated to reducing our carbon footprint both within our operations and throughout our supply chain. To achieve this, we are implementing several strategies, including:

- **Reducing energy intensity**
- **Increasing the use of renewable energy**
- **Utilising non-fossil fuel-based sources and biogas at all fibre sites**
- **Promoting net positive forest growth to sequester carbon emissions**

Our pulp sites are self-sufficient, generating 80-90% of their energy needs from black or red liquor produced during the pulp cooking process.

Decarbonisation

As global attention on climate change has intensified, it is clear that decarbonisation is not only an environmental duty but also a crucial factor for achieving long-term success. The urgency to address climate change has grown significantly in recent years, with decarbonisation becoming a key strategy for reducing risks and enhancing resilience.

Our business is not immune to this global phenomenon and has recognised the need for accelerated climate action. We have begun integrating climate risks and opportunities into our strategic plans.

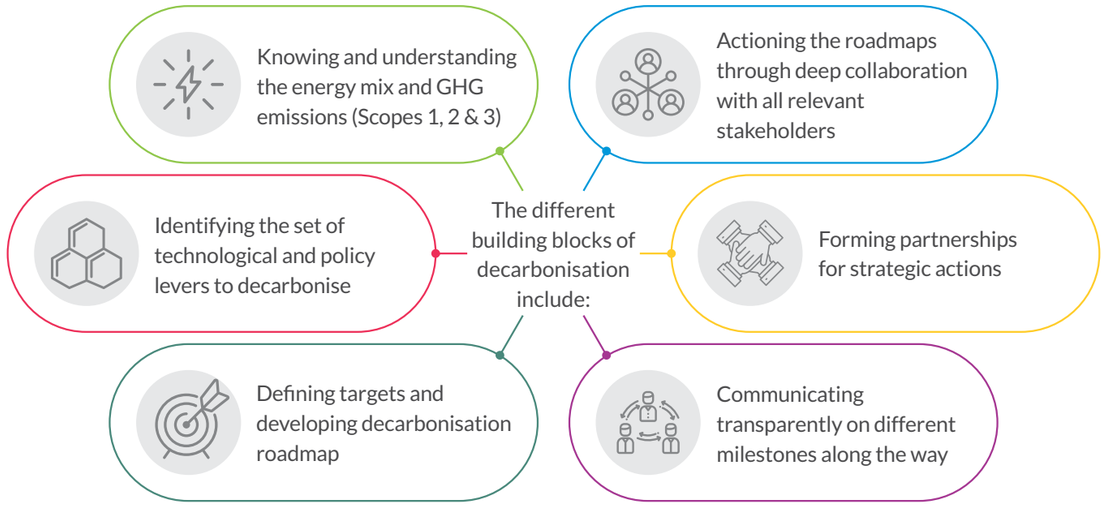
Birla Cellulose acknowledges the potential harm that climate change could inflict on our natural resources and business operations. We recognise that GHG emissions are the primary driver of climate change. Our customers are increasingly inquiring about the GHG emissions associated with our products and supply chain.

To continuously enhance our operational excellence, we are implementing various energy efficiency initiatives. We are also closely monitoring global, regional, and national policies and regulations related to climate change and its mitigation, as these may have financial implications for our business in terms of energy and other resources.

DECARBONISATION ROADMAP

Our business has set ambitious climate action goals, aiming to reduce greenhouse gas (GHG) emissions intensity by 50% by 2030, using 2019 as the baseline for Scope 1 and Scope 2 emissions.

We strive to achieve net-zero emissions across all operations by 2040, with an aspiration to reach this target even earlier, by 2035, through a science-based methodology.



Identified handles to abate GHG emissions are:

- Energy efficiency improvements in process and power plant by adopting new technologies like Membrane distillation in place of conventional evaporation.
- Use of alternate fuel in boilers to replace coal.
- Adoption of Biofuel fired boiler for future expansion.
- Adaptation of renewable energy to the extent possible.
- Reduction in consumption ratios for all materials, increasing the recovery of CS_2 and other chemicals.
- Select suppliers with lower GHG intensity for major raw materials

We have developed site-specific roadmaps, which include evaluating carbon reduction technologies, analysing the cost implications, and prioritising investment requirements. A three-tiered governance structure has been established, complete with a review mechanism for monitoring progress.

Minimising Emissions to Air

Birla Cellulose recognises the direct impact of air pollution on the environment and the surrounding community. Reducing air pollution is a key priority and we have adopted several mitigation measures:

- Implementing engineering controls such as filters, scrubbers, and cyclones for air pollution control.
- Installing automated controls to maintain critical process parameters.
- Scheduling preventive maintenance for all environmentally critical equipment.
- Using an online monitoring system to ensure compliance with local regulations.
- Conducting periodic third-party monitoring and analysis as approved by regulatory authorities.

We have Continuous Emissions Monitoring Systems (CEMS) at most sites, connected to pollution control board servers. Real-time emission data for key parameters are displayed at the factory gates of our fibre manufacturing sites to enhance transparency in environmental performance.

Our fibre sites have implemented various technologies to collect and treat process emissions, such as CS_2 and H_2S. These technologies include CS_2 condensation, wet sulphuric acid processes, carbon disulphide adsorption (CAP) technology, redox processes, and scrubbers.

Birla Cellulose is committed to maintaining emissions within permissible limits and continuously seeks innovative solutions to reduce emissions, adopting global best practices and benchmarks.

Awards

GCD Vilayat site was awarded First prize under the 'Industrial Water Use Efficiency' category at the 11th Edition of FICCI Water Awards.

Staple Fibre Division, Nagda, India was bestowed with the CII-ITC Sustainability Award 2023 for Excellence in Environment Management.

Grasim won the Water Stewardship category of the Network18 (CNBC) Sustainability100+ Award 2023.

Harihar Unit won the 'Platinum Award' for Sustainability at the Apex India Green Leaf Awards 2023.

Harihar Polyfibre and Grasilene Division bagged the World Safety Organization's OHSE Silver Award, achieving a 3 Star rating in the manufacturing sector.

Domsjö Fabriker AB won Sweden's prestigious Magnet Awards in recognition for Employer Branding. Domsjö bagged the 'Gold' awards in 2 categories: 'Culture and Commitment' and 'Strategy.'

Staple Fibre Division, Nagda won the 'Gold' Award at the 11th National CSR Summit & CSR Times Awards 2024 for its project 'Ensuring Quality Education.'

Thai Rayon was awarded the 2024 Organisation Award for Outstanding Provincial Social Responsibility Promotion by the Ministry of Social Development and Human Security, Thailand.

Adapting Globally Recognised Standards and Systems

Birla Cellulose has adopted globally recognised standards and systems to make its processes more environmentally friendly and to ensure transparent reporting. Some of these systems include EU-BAT, ZDHC, Higg (4.0) FEM, Higg FSLM, EMS, etc.

EU-BAT (EUROPEAN UNION BEST AVAILABLE TECHNIQUES)

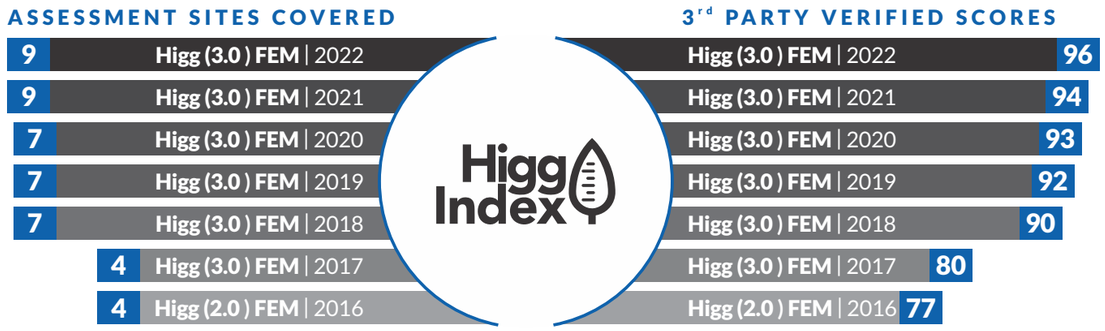
The EU-BAT reference document on best available techniques in the production of polymers provides the BAT for the production of viscose fibres. Birla Cellulose has adopted EU-BAT for its fibre manufacturing facilities with its sites in China, Thailand, and two sites in India already conforming to these guidelines.

HIGG FEM

The Higg Facility Environment Module (FEM) is a widely used tool for evaluating a facility's environmental impact, assessing sustainability, and communicating performance to stakeholders, including global brands, retailers, and customers.

Birla Cellulose has been conducting self-assessments for several years and achieved verified benchmark scores in the Higg (3.0) FEM for 2022. To improve these scores, our sites demonstrate continuous year-on-year improvements in areas such as environmental management, energy and GHG emissions, water use, wastewater, air emissions, waste management, and chemical management.

Birla Cellulose has also started the implementation of Higg (4.0) FEM at its manufacturing sites.



HIGG FSLM

Higg Facility Social & Labour Module (FSLM) measures the social impact of manufacturing across areas such as wages, working hours, health and safety, and employee treatment.

The FSLM assessment is based on the Converged Assessment Framework (CAF) developed by the SLCP to measure social impacts and working conditions in the supply chain.

Birla Cellulose has started the implementation of Higg FSLM at its manufacturing facilities.

ZDHC MMCF GUIDELINES

ZDHC CONTRIBUTOR

Birla Cellulose operates seven fibre manufacturing sites across four countries. One of the major challenges was to align all sites and operations teams with the new standards and ensure a unified focus on meeting the same goals.

To achieve compliance with these stringent standards, the sites conducted gap assessments to identify the necessary technological and operational changes. Monthly monitoring and progress dashboards were established, targeting ZDHC progressive limit values. Site teams and central teams collaborated to develop a time-bound action plan to meet the new targets.

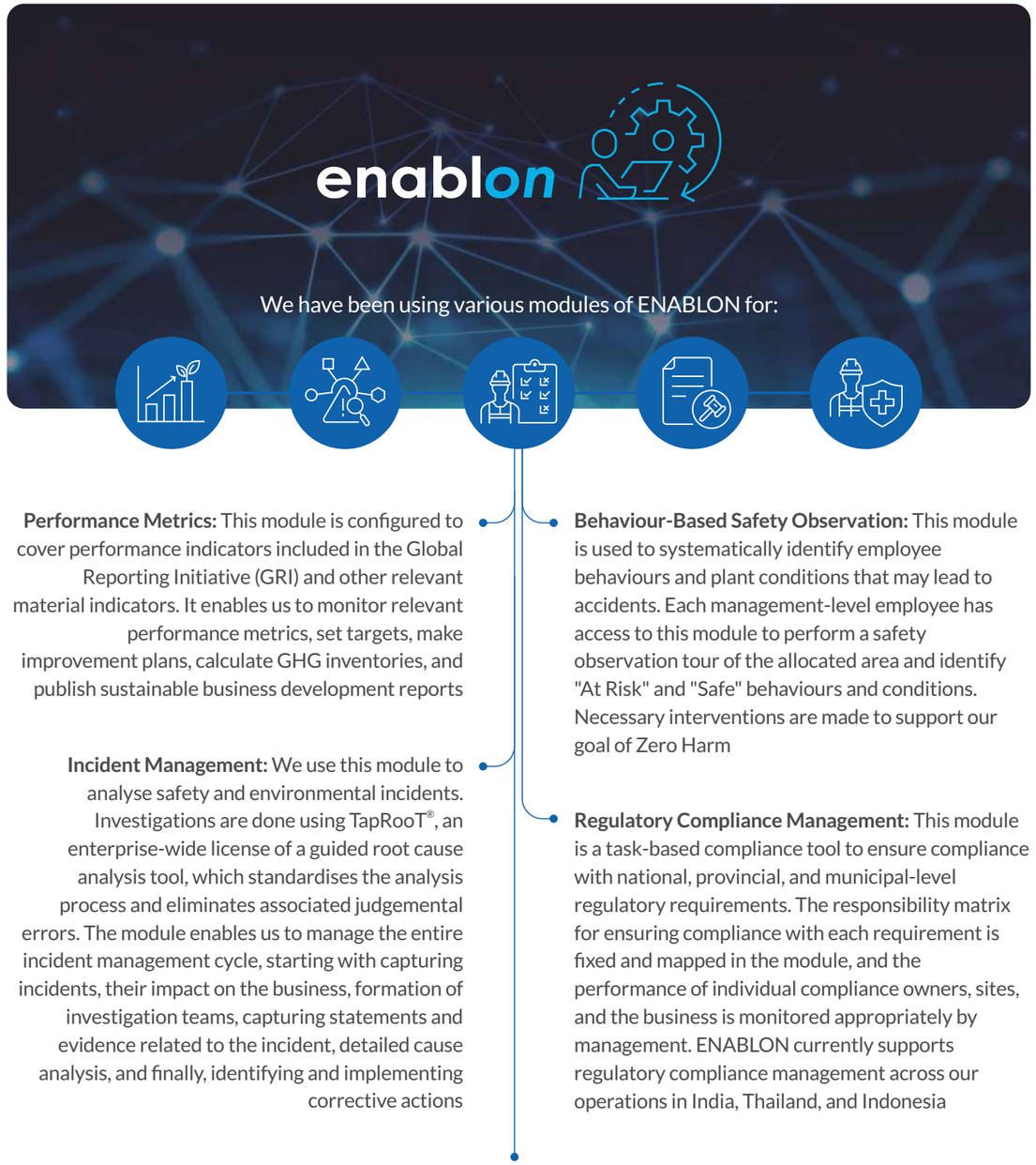
As a result of these efforts, all sites exceeded the Suppliers to Zero Progressive and Aspirational Levels for more than 90% of the parameters.

They are also in the process of surpassing foundational limits for the remaining parameters of the ZDHC MMCF wastewater standards, which are already being implemented by ZDHC. Data from all sites is publicly available on the ZDHC Gateway.

Birla Cellulose is fully committed to implementing the ZDHC MMCF Guidelines across all its fibre manufacturing sites.

USE OF IT AS ENABLER

Given the diverse geographies in which we operate, IT-enabled tools are essential for implementing sustainability frameworks. The ENABLON data management system enables our geographically dispersed units to ensure compliance with local laws, adhere to international standards, and benchmark performance metrics against global best practices.



Performance Metrics: This module is configured to cover performance indicators included in the Global Reporting Initiative (GRI) and other relevant material indicators. It enables us to monitor relevant performance metrics, set targets, make improvement plans, calculate GHG inventories, and publish sustainable business development reports

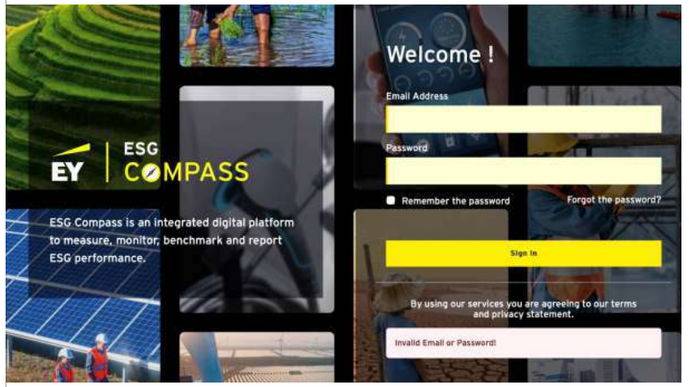
Incident Management: We use this module to analyse safety and environmental incidents. Investigations are done using TapRooT®, an enterprise-wide license of a guided root cause analysis tool, which standardises the analysis process and eliminates associated judgemental errors. The module enables us to manage the entire incident management cycle, starting with capturing incidents, their impact on the business, formation of investigation teams, capturing statements and evidence related to the incident, detailed cause analysis, and finally, identifying and implementing corrective actions

Behaviour-Based Safety Observation: This module is used to systematically identify employee behaviours and plant conditions that may lead to accidents. Each management-level employee has access to this module to perform a safety observation tour of the allocated area and identify "At Risk" and "Safe" behaviours and conditions. Necessary interventions are made to support our goal of Zero Harm

Regulatory Compliance Management: This module is a task-based compliance tool to ensure compliance with national, provincial, and municipal-level regulatory requirements. The responsibility matrix for ensuring compliance with each requirement is fixed and mapped in the module, and the performance of individual compliance owners, sites, and the business is monitored appropriately by management. ENABLON currently supports regulatory compliance management across our operations in India, Thailand, and Indonesia

Industrial Hygiene: This module helps in managing and controlling occupational health-related risks using Qualitative Exposure Assessment (QLEA), Quantitative Exposure Assessment (QNEA), and identifying/tracking improvement plans

ABG ESG 360 Accelerator Digital Project



In response to the Aditya Birla Group's Chairman call for accelerating ESG, the Group embarked upon a unique project in FY23. In partnership with EY, we are developing an integrated digital platform that serves as a single-window access and analytics dashboard of ESG information of participating Aditya Birla Group businesses in their ESG performance monitoring, benchmarking, rating improvement and reporting.

The project is built on a unique IT architecture connectivity that bridges each ESG KPI from individual data sources for each business to the Group Sustainability Data Lake (GS-DL).

Here is a snapshot of the project outcomes:

Objective	Business Benefits	Outcomes
Streamline ESG data management and enhance data governance	• Single and automated source of key ESG Data (integrated through GS-DL) • Improved processes, data governance and internal controls • Minimised manual time and efforts in data collection and consolidation • Consistent measurement and timeliness • Improved traceability of data for future audit purposes • Near-to-real-time automated dashboards for performance monitoring	Single source of key ESG data with enhanced data governance Minimised manual time and efforts
Support ESG Rating Improvement	• ESG rating report analysis to identify disclosure & performance improvements • Enhanced ESG disclosures aligned with ESG rating parameters - through ESG Factsheet • ESG rating improvement action tracker workflow - with responsibility, timeline & regular notifications • ESG ratings IQ - peer benchmarking • ESG rating simulation model	Improved ESG rating performance Sharper ESG Communication: Internal and External
Automate ESG Reporting	• Digitisation and automation of annual Business Responsibility and Sustainability Reporting (BRSR) (with automated Word and XBRL template) • BRSR maturity assessment tool	Faster and more accurate reporting, and peer insights
Enhance ESG Benchmarking	• Through BRSR, DJSI, MSCI, Governance, SASB	External intelligence

GRI Indicators

There has been a reduction in water withdrawal and effluent however, energy and greenhouse emissions have increased in the reporting period.

Water Withdrawal and Effluent Discharge

The water withdrawal and effluent discharge in the pulp and fibre manufacturing sector is presented in the table below:

million m^3

	FY22	FY24
Surface Water	119.91	116.00
Ground Water	0.00	0.00
Wastewater from other Organisations	0.26	0.16
Water from Municipality / Water Utility	11.74	10.60
Total Water Withdrawn	**131.90**	**126.76**
Effluent Discharge	**108.15**	**105.90**
Effluent Recycled / Reused	**22.04**	**26.09**

Note: The quality of treated wastewater discharge meets the local regulatory norms.

Waste Disposal

The information regarding the waste generated, categorised by type and method of disposal, has been presented in the following table for the reporting year.

MT

Disposal Methods	Hazardous Waste		Non-hazardous Waste	
	FY22	FY24	FY22	FY24
Recovery	16,854	20,078	96,553	95,084
Reuse	38,322	64,770	207,918	1,17,923
Recycling	13,306	21,972	89,002	1,89,598
Incineration	27,684	28,223	485	733
Landfill	28,899	9,478	17,254	25,459
Composting	0	0	33,250	26,300
Total	**125,064**	**144,520**	**444,462**	**455,096**

Energy Consumption

The energy consumption by type in our operations is presented in the following table:

million GJ

	FY22	FY24
Non-renewable Energy	38.04	39.36
Renewable Energy	21.32	22.81
Total Energy Consumption	**59.36**	**62.17**

GHG Emission

million MT

	FY22	FY24
Scope I Emissions (Direct Emissions)	3.29	3.58
Scope II Emissions (Indirect Emissions)	0.17	0.15
Total GHG Emissions (CO_2e)	**3.46**	**3.73**

Sustainable Products

Overview

There has been an upward trend for more and more products that are circular, low-carbon, comes from responsible sources and do not pollute or harm environment. Sustainability conscious buyers are now demanding products with these key attributes.

These products should be made in an environmentally and socially responsible way using natural & sustainably sourced renewable raw material, and adopting a closed-loop process to recover and reuse key materials thereby reducing the use of fresh materials and minimising environmental impact.

At the end of life, the product should biodegrade or can be recycled with least harm to the environment and also, the entire value chain is transparent and traceable.

MMCFs such as viscose, modal and lyocell are used predominantly by the textile/nonwoven industry to make a range of products for diverse applications such as fashion, home, medical and hygiene. Responsibly produced MMCFs fulfill these requirements and are considered as one of the most sustainable fibres and are preferred as they offer outstanding benefits while choosing a fibre based on sustainable credentials and natural comfort.

Birla Cellulose operates at the beginning of the long wood-pulp-fibre-fabric-fashion chain and supplies the basic constituent, which is the MMCF fibre, for textile/nonwovens industry. **Birla Cellulose applies sustainable best practices throughout the value chain, including responsibly sourced wood, a closed-loop manufacturing process, recycling and reusing raw materials and natural resources, and a circular business model, all while ensuring transparency and traceability.** More information on the product offerings by Birla Cellulose are available here https://www.birlacellulose.com/products.

Sustainable Products Profile

Birla Viscose™

Birla Viscose™ is the 1st generation regenerated cellulosic fibre made from wood pulp from sustainably managed forests. **Birla Viscose™ is not only biodegradable and eco-friendly, it is also one of the most purified forms of cellulose.** It enriches every garment with fluidity, lustre, softness, drape and comfort. Excellent for skin, these delightful fibres, inspire soft drapes, effortless style and are bound to make your everyday moments glamorous.

Birla Spunshades™

Birla Spunshades™ are coloured MMCF where pigments are injected into the viscose dope before the fibre is spun and cut. Birla Spunshades fibres with unique Colour-Lock™ technology make fabric fade-resistant and ensures best in class colour consistency. **The spundyed fibre eliminates the process in downstream value chain such as dyeing step at the fabric stage, saving large amount of energy, water and chemicals as well as ensuring there is no wastewater generation.**

Birla Modal™

Birla Modal™ is the 2nd generation in MMCF that combines aesthetics and elegance with performance, with a host of consumer & value chain benefits. Birla Modal fibres offer best of comfort and luxury. These fibres have been designed to impart brilliant lustre, soft feel and excellent drape.

Birla Excel™

Birla Excel™ (Lyocell) is the 3rd generation in MMCF, a fibre which is truly environment friendly and is made through a unique closed-loop process, where the by-products of the process are reused in the process itself, thereby minimising discharge and resulting in a near zero environmental impact. **The solvent recovery from these processes is as high as 99.7% and is the most water efficient process for MMCF industry.**

Birla purocel™ because we care

Birla Purocel™ are our nonwoven fibre offering which are nature-based and ideal for personal care, hygiene and medical usage and next-to-skin applications. **Birla Purocel offers a wide range of fibres for nonwoven applications with a focus on sustainability, innovation and partnership.** For more information on all the Birla Purocel product offerings, please visit https://www.purocel.com/

Livaeco is an eco-enhanced viscose fibre made from wood pulp sourced from FSC® certified sources and is produced through a closed-loop process in the facilities following EU BAT guidelines. Livaeco comes with supply chain transparency and traceability through a unique molecular tracer and GreenTrack™ platform powered by blockchain technology. Birla Cellulose offers both viscose & modal fibres in the Livaeco range for a variety of applications. Livaeco fibres have a lower environmental impact as compared to generic viscose fibres based on Higg MSI tool provided by Cascale (previously SAC).

RECYCLED BLENDED claim standard

liva reviva

Birla Cellulose has developed Liva Reviva with 30% textile waste content starting with an initial content of 20% when the product was launched in 2019. The product is Recycled Claimed Standard (RCS) certified. The quality of the fibre remains comparable to the quality of fibre produced using virgin wood-based pulp.

Birla Cellulose's current efforts are concentrated on developing products made with industrial waste, post-consumer waste and alternate feedstock.

The use of alternate feedstock in total production would help in reducing the waste and is a climate friendly solution.

Birla purocel™ | Eco

With Purocel Eco, an eco-enhanced nonwoven viscose fibre, we have taken our spirit of caring for tomorrow to the next level.

Purocel Eco comes from FSC® certified sustainable forests and lowers GHG and sulphur emissions which meets EU BAT guidelines and the higher usage of renewable energy sources makes it even more sustainable.

Purocel Eco has been manufactured in a facility having best in class Higg (3.0) FEM score. Purocel Eco can be identified in the end products like wipes through a unique molecular tracer which helps the end buyer trace the origin and full journey of the product he/she is buying. Purocel Eco fibres have a lower environmental impact as compared to generic viscose fibres based on Higg MSI tool provided by SAC.

Product Innovation

Innovation is one of the key pillars of our business strategy and it is a continuous process.

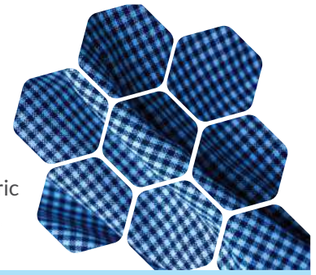
We work collaboratively with technology providers, global research institutions and the value chain to bring out the products to delight our customers with improved sustainability performance and environmentally-friendly products.

Our global R&D centres have played a crucial role in this and are continually developing sustainable products and processes for the textile and nonwoven industry.

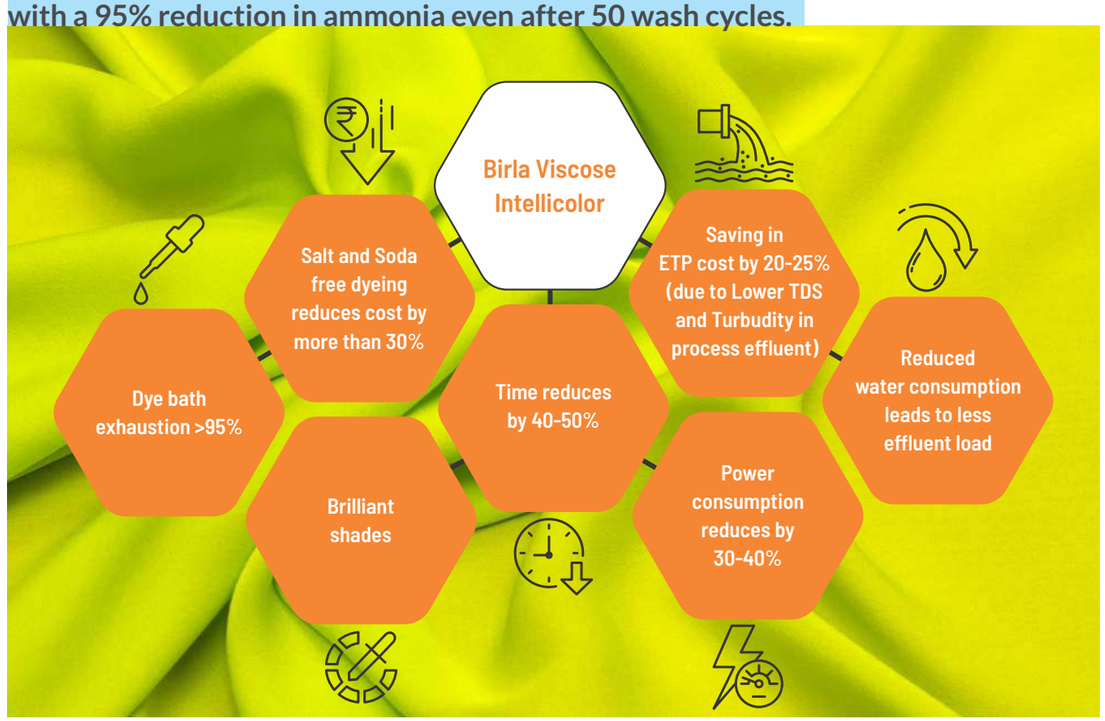
Innovations in technology development have resulted in Birla Cellulose setting new benchmarks in raw material consumption, going much lower than the stringent EU BAT consumption norms for key raw materials such as pulp, solvents, caustic, water and many others.

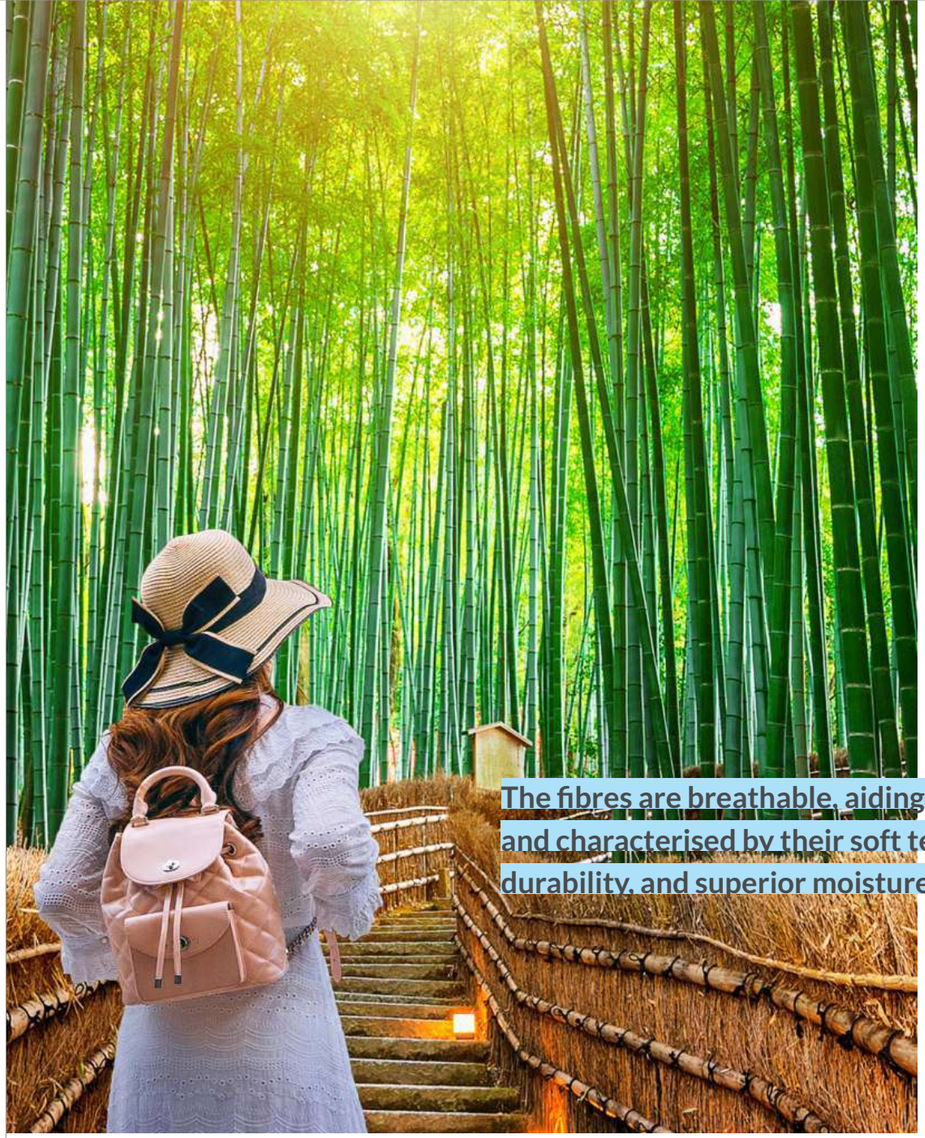
Birla Viscose Intellicolor

Intellicolor is a fibre produced using a breakthrough dyeing technology that utilises cationic or basic dyes for up to 95% dye bath exhaustion, significantly reducing dye usage. Our patented Birla Viscose Intellicolor enhances conventional reactive dyeing by delivering brighter shades with deeper colours and lower environmental impact, eliminating the need for salt and soda ash. This reduces pollution and cuts treatment costs while streamlining operations. Additionally, Intellicolor reduces nitric oxide levels and boosts glutathione, delivering anti-ageing and antioxidant benefits.



Fabrics dyed with Intellicolor maintain antibacterial and anti-odour properties, with a 95% reduction in ammonia even after 50 wash cycles.





Birla Viscose Ecosoft

Birla Viscose EcoSoft is an innovative bamboo viscose fibre that redefines sustainable fashion. Sourced from responsibly managed bamboo forests and FSC certified, EcoSoft is an eco-friendly alternative made entirely from bamboo pulp known for its rapid growth and low resource needs.

The fibres are breathable, aiding in thermo-regulation, and characterised by their soft textures, light weight, durability, and superior moisture management.

Additionally, it features molecular tracer technology to ensure authenticity and transparency for each product through a transaction certificate.

Birla SaFR (Flame Retardant Fibres)

This phosphate-based, inherently flame-retardant fibre is designed for creating high-performance, eco-friendly flame-retardant fabrics.

Our Birla SaFR fibres are 100% plant-based, made from sustainably sourced wood pulp, and produced in facilities that adhere to the highest global environmental standards.

CASE STUDY

Birla Cellulose's journey to EcoSodium

Birla EcoSodium™
A Sustainable Sodium Sulphate

Sodium Sulphate, a vital inorganic chemical with a wide range of applications, is obtained through either natural means, predominantly mining, or synthetically from diverse chemical industries. The extraction of natural sodium sulphate poses significant environmental challenges, including resource depletion and biodiversity loss along with environmental degradation and strain on natural resources.

SOLUTION

Birla Cellulose, in collaboration with BluWin Ltd., UK, evaluated the sustainable credentials of recovered Sodium Sulphate from its man-made cellulosic fibre (MMCF) manufacturing process. This comprehensive evaluation addresses the environmental concerns associated with traditional extraction methods, delivering benefits as outlined below:

Benchmark Standard

Birla Cellulose surpassed industry standards by recovering a substantial amount of sodium sulphate, setting a new benchmark for sustainability in the MMCF industry.

Wastewater Salinity Reduction

Increased recovery of sodium sulphate led to a reduction in wastewater salinity, enhancing water recycling efforts and promoting sustainable wastewater management practices.

Lowest Water Consumption

Higher recovery rates facilitated the production of MMCF with the world's lowest water consumption, further contributing to environmental conservation efforts.

IMPACT

This initiative is a significant milestone in our commitment to sustainability and responsible manufacturing practices. EcoSodium relies on advanced technologies to deliver superior performance while prioritising environmental responsibility, leading the textile and fibre industry to a sustainable and eco-friendly future.

To know more about Birla EcoSodium, please visit: https://www.birlaecosodium.com/

End of Life Considerations

Birla Cellulose considers the end-scenario of the products that it makes.

The fibres are made from renewable wood from managed forests and they are fully biodegradable in marine, soil & water and compostable in industrial and home-composting conditions.

MMCFs are cellulose-based fibres and hence follow a natural cycle. They come from nature and go back to nature. By virtue of this characteristic of MMCFs, they have minimal impact on the environment during and at the end of their lifecycle. Products such as the apparels made from our fibres are biodegradable if they are not mixed with some other synthetic fibres.

Microplastic pollution in marine bodies is increasingly becoming a major cause of concern as it impacts aquatic life and finds its way into the human food chain. Microplastics are generated during the washing cycles and end-of-life of fabrics made from synthetic fibres such as polyester, nylon, etc. MMCFs are fully biodegradable in marine environment and made from natural cellulose and so do not have any adverse impact on human health.

Product Safety

Safety of our products is a top priority as they are used as basic constituents to make products used daily for various applications. Hence, we make sure they are safe during their use phase as well as that they do not degrade the environment in their post-use phase.

Following product certifications both for textile and nonwoven applications allays any concern regarding the safe use of products that are worn/used for direct skin applications.

STANDARD 100 BY OEKO-TEX®

All Birla Cellulose fibres are certified to STANDARD 100 by OEKO-TEX® (Class I product) which means it is safe for use in applications having skin contact and is even safe for use in baby articles.

OEKO-TEX®
CONFIDENCE IN TEXTILES
STANDARD 100
2707 Shirley
Tested for harmful substances.
www.oeko-tex.com/standard100

USDA BIOBASED CERTIFICATION

Birla Cellulose received this certification from the US Department of Agriculture (USDA) for their regular as well as specialty products such as Birla Viscose, Birla Modal, Birla Excel, Birla Spunshades fibres, Livaeco, Liva Reviva, Purocel, Purocel Eco. This certification confirms that the product is derived from plants and other renewable agricultural/forestry materials and provide an alternative to conventional petroleum-derived products.

USDA CERTIFIED BIOBASED PRODUCT
PRODUCT 97%

TUV AB OK CERTIFICATION

Regular viscose fibres from Birla Cellulose are certified according to OK Scheme by TÜV AUSTRIA BELGIUM NV/SA for compostability in various conditions like industrial composting and biodegradability in soil, water and marine environments. The fibres are biodegradable and compostable at the end of life and this clearly shows the circular nature of MMCFs coming from the renewable and sustainable raw material wood.

HOME — OK compost — TÜV AUSTRIA — HOME S0926
OK compost — TÜV AUSTRIA — INDUSTRIAL S0926
SOIL — OK bio-degradable — TÜV AUSTRIA — SOIL S0926
WATER — OK bio-degradable — TÜV AUSTRIA — WATER S0926
MARINE — OK bio-degradable — TÜV AUSTRIA — MARINE S0926

Valuable Partnerships

Overview

For Birla Cellulose, 'Valuable Partnerships' is a collaborative philosophy grounded in mutual trust, respect and shared goals which are fundamental to an organisation's success in achieving its vision and mission. Through these partnerships, we accelerate the transition to circular fashion while maximising resource efficiency and minimising environmental impact.

Sustainability across the value chain is realised by aligning strategically with shared aspirations, thereby producing broader and more impactful outcomes. Stakeholders are central to our business strategy. We believe in fostering growth while safeguarding the interests and addressing the concerns of our stakeholders.

By collaborating with them, we transform their expectations into meaningful long-term objectives, ranging from conserving ancient forests to exploring next-generation solutions, alternative raw materials, and adopting cutting-edge technologies for closed-loop processes, sustainable products, circularity, transparency, traceability, and social responsibility.

Our partnerships span a wide range of areas, including sustainable sourcing, forest conservation, environmental protection, and the well-being of people, all aligned with the UN SDGs. It is a key pillar of our sustainability strategy, integrated across other pillars such as Responsible Sourcing, Responsible Manufacturing, Sustainable Products & Circular Economy, and Social Responsibility.

Our Engagement Approach

Our strategy for meeting the requirements of this crucial pillar is through Stakeholder Engagement. Building a foundation of trust, open communication, transparency, and consistent interaction with our key stakeholders is central to our business values. This engagement is based on the following core principles:

INFORMATIVE
Providing essential information in a timely manner

DESCRIPTIVE
Convey information thoroughly and offer a complete perspective

INTERACTIVE
Determine stakeholder concerns through consistent feedback and prioritise tasks accordingly

COLLABORATIVE
Promote active collaboration with stakeholders

PROACTIVE
Quickly identify and address stakeholder concerns

INCLUSIVE
Make sure every stakeholder feels included in the organisation and its progress

BIRLA CELLULOSE STAKEHOLDERS' ENGAGEMENT PLATFORMS

Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Employees	iSay - Interaction with Leadership Team	Annual	• Work-life Balance • Career Growth • Learning & Development • Fair Wages & Remuneration • Health & Safety • Talent Recognition	• Recreation facilities, celebration of major festivals, cultural programmes, sports day etc. • Employee performance management system • Development plan for all employees • Functional & Behavioural trainings provided based on Training Need Identification (TNI) • Specially designed programmes for Technical Leadership Development • Monetary award schemes like iApplaud - an instant recognition scheme • PRIDE Award for a team for a high impact project in manufacturing, innovation, marketing etc. • Regular safety trainings are imparted to employees and their families especially road and driving safety • Health & Safety programmes in all manufacturing sites
	Townhall Meetings by CXOs	Regular		
	Annual Performance Reviews	Annual		
	Continuous Feedback Programme			
	Training Programmes	Continuous basis		
	Monetary Award, Recognition Scheme (iApplaud, PRIDE)			
	Employee Satisfaction Survey	Annual		

Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Customers	Customer Feedback	Continuous	• Good customer experience • Provide solutions • Customer value proposition, price, quality, delivery, and product features • Application development • After-sales support • Complaint resolutions	• Customer feedback is taken on continuous basis on the product performance, quality, cost, service and delivery. Customer Happiness is a mission. • Implemented Mission Happiness based on Net Promoter Score - combination of top-down and bottom-up approach • Products are certified to globally recognised certifications which ensures product safety • Dedicated Customer Technical Service team actively supports customers in productivity and quality improvements, and technical problem resolutions • Customer complaint resolution process for resolution of the problem by root cause analysis
	Visit to Customers	Regular		
	Customer Technical Services	Need based		
	Grievance Redressal	Case-to-case basis		
Value Chain Partners	LIVA Partnership Programme	Continuous	• Create value from strong product and brand for value chain partners • Provide visibility to future trends	• LAPF addresses the issues such as fashion forecasts, product perfection, innovative yarns / fabrics, connecting partners with buyers • Fashion Studios launch collection every season which customers use to forecast their demand • Latest developments in product and processing techniques are shared with all the value chain partners. Target to introduce new products, improve sustainability, quality, productivity of the value chain. • Joint development programmes for better materials, optimising cost, logistics, packaging
	Fashion Forecast	Fashion Season		
	Exhibitions	Regular	Product and application development support for value chain	

Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Multi Stakeholder Organisations	Innovation Sustainability Best Practices Standards Development	Regular Regular Regular Need based	• Best-in-class technology and products • MMCF value chain sustainability • Apply global best practices • Develop new standards	• Collaborations with Institutes and Technology focussed organisations to continually apply latest know-how • Implementation of global best practices in MMCF production and supply, Life cycle studies etc. • Working groups and regular collaboration with multi-stakeholders such as ZDHC, TE, Canopy, WBCSD; develop certification standards for sustainable viscose
Brands & Retailers	Fashion Studios Partnering	Every season Continuous	• New product innovations • Common goals for sustainability	• Regular meetings to understand the needs and share the new designs and products • Developing new products aligned to the need of sustainability focussed customers
Suppliers & Contractors	Vendor Assessment, Supplier Audits, Review Meetings, Contractor Management	Regular	• Continuity of orders • Timely payment • Transparency	• Supplier risk management process including human rights • Contractor Safety Management • Supplier Code of Conduct, compliance with regulations and applicable laws
Investors & Shareholders	Investor Results Board Meeting Investor Day	Quarterly, Half-yearly, Annually Annual Annual	• Corporate Governance & Risk Management • Returns on investment • Operational performance	• Structured governance • Board of Directors • Risk Management Committee • Financial and operational performance discussions • Cost reduction approach and initiatives • Site visits
Media	Corporate Communications Social Media Platforms	Continuous basis Regular	• Developments in the organisation • Regular	• Regularly updating the websites and communicate about any changes in the organisation, product launches etc. • Using social media platforms for events organised, any publication done by the organisation

Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Communities	Need Assessment CSR Meetings Social Impact Programmes	Continuous basis Continuous basis Periodic Continuous	• Local employment • Infrastructure development • Livelihood & training programmes • Develop weaker section of society, women empowerment	• Community Need Assessment • Meetings with Community Representatives • Development and construction of village roads, school renovation, street lights etc. • Skill development programmes on tailoring, embroidering and beautician for women • Health camps, pulse polio immunisation programme, rural/mobile clinics • Animal husbandry projects, skill training, self-help groups for Sustainable Livelihood • Collaboration with local communities, NGOs and focus on women empowerment and financial independence
Government & Regulatory Bodies	Communication with Regulatory Bodies Formal Dialogues	Regular Regular	• Payments of taxes • Compliance to laws • Pollution prevention • Local economy growth	• Regular payment of all applicable taxes in all the geographies of operations • Compliance to applicable laws of the land • Adherence to all norms of Pollution Control Board • Employment of local people

Customers & Value Chain

Customer centricity is a core principle at Birla Cellulose. By prioritising customer goals, we align our sustainability decisions to support and enhance their efforts in improving the planet and society. Our value chain partners create products and deliver services that meet the environmental, social, and economic expectations of our customers.

Some of the engagement initiatives taken up for customers and value chain include:

Customers

Birla Cellulose boasts a global presence, serving customers in over 65 countries and maintaining a strong influence in every major textile cluster worldwide.

We utilise a comprehensive approach that integrates various elements across the ecosystem to meet the expectations and preferences of our customers and markets:

MISSION HAPPINESS

Mission Happiness encompasses a range of real-time engagement activities with customers to ensure a positive and consistent customer experience. Employees are encouraged to be agile and proactive in addressing customer needs.

CUSTOMER MEET

We continuously engage with our customers to exchange insights on key industry trends, future business plans, and new developments in the textile and nonwoven sectors. One of our key initiatives for customer outreach is organising customer meetings at regular intervals.

CUSTOMER TECHNICAL SERVICES (CTS)

We have robust customer service systems and rigorous mechanisms to foster long-term relationships with our customers. The CTS engages with customers through reactive and proactive visits, complaint resolution, new product rollouts, and process optimisation projects.

Value Chain

LIVA ACCREDITED PARTNER FORUM

The LIVA Accredited Partner Forum (LAPF) is a collective of value chain partners, including spinners, fabricators, and processors, dedicated to producing fabrics that meet LIVA standards. This accredited forum has a certification mechanism and offers support in marketing, vendor management, design innovation, product perfection, and sustainability.

LAPF DESIGN STUDIOS

LAPF Studio is a state-of-the-art experience center showcasing over 2,000 samples of fibre offerings of Birla Cellulose complete with detailed technical specifications. It serves as a one-stop platform for buyers seeking variety, convenience, and the opportunity to connect with value chain partners. LAPF Studios are hubs for connecting with garment manufacturers and exporters, local and international brands, international buying houses, agents, traders, and fashion design houses.

Brands & Retailers

Brands and Retailers stay attuned to trends driven by consumer interests. During our interactions with global fashion brands and retailers, we also discuss key information on new products, developments, and market opportunities.

Employees

Our employees are our growth partners, united by a shared goal and common purpose. Birla Cellulose supports them by fostering a safe environment where they can work towards our goals and thrive. For our workers, we establish collective bargaining agreements with union representatives, transparently and fairly, through detailed discussions.

For more details on the employee engagement initiatives, refer to our 'Social Responsibility' on page 85.

Local Communities

Empowering the community has always been a crucial part of our business strategy. Birla Cellulose collaborates with nearby communities to actively contribute to their social and economic development. We work together with the community, making them active participants in our business through job creation and various initiatives for mutual growth.

For more details refer to our 'Social Responsibility' on page 97.

Collaboration with Various Organisations & Associations

Birla Cellulose is involved with various multi-stakeholder organisations, industry bodies, and associations to stay updated on the latest industry developments. These partnerships enable us to introduce new standards and best practices, contributing to the future of the MMCF industry.

Currently, Birla Cellulose is involved with multi-stakeholder organisations such as Canopy, Cascale (formerly Sustainable Apparel Coalition, SAC), Changing Markets Foundation, Fashion for Good, The Microfibre Consortium (TMC), Textile Exchange, and ZDHC in various projects and activities.

For more details on the engagement initiatives with above organisations, refer to our Sustainability Report FY2021-22, page no. 82.

Cascale | Changing Markets Foundation | Fashion for Good | Textile Exchange | ZDHC Contributor

Industry Associations

Birla Cellulose is part of several industry bodies & associations and engages regularly with them to keep abreast on latest developments in the industry such as policy formation, new developments, etc. Partnerships with these bodies help us introduce new standards and best practices to contribute to shaping the future of viscose industry.

To know more, please refer to our sustainability report 2018-19, page no. 131.

Collaboration For Circularity

At Birla Cellulose, we cultivate an entrepreneurial mindset to drive innovation. Partnering with external innovators and start-ups is a powerful strategy to accelerate new developments. These collaborations often complement our business offerings and open up potential avenues for rapid growth and groundbreaking innovations.

Our collaboration with Nanollose to create the world's first 'tree-free' lyocell fibres using bacterial cellulose exemplifies this principle. This highly sustainable fibre is produced through Nanollose's innovative and patented process, which converts any waste stream containing soluble carbohydrates into bacterial cellulose. Birla Cellulose then transforms this bacterial cellulose into lyocell fibre using a unique and proprietary spinning process.

The development is currently in the pilot scale testing phase, with proof-of-concept fibre spinning trials incorporating up to 30% bacterial cellulose in the lyocell fibre already completed.

Beyond this collaboration, we actively participate in joint development initiatives with various external innovators in the following areas:

- Circular viscose and lyocell fibres from recycled textile waste
- Alternative 'non-wood' sources for producing dissolving-grade pulp
- Closed-loop solvent-based pulping processes with reduced environmental impact
- Sustainable pigments derived from industrial waste streams
- Algae-based sustainable coloured fibres with skin regenerative properties
- Membrane technology for energy-efficient viscose fibre production

nanollose | CIRCULOSE® | SaXcell | irc | Algaeing

Our strong R&D capabilities and infrastructure, covering the entire fibre manufacturing and downstream conversion process, allow us to systematically evaluate new sustainable materials in cellulose fibre production. Specifically, in the area of circular fibres made from recycled textile waste, we are actively collaborating with leading innovators such as SaXcell, Circulose, and Circ.

Birla Cellulose and SaXcell have signed an MOU to supply high-quality, sustainable recycled lyocell fibre to the textile industry. **This innovative lyocell fibre, containing 30% recycled cellulose, is produced on an industrial scale by Birla Cellulose and is commercially available as 'SaXcell' fibre.**

Birla Cellulose has entered into a long-term strategic partnership with Circ, a U.S.-based textile-to-textile recycling innovator. This collaboration involves Birla Cellulose purchasing up to 5,000 tons of Circ's pulp annually for five years, starting from Circ's first commercial-scale facility. The resulting pulp will be converted into lyocell staple fibre, significantly increasing the availability of recycled materials and supporting Circ's commercial expansion.

In line with sustainable textile manufacturing, Birla Cellulose has also partnered with Algaeing™, a pioneer in clean textiles. This partnership aims to develop and introduce a novel, algae-powered cellulosic fibre that is environmentally friendly and offers numerous benefits to consumers. Infused with algae's natural hues, it provides a range of colours, eliminating the need for conventional dyeing processes.

Birla Cellulose has actively participated in numerous pilot projects organised by Fashion for Good (FFG), providing in-kind support, including laboratory and pilot-scale evaluations of innovative materials. A notable example is the 'Black Pigment Pilot' Project, which focuses on developing black dope-dyed fibre using pigments derived from waste feedstock such as industrial carbon, algae, and wood. These pigments have the potential to replace synthetic dyes, offering a more sustainable approach to textile production with a reduced carbon footprint.

Additionally, millions of tons of wood is damaged annually due to bark beetle infestation, a problem worsened by climate change. In collaboration with Stockholm University, we have developed lyocell fibres from the pulp of beetle-infested spruce wood. This promising research has been published in a peer-reviewed journal which can be accessed here.

Social *Responsibility*

DEVELOPING OUR PEOPLE

Management Approach

At Birla Cellulose, we believe in the power of human capital. This stems from the fact that our people are our greatest asset. Our commitment to sustainability extends beyond our products and processes; to prioritising the well-being and development of our employees.

This report highlights our approach to human resources, which is rooted in the principles of care, performance, inclusivity, diversity, and continuous improvement.

It is our constant endeavour to build a workplace where every employee feels heard, valued, respected, and is empowered to contribute their best. Our human resource policies are designed to promote equal opportunities, foster a culture of open communication, and ensure a safe and healthy work environment. We actively equip our employees with the resources and tools they need to effectively execute their roles and grow their careers within the organisation.

We recognise that our employees are not just our internal stakeholders but also members of the communities in which we operate. Therefore, we provide ample opportunities for them to engage in community service and volunteer activities, aligning with our broader social responsibility initiatives. By investing in our people, we are not only strengthening our organisation but also contributing to the sustainable development of the communities where we live and work.

In the following sections, we will delve deeper into our human resource practices, highlighting our initiatives in talent acquisition, employee development, diversity and inclusion, health and safety, and community engagement. We are confident that our management approach to human resources and our engagement with our partners will continue to drive our sustainability performance, create long-term value for our stakeholders and embed sustainability in our value chain.

Our Group's One HR strategy forms the foundation for the business HR strategy. Our strategy is defined for a period of 3 years. Every year, we identify focus areas that are aligned to the business objectives and people needs. The expected outcome is to be a high-performance organisation.

High-Performance Organisation

The intent is to build a high-performance, agile, and customer-centric organisation that responds proactively and with agility to customer needs and business requirements. We believe that Birla Cellulose is a high-performance organisation committed to sustainable practices. We foster a culture of responsibility by promoting ethical conduct and safety. We encourage innovation and provide opportunities for experimentation. We acknowledge and celebrate excellence by recognising and rewarding performance at individual level, as teams and as business units/functions.

Talent Acquisition

MULTI-PRONGED STRATEGY

Birla Cellulose builds a strong talent pipeline by focusing on several key strategies, including proactive recruitment of young talent from reputed institutions, and enhancing the hiring and onboarding processes to ensure smooth transitions for new hires. While we are able to attract first time job seekers as well as lateral entrants into the organisation, our talent management processes ensure that we also have an internal pipeline. We also get employees from the other Group Businesses, through a process of internal job posting.

We actively encourage new hires to share their feedback and experiences through a robust 30-60-90-day framework and work honestly on feedback.

EMPLOYER BRANDING

The company strengthens its employer brand through social media engagement and increased campus interactions, positioning itself as an employer of choice.

ATTRITION MANAGEMENT

Attrition risks are actively addressed by analysing data from exit interviews, employee trends, and vintage analysis, helping to predict and mitigate attrition challenges.

Learning & Development

To enhance performance and build future capacity, we invest in several learning and leadership development initiatives. They are either conducted in-house or by external partners or at Gyanodaya - the Group's Centre for Leadership Learning.

PRAYAS

Launched across all India units, this flagship workmen development programme focuses on enhancing essential workplace behaviours, such as collaboration, time management, ownership, and wellness awareness. The programme drives business impact, leading to improvements in productivity and reduced absenteeism. In FY 2024, around 1,185 workmen attended Prayas programme across our 4 manufacturing units in India.

Prayas yielded significant positive impact, shaping the work environment and employee well-being. The training, focused on enhancing collaboration, communication, and discipline, has resulted in tangible improvements across these key areas.

The training has led to greater team synergy, smoother workflows, and a more structured and disciplined approach to daily tasks. The training has also improved employee self-efficacy, empowering them to take initiative and contribute more effectively to the team.

Beyond the core behavioural improvements, the training also underscored the importance of mental and physical well-being. This proactive approach resonated strongly with our teams, and we have seen a noticeable increase in individuals taking positive steps to prioritise their health, from adopting healthier lifestyles to seeking support when needed.

FIBRE TECHNICAL ACADEMY

The Fibre Technical Academy (FTA) offers a range of technical and functional programmes aimed at developing cutting-edge skills in employees. The academy plays a key role in strengthening the technical capabilities needed to address future business needs. The learning academy offers sessions on Fundamentals of Spinning, Natural Gas-CS2 Plant Management, Fundamentals of Viscose Process, etc.

In 2024, 7 on-site programmes were organised covering 120 employees across all Fibre Units. We also partner with OEMs to train our employees.

FOCUS 50

This leadership development programme selects high-potential Section Heads (SHs) and equips them with multi-unit exposure, leadership skills, and technical expertise, preparing them for future Department Head (DH) roles.

Four batches have been conducted, resulting in a total of 96 participants and a retention rate of approximately 80%. The current talent pool batch includes 37 participants.

LEAD THE CHANGE

This initiative is designed for supervisors in middle management to enhance their effectiveness - they represent the 'core' of the organisation. The Core plays a critical role in bridging strategy and execution, managing extended teams, and driving organisational success. Investing in their growth ensures:

- **Stronger pipeline of organisational change agents;**
- **Support in navigating their own challenges and dilemmas as mid-level leaders;**
- **Aligning with HR Strategy.**

The ABG HR strategy has committed to re-igniting the Core by reinforcing key cultural pillars such as Ownership, Performance Ethic, Inclusion, and Collaboration.

This initiative is a step towards empowering our Core managers, equipping them to lead with impact, and shaping the future of our organisation. To date, 135 participants out of the eligible pool of 153 have attended the sessions.

GLOBALNXT

The online Global MBA programme offers employees the opportunity to upskill while working. The programme emphasises career growth and future-readiness. 24 employees have successfully completed the programme, of which 7 have moved on to new opportunities. 7 employees enrolled in FY 2024 and are on track to graduate in 2026.

GYANODAYA

We actively leverage the group's leadership learning centre for targeted capability building for middle and senior managers. The Gyanodaya Virtual Campus is an extensive e-learning platform providing employees with access to over 500 interactive courses across a wide range of domains, including sustainability, finance, safety, operations, and general management. This platform empowers employees to grow their capabilities continuously.

54% of employees completed their assigned courses in FY 2024.

GYANODAYA VIRTUAL CAMPUS

Talent Management

The intent is to build a pipeline of highly engaged and capable talent pool across responsibility levels in an extremely competitive talent market. Various programmes are designed to serve very specific purposes.

SUCCESSION PLANNING

The company proactively identifies and prepares successors for key roles through a structured talent segmentation process. This approach ensures continuity in critical positions and strengthens the leadership bench.

JOB ROTATION

The Job Rotation Policy, introduced in April, aims to enrich careers by allowing employees to gain diverse functional exposure across the Fibre Business. This fosters cross department and cross-unit expertise and promotes career progression while maintaining operational stability.

FULL-STACK EMPLOYEE DEVELOPMENT

Employees are rotated across key departments in the manufacturing process, ensuring they acquire multi-functional exposure and develop a holistic understanding of operations. This approach, aligned with job rotation, strengthens the internal talent pipeline and prepares future leaders.

MANAGEMENT DEVELOPMENT PLAN (MDP)

This plan is an integral part of goal setting. It follows the 70-20-10 learning framework, combining on-the-job learning, guided coaching, and formal training to enhance employees' performance and career progression. A training calendar is prepared based on the MDP requirements and it is monitored for fulfilment. For e.g., coaching programmes for mid-management employees through ABG coaches; mentoring initiatives by senior leaders around technical and managerial capabilities for top talent in critical roles; assigning projects to address real business issues, all in alignment with the development philosophy.

Organisation Effectiveness

We believe in taking a holistic approach to well-being. Our programmes on safety, mental health, financial awareness and human rights are made available to all cadres of employees and at times, family members, teachers and doctors who work with our communities.

POSH (PREVENTION OF SEXUAL HARASSMENT)

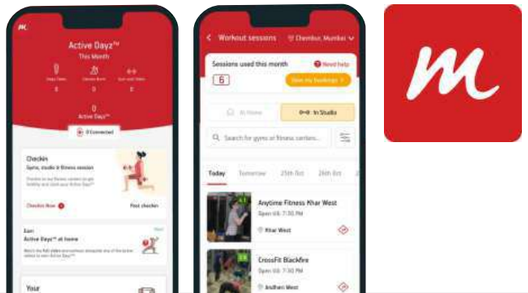
Birla Cellulose ensures a safe, respectful, and inclusive environment by aligning with legal requirements and best practices for prevention of sexual harassment. Employees are supported by strong governance structures and regular awareness programmes. POSH training to freshers, IC member training, POSH refreshers, etc. are a part of our annual learning calendar.

GENDER DIVERSITY

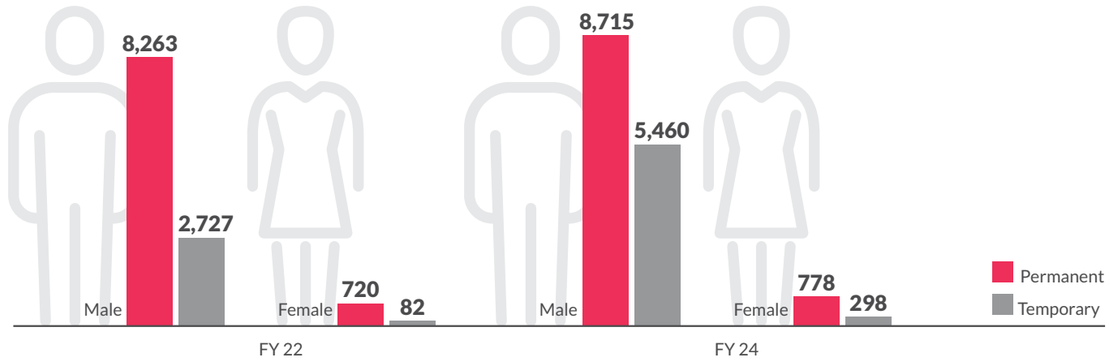
Women represent 11% of the workforce, and the company is committed to creating an inclusive environment by actively promoting policies to support women at various stages of their careers. The business has the WISE (Women Investing in Skills & Experiences) programme to develop women employees at the junior level, focusing on building mindsets, and the confidence to take up managerial positions. The programme architecture covers a range of subjects such as - building self-awareness, dealing with self-limiting thoughts, strengthening business understanding, financial acumen, grooming and presentation skills.

EMPLOYEE WELL-BEING AND SAFETY

Birla Cellulose offers several wellness programmes, including the AB Multiply app (for employees in metro cities), Life Unlimited counselling support, maternity and paternity support, child adoption assistance, and elder care services. The company also provides annual health check-ups and ensures employees in red/orange zones receive medical counselling and awareness.

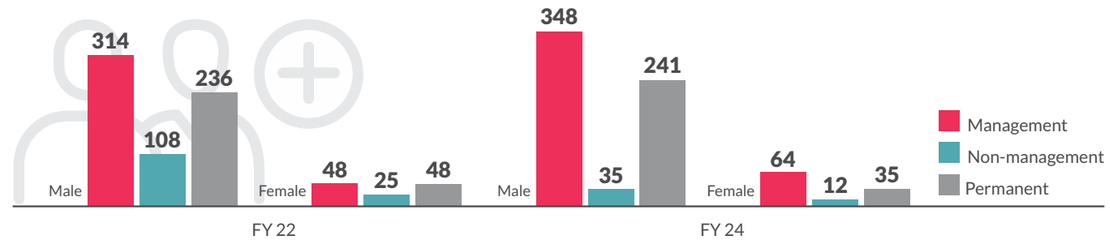


Employees by Gender (Nos.)

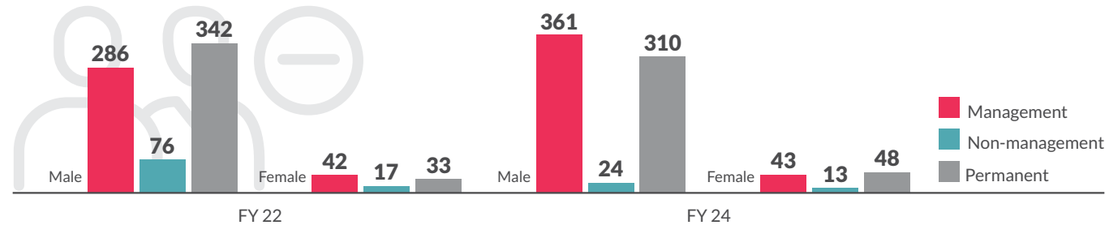


Employee Turnover

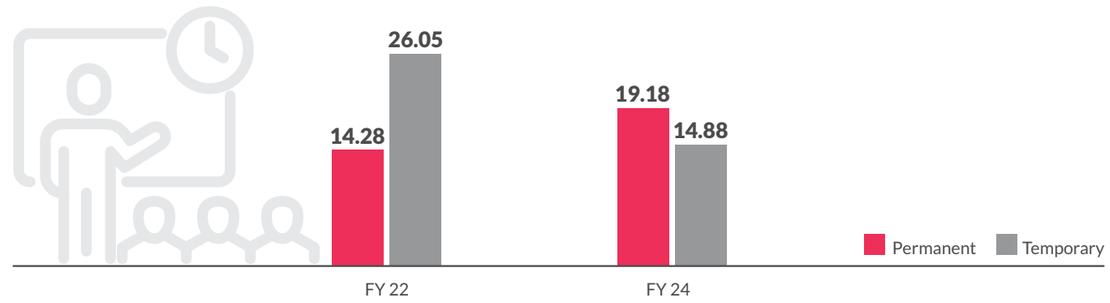
Employees Hired (Nos.)



Employees Separated (Nos.)



Employee Training - Average Hours of Training per Employee (Hours)



HEALTH AND SAFETY MANAGEMENT SYSTEM

The well-being of our workforce is a crucial component of our sustainable business practices. In line with this, at our Pulp and Fibre Business, we have implemented Occupational Health and Safety Management system at all our sites adhering to national and international standards and industrial best practices.

Our safety management system reflects our commitment to achieving 'Zero Harm'. Our Business Leadership emphasises that excellence in safety is not merely a goal but a continuous journey requiring firm dedication, regular practice, and a continuous demand for safety excellence.

We firmly believe that:

Safety is an integral part of both ***business and personal values***

Safety is a ***non-negotiable stance***

All injuries and incidents ***are preventable***

Value and respect of our safety systems and work processes is essential

Line management is directly accountable for safety outcomes

Our approach is structured around 8 key elements:

Leadership and Commitment | **Policy and Strategic Objectives** | **Organisational Resources and Competence** | **Implementation, Monitoring and Reporting**

Planning, Standards and Procedures | **Risk Evaluation and Management** | **Inspection and Assurance** | **Management Review**

Through rigorous adherence to these elements, we strive to create a workplace where safety is not just a priority but a fundamental part of our culture and operations.

Safety Governance Structure

Our organisation maintains a rigorous safety governance framework aimed at achieving excellence and realising the objective of Zero Harm. Safety Governance system in our business plays an eminent role in providing support by developing safety policy, strategic objectives, evaluating and providing resources, developing business specific Safety Standards, monitoring & auditing safety performance and systems etc.

At its core, we have the Safety Steering Committee which operates as a three-tiered governance body in the form of business safety sub committees. Safety Steering Subcommittee undertakes comprehensive reviews of safety performance across all units and provides strategic guidance to improve our safety management systems. Business sub-committees, chaired by senior leadership, meticulously execute and monitor safety objectives. Facilitation of these sub-committees by our central business team ensures support and consistency in safety practices across all our operations.

This integrated approach highlights our commitment to foster a culture of safety and achieving the highest standards of operational excellence.

Integration of Safety in Business Process

Safety is an integral aspect of our business operations. All business decisions undergo thorough safety scrutiny. During routine operations, we implement a hazard identification and risk assessment process where hazards are identified, risks evaluated, and operational controls are implemented following the hierarchy of control: elimination, substitution, engineering controls, administrative controls, and personal protective measures. Standard Operating Procedures (SOPs) for routine activities comprehensively address safety hazards and risks.

Non-routine activities require a 'Permit-to-Work' process that covers every step from initiation to completion of a job. Each permit includes a job safety analysis (JSA) to assess all associated risks, ensuring they are reduced to 'As Low As Reasonably Practicable' (ALARP) levels before commencement. Our Management of Change procedure includes assessing safety risks alongside societal, technological, and economic factors whenever changes are proposed.

To implement any changes, we adhere to a Management of Change procedure. This process involves assessing safety risks along with other factors such as societal, technological, and financial considerations.

Process Safety Management

In alignment with our integrated approach to Process Safety Management (PSM), aimed at incident elimination and risk mitigation, we have implemented several key processes:

PROCESS SAFETY INFORMATION (PSI) LIBRARY

Establishing a comprehensive repository for process safety information to facilitate record-keeping and easy retrieval.

BARRIER-BASED RISK MANAGEMENT PROCEDURE

Introducing a systematic approach to identify and implement safety barriers to prevent and mitigate risks.

IDENTIFICATION OF SAFETY CRITICAL EQUIPMENT

Identifying equipment whose failure could lead to severe consequences, and implementing maintenance programmes to ensure reliability.

PROCESS HAZARD ANALYSIS (PHA)

Conducting PHA studies using tools such as HAZOP/What-if to systematically assess and mitigate process hazards.

PROCESS SAFETY EVENT REPORTING

Adhering to CCPS guidelines, process safety events are reported and analysed using IT tools like Enablon.

ALARM RATIONALISATION

Initiating a process to reduce the number of alarms to prioritise critical alarms and prevent alarm fatigue.

TRAINING AND WORKSHOP ON BOW TIE ANALYSIS

Educating personnel on incident pathways and implementing effective safety barriers, starting with addressing the top 10 high-risk scenarios.

CS_2 LOADING/UNLOADING PROCEDURE AND FLEET MANAGEMENT

Developing procedures aligned with international best practices for safe handling and management of CS_2 (Carbon Disulfide).

These initiatives emphasise our commitment to enhancing process safety culture and ensuring the reliability and safety of our operations.

Transportation Safety

Transportation plays a key role in both receiving our raw materials and dispatching finished goods, with safety being important for drivers and vehicle during transit. In the past couple of years, we have enhanced the following key processes to bolster transport safety:

GPS MONITORING & ESCALATION

Implemented GPS systems across all inbound and outbound vehicles, enabling real-time monitoring and immediate escalation protocols.

TRANSPORTER PRE-QUALIFICATION ASSESSMENT

Implemented rigorous assessments prior to finalising Transport Agreements, ensuring transporters meet stringent safety and reliability criteria.

CONTINUOUS TRANSPORTER EVALUATION

Implemented ongoing evaluations of transporters based on enroute violations, incidents, gate violations, and pre-qualification scores to maintain high safety standards.

ANNUAL TRANSPORTERS MEET

Organised regular meetings with transporters to improve collaboration, discuss safety improvements, and ensure alignment with internal standards.

JOURNEY RISK MANAGEMENT

Conducted comprehensive risk assessments for critical transport routes, integrating findings with GPS mapping to enhance safety measures.

TRANSPORT INCIDENT REPORTING

Utilised the SHIELD platform for efficient reporting and management of transport-related incidents.

RECOGNITION FOR DRIVERS

Introduced a system of rewards and recognition to incentivise and promote good driver behaviour.

These initiatives highlight our commitment to enhance transport standards, for safety of our transporters in our logistics operations.

Occupational Health

Below are key initiatives taken under occupational health management which reflect our commitment to maintaining a safe and healthy work environment, ensuring the well-being of our employees across various operational sites.

EXPOSURE ASSESSMENT (QLEA AND QNEA)

Implemented quantitative and qualitative exposure assessments to evaluate workplace hazards.

HEALTH ROUNDS

Initiated regular health rounds at our sites to monitor and address occupational health issues.

HOME VISITS FOR CO-MORBID CASES

Successfully conducted home visits for co-morbid cases at one of the sites, receiving positive feedback for enhanced care and support.

RESPIRATORY PROTECTION PROCEDURE

Released a standardised procedure for respiratory protection to ensure employee safety against airborne hazards.

AED AND CPR TRAINING

Provided automated external defibrillator (AED) and cardiopulmonary resuscitation (CPR) training for all employees across all units to enhance emergency response capabilities.

RISK MANAGEMENT TEAM FORMATION

Established teams to implement recommendations from exposure assessments (QLEA/QNEA) to mitigate health risks.

CO-MORBID CASE IDENTIFICATION

Identified and managed co-morbid cases according to revised occupational health monitoring standards.

VENTILATION STUDY

Initiated a comprehensive ventilation study at one of the sites to improve indoor air quality and respiratory health.

ERGONOMICS INITIATIVES

Conducted ergonomics surveys at Kharach and implemented stretching sessions for all employee groups to enhance workplace comfort and prevent musculoskeletal disorders.

URINE AZIDE/TTCA TEST

Completed urine tests for detection related to CS_2 exposure at two sites to monitor and manage occupational health risks.

Digitalisation in Safety

Below are the key initiatives under digitalisation of safety processes to enhance safety, efficiency, and effectiveness in our operations:

DIGITALISATION OF PERSONAL SAFETY ACTION PLAN AND SCORECARD

Implementing digital tools for managing individual safety plans and performance for leadership team (Section Head and above).

DIGITALISATION OF PROGRESSIVE CONSEQUENCE MANAGEMENT PROCESS

Developing processes for managing and escalating safety-related consequences for employees and contractors.

SELF-ASSESSMENT PROCESS

Implementing digital self-assessment questionnaire (SAQ) to conduct self-assessment for implementation of standard.

PEHEL (PROACTIVE ENGAGEMENT ON HEALTH TO ENRICH LIVES) FOR INTEGRATED HEALTH MANAGEMENT

Utilising PEHEL - a digital portal for integrated health management.

REPORTING OF TRANSPORT SAFETY INCIDENTS

Introducing digital platforms for efficient reporting and management of offsite transport safety incidents.

E-PTW PILOT STUDY

Conducting a pilot study for Electronic Permit-to-Work (E-PTW) systems at two sites to improve efficiency and in permit-to-work process.

PROCESS SAFETY EVENT REPORTING

Utilising digital platform Enablon for reporting and analysing process safety events to enhance incident management and prevention.

Business Safety Performance

The above initiatives have supported positively in achieving the overall Business Safety performance during the reporting period FY 23-24 as follows:

	Unit of Measurement	FY22	FY24
Total no. of lost time accidents (Reportable Accidents)	**Number**	**32**	**30**
Lost Time Injury Frequency Rate (LTIFR)	**per million hours worked**	**0.65**	**0.79**

ENSURING ALL-INCLUSIVE GROWTH

As an organisation, we prioritise inclusive growth by ensuring that everyone is part of our journey. We support the communities around us in becoming self-reliant, recognising them as key stakeholders in our operations.

Management Approach

The Aditya Birla Centre for Community Initiatives and Rural Development serves as the Group's community development arm. Community service is integral to our strategy and is deeply rooted in the Aditya Birla Group's philanthropic philosophy of actively contributing to the social and economic development of the regions where we operate.

Our process starts with a collective evaluation of community needs, based on which we set priorities together. We then collaborate with the community to drive focused implementation efforts.

For Corporate Social Responsibility (CSR), we allocate a dedicated budget and have a structured Board Committee that oversees and approves all CSR-related activities and management.

We focus on the holistic development of the communities around our plants. Our development partners include government bodies, district authorities, village panchayats, and the end beneficiaries-the villagers.

We proactively engage with communities on health, sanitation, and hygiene programmes, and support infrastructure development such as schools and medical facilities in surrounding villages for socioeconomic development.

HEALTHCARE

Our goal is to render quality healthcare facilities to people living in the villages and elsewhere through:

Our Hospitals | Primary Healthcare Centres | Mother and Child Care Projects | Immunisation Programmes with a thrust on Polio Eradication | Healthcare for Visually Impaired, and Physically Challenged | Preventive Health through Awareness Programmes

SOCIAL PROJECTS

We advocate and support:

Dowry-less Marriage | Widow Remarriage | Awareness Programmes on Anti-social Issues | De-addiction Campaigns And Programmes | Espousing Basic Moral Values

INFRASTRUCTURE DEVELOPMENT

We endeavour to set up essential services that form the foundation of sustainable development through:

Basic Infrastructure Facilities | Housing Facilities Safe Drinking Water | Sanitation & Hygiene

EDUCATION

We endeavour to spark the desire for learning and knowledge at every stage through:

Formal Schools | Balwadis for Elementary Education | Quality Primary Education | Aditya Bal Vidya Mandirs | Girl Child Education | Adult Education Programmes

SUSTAINABLE LIVELIHOOD

Our programmes aim at providing livelihood in a locally appropriate and environmentally sustainable manner through:

Watershed Development | Formation of Self-help Groups for Women Empowerment | Partnership with Industrial Training Institutes | Vocational Training through Aditya Birla Rural Technology Parks | Agriculture Development and Better Farmer Focus

Healthcare

Through our healthcare initiatives, we focus on making essential healthcare more accessible for marginalised groups. We aim to share responsibilities with the state-run systems and play our part in supporting the communities we work with. Through these partnerships, our focus has been on providing preventative healthcare and creating awareness in both rural and urban spaces.

Immunisation, Awareness and Screening Camps

Immunisation camps were organised to support the eradication of Polio, Hepatitis B, Diphtheria, and Tetanus. Additionally, screening and awareness drives were conducted on TB and vector borne diseases.

NAGDA

12,067 children covered under immunisation camps done in collaboration with the local sub-health centers.

HARIHAR

Supported local government hospitals in organising awareness and screening programmes for diseases like TB, Malaria, Dengue and HIV/AIDS - which benefitted **1,274 people**. In addition, to prevent water and vector borne diseases, a project was done aimed to destroy breeding sites, the activity benefitted a total of **9,538 residents**.

KHARACH

The unique Polio Eradication Programme on Train, allowed the team to administer vaccines to **321 children** from various socio-economic backgrounds.

Additionally, as an extension of the PM TB Mukt Abhiyan, **12 TB awareness camps** were hosted to aid **542 patients**.

VILAYAT

1,092 children vaccinated through polio vaccine drive.

Awareness Campaigns for HIV/AIDS

To combat the threat of HIV and address the stigma surrounding it, a comprehensive awareness campaign was launched.

NAGDA

As an industrial town, Nagda is at risk of being affected by HIV/AIDS. Equipped with testing facilities and an experienced team, **64 camps** were organised in collaboration with NGOs and the Government Health Department, benefitting **2,395 people**.

VILAYAT

Through the SaMMan initiative, originally started to provide support to children affected by HIV/AIDS, the team distributed educational kits to **70 children across 33 villages**.

Grasim Jan Seva Trust provides quality treatment and free medicines for the nearby communities.

NAGDA

- About **1.30 lakh patients** were successfully treated at Indubhai Parekh Memorial (150 beds) and G.D. Memorial Ujjain (80 beds) - both run by the Trust.

HARIHAR

- **15,881 people, across 10 villages,** benefitted from primary health checkups.

Mobile Medical Units (MMUs)

These units make primary healthcare more accessible and help in raising awareness about various health and hygiene issues.

NAGDA

308 camps in 18 villages during times of seasonal diseases, covering **9,196 people**.

KHARACH

114 camps provided 2,948 patients with easy access to quality healthcare.

VILAYAT

8,844 patients reached through camps. Various health and hygiene awareness programmes also conducted.

Reproductive, Mother and Child Health & Hygiene

This programme promotes effective nutrition, vaccinations, and healthcare for mothers and children. The health services include anaemia checks, vaccinations, and awareness programmes.

NAGDA

In the **35 adopted villages**, the programme has effectively reduced anemia in pregnant women, improved antenatal care, and responsibly managed issues of child nutrition, timely vaccination and institutional delivery.

Additionally, through **209 programmes**, support was extended to **10,732 beneficiaries**.

VILAYAT

169 pregnant women received iron, multivitamins, and counselling to improve antenatal mother care. CPR training was provided to **718 individuals**. Improved menstrual hygiene for **187 girls** via a new disposal unit.

HARIHAR

1,801 children were successfully immunised against communicable diseases and anaemia to reduce child mortality rates.

Additionally, check-ups were held in Anganwadis and schools where nutritional supplements were distributed to around **1,815 individuals**.

Primary Health and Eye Check-ups

NAGDA

7 multi-specialty health camps provided eye, dental, ENT, and gynecologist check-ups, through Indubhai Parikh Memorial Hospital, benefitting **694 people**.

VILAYAT

Organised eye check-ups that included treating **250 patients** and conducting **9 cataract procedures**. Free spectacles were also distributed to **184 patients**.

HARIHAR

3,131 people were screened and referred for treatment to address blood pressure and diabetes related health issues.

THAI RAYON

1,000 people were benefitted at Hua Phai National Health Service Hospital via the support provided to Saeng Nam Jai Thai Nation project. The project promotes activities like walking, running, and cycling with the goal of preventing paralysis. Additionally, **3,000 people** were benefitted through the doctors arranged at Ang Thong Hospital to conduct health examinations and provide advice on healthy practices.

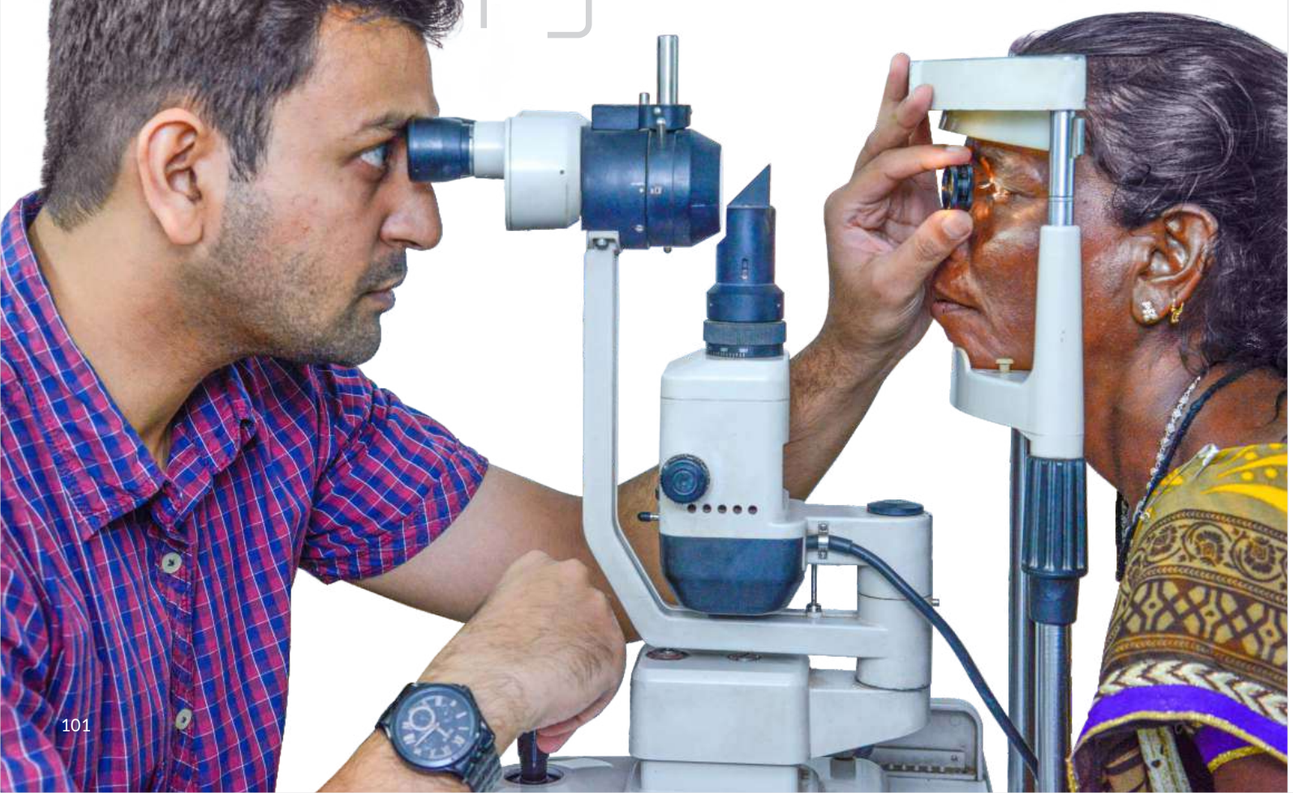
PT INDO BHARAT RAYON

Medical check-ups were organised for Cilangkap villagers at an expense of **IDR 13,77,92,000** in FY24.

Artificial Limb Fitment Camps

HARIHAR

Since 1995, these camps have supported more than **4,513 people**. This year, 205 limbs and 20 arms were fitted for **225 individuals**.



Social Projects

We are deeply committed to building sustainable and responsible social systems. We have been investing in initiatives that address social disparities, equip communities for future challenges, and provide support in times of need. These initiatives create a sense of responsibility amongst the people, who then take it forward to achieving our common goals.

Disaster Relief Activities

KHARACH

During the Narmada River floods, **1,000 families** were reached through ration kits that were distributed with the support of the Ankleshwar municipality. Food packages were also distributed at the Hansot Shelter Home.

VILAYAT

700 ration kits were distributed to those affected by the Bharuch floods.

Community Awareness Programme

NAGDA

Road Safety Awareness programmes were conducted in nearby villages, emphasising key aspects of road safety, ranging from vehicle speed regulations to dangers of driving under the influence of alcohol. **1,835 community members** were covered through 54 such sessions.

To educate and empower the community, awareness sessions were held on legal rights for women and marginalised groups in Nagda and were attended by **10,337 individuals**. The sessions also focused on government schemes like Mid-Day Meals, Skill India, NRHM and Social Security.

HARIHAR

In partnership with the District Administration of Haveri, a mock drill was conducted to equip the nearby village residents with an appropriate emergency response to chemical leakage and mitigation.

Green Space Development & Protection

The team at Vilayat played an active role in creating green spaces by planting a total of **72,000 saplings** of 102 different varieties using both conventional and Miyawaki plantation methods. Drip and sprinkler systems powered by green energy and designed to conserve water were installed for irrigation. In addition, **40 tree guards** were provided to the Vagra Police Station to prevent the trees from being damaged by weather conditions or human activities.

Water Security

To ensure water security for all, potable drinking water was made available for **26,850 individuals** from 4 nearby villages of Harihar.

THAI RAYON

- Rice lunches have been consistently donated to **16 primary schools for over 20 years**, reflecting the company's long-standing commitment to support local students. This initiative benefitted **1,500 students** this year.
- Supported drinking water for the Disaster Prevention and Mitigation Department of Ang Thong Province for distribution to **2,000 citizens** passing by during the New Year festival at checkpoints to promote driving safely, without being sleepy or inebriated.

PT INDO BHARAT RAYON

Conducted annual food donation across **3,738 families** from Cilangkap and Tegallega villages, spending a cumulative amount of **IDR 48,30,00,000**.

Infrastructure Development

Infrastructural growth is at the core of community building and essential in enhancing the quality of life for the communities we work in. By working towards fostering habitable environments and improving current systems, we strive to help these communities flourish and facilitate overall growth.

NAGDA

- **3,032 toilets** were constructed to prioritise hygiene and sanitation. Also, 42 programmes were coordinated, motivating residents to maintain clean surroundings and improve personal hygiene. **2,425 people** benefitted due to this joint effort alongside the panchayat and health experts.

- To improve the availability of clean drinking water and maintain water levels, water harvesting systems were repaired in **4 villages** followed by provision of drinking water tanks along with well-operating RO plants and strengthening of drinking water schemes.

HARIHAR

- Supported the annual desilting of the farm canals to ensure that the farmers have an uninterrupted supply of water for irrigation, benefitting **70 farmers**.
- **20 solar streetlights** were installed in 9 villages to improve the nighttime commute for around **3,000 residents**. Electrical lights were also installed in Kodival Hospet village, enhancing the infrastructure of the village.

Education

Education is essential not only for the personal, economic, and social development of individuals but also for the holistic growth of a nation.

Birla Cellulose is focusing on development and education to promote holistic development. We are implementing initiatives such as computer literacy programmes, knowledge-based training, educational tours, and infrastructural development of schools to empower communities and foster personal, economic, and social growth.

NAGDA

- The primary and secondary schools managed by Grasim Industries have been providing quality education to **3,743 children** from Nagda and the surrounding villages.
- **525 girls** have been supported through the Girl Child Education programmes organised to improve school enrollment and reduce dropouts.
- Launched in 2022, Grasim's transformative education initiative 'Ensuring Quality Education' Project in rural Madhya Pradesh has successfully bridged educational gaps in **25 Anganwadi centres and 37 schools**, creating education opportunities in 20 villages.

KHARACH

- Supported Gujarat Government's School Enrolment initiative to achieve 100% literacy rate in every village by providing educational kits to the **945 newly enrolled students**.
- Established a minicomputer lab for a primary school to help bridge the digital divide and introduced digital literacy to **100 students**.
- Collaborated with the Gujarat State Disaster Management and Disaster Emergency Operation Centre to organise disaster management and safety awareness sessions for **367 students from 4 schools**.

HARIHAR

- Distributed **18,018 notebooks to 3,434 students** across 29 schools, to ensure adequate resources for their studies.
- A total of **1,247 students** were involved in sports and cultural events organised by us in order to promote co-curricular activities along with academic training.
- **528 youngsters** from low-income families have been effectively receiving first-rate teaching facilities and educational infrastructure at the company-run school. This year, the school achieved an impressive 100% result in the SSLC board examinations.
- We also support school infrastructure projects, through provision of **500 mattresses** to 5 government hostels and **70 wooden desks** to village primary schools, benefitting **900 students**. Additionally, we are constructing a mid-day meal dining hall for a government school.

VILAYAT

- Implemented the Star Topper of the Year initiative in **23 primary schools**. This initiative recognises top-performing students and awards education kits.
- Organised a fire and safety awareness drive to educate both students and teachers on fire prevention methods and first aid precautions necessary to effectively respond to emergencies. **791 individuals** attended.
- Set up a minicomputer lab with 6 computer sets to promote digital education for **1,280 students**.

THAI RAYON

- Thai Rayon awarded scholarships to **500 students** in honour of Her Majesty Queen Sirikit the Queen Mother for the 2023 academic year. The initiative supports better educational opportunities for youth in Ang Thong.
- **310,000 THB** were awarded to **155 children** of TRC employees at a scholarship ceremony, chaired by Mr. Nattapong Patanarat, Permanent Secretary of Angthong Province. Thai Rayon has been supporting Angthong's youth education since 1986.

Sustainable Livelihood

Providing sustainable livelihoods to the local communities is key to uplifting their living standards. We enable the community to generate additional income through skill development, training, and supporting their projects with grants and associations. We have undertaken several initiatives under the following heads to bring economic prosperity to the lives of local communities:

Agriculture

To empower and enable farmers with skills, awareness on best practices and aiding with seeds and saplings, we aim to support and help farmers grow their incomes and sustain their livelihoods.

NAGDA

- **929 farmers** received on-field demonstrations of crop varieties, training and exposure visits. They were also made aware of government schemes to enhance agriculture productivity and increase income.
- An intensive Fruit Wadis programme helped motivate farmers to grow fruits where **16,643 saplings** of forest and fruit species were distributed to the villagers. Consequently, the farmers were able to generate more income compared to their traditional crops.
- To empower farmers as climate change warriors, the Resilient and Sustainable Agriculture Development Project encourages developments in agricultural practices and creates opportunities for rural enterprises. Implemented in 20 villages, the project has developed **202 wadis, 236 high value crop plots, 205 soil health cards, 250 INM/IPM major crop farmers/plots, 125 water efficiency techniques, and 429 nutritional gardens** benefitting about **1,000 farmers**.

HARIHAR

- 9 types of plants were provided to farmers wherein **11,725 saplings** were distributed to **186 farmers**.
- Supported **47 male and female farmers** were provided with improved variety maize and vegetable seeds for better yield.

VILAYAT

- Held a Millet Cultivation Workshop for farmers with Dr. Lalit Patil. Millets were encouraged as climate resilient crops that can provide food security.
- Since 2016, the Wadi Project has promoted the use of climate-resilient horticulture crops as secondary yields after the single cropping patterns to provide an additional avenue of income.

Animal Care, Husbandry and Veterinarian Camps

Animals and humans often live in a symbiotic relationship depending on each other for care and livelihoods. Our initiatives focused on cows and other cattle's care focus on nutrition and aid, alongside animal husbandry and medical aid.

NAGDA

- Grasim Gokul Gaushala shelters **856 Cows** (Male - 224 & Female - 632) across the country, providing food, care & love for the old, injured, and abandoned cows/cattle.
- Across 35 villages, the Unit provided **100 mobile cattle drinking-water tanks** and over 2,705 artificial inseminations due to which 923 calves were born, benefitting **6,031 villagers**. Additionally, **12,110 animals** were treated and vaccinated through Veterinary Camps across these villages.

HARIHAR

Veterinary Camps organised in 7 villages treating and vaccinating **1,555 livestock**, that benefitted **586 farmers**.

VILAYAT

- **1,306 Artificial Inseminations** conducted for improving indigenous cattle breeds to provide a higher milk yield.
- A Cattle Survey was conducted for **214 individual cattle holders** across 25 villages to provide data driven solutions for animal husbandry related problems.

Skill Training Sessions

We aid in skilling of women and underprivileged individuals through our team and with the help of Self-Help Groups (SHGs) to empower the beneficiaries to be self-sustained through new avenues of income.

HARIHAR

Trained young women in tailoring, embroidering and painting with the aim to make them financially independent. Additionally, SHGs engaged in activities like mask stitching, spinning candles, bag stitching, uniform stitching to help the villagers explore various income avenues.

VILAYAT

Trained women on skills like stitching, embroidery work, applique work, basic computer education, hard resin, epoxy material training, handlooms (sari making) leading to employment opportunities and entrepreneurial ventures that enable financial independence.

GRI CONTENT INDEX

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GRI Standard	Disclosure	Location in the Report
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GRI 414: Supplier Social Assessment 2016	414-2 Negative social impacts in the supply chain and actions taken	31-32

Magnum Global Park,
21 Floor, Archview Drive,
Sector 58, Golf Course Extn Road,
Gurugram 122011
Haryana, India

Independent Assurance Statement

To,
Grasim Industries Limited, Pulp & Fiber Business,
Aditya Birla Centre, 'A' Wing, 2nd Floor,
S.K. Ahire Marg, Worli, Mumbai-400030

Independent Assurance Statement to Grasim Industries Limited (Pulp & Fiber Business) on select non-financial disclosures in the Sustainability Report for the financial year 2023-24.

Introduction and objective of engagement

Grasim Industries Limited (Pulp & Fiber Business) (the 'Company') has developed its Sustainability Report (the 'Report') based on the Global Reporting Initiatives (GRI) Standards. The reporting criteria have been derived from the GRI Standards (Core) and Greenhouse Gas (GHG) Protocol - A Corporate Accounting and Reporting Standard.

BDO India LLP (BDO) was engaged by the Company to provide independent limited assurance on select non-financial information in the Report for the financial year 2023-24.

The Company's responsibilities
The Report content and its presentation are the sole responsibilities of the management of the Company. The Company management is also responsible for the design, implementation, and maintenance of internal controls relevant to the preparation of the Report, so that it is free from material misstatement, whether due to fraud or error.

BDO's responsibilities
BDO India LLP's responsibility, as agreed with the management of the Company, is to provide assurance on the Report content as described in the 'Scope & boundary of Assurance' section below. We do not accept or assume any responsibility for any other purpose or to any other person or organisation. Any reliance a third party may place on the Report is entirely at its own risk.

Assurance standard and criteria
We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised), "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" and ISAE 3410, "Assurance Engagements on Greenhouse Gas Statement" issued by the International Auditing and Standards Board. We applied the criteria of 'Limited' assurance.

Scope & boundary of assurance
We have assured the select indicators in the Report pertaining to the Company's non-financial performance covering its operations for the period 1st April 2023 through 31st March 2024. The indicators under the scope of assurance are listed in Appendix 1.

Assurance methodology

Our assurance process entails conducting procedures to gather evidence regarding the reliability of the disclosures covered in the assurance scope. We conducted a review and verification of data collection, collation, and calculation methodologies, and a general review of the logic of inclusion/ omission of relevant information/ data in the Report. Our review process included:

- Evaluate and assess the appropriateness of the quantification methods used to arrive at the non-financial sustainability information of the select GRI indicators in the Report;
- Review of consistency of data/information within the Report as well as between the Report and source;
- Engagement through discussions with personnel at the corporate level who are accountable for the data and information presented in the Report;
- Execution of an audit trail of claims and data streams, to determine the level of accuracy in collection, transcription, and aggregation;
- Review of data collection and management procedures, and related internal controls.
- Verification of non-financial/sustainability performance data, on sample basis, based on our professional judgement, was done for the Nagda, Vilayat and Harihar locations only.

Limitations and exclusions:
There are inherent limitations in an assurance engagement, including, for example, the use of judgement and selective testing of data. Accordingly, there are possibilities that material misstatements in the Report may remain undetected.

The assurance scope excludes:

- Data and information outside the defined reporting period (1st April 2023 to 31st March 2024)
- Review of the 'economic and/or financial performance indicators' included in the Report or on which reporting is based; we have been informed by the Company that these are derived from the Company's audited financial records;
- The Company's statements and claims related to any topic other than those listed in the 'Scope & boundary of assurance' and the indicators listed in Appendix-1;

- The Company's statements that describe qualitative/quantitative assertions, expression of opinion, belief, inference, aspiration/targets, expectation, aim or future intention.

Our observations
We have reviewed the disclosures in the "Report" for the reporting period from 1st April 2023 through 31st March 2024. The disclosures of the Company, covered under the 'Scope and boundary of assurance', are fairly reliable.

Our conclusions
Based on the procedures performed and evidence obtained as defined under the 'Scope & boundary of assurance', nothing has come to our attention that causes us not to believe that the disclosures of the Company is presented fairly in accordance with the relevant reporting guidelines/standards.

Our assurance team and independence
BDO India LLP is a professional services firm providing services in Advisory, Assurance, Tax, and Business Advisory Services, to both domestic and international organizations across industry sectors. Our non-financial assurance practitioners for this engagement are drawn from a dedicated Sustainability and ESG Team in the organization. This team is comprised of multidisciplinary professionals, with expertise across the domains of sustainability, global sustainability reporting standards and principles, and related assurance standards. This team has extensive experience in conducting independent assurance of sustainability data, systems, and processes across sectors and geographies. As an assurance provider, BDO India LLP is required to comply with the independence requirements set out in the International Federation of Accountants (IFAC) Code of Ethics for Professional Accountants. Our independence policies and procedures ensure compliance with the Code.

For BDO India LLP

Indra Guha
Partner | Sustainability & ESG
Business Advisory Services

Gurugram, Haryana
28 March 2025

Appendix 1 (to be read as part of 'Scope and boundary of assurance')

The sustainability indicators/disclosures considered during the engagement are presented below:

Sr. No.	GRI Reference	Indicator description
1	302-1	Energy Consumption
2	303-3	Water Withdrawal
3	303-4	Water Discharge
4	303-5	Water Consumption
5	305-1	Direct (Scope 1) GHG Emissions
6	305-2	Energy Indirect (Scope 2) GHG Emissions
7	306-4	Waste Diverted from Disposal
8	306-5	Waste Directed to Disposal
9	401-1	New Employee Hires and Employee Turnover
10	403-9	Work-related Injuries
11	404-1	Average hours of training per year per employee
12	405-1	Diversity of governing bodies and employees

COLLABORATING FOR CIRCULARITY

Birla Cellulose
Fibres from nature

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