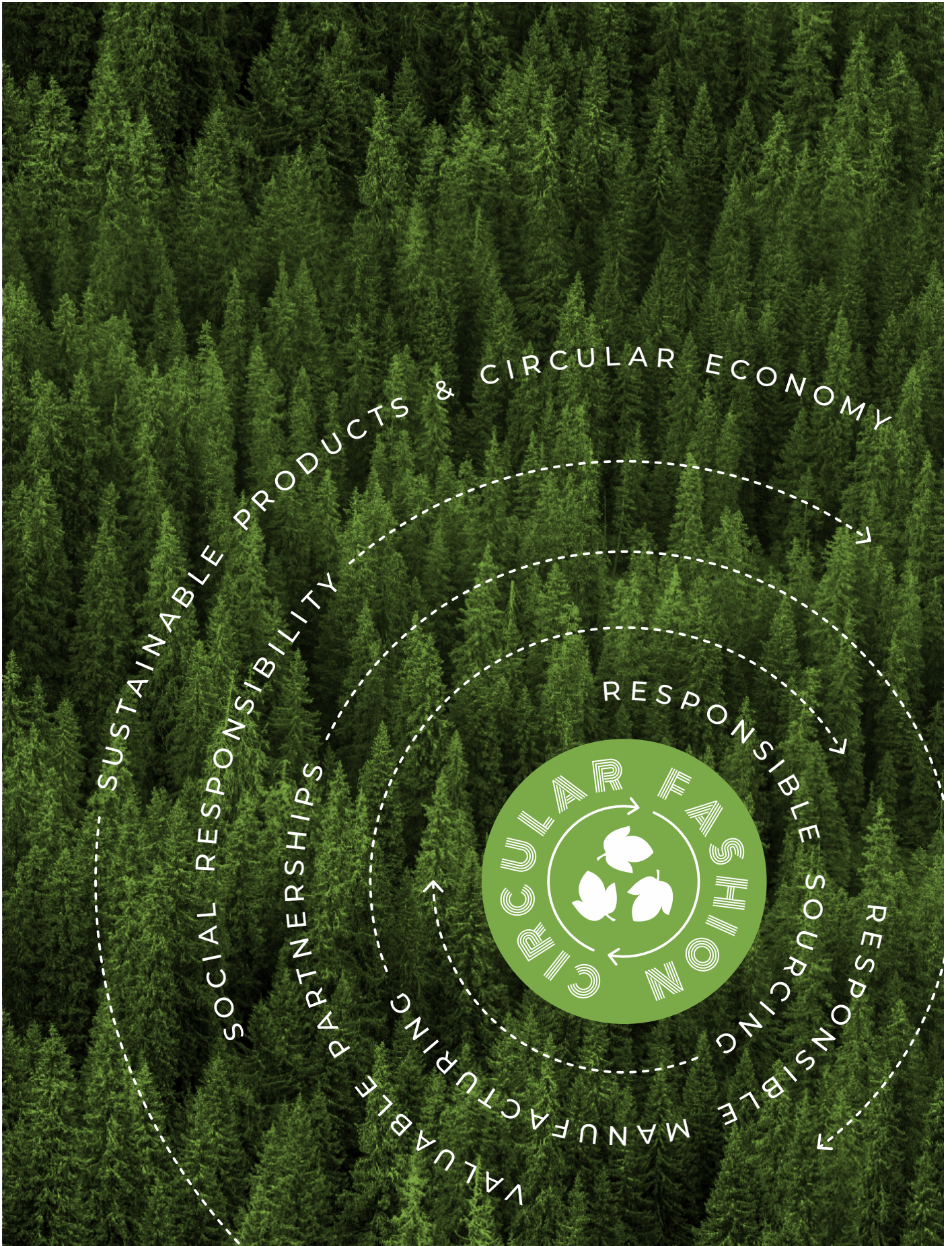




Birla Cellulose
Fibres from nature



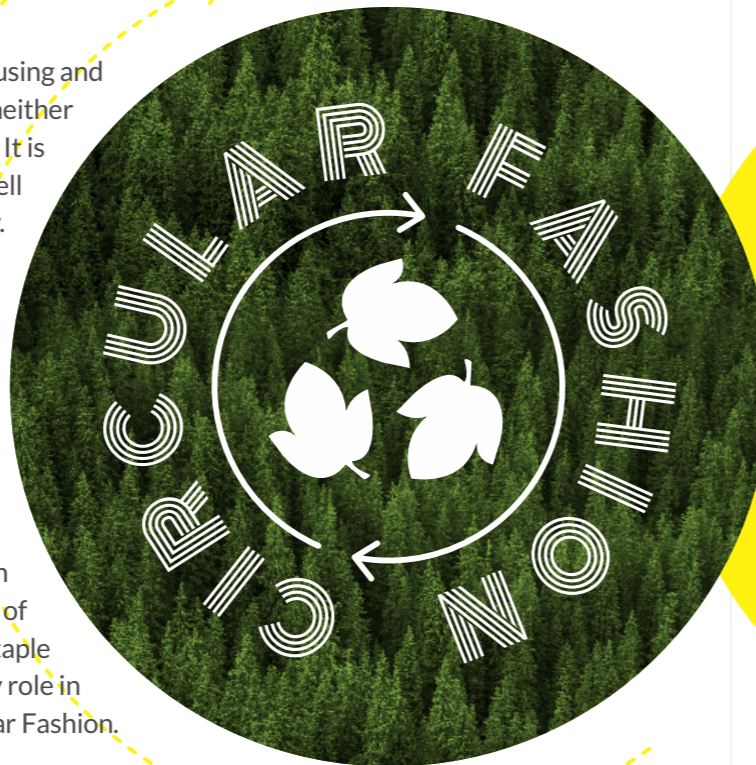
ADITYA BIRLA GROUP



In the world we live in today, producing, using and throwing things away is no longer tenable. It neither makes economic sense nor an ethical one. It is harmful to the environment, the people as well as brand equity.

Progressive fashion and textile players, the world over, are zeroing in on circularity because it shifts the demand from virgin resources to renewed materials, reduces waste, eases the pressure on landfills and saves energy and water.

By delivering better economic, societal, and environmental outcomes, Circular Fashion makes the world go round, literally. As one of the world's leading producers of Viscose Staple Fibre, Birla Cellulose aims to play a key role in spearheading Circular Fashion.



We call Viscose the Greater Fibre not only because it is inherently sustainable, but also because it is tailor-made for circularity.

Various types of cellulose-based waste can be recycled and processed to create man-made cellulosic fibres (MMCF) – a characteristic that we innovatively leveraged, during the year, to create fibres with recycled content.

This Fibre of the Future uses recycled materials and many non-wood alternatives to create MMCF using closed-loop system with a lower environment footprint. Along the way we work in collaboration with many innovators and the value chain to utilize its synergy.

This sustainability report highlights our progress in adopting, leading and evangelising a circular economy model. Through responsible sourcing and manufacturing, building valuable partnerships, championing social responsibility and creating products that add value to the circular economy, we aim to create a more sustainable future.

Because what goes around, comes around.

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SUSTAINABILITY MANAGEMENT

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Performance Highlights

Responsible Sourcing



Birla Cellulose retained top category in Canopy's Hot Button Report for the 3rd consecutive year

AV Group achieved FSC® Forest Management (FM) certification in New Brunswick



Responsible Manufacturing

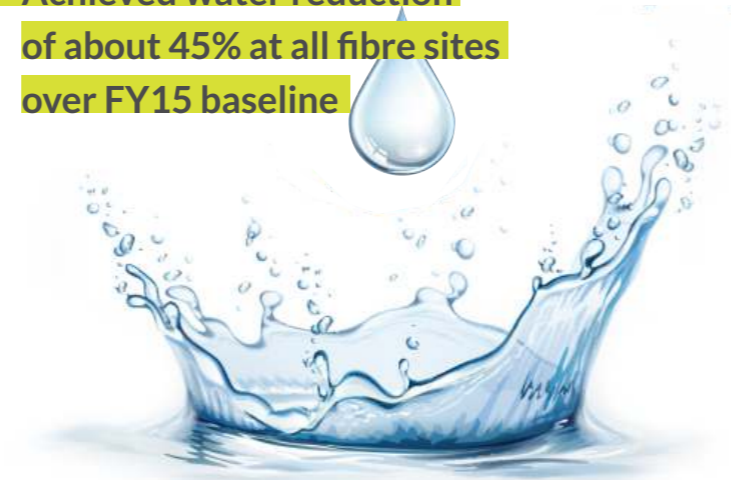


3rd party verified Higg FEM 2021 score of 94% at seven fibre manufacturing sites

EU BAT compliance achieved at fibre manufacturing site at GCD, Vilayat (India) incl. expansion

38% reduction in sulphur-to-air emissions by end of FY22 over FY15 baseline

Achieved water reduction of about 45% at all fibre sites over FY15 baseline



Sustainable Products & Circular Economy

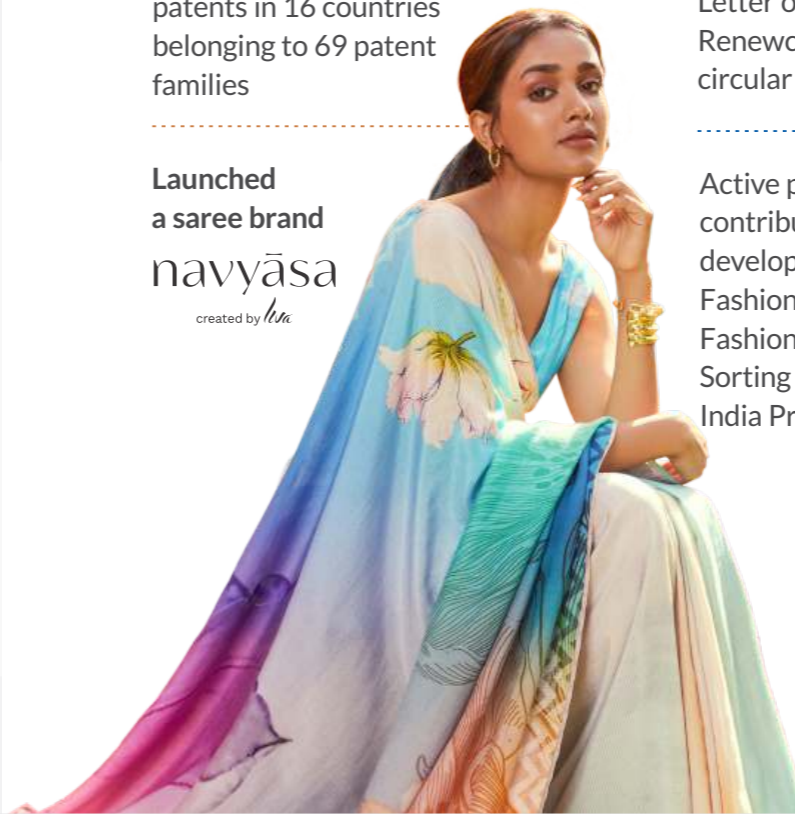


Launched Liva Reviva with 30% textile waste content

Completed pilot spin of lyocell fibres containing Nanollose microbial cellulose

105 patent applications / patents in 16 countries belonging to 69 patent families

Launched a saree brand **navyāsa**
created by liva



Valuable Partnerships



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

Letter of Intent signed with Renewcell for large-scale circular fibre production

Active participation and contribution towards development of Circular Fashion through Circular Fashion Partnership and Sorting for Circularity India Project

Social Responsibility



CSR expenditure of about \$1.89 million in FY22

SFD, Nagda awarded with 'TERI-IWA-UNDP Water Sustainability Awards 2021-2022'

85% reduction in LTIFR over FY15



Chairman's Message



Dear Stakeholders,

The past couple of years have reshaped our business and communities. The pandemic-induced disruption has been epochal in heralding innovation. There is a renewed sense of responsibility for the planet and a desire to drive sustainable and inclusive growth. Across the board, one can sense an urgency for action.

The Aditya Birla Group is accelerating a positive impact by leveraging technology, driving innovation, and collaborating with others in leading change. Sustainability is at the core of our business and will continue to guide its strategic choices.

In 2022,

the Pulp and Fibre business celebrated 75 glorious years of incorporation. Its success is an emphatic endorsement of a self-reliant India.

Over a long arc of time, developing sustainable business practices with an increased focus on the environment has been a consistent priority. This is evident in the intense forestry management system and robust wood sourcing policies compliant with global standards.

Birla Cellulose fibres come from nature and return to nature, leaving a positive environmental footprint.

Birla Cellulose is leading the charge in eco-fashion with its latest offerings. The circular product 'Liva Reviva' is now made with 30% industrial cotton waste compared to 20% earlier. The eco-enhanced Livaeco fibre represents impressive strides toward sustainable fashion. The year also saw the launch of 'navyāsa created by liva', a new-age, contemporary, premium saree brand.

In 2022, the fibre unit at Vilayat also set a new benchmark after commissioning two large production lines as it attained compliance with the stringent EU BAT norms, significantly reducing emissions.

Birla Cellulose's environmental stewardship was once again acknowledged on the global stage when it achieved the top category in the Canopy Hot Button Report 2022 for the third consecutive year. The recognition is testimony to its work in sustainable forest management and the development of next-generation solutions.

By backing up its advocacy of sustainable business practices with its far-reaching commitments, Birla Cellulose is driving the sustainability agenda in the MMCF industry and aligning itself with the larger vision of the Aditya Birla Group. I believe we can achieve global industry leadership and thrive in the new world through the cross-functional confluence of sustainability, innovation, technology, and customer-centricity in everything we do.

I compliment the team for their dedicated efforts in sustaining excellence and wish them the best for the years ahead.

Kumar Mangalam Birla
Chairman, Aditya Birla Group



From the Desk of Business Director



Dear Valuable Partners,

Despite a difficult beginning caused by the impact of COVID-19's second wave, FY22 concluded on a positive note. We were able to react with resiliency and quickly implement safety measures thanks to the lessons we learned from the first wave. Our decision-making was centred on ensuring the security of all our employees and their families as well as efficient business operations.

The pandemic inordinately impacted the future of work, workforce, and workplace. We have moved with the new work ethic by focusing on a holistic employee experience that puts equal emphasis on growth, engagement, and wellbeing.

Our employees value and appreciate the One ABG culture, which is profoundly embedded across the organisation. This culture gives the ultimate competitive edge in a world where business models are easily upended.

Despite a couple of tough years due to the pandemic, Birla Cellulose kept its eye on the ball as far as sustainability was concerned.

Our approach of integrating sustainability across the value chain of our operations has served us well.

In many ways, it has contributed to the resilience demonstrated by the business in navigating the challenges posed by the pandemic and help us set global benchmarks in all our focus areas: Responsible Sourcing, Responsible Manufacturing, Sustainable Products, Valuable Partnerships, and Social Responsibility.

We reached a significant milestone this year. The Pulp & Fibre Business completed 75 illustrious years of incorporation. By focusing on inclusive growth and prosperity throughout our 75-year journey, we have been fortunate to establish and strengthen relationships with our stakeholders.

We continue to fortify this relationship by achieving sustainability and contributing to the holistic development of our people, communities, and the planet. I would also like to take this moment to appreciate the efforts and support of all stakeholders, including colleagues, shareholders, customers, partners, communities, and others, who have been an integral part of this journey.

As I proceed to recap the sustainability-related highlights of the business and the Group over the past year, I am delighted to share with you that:

- Birla Cellulose retained the top category of 'Dark Green Shirt' in Canopy's Hot Button Report 2022 for the third consecutive year for its sustainable wood sourcing practices and next-generation fibre innovations.
- AV Group Canada achieved FSC Forest Management certification in New Brunswick

- Our fibre manufacturing sites achieved the highest third-party verified Higg (3.0) FEM score, setting a new industry benchmark of 94% on average.
- Vilayat site, world's largest viscose manufacturing site, became EU BAT compliant and was verified by third party including the recent expansion.
- All fibre manufacturing sites are compliant with ZDHC wastewater guidelines.
- Our sites established new global benchmarks by having the lowest specific water consumption in viscose and lyocell fibres.
- Circular product Liva Reviva, made with pre-consumer waste, is now made with 30% waste, with added sustainability advantages.
- We signed a Letter of Intent with next-gen pulp producer Renewcell to scale up our circular fibre offerings.

This fulfilling journey would not have been possible without the support of our allies. As an organisation, we owe our gratitude to the people and institutions who have stood by us in our sustainability journey: from fashion brands and customers, to civil society, our employees, communities, our suppliers, innovators, and other stakeholders.

In continuation to our journey presented last year, I am pleased to share our fourth sustainability report which further elaborates our efforts in building a sustainable business for a better tomorrow.

Happy reading!

H K Agarwal
 Business Director, Pulp & Fibre Business



Q&A - CSO with CXOs

CSO

Surya Valluri
Chief Sustainability Officer



CSO Surya Valluri talks to COO Kalyan Ram Madabhushi, CTO Dr. Aspi Patel, CMO Manmohan Singh and CHRO Anupama Mohan, about sustainability journey, climate change, supply chain, circularity, innovations, consumer preferences, customer voice, community and much more.

Kalyan Ram Madabhushi
Chief Operations Officer



COO

Surya Valluri Phasing through past one year or so with not-so-good market situation, how the business is progressing on the business sustainability goals and EU BAT?

Kalyan Ram: In spite of severe headwinds last year primarily due to supply chain issues, COVID-19 situation in China and Russia-Ukraine war, we have progressed well on majority of business sustainability targets. We have reduced our water consumption in manufacturing process by 53%, COD by 61%, zinc discharge by 79%, etc. compared to the baseline. On EU BAT, 3 out of 7 sites already meet all the EU BAT parameters.

Two sites, one in India and another in Indonesia, will complete EU BAT implementation by end of 2023. The balance two sites in India are being worked out. More than 110 brands are using our GreenTrack™ traceability programme globally and we continue to progress with scaling up of circular products via Liva Reviva brand. We have already started to offer more Liva Reviva offerings, increasing the usage of cotton waste % steadily.

Surya Valluri Where does the business stand on industry-leading ambitious goal to achieve carbon neutrality by 2040 in Scope 1, 2 & 3 emissions?

Kalyan Ram: Aditya Birla Group has committed to 'Net-zero carbon emissions by 2050' and more specifically, Birla Cellulose has taken up business targets to be 'net-zero by 2040' and to reduce GHG emissions by 50% by 2030.

While the roadmap is still under development, we have already increased investments in renewable energy, while developing technology and clean energy solutions.

Manmohan Singh
Chief Marketing Officer



CMO

Surya Valluri Will you please take us through the success story of Liva Reviva fibre which is based on circular business model and future plans?

Manmohan Singh: New products, innovation and technological upgrades are important for every industry. Innovation has always been the core of Birla Cellulose and we have proved our mark with innovations like Livaeco, Liva Reviva, anti-microbial viscose and other array of products. Liva Reviva has been a special innovation as it focusses on utilising waste leading to raw material and other resources' reduction. Started with 20% waste, we have now launched the fibre with 30% waste. The fibre is manufactured in EU BAT compliant facility and the plans are afoot to scale it up. We are also collaborating with many pulp innovators to help scale up, apart from our own waste processing facility to produce pulp from waste. We have signed a 'Letter of Intent' with Renewcell for large scale circular production and provide a framework for off take in future.

Surya Valluri Looking at tough time for MMCF producers in the given scenario, how do you want to leverage on sustainable business opportunities to make a breakthrough?

Manmohan Singh: This is one of the established facts that MMCF has been a very sustainable fibre and a great substitute for resource intensive natural cellulosic fibres. And basis these credentials, MMCFs are now the preferred fibres. There are many sustainability credentials with us that helps to sail through difficult times like top category in Canopy's Hot Button Report, lowest water consumer, closed-loop production (such as EU BAT), benchmarked Higg FEM scores, etc. MMCFs have been one of the fastest growing fibres amongst all the fibres and would be a fibre which would continue to grow at the highest rate compared to all other fibres.

Dr. Aspi Patel
Chief Technology Officer



CTO

Surya Valluri Birla Cellulose has been ahead in adopting chemical recycling and other technological process innovations. How far these indicatives impact climate action targets such as GHG emissions?

Dr. Aspi Patel: The strategy involves development of innovative solutions to increase circularity, increase resource efficiency and mitigate environmental impacts. Due to recycling of chemicals, we could reduce our chemical consumption by 10% to 15% in the last 5-6 years. Lower material use helps in reduction of emissions. One of the technologies we are exploring is to build a recovery pilot plant using a new improved membrane-based distillation technology. Targeted to be commissioned by 2023 end, this will recover >98% of water and nearly all chemicals with an added benefit of lower carbon footprint. About 67% of the emission reduction is expected due to direct energy savings. One-third of the remaining emission reduction is expected to come from recovering and reusing the chemicals. Another major exploration is in non-wood cellulosic resources as feedstock, such as textile wastes, agricultural byproducts and wastes.

Surya Valluri Birla Cellulose has been working in the field of textile waste recycling. Please elaborate on its status and how will it impact sustainability.

Dr. Aspi Patel: Birla cellulose has been a pioneer and developed a proprietary technology to use cotton-based textile waste as a feedstock for making virgin regenerated cellulosic fibres. We already have 'Liva Reviva', which uses ~30% pre-consumer textile waste-based cellulose along with dissolving grade cellulosic pulp as a feedstock. In addition to this, we have been supporting several innovators in this field. Recently, we have also started piloting mechanical recycling technology to produce 100% biodegradable fibre blends of regenerated cellulosic fibres recovered from textile waste. This will potentially have dual benefit with a big positive impact on sustainability. It will help reduce the textile waste which currently goes to incinerators/landfills or oceans and concurrently help to reduce overall dissolving grade pulp needs, and hence forestation land requirements.

Surya Valluri Lyocell is considered the future of MMCF due to its superior sustainability credentials and strong performance attributes. How does it fit into Birla Cellulose's strategic plan for growth?

Dr. Aspi Patel: Lyocell is aptly labelled the 'fibre of future' and is a key focus area in our strategic growth plan. We produce high quality lyocell, branded as Birla Excel, using closed loop technology developed in-house backed by strong process know-how. We are executing debottlenecking projects at Kharach and Nagda sites to increase lyocell capacity by ~ 1/3rd in the next six months. Over the next decade, we may consider

building several large capacity lyocell lines to meet the expected increase in demand. Several new lyocell product variants offering enhanced value to end consumers are in different stages of development. We are also working with various start-ups to develop innovative solutions on alternate, more sustainable feedstocks and circularity. For example, our collaboration with Australian company Nanollose to develop a 'tree-free' lyocell fibre from bacterial cellulose is currently at pilot stage.

Anupama Mohan
Chief Human Resource Officer



CHRO

Surya Valluri It is a known fact that employees' high motivational level is very vital for an organisation to grow. With this mindset, please tell us what new initiatives or programmes the business is having and coming up for greater employee engagement.

Anupama Mohan: Our Group Purpose (launched in April 2022) and the 2 pillars - 'Valuable partnerships' and 'Social Responsibility', guide our actions towards employees, service providers, community we live in and the communities we work with. We believe that caring for our people - caring for their safety, career, and overall well-being - builds trust and reputation. Our policies and practices promise equal opportunity while hiring, fair and transparent performance management, learning and development interventions linked to individual and business needs, and well-defined career pathways. We are continually working to ensure everyone feels listened to and involved. We are an equal opportunity employer, and we make conscious efforts to be diverse, inclusive, and equal, at the workplace. It is also our endeavour to stay contemporary with our processes, policies, and usage of technology. These actions attract the best talent and safeguards long-term success.

Surya Valluri Similar to our employees - the internal stakeholders, how are you taking through hand in hand the surrounding society at large of the operational units who are our external stakeholders, in building confidence and support for mutual sustainable growth?

Anupama Mohan: 'Service to Society and Enriching Lives' is at the heart of Aditya Birla Group's ethos. We have always championed the cause of empowering communities towards social inclusion and equitable growth. Our business undertakes initiatives and long-term projects based on their geography of operation and the unique needs of stakeholder groups at those locations. All CSR programmes are run in collaboration with neighbouring communities and all our units. These programmes also align with UN SDGs. In executing these programmes, we partner with Government Departments, Non-Governmental Organisations, academic institutions, local communities and employee volunteers.



ORGANISATION PROFILE

Aditya Birla Group



Today, over 50% of Group revenues flow from overseas operations that span 36 countries across 6 continents with 130+ state-of-the-art manufacturing facilities globally.

The Aditya Birla Group, a US\$ 60 billion global conglomerate, is in the League of Fortune 500. Anchored by an extraordinary force of over 140,000 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.

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](#).





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 its leadership in sustainable business practices.

Fibre manufacturing is one of the oldest businesses of the Aditya Birla Group. Present at 6 locations across the globe, today, Birla Cellulose produces dissolving grade pulp in India, Canada and 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 - a sustainable, renewable resource - following international forestry standards like FSC® (Forest Stewardship Council), SFI® (Sustainable Forestry Initiative) & PEFC™ (Programme for the Endorsement of Forest Certification). We also collaborate actively with sustainability-focused multi-stakeholder organisations and other global institutions, and apply their best practices in our value chain.



Birla Cellulose collaborates actively with its upstream and downstream partners to enhance the sustainability performance of the value chain.



VISION

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



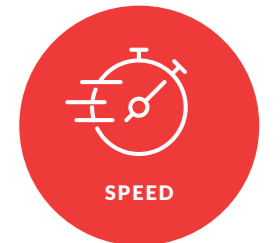
MISSION

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

Innovation in product and process; Excellence in quality, service, people development and Focus on sustainability across the value chain

VALUES

Our core values define what we stand for and how we do things. They are akin to a compass that guides our decision-making and behaviour. Individually, each of the value means what it is, and when combined together, they shape the culture of our organisation and its identity.



<https://www.adityabirla.com/about-us/vision-values>

75 GLORIOUS YEARS

India's 75th Independence Day also marks a historical milestone for Aditya Birla Group's Grasim Industries Ltd. Grasim was incorporated on 25th Aug 1947, just 10 days after India attained freedom. From those humble roots, the company founded by the visionary Shri G. D. Birla went on to craft a true-blue Swadeshi success story as an industry leader in diverse sectors.

Grasim is one of independent India's first organisations and has played an integral role in the country's growth. In the past 75 years, we have grown exponentially from starting as a textiles manufacturing unit to becoming a global leader in MMCF manufacturing.

We are a global brand and recognised as one of the most sustainable businesses.

During our journey of 75 years, we have been fortunate to build and develop strong relationships with our stakeholders by focussing on inclusive growth and prosperity. We continue to strive towards this goal by pursuing sustainability principles and contributing to the holistic development of our people, communities, and the planet.



Global Footprint

OPERATIONS & MARKETING OFFICES

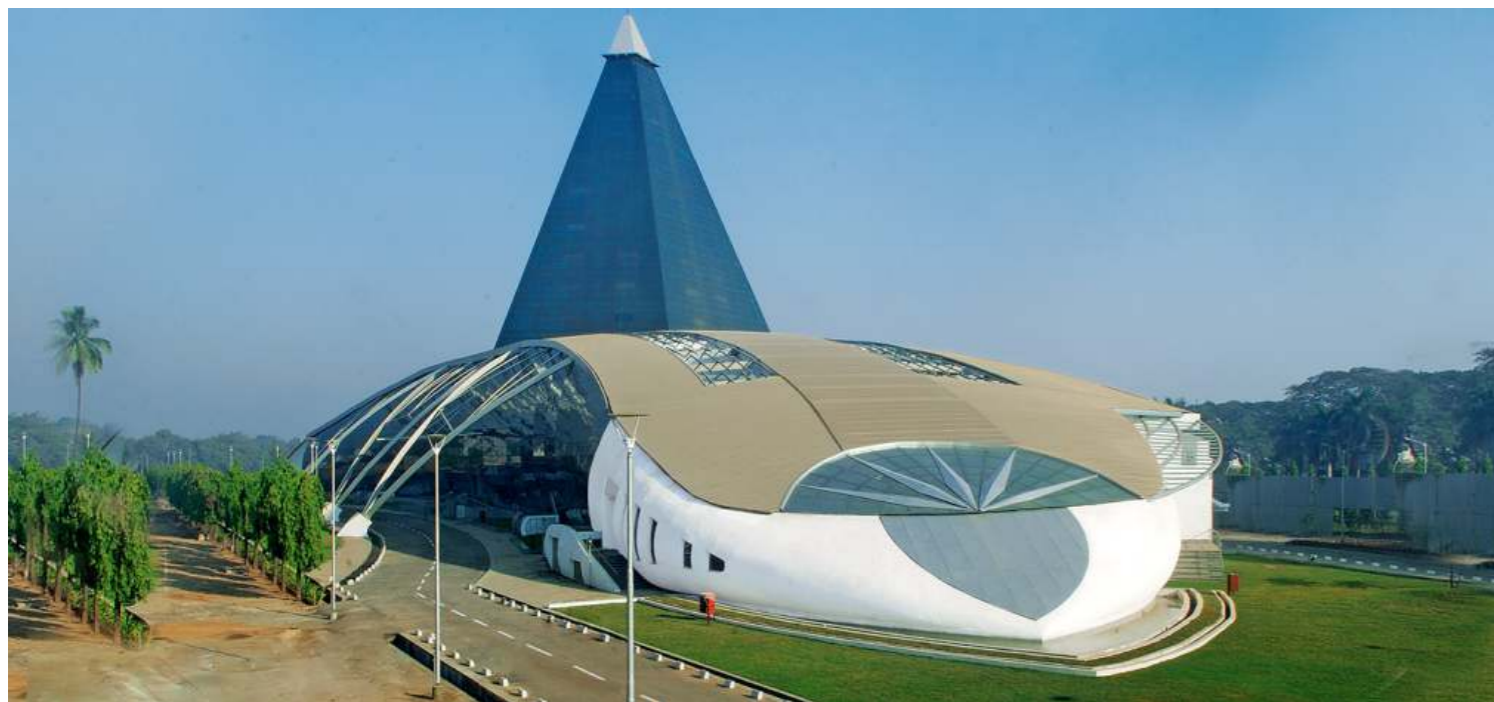
Birla Cellulose is headquartered in Mumbai while our plantations, factories and marketing offices reach out to several countries, making a positive impact on the global textile and non-woven businesses.



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 bring versatility in our products and their applications through technology.

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 AND 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 improve core competencies and execute them effectively.

DOMINNOVA, DOMSJO, 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 organisations. 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.

NEXT GENERATION FIBRE RESEARCH CENTRE, NAGDA, INDIA

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

Our process innovation centres are working to improve processes and make them more sustainable by focussing on areas like closed-loop or low carbon technologies, sustainable and alternate raw materials and elimination of hazardous chemicals.

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.

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 commercialising them across the value chain.

PFIC, TALOJA, INDIA

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



Value Chain & Us

MMCF is a basic raw material for the textile value chain and gives 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 finally up to the fashion in the hands of the end consumers, to drive sustainability improvements across the 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.



FOREST PLANTATION

PULP MANUFACTURING

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



FIBRE MANUFACTURING



YARN



CLOTH



GARMENT



RETAILERS



END CONSUMER

TEXTILE VALUE CHAIN

NONWOVEN VALUE CHAIN



NONWOVEN ROLLS



CONVERTERS



PRODUCTS



RETAILERS



END CONSUMER

VISCOSE VALUE CHAIN

BIODEGRADES

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 compostability 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 focussed on the 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 the upstream as well as the downstream value chains.



TEXTILE / NONWOVEN MANUFACTURING & USE

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

FIBRE PRODUCTION

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



Sustainability & Us

About the Report

Reporting Principles

The Sustainability Report seeks to communicate our ESG (Environmental, Social & Governance) performance to our stakeholders. The report highlights our management approach to sustainability, which is deeply integrated into our business strategy and presents information organised around our priorities and key areas of interest to our stakeholders. Sharing relevant and accountable information about our business practices, supply chain, and products is important for tracking our progress and learnings towards a more sustainable future.

These aspects are scoped and incorporated into the **five pillars of our sustainability strategy - Responsible Sourcing, Responsible Manufacturing, Sustainable Products, Valuable Partnerships, and Social Responsibility.**

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

This is our 4th consecutive sustainability report, showcasing our sustainability journey and maturity over the years, driving sustainability in and beyond our own operations, contributing to build sustainable fashion, and creating long-term value for all our stakeholders.

This report communicates how Birla Cellulose is creating value for stakeholders by integrating sustainability into its policies, operations, and value chain. It is our continuous endeavour to minimise environmental impact using our sustainability framework, which not only looks at the sustainability aspects of Man-Made Cellulosic Fibres (MMCF) manufacturing but is also focussed on working closely with our value chain partners to improve the sustainability of the entire MMCF value chain.

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, 2021, and March 31, 2022. The last report was released for the period from April 01, 2020, to March 31, 2021, maintaining an annual reporting cycle. We believe that the sustainability report acts as a manifestation of our sustainability journey and the impact generated from our sustainability initiatives.

For your valuable feedback and suggestions, please write to

Mr. Surya Valluri at
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.)
- Thai Rayon Public Company Ltd. (Thailand)* Grasilene Divison, Harihar (Karnataka)
- PT Indo Bharat Rayon (Indonesia)* Birla Cellulosic, Kharach (Gujarat)
- Birla Jingwei Fibres Co. Limited (China)[†] Grasim Cellulosic Divison, Vilayat (Gujarat)

ENTITIES WITH PULP MANUFACTURING UNITS



- Grasim Industries Ltd. - Harihar Polyfibers (India)
- AV Group NB (Canada)[†] Atholville Mill
- Domsjö Fabriker AB (Sweden)[†] Nackawic Mill

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

Independent Assurance

This report is externally assured by Ernst & Young Associates 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 Engagements (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 are the ideologies we follow for ensuring good corporate governance in our organisations. The Principles and Codes are practiced and monitored within the group with an aim to follow the highest standards of ethics and values.

Corporate governance refers to a set of laws, regulations, and good practices that enable an organisation to perform efficiently, and ethically generate long-term wealth and create value for all its stakeholders.

Please [click here](#) to learn more about our Corporate Governance.

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.



Sustainability Policy



Water Stewardship Policy



Energy & Carbon Policy



Safety Policy



Human Rights Policy



Wood Sourcing Policy



Environment Policy



Health Policy



Global Best Practices Policy



Supplier Code of Conduct

For a deeper understanding of our policies visit-
<https://www.birlacellulose.com/reports-policies.php>

Management's Approach to Sustainability

The COVID-19 pandemic has, in its wake, also brought opportunities to accelerate progress on many dimensions. None is more significant than sustainability. Stakeholders are seeking a compelling sustainability agenda while businesses need to act in a proactive manner to remain ahead of the curve.

At Birla Cellulose, sustainability is at the core of the business strategy and deeply inculcated in the culture of the organisation.

We have a long-term commitment to sustainability and follow a 360° approach, where we work towards making the entire process – right from plantation to pulp to fibre production, fashion, and end of life, upstream and downstream value chain – more sustainable. We collaborate and partner with all the stakeholders to create a bigger and broader positive impact.

Every process is designed to enhance the sustainability attributes of the product so that the richness of the natural cellulose, sourced from sustainable forests, is transformed efficiently into the fibre that gives unparalleled comfort and a natural feel to the consumers.

The materiality issues identified with internal & external stakeholders, the risk assessment, UN SDGs, and the ABG Sustainability Framework constitute the framework of Birla Cellulose's Business Sustainability Strategy.

Materiality Assessment

In order to create a transparent and robust approach in sync with the needs of the industry and shape our sustainability strategy, a complete materiality assessment was done in the year 2019 and the key materiality issues were identified. We are taking feedback on a continuous basis from both internal and external stakeholders, and the materiality issues are being updated accordingly.

Please [click here](#) to refer the detailed materiality analysis which is available on our website.





Sustainability Goals & Targets

Birla Cellulose will drive to a leadership position in the sustainability space and be the most sustainable MMCF manufacturer with the implementation of its sustainability strategy. Our aspiration is to stay ahead of the curve in critical areas of wood sourcing, closed-loop process, and sustainable products.

GOAL 1

Net Zero Emissions by 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. The roadmap is under preparation.

GOAL 2

Reduce specific water consumption by 50% in VSF manufacturing by the year 2025 over the 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 at about 20 m³ per ton of fibre, which is much lower than even the stringent EU BAT norms for water consumption (35-70 m³/TF).

Water consumption has reduced by 45% at the end of FY22 and operates well below the limit prescribed by EU BAT norms. *The 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 by end of 2025



Birla Cellulose has committed to implement closed-loop technologies at all the fibre manufacturing sites to achieve the EU BAT compliance for sulphur-to-air release by end of the year 2025. By end of FY22, we have reduced sulphur-to-air emission by 38% over FY15. Currently, 3 sites have achieved EU BAT. *The 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. Intensive efforts are in progress to increase the share of recycling by working on the technology as well as on the reverse logistics supply chain to optimise the process. We have taken an ambitious target of scaling up Liva Reviva fibre to 100,000 tons by the year 2024. *More on the progress of 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 FY22, we have reduced our LTIFR by 85% and expect to meet the target ahead of our timelines. *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 of supplier selection, and suppliers will be encouraged to adopt these best practices. We have started the supplier assessment for key suppliers. *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 the girl child are the key developmental gaps in some of the countries where we operate. We aim to empower 50,000 women through capacity building and make them financially independent by 2030. We have supported nearly 26,000 women for livelihood activities between FY15 to FY22.



Materiality Performance and Targets

Sustainability Pillar & Strategic Message	Material Topic	Linkage with SDGs	Key Performance Indicators	Target	Baseline	Progress by FY22
Responsible Sourcing	Responsible Wood Sourcing		Percentage of sustainably sourced wood	100% controlled wood sourcing	93% in FY18	100% controlled wood sourcing achieved
	Biodiversity		Conservation/protection of Ancient & Endangered forests	Conservation work in Boreal forests	-	Conservation of Boreal Forests in collaboration with Canopy in progress
	Sustainable Supply Chain		Assess the sustainability performance of key suppliers	100% evaluation of critical suppliers by 2025	-	Supplier Assessment Framework established. Identification of critical suppliers done. Supplier Code of Conduct circulated and sign off started
Responsible Manufacturing	Climate Change Risks		50% GHG intensity reduction by 2030 and Carbon Neutrality by 2040 in scope 1, 2 & 3 (identified scope 3) and sequestration in managed forests	Develop site-wise roadmap and initiate GHG reduction actions	FY19	Multiple actions in progress to reduce GHG emissions and adaption of energy-efficient technologies
	Closed-loop Manufacturing		Adaption of EU BAT technology for VSF manufacturing	Implement closed-loop technology to reduce sulphur-to-air emission	FY15 = 100%	38% reduction over the baseline achieved
	Water Footprint		Reduction in water intensity in VSF manufacturing process	Reduce water intensity by 50% by 2025	FY15 = 100%	45% reduction over the baseline achieved
			Reduce pollution load in effluent by 2022	Reduction in COD to meet EU BAT compliance	FY18 = 100%	46% reduction over the baseline achieved
				Reduction in zinc to meet EU BAT compliance	FY19 = 100%	72% reduction over the baseline achieved
	Waste Management		Reduction in waste to landfill and incineration	Reduction by 25% by 2030	FY19	38% reduction in the waste going to landfill & incineration over FY19 achieved
Sustainable Products & Circular Economy	Sustainable Products & Circular Economy		Scaling of circular products utilising textile waste	Increase waste used and recycled content	-	Production of Liva Reviva with 30% recycled content started at EU BAT compliant GCD Vilayat site
			Growth of eco-enhanced products	No. of products and scaling-up	FY19	Launched Livaeco (Modal) and Purocel NW fibre. Significant growth achieved in Livaeco Viscose/Modal and Liva Reviva
Valuable Partnerships	Valuable Partnerships		Major collaborative efforts across industry	Participation in major multi-stakeholder initiatives	-	Joined 8 multi-stakeholder organisations
Social Responsibility	Occupational Health & Safety		Reduce Lost Time Injury Frequency Rate (LTIFR)	Reduce LTIFR below 90% over FY15 baseline	FY15	85% reduction in LTIFR achieved over baseline
	Gender Equality & Reduce Inequality		Women Empowerment	To empower 50,000 women to be financially independent by 2030	FY15	Total cumulative 26,017 Nos. over FY15
	Community Engagement		Total no. of beneficiaries	Community Engagement in Health & Education	FY15	Total cumulative beneficiaries (Nos) 27,90,220



Responsible Sourcing

- *Birla Cellulose has retained top category in Canopy's Hot Button Report for 3rd consecutive year*
- *Implementation of Supplier Sustainability Assessment Program thereby addressing SDG 8*

- *AV Group achieves FSC forest certification in New Brunswick*
- *Supply chain disruption due to COVID-19, Russia-Ukraine war particularly pulp and procurement for key projects*



Overview

Most of the businesses have now understood the need to create a positive impact on communities while minimising the negative effect on the environment while creating value. But the pandemic and the Russia-Ukraine war, which led to supply chain disruptions, have made them expand the ambit of their thought process to include sustainable value chains.

Responsible sourcing is the first step towards creating sustainable value chains as well as circularity. If environmental misconducts are happening at the source and are not properly addressed and mitigated, businesses would not be able to successfully integrate, and fully benefit from the adoption of circular principles into their business operations.

For Birla Cellulose, sustainable sourcing is a critical part of business strategy in order to ensure that procured goods and services meet our sustainability requirements. We believe this is an important lever to create a positive impact and by working with our suppliers, we can advance ethical business practices, human rights, climate resilience and environmental protection. Dissolving pulp made out of wood and various chemicals required for making both pulp and MMCF fibre are our key materials. Wood has the highest priority as there are many risks associated with its sourcing such as sourcing from controversial sources, deforestation etc. Forests support biodiversity of flora and fauna by sequestering carbon dioxide from atmosphere, which has a direct impact on global weather patterns.

Birla Cellulose has a very stringent 'Wood Sourcing Policy' that ensures forestry conservation and protection of Ancient & Endangered (A&E) forests. At the same time, we have also worked on developing alternate raw materials for MMCF that would ease the burden on forest wood.

We engage with our suppliers through long-term supply agreements and include environmental, social and governance (ESG) criteria along with economic criteria for their evaluation and their selection. A 'Supplier Code of Conduct' issued by our procurement cell has to be followed diligently by all the suppliers. We have also instituted a 'Supplier Assessment Process' wherein critical suppliers are assessed for their sustainability performance.



Responsible Sourcing at Birla Cellulose

We aim to have collaborative efforts with our suppliers for creating a positive impact on sustainability by applying globally accepted frameworks and best practices:

-  **Environment:** act on climate change, protect environment and biodiversity, reduce resource consumption by improving efficiency and adapting circular business models
-  **Health and Safety:** create better and healthy working conditions for workers and communities respecting human rights
-  **Ethics:** follow ethical and fair business practices, fair wages, labour laws, anti-bribery, etc.
-  **Transparency:** maintain transparency and traceability of sources of materials / services
-  **Multiplier Impact:** Work with your own suppliers to replicate similar requirements for creating a broader and bigger impact

Supplier Sustainability Assessment

Supplier Code of Conduct

Our Supplier Code of Conduct is aimed at creating a positive impact across the value chain and implement sustainable business practices. Compliance to this Code by our suppliers is a key criterion for vendor selection and further business partnerships. All suppliers of Birla Cellulose are expected to understand the requirements of our Supplier Code of Conduct, and apply it within their operations and in all their transactions with Birla Cellulose.

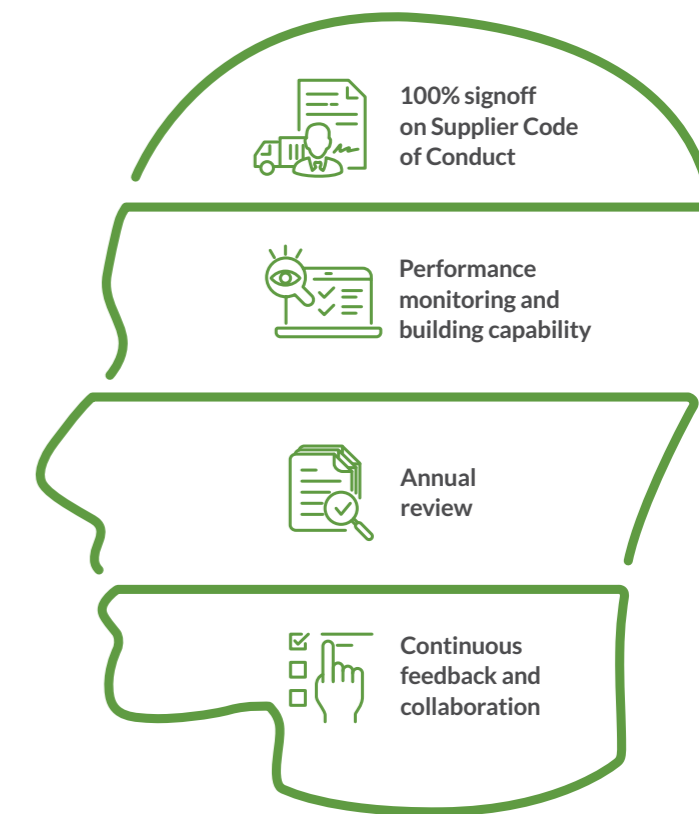
The Supplier Code of Conduct covers following key aspects:



The programme covers the following:

The purpose of the Supplier Code of Conduct is to procure all goods and services from sustainable sources adhering to stringent EHS standards in line with SDG 8 & 12 and ensure all transactions are done in ethical ways following regulatory requirements. Human Rights is of paramount importance to us and therefore we consistently interact with suppliers on these issues. We periodically assess the risks in the supply chain, on a case-to-case basis, investigate / audit facilities and encourage the suppliers to establish best practices. The Supplier Code of Conduct can be accessed [here](#).

We have also started supplier assessment for key suppliers based on the criticality of suppliers. Critical suppliers are those whose materials or services have a huge impact on the business operations, competitive advantage, market performance, etc.





Responsible Wood and Dissolving Pulp Sourcing

Responsible wood sourcing has the utmost priority in our sourcing practices. Wood sourced from sustainably managed forests is the main raw material for dissolving pulp which in turn is the key raw material for manufacturing of MMCF.

Wood Sourcing Policy

We engage with all our pulp suppliers to ensure that the wood used by them is sourced from sustainably managed forests and plantations.

We are committed to procure wood only from sustainable sources.

Our 'Wood Sourcing Policy' 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

Harvested from ancient and endangered forests, or endangered species habitat

From forests in which genetically modified trees are planted

Our wood sourcing policy can be accessed [here](#).



Biodiversity Management

We continue to implement strict controls on the wood sourcing to ensure our sustainability practices start right from the very first stage of procurement. Apart from ensuring certifications of harvested wood from leading organisations working towards forest management, we keep a check on the source of the wood procured, valid across all our operations and our pulp suppliers.

All the pulp and fibre manufacturing sites of Birla Cellulose are FSC® CoC (Forest Stewardship Council Chain of Custody) certified.

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.

Conserving Ancient and Endangered Forests

Forests take hundred to thousand years to evolve. These Ancient and Endangered Forests are key to steadying our climate as they are home to many threatened animals and birds. Another very important feature of forest is that, they are carbon storing powerhouses, sequestering carbon out of the atmosphere by holding it in their vegetation, soils, and root systems.

Birla Cellulose continued to hold space for solutions in critical Ancient and Endangered Forests in their non-dissolving pulp mill's sourcing region, setting the stage for conserving more than 70% of a 1.1-million-hectare area of largely intact boreal forest.

We acknowledge how important forests are for maintaining the balance in global ecosystem and strive to become a leading organisation that believes in utilising responsibly sourced materials from sustainably managed forests.

Forests are critical to achieve climate change goals as outlined in SDG 13 and Paris Agreement.

It is estimated that currently, forests absorb nearly 40% of total GHG emissions.





AV Group NB first to receive FSC certification in New Brunswick



AV Group NB Inc., an Aditya Birla Group company, announced it has received Forest Stewardship Council (FSC®-C174919) Forest Management Certification on its freehold land situated in York County, New Brunswick. Certification of the 41,000 hectares Acadian Forest type under FSC's National Forest Stewardship Standard, is a first for New Brunswick.

The Forest Management Certification helps protect the people, plant and animal species that live in and around, and depend upon, the forest.

Under the FSC standard, the certified area requires adherence to ten core principles including principle three which moves forward an expectation for meaningful consultation, engagement, and collaboration with our First Nation partners.

AV Group considers this a transition point for the company and a game changer for their forest management activities in New Brunswick moving forward.

Pulp produced by AV Group mills is used in the manufacture of textiles for woven and nonwoven applications, and is found in the apparel lines of many major clothing brands.

For AV Group NB Inc. to obtain this certification on their private land is proof of their commitment to good management and governance. As a key link in the man-made cellulose fibre (MMCF) supply chain, it is a must to document and verify important aspects of environmental, social and governance values for our customers. This certification will greatly enhance their credibility as a supplier of responsibly produced fibres from nature through the textile value chain.

CASE STUDY

Birla Cellulose retains highest category in Canopy's Hot Button Report 2022



Birla Cellulose has once again retained highest category 'dark green shirt' rating in Canopy's Hot Button Report 2022. This rating is the result of our continuous efforts on the conservation of ancient and endangered forests, and robust initiatives to scale circular business model in fashion industry.

Dark green rating affirms better performance of Birla Cellulose in implementation of CanopyStyle commitments, with progress on the next generation fibre solutions and the advancement of conservation solutions.

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 top rating in the environmental report also reflects our relentless attempt to improve sustainable wood sourcing practices, innovations, and transparency across the value chain.

The Hot Button Report is the first tool of its kind that enables fashion brands and retailers to robustly assess MMCF suppliers' forest management practices as well as their leadership in forging solutions to eliminate endangered forest fibre from the rayon and viscose supply chain.

The importance of environmental-friendly business practices in the textile industry has indeed gained a significant amount of traction. Today, more than 500 global brands are looking to source from 'green shirt' producers. These same brands have combined annual revenues of over US\$850 billion, so this demand is an impressive driver of change.



Chemicals Sourcing & Effective Management

Chemicals are integral to the process as they are used at various stages of viscose fibre production - from making pulp from wood chips, to making fibre from pulp. These chemicals such as caustic soda, sulphur, zinc, and finishing agents are procured from suppliers with long-term agreements.

We acknowledge the impact of the chemicals we use and have implemented a robust chemical management system.

We ask our suppliers to follow ZDHC Manufacturing Restricted Substance List (MRSL) in their process. As much as possible, we procure majority of chemicals locally. Some of our sites have caustic soda production co-located and most of our sites are backward integrated where we produce sulphuric acid and carbon disulphide in order to avoid transportation of hazardous chemicals over long distances. Along with this, we are working on closed-loop recycling of chemicals to reduce the impact of our operations. This helps to minimise our carbon footprint as well. We are committed to minimising the impact of chemicals and related risks associated with them on the surroundings thus supporting SDG 12.



Effective Chemical Management Programme

We have a Chemical Management Programme for safety and storage of chemicals in our facilities. The chemicals are segregated based on an interaction matrix and have a containment dyke to prevent any uncontrolled spillage, in case of leaks.

Special attention is paid to labelling requirements and storage of these chemicals at the site. Efficiently using these chemicals help in reducing the impact on our operations and environment.

The safety documents such as Material Safety Data Sheet (MSDS), the risk assessment, compatibility study, etc. are ensured before the material is purchased at site. Specific training is provided to the workers who receive and store these materials for safe handling and storage practices, and it is ensured that proper personal protective equipment (PPE) is provided to handle the chemicals safely.





Responsible Manufacturing

- Capacity expansion of 600 tons per day at Vilayat site completed; now largest viscose fibre manufacturing facility globally
- EU BAT compliance achieved at GCD, Vilayat (India) fibre manufacturing site incl. new expansion capacity
- SFD, Nagda was awarded with 'TERI-IWA-UNDP Water Sustainability Awards 2021-2022'

- Maintained global leadership in 3rd party verified Higg (3.0) FEM with average score of 94% across the fibre sites
- Achieved water reduction of nearly 45% at all fibre sites by end of FY22 over FY15



Investing in circularity is now an integral part of how responsible businesses run their supply chains. As customers become more environmentally conscious, regulations further widespread, and investors increasingly favour circular business models, companies are exploring new ways to retain the value of their products.

In line with UN SDG 12 and 17, Birla Cellulose works closely with various stakeholders in developing responsible manufacturing practices that drive sustainable consumption and production patterns, underpinned by our responsible stewardship philosophy.



Both from environmental perspective as well as product attributes, Manmade Cellulosic Fibres (MMCFs) have unmatched credentials and immense potential to drive sustainability in the global textile and fashion industry. These credentials are achieved as a result of integrating responsible manufacturing processes in the organisation.

Birla Cellulose strives to remain at the forefront of sustainability and innovation in the MMCF industry. We have continually improved our MMCF

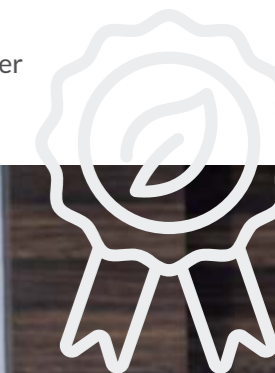
manufacturing process and established global benchmarks especially in raw material consumption such as caustic soda, water, etc.

In 2018, we embarked upon a journey to implement closed-loop technologies at all our MMCF manufacturing facilities to achieve the most stringent global standards such as EU BAT and ZDHC MMCF Guidelines. Currently, three out of seven MMCF manufacturing sites are EU BAT compliant.

Management Approach

Birla Cellulose has a holistic approach towards sustainable MMCF manufacturing which includes applying the right mix of **best-in-class processes and technology, adopting globally benchmarked management practices, and engaging a highly skilled and trained team to deliver the fibre of the highest quality in an environment-friendly and safe manner.**

Projects improving efficiencies have been implemented in the past and new initiatives are under execution for reducing water and other raw materials' consumption. The process water consumption at many of our fibre plants is 30% to 40% lower than the EU BAT lower limit.



All the pulp and fibre manufacturing sites are certified with ISO 14001:2015 Environment Management Standard (EMS).

Continuous focus on improving energy efficiency, minimising air emissions (sulphur-to-air) as well as wastewater across the business is underway. The focus is abatement at the source to reduce the impact of our operations on the environment and move towards tighter closed-loop manufacturing.

We have implemented Zero Liquid Discharge (ZLD) at our Nagda site in India demonstrating our commitment towards responsible stewardship.

Similarly, all the fibre manufacturing sites of Birla Cellulose are verified for Higg (3.0) FEM. Birla Cellulose leads the implementation of Higg (3.0) FEM globally among MMCF producers and are the leading scorers in Higg (3.0) FEM in the MMCF industry with third-party verification.



Sustainable Pulp & Fibre Manufacturing

Sustainably sourced wood is an ideal, renewable raw material for producing dissolving wood pulp. This pulp is then transformed into MMCF (multi-modal cellulose fibres) that 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 pure form (nearly 99.9%) just as it was in the original cellulose structure of the wood.



Birla Cellulose produces a range of MMCF, including Viscose, Modal, and Dope Dyed fibres, through the classic viscose process. Additionally, they also manufacture Lyocell fibre through a distinct solvent spinning process. The Lyocell technology is known 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/modal fibre, the use of carbon disulphide (CS₂) as a catalyst is a major concern due to its hazardous nature. To minimize the associated risks, a closed-loop process is implemented with the main objective of maximizing the recovery of CS₂ released through exhaust gases during the viscose production process and reusing it back in the process.

This not only reduces harmful sulphur emissions to the air, but it also improves the working environment and reduces raw material consumption, resulting in a positive impact on process economics.

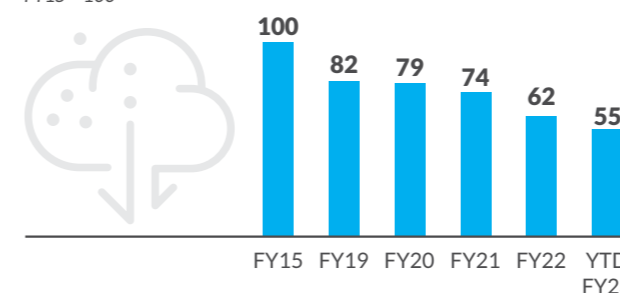
For further information, please refer to our Sustainability Report for FY20.

CURRENT STATUS

Currently, our three sites, 'one in' India (out of total four), China, and Thailand are in compliance with the stringent European Union Best Available Techniques (EU BAT) norms, including sulphur-to-air emissions of 20 kilograms per ton of fibre.

Sulphur-to-air Emission (kg/TF)

FY15 = 100



WAY FORWARD

Work is underway to implement closed-loop technologies at the remaining four sites. By June 2023, one site in India and another in Indonesia will have completed EU BAT implementation, while the remaining two sites in India are expected to meet EU BAT guidelines within the next 18 to 24 months.





Setting New Benchmark in Environmental Performance

Reducing our ecological impact throughout our value chain through resource conservation is a priority for Birla Cellulose. We aim to set a standard in the MMCF industry and have taken various initiatives to minimise our environmental impact.

As our business continues to grow, the demand for raw materials increases, making conservation of natural resources increasingly important. Our focus is therefore on reducing resource consumption through 'abatement at source'. In recent years, we have made efforts to improve the closed-loop process, implement the Best Available Technologies (BATs), and recover and reuse waste and by-products generated in the manufacturing process.

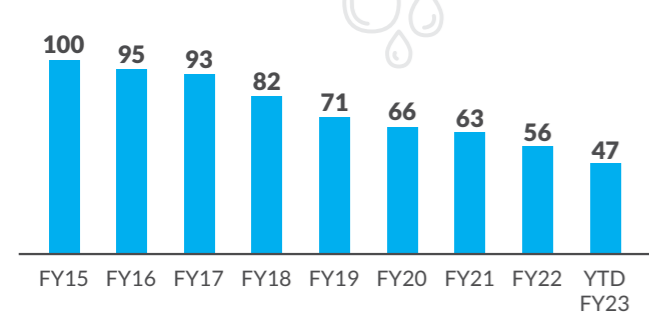
Water & Wastewater Management

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

The success of our operations is closely tied to access to water, as it affects 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 (m³/TF)

Index FY15 = 100



Birla Cellulose has implemented the 4R Principles (reduce, reuse, recycle, and regenerate) in its operations to conserve water, resulting in significant reductions in water consumption through technological advancements.



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

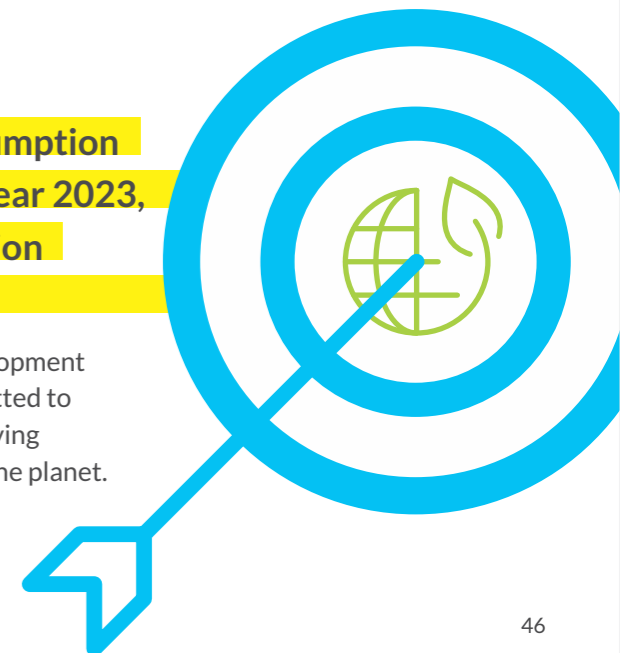
The discharge of untreated wastewater poses risks to both human health and the environment. Birla Cellulose strives to ensure that wastewater is treated and discharged in compliance with the most stringent global norms, and in some cases, going beyond regulatory requirements. Our fibre manufacturing sites follow EU BAT BREFs and ZDHC MMCF Wastewater Guidelines, and we have installed state-of-the-art Effluent Treatment Plants (ETPs) with the latest technology at each site.

SUSTAINABILITY GOAL

Birla Cellulose aims to reduce process water consumption in VSF manufacturing by 50% by 2025. By end of year 2023, we have already reduced process water consumption by 53% compared to the baseline in FY15.



In alignment with UN Sustainable Development Goals 6 and 12, Birla Cellulose is committed to reducing water consumption and improving water availability for communities and the planet.





Waste Management

Our waste management approach continues to evolve as we strive to better identify and account for our waste. At Birla Cellulose, we follow the waste management hierarchy, which outlines the preferred options for dealing with waste in order to minimise disposal as much as possible. Our goal is to reduce the amount of waste we generate.

All of 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 in our waste management, meaning that we aim to use waste as a resource for other processes or industries.

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

The majority of the waste generated at our sites is recycled, reused, or recovered, and we focus on reducing the amount of waste that goes to landfills or incineration.



Energy & GHG

The management of energy consumption and carbon emissions are critical issues that impact our operations. Both are interrelated as the generation and consumption of energy from fossil fuel sources is a significant source of greenhouse gas (GHG) emissions.

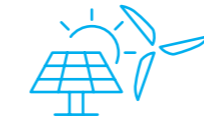
The production of viscose fibre is an energy-intensive process. We currently use both renewable and non-renewable energy sources in our operations, and non-renewable sources of energy contribute to CO₂ emissions and climate change.



Birla Cellulose is committed to reducing our carbon footprint within our operations and across our supply chain. We are implementing multiple strategies to achieve this goal, including:



Reduction in energy intensity



Increase in the use of renewable energy



Use of non-fossil fuel based sources and biogas as energy source at all the fibre sites



Net positive growth of forests to sequester carbon emissions



We currently monitor Scope 1 and Scope 2 GHG emissions. Scope 1 GHG emissions include emissions from the use of primary fuels, and Scope 2 GHG emissions are mainly from purchased electricity.

Our pulp sites are nearly self-sufficient, as they generate energy from black or red liquor, which is produced during the pulp cooking process, accounting for 80-90% of their energy requirements.

Decarbonisation

Today, the evidence of climate change and its impact is unmistakable. Our business is not immune to this global phenomenon, and has taken note of the anticipated acceleration in climate action. We have started integrating climate risks and opportunities into our strategic plans.

Birla Cellulose recognizes the potential harm that climate change could cause to our natural resources and our business. We acknowledge that global emissions of Greenhouse Gases (GHG) are the primary driver of climate change.

Our customers are also beginning to inquire about GHG emissions associated with our products and throughout our supply chain.

To continuously improve our operational excellence, Birla Cellulose is implementing various energy efficiency initiatives. We are closely monitoring global, regional, and national-level 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 relevant resources.



The business has ambitious goals for climate action, with the objective of reducing its greenhouse gas (GHG) emissions intensity by 50% by 2030, based on a baseline from 2019 (Scope 1 & 2). The aim is to achieve net-zero emissions across all operations by 2040, with the aspiration to reach this target even earlier, by 2035, using a science-based methodology.

The different building blocks of decarbonisation include:



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 CS₂ and other chemicals

Select suppliers with lower GHG intensity for major raw materials

We are developing site-specific roadmaps, which will 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 that air pollution has a direct impact on the environment and the surrounding community. Curbing air pollution is one of the key priorities and several necessary mitigation measures have been adopted:

- Engineering controls like filters, scrubbers and cyclones are used for air pollution control
- Installing auto controls for maintaining critical process parameters
- Preventive maintenance schedules for all environmental critical equipment
- Online monitoring system to check performance against local regulations
- Periodic regulatory approved third-party monitoring and analysis



We have continuous online monitoring system (CEMS) at most of the sites for emissions monitoring which are connected to pollution control board servers. Real time emission data of important parameters are displayed at the factory gate of fibre manufacturing sites to improve the transparency of environmental performance.

The fibre sites have various technologies to collect and treat process emissions such as CS₂ and H₂S emissions. These include condensation of CS₂, wet sulphuric acid processes, carbon disulphide adsorption (CAP) technology, redox process and scrubbers etc.

Birla Cellulose is committed to keeping emission within permissible limits, as well as finding innovative solutions to reduce them and adapt global best practices and benchmarks.



Awards



Grasim's SFD, Nagda won the Golden Peacock Occupational Health & Safety Award 2022

- Grasim's SFD, Nagda was awarded the prestigious 'TERI-IWA-UNDP Water Sustainability Award 2021-2022'
- Grasim Cellulosic Division, Vilayat site received 'Excellence in Environment Management' in CII-ITC Sustainability Awards 2022
- Grasim Industries' Pulp and Fibre Business won the Golden Peacock Innovation Management Award 2022

- Birla Cellulosic, Kharach received certificate for 'Noteworthy Water Efficient Unit' at the 'National Competition for Excellence in Water Management 2022' organised by CII Water Institute
- Grasim Industries Ltd.'s Vilayat plant has been awarded 'The Economic Times Promising Plants 2022'

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 (3.0) FEM, Higg FSLM, EMS, etc.

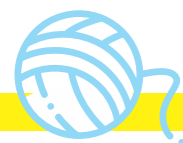


EU BAT (EUROPEAN UNION BEST AVAILABLE TECHNIQUES)

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 and aims to comply with it for all sites

with its sites in China, Thailand, and one site in India already in compliance with these norms.



HIGG FEM

The Higg FEM (Facility Environment Module) evaluates a facility's environmental impact and is a commonly used tool for sustainability assessment and communication of performance to stakeholders such as global brands, retailers, and customers.



Birla Cellulose has been conducting self-assessments for several years and has verified benchmarked scores in Higg (3.0) FEM for 2020.

To improve its scores from previous years, the sites must demonstrate year-on-year improvement in areas such as environment management, energy and GHG emissions, water use, wastewater, emissions to air, waste management, and chemical management.

ASSESSMENT SITES COVERED

ASSESSMENT SITES COVERED	3 rd PARTY VERIFIED SCORES
9 Higg (3.0) FEM 2021	Higg (3.0) FEM 2021 94
7 Higg (3.0) FEM 2020	Higg (3.0) FEM 2020 93
7 Higg (3.0) FEM 2019	Higg (3.0) FEM 2019 92
7 Higg (3.0) FEM 2018	Higg (3.0) FEM 2018 90
4 Higg (3.0) FEM 2017	Higg (3.0) FEM 2017 80
4 Higg (2.0) FEM 2016	Higg (2.0) FEM 2016 77



ZDHC MMCF GUIDELINES



Birla Cellulose operates seven fibre manufacturing sites across four countries. One of the major challenges was to bring all the sites and operations teams on the same page, and ensure they understand the new standards and focus on meeting the same goals.

To achieve compliance with these stringent standards, the sites conducted gap assessments to determine the necessary technology and operational changes needed. Close monitoring was done on a monthly basis and a monthly progress dashboard was created, targeting ZDHC progressive limit values. Site teams and central teams collaborated to develop a time-bound action plan to meet the new targets.

Thanks to these efforts, all sites exceeded the Suppliers to Zero Progressive and Aspirational Level for more than 90% of the parameters, and are in the process of exceeding foundational limits for the remaining parameters for the ZDHC MMCF wastewater standards, which are already being implemented by ZDHC. The 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

enablon



Given the number of geographies we operate in, IT-enabled tools play a crucial role in implementing sustainability frameworks. The use of the ENABLON data management system allows our geographically dispersed units to ensure compliance with local laws, conformance to international standards, and benchmark performance metrics against global best practices.

We have been using various modules of ENABLON for:

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 greenhouse gas inventories, and publish sustainable business development reports

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

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 standardizes the analysis process and eliminates associated judgmental 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

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

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



SAQS TO ENSURE CONFORMANCE TO INTERNATIONAL STANDARDS

The Aditya Birla Group's Sustainable Business Framework has been reviewed and confirmed by an internationally recognised independent third party to ensure that it adheres to the various international standards it incorporates and goes beyond regulatory norms.

To support this process, ABG has created a scoring methodology and heat map scoring system to evaluate and monitor site performance against the standards, and develop action plans for improvement.

The self-assessment mechanism, which involves self-assessment questionnaires, empowers site managers to engage with our standards and drive the necessary changes to make their operations more sustainable.

By using an evidence-based approach, we ensure rigour and consistency in our processes. Sites must provide evidence, such as reports, photographs, documents, and registers, to demonstrate their compliance.

Sites that fall into Tier 1 & 2 (more than 80%) are reviewed off-site, while the highest performing sites are verified through onsite visits.



GRI Indicators

There has been an increase in most of the indicators, such as water withdrawal, effluent discharge, waste, and energy, on an absolute basis, due to the increase in production in FY22 as compared to FY21, during which the business faced shutdowns due to the COVID-19 pandemic.

Below tables and graphs represent the operational details of the business as per the boundary and scope of the report.



Water Withdrawal and Effluent Discharge

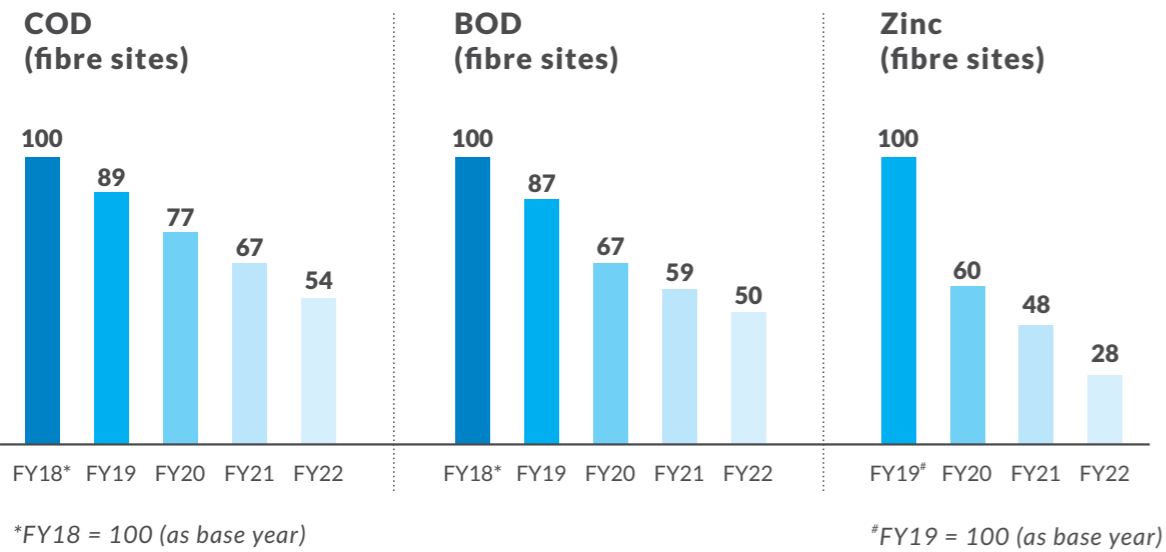
The water withdrawal and effluent discharge in the pulp and fibre manufacturing sector for the last two years is presented in the table below:

	<i>million m³</i>	
	FY21	FY22
Plant Water Withdrawal		
Surface Water	117.18	119.91
Ground Water	0.00	0.00
Wastewater from other Organisations	0.24	0.26
Water from Municipality / Water Utility	9.04	11.74
Total Water Withdrawn	126.45	131.90
Effluent Discharge	106.77	108.15
Effluent Recycled / Reused	14.01	22.04

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



The below table summarises 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.



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	
	FY21	FY22	FY21	FY22
Recovery	20,992	16,854	59,355	96,553
Reuse	7,714	38,322	128,933	207,918
Recycling	1,715	13,306	69,154	89,002
Incineration	42,572	27,684	536	485
Landfill	10,947	28,899	17,171	17,254
Composting	0	0	8,468	33,250
Total	83,939	125,064	283,616	444,462



Energy Consumption

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

	FY21	FY22
Non-renewable Energy	30.52	38.04
Renewable Energy	20.52	21.32
Total Energy Consumption	51.04	59.36

GHG Emission

million MT

	FY21	FY22
Scope I Emission (direct emissions)	2.60	3.29
Scope II Emission (indirect emissions)	0.15	0.17
Total GHG Emissions (CO₂e)	2.75	3.46



Sustainable Products

- Launched Liva Reviva with 30% recycled content, steadily increasing textile waste

- Birla Cellulose completes first pilot spin of lyocell fibres containing Nanollose's microbial cellulose

- 105 patent applications / patents in 16 countries belonging to 69 patent families

- Launched 'Navyasa' a Saree brand



Overview

Circular, low-carbon, and environment friendly - these are some of the key attributes of a product that are being sought after by sustainability-conscious buyers nowadays and the clamour for this has seen an uprising.

These products should be made in environmentally and socially responsible manner by using natural and sustainably-sourced renewable raw materials, and by 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 should be capable of recycling causing least harm to the environment with the entire value chain being transparent and traceable.

Responsibly produced MMCFs fulfil these requirements and are considered one of the most sustainable fibres. 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.

They 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 the textile/nonwoven industry. We apply sustainable best practices across the value chain including responsibly sourced wood, closed-loop manufacturing process, recycling & reusing raw materials and natural resources, and using a circular business model while offering transparency and traceability along the value chain.

More information on the product offerings by Birla Cellulose are available [here](#).



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 form 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 turn glamorous.



Birla Spunshades™

Birla Spunshades™ is a coloured MMCF where pigments are injected into the viscose dope before the fibre is spun & cut. Birla Spunshades fibres with unique Colour-Lock™ technology make fabric fade-resistant and ensure best-in-class colour consistency. **The spun-dyed fibre eliminates processes in the downstream value chain such as the dyeing step at the fabric stage, saving a large amount of energy, water and chemicals as well as preventing any wastewater generation.**



Birla Modal™

Birla Modal is the 2nd generation in MMCF that combines aesthetics and elegance with performance, and also offers a host of consumer & value chain benefits. It offers the 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% which is the most water-efficient process for the MMCF industry.





Birla Purocel is our nonwoven fibre offering which is **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/>

Birla Sodium Sulphate

Sodium Sulphate is obtained as a by-product from a state-of-the-art closed-loop viscose/modal fibre production process with an objective to recover natural resources and reduce emissions to the environment.

Birla Sodium Sulphate is a rayon-grade sodium sulphate and we produce different grades of sodium sulphate as per customer requirements - regular, low pH, high whiteness, finer/coarser, ProSodium, etc. Birla Sodium Sulphate conforms to ZDHC MRSL V2.0.

Traditional industry segments of sodium sulphate applications are
**DETERGENTS | GLASS | TEXTILE PROCESSING | PULP & PAPER
 DYES & CHEMICALS | LEATHER | CEMENT INDUSTRIES**



Product Innovation

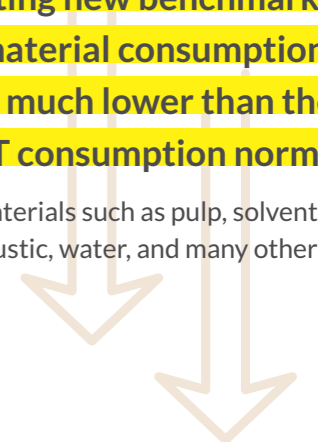


Innovation is one of the key pillars of our business strategy and it is a continuous process. We work collaboratively with technology providers, global research institutions and the value chain, bringing out the products to delight our customers with improved sustainability performance and environmental friendliness.

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 the 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.





Livaeco is an eco-enhanced viscose fibre made from wood pulp sourced from FSC® certified forests and is produced through a closed-loop process in EU BAT compliant facilities.



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 the Higg MSI tool provided by SAC.



Birla Cellulose has developed Liva Reviva with 30% waste content. Our R&D efforts towards developing a circular economy model and increasing the utilisation of alternative feedstock have led to several innovations that have shown promising results and are in various stages of development - starting from lab level to pilot, while some have already reached the commercial level.

Circularity has been a key goal for us at Birla Cellulose for our commitment towards contributing to sustainable development. In 2019, we launched Liva Reviva with 20% pre-consumer waste content.

We successfully stabilised production of the Recycled Claimed Standard (RCS) certified product,



The quality of the fibre remains comparable to that of fibre produced using virgin wood-based pulp, making Liva Reviva a high-quality fibre that finds widespread applications amongst major global brands. Our 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 Cellulose aims to increase the offering of circular products up to 100,000 tons by the year 2024 using pre- and post-consumer waste, and alternative feedstock. It is committed to accelerating innovations that are aligned with UN SDGs.





Birla **purocel** | Eco

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

Purocel Eco comes from FSC® certified sustainable forests, lowers GHG and sulphur emissions which meets EU BAT standards, and higher usage of renewable energy sources

makes it even more sustainable. It is manufactured in a facility having best in class Higg (3.0) FEM score and 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 the Higg MSI tool provided by SAC.

Birla **purocel** | EcoDry

top-sheet successfully commercialised in GoNatura sanitary pads

The market for feminine sanitary napkins is projected to grow significantly from USD 600 million to USD 1.1 billion in the next 5 years. Improved distribution, greater awareness on menstrual hygiene and a wider choice of products are playing a key role in driving this growth. However, the growth is also accompanied by environmental costs in the form of thousands of tons of plastic waste.

While FMCG majors are working towards reducing plastic consumption by using more nature-friendly raw materials, there are many niche companies that are pushing the envelope on innovation. A major chunk of the challenge is to find an alternative to plastic-based fibres that form the bulk of the ingredients.

GoNatura, a Bengaluru-based sanitary pad brand is on a mission to bring a positive change in women's health & hygiene through plastic-free natural sanitary pads at affordable cost.



They have partnered with Purocel Ecodry, a highly sustainable and environmental-friendly fibre from Birla Cellulose.

Purocel is a viscose fibre, made from wood pulp and perfectly suited for super soft nonwoven applications like sanitary pads or diapers. They keep the user's skin dry while allowing fluids to get transferred to the core. The material stands out for its hydrophobicity or ability to repel moisture and keep surfaces dry. In addition, the fibre is fully biodegradable making it possible to have eco-friendly hygiene products without compromising on the required performance.

Viscose staple fibre by nature is a hydrophilic fibre. Our innovation Purocel EcoDry is a special viscose fibre, which has been carefully designed with optimum hydrophobicity to get the desired properties in the top sheet application of AHPs (Absorbent Hygiene Products) like sanitary pads.

With concerns about climate change intensifying globally, now is the time to emphasise on the importance of products that are environment friendly. This innovation from GoNatura is a step in the right direction for raising awareness and adoption of green products to usher a sustainable growth for the menstrual health category in India.



navyāsa
created by *Liva*

Navyāsa created by Liva is a new-age, contemporary, premium saree* brand from the Aditya Birla Group. The brand was launched in Feb 2022. Featuring ethereal prints and chic styles that take inspiration from the world of art, each saree tells a colour-rich story with a modern twist. Designed for the women of today and tomorrow, the unique bold designs and diverse themes blur the boundaries between occasions - from busy workdays to evenings of fun. A fascinating fusion of fluidity and finesse; style and sustainability, Navyāsa sarees will give you the confidence to unleash your creativity and freestyle your life.

Navyāsa sarees are crafted with nature-based eco-friendly fabrics from Liva.

These fabrics are made from ethically-sourced cellulosic fibres like viscose and modal, which are derived from the renewable wood of eucalyptus, birch, maple or aspen.

This makes our sarees luxuriously soft and extremely lightweight, giving you the freedom to move with ease and stay comfortable all day long.

*Saree is a women's garment from the Indian subcontinent, which consists of an un-stitched stretch of woven fabric arranged over the body as a robe, with one end tied to the waist, while the other end rests over one shoulder as a stole.

End-of-life Considerations

Birla Cellulose considers the end scenario of the products that it makes. The fibres are made of renewable wood from managed forests, being fully biodegradable in soil, water and marine environments, 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 apparels made from our fibres are biodegradable if they are not mixed with 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, made from natural cellulose, are fully biodegradable in the marine environment and so, do not have any adverse impact on human health.

Product Safety

The 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 ensure that they are safe during their use phase and do not degrade the environment in their post-use phase.

Following product certifications for both, textile and nonwoven applications, allays any concern regarding the safe use of products 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.



USDA BIOBASED CERTIFICATION

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



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 which clearly shows the circular nature of MMCFs - coming from renewable and sustainable raw material wood.





Valuable Partnerships

- Partnerships with various organisations, not-for-profits to be part of value chain and support both backward and forward players
- Renewcell and Birla Cellulose sign Letter of Intent for large scale circular fibre production
- Participated in Circular Chic Campaign by Canopy to create awareness on NextGen Solutions

- Grasim and Century Textiles & Industries forayed into manufacturing of Man-Made Cellulosic Fibre (MMCF) Knit Fabrics under 'Birla Advanced Knits'
- Active participation and contribution towards development of Circular Fashion through Circular Fashion Partnership, Sorting for Circularity India Project



Overview

Partnership with various stakeholders based on mutual respect and commitment is one of the fundamental tenets for an organisation to be successful and achieve its vision and mission. Sustainability across the value chain can be achieved by working in tune with the shared needs strategically with all stakeholders, thereby generating broader and better results.

Stakeholders' expectations, needs and aspirations are at the core of our business strategy. We firmly believe in growth, while ensuring interests and addressing concerns of stakeholders. We work with our stakeholders to understand their expectations and transform them into meaningful long-term missions. It ranges from conserving ancient forests, finding

next-generation solutions, exploring alternative raw materials, adopting best technologies for closed-loop processes, sustainable products or circularity, transparency & traceability, and developing social aspects.

For Birla Cellulose, 'Valuable Partnership' is a collaborative philosophy - trusting, respecting and having a shared vision for a common goal and a better tomorrow aligning with SDG 17.

'Valuable Partnerships' is a vital pillar of our sustainability strategy and is consistently applied across all the other pillars, namely Responsible Sourcing, Responsible Manufacturing, Sustainable Products & Circular Economy, and Social Responsibility.

The gamut of our partnerships is spread across and includes sustainable sourcing, forest conservation, sustainable innovations and products, environment protection, and community well-being, to name a few, that are aligned with the UN SDGs.



Our Engagement Approach

Stakeholder Engagement has been our approach to fulfilling the requirements of this important pillar. The relationship of trust, communication, transparency and regular engagement with our key stakeholders forms the foundation of our business value system. The engagement has the following fundamentals in common:





BIRLA CELLULOSE STAKEHOLDERS' ENGAGEMENT PLATFORMS

Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Employees	iSay - Interaction with Leadership Team	Annual	<ul style="list-style-type: none"> • Work-life Balance • Career Growth 	<ul style="list-style-type: none"> • Recreation facilities, celebration of major festivals, cultural programmes, sports day etc.
	Townhall Meetings by CXOs	Regular	<ul style="list-style-type: none"> • Learning & Development • Fair Wages & Remuneration 	<ul style="list-style-type: none"> • Employee performance management system • Development plan for all employees
	Annual Performance Reviews	Annual	<ul style="list-style-type: none"> • Health & Safety • Talent Recognition 	<ul style="list-style-type: none"> • Functional & Behavioural trainings provided based on Training Need Identification (TNI)
	Continuous Feedback Programme			<ul style="list-style-type: none"> • Specially designed programmes for Technical Leadership Development
	Training Programmes	Continuous basis		<ul style="list-style-type: none"> • Monetary award schemes like iApplaud - an instant recognition scheme
	Monetary Award, Recognition Scheme (iApplaud, PRIDE)			<ul style="list-style-type: none"> • PRIDE Award for a team for a high impact project in manufacturing, innovation, marketing etc.
	Employee Satisfaction Survey	Annual		<ul style="list-style-type: none"> • Regular safety trainings are imparted to employees and their families especially road and driving safety • Health & Safety programmes in all manufacturing sites



Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Customers	Customer Feedback	Continuous	<ul style="list-style-type: none"> • Good customer experience • Provide solutions 	<ul style="list-style-type: none"> • Customer feedback is taken on continuous basis on the product performance, quality, cost, service and delivery. Customer Happiness is a mission.
	Visit to Customers	Regular	<ul style="list-style-type: none"> • Customer value proposition, price, quality, delivery, and product features 	<ul style="list-style-type: none"> • Implemented Mission Happiness based on Net Promoter Score - combination of top-down and bottom-up approach
	Customer Technical Services	Need based	<ul style="list-style-type: none"> • Application development • After-sales support • Complaint resolutions 	<ul style="list-style-type: none"> • 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
	Grievance Redressal	Case-to-case basis		<ul style="list-style-type: none"> • Customer complaint resolution process for resolution of the problem by root cause analysis
Value Chain Partners	LIVA Partnership Programme	Continuous	<ul style="list-style-type: none"> • Create value from strong product and brand for value chain partners 	<ul style="list-style-type: none"> • LAPF addresses the issues such as fashion forecasts, product perfection, innovative yarns / fabrics, connecting partners with buyers
	Fashion Forecast	Fashion Season	<ul style="list-style-type: none"> • Provide visibility to future trends 	<ul style="list-style-type: none"> • Fashion Studios launch collection every season which customers use to forecast their demand





Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Value Chain Partners (contd.)	Exhibitions	Regular	Product and application development support for value chain	<ul style="list-style-type: none"> • 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
Multi Stakeholder Organisations	Innovation	Regular	• Best-in-class technology and products	• Collaborations with Institutes and Technology focussed organisations to continually apply latest knowhow
	Sustainability	Regular	• MMCF value chain sustainability	• Implementation of global best practices in MMCF production and supply, Life cycle studies etc.
	Best Practices	Regular	• Apply global best practices	• Working groups and regular collaboration with multi-stakeholders such as ZDHC, TE, Canopy, WBCSD; develop certification standards for sustainable viscose
	Standards Development	Need based	• Develop new standards	
Brands & Retailers	Fashion Studios	Every season	• New product innovations	• Regular meetings to understand the needs and share the new designs and products
	Partnering	Continuous	• Common goals for sustainability	• Developing new products aligned to the need of sustainability focussed customers

Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Suppliers & Contractors	Vendor Assessment, Supplier Audits, Review Meetings, Contractor Management	Regular	<ul style="list-style-type: none"> • Continuity of orders • Timely payment • Transparency 	<ul style="list-style-type: none"> • Supplier risk management process including human rights • Contractor Safety Management • Supplier Code of Conduct, compliance with regulations and applicable laws
Communities	Need Assessment	Continuous basis	• Local employment	• Community Need Assessment
	CSR	Continuous basis	• Infrastructure development	• Meetings with Community Representatives
	Meetings	Periodic	• Livelihood & training programmes	• Development and construction of village roads, school renovation, street lights etc.
	Social Impact Programmes	Continuous	• Develop weaker section of society, women empowerment	• Skill development programme 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





Stakeholder Group	Engagement Mechanism	Frequency	Stakeholder Expectations	Our Approach
Investors & Shareholders	Investor Results	Quarterly, Half-yearly, Annually	<ul style="list-style-type: none"> Corporate Governance & Risk Management 	<ul style="list-style-type: none"> Structured governance Board of Directors
	Board Meeting	Annual	<ul style="list-style-type: none"> Returns on investment 	<ul style="list-style-type: none"> Risk Management Committee Financial and operational performance discussions
	Investor Day	Annual	<ul style="list-style-type: none"> Operational performance 	<ul style="list-style-type: none"> Cost reduction approach and initiatives Site visits
Media	Corporate Communications	Continuous basis	<ul style="list-style-type: none"> Developments in the organisation 	<ul style="list-style-type: none"> Regularly updating the websites and communicate about any changes in the organisation, product launches etc.
	Social Media Platforms	Regular	<ul style="list-style-type: none"> Regular 	<ul style="list-style-type: none"> Using social media platforms for events organised, any publication done by the organisation
Government & Regulatory Bodies	Communication with Regulatory Bodies	Regular	<ul style="list-style-type: none"> Payments of taxes Compliance to laws 	<ul style="list-style-type: none"> Regular payment of all applicable taxes in all the geographies of operations Compliance to applicable laws of the land
	Formal Dialogues	Regular	<ul style="list-style-type: none"> Pollution prevention Local economy growth 	<ul style="list-style-type: none"> Adherence to all norms of Pollution Control Board Employment of local people



Customers & Value Chain Partners

Customer centricity is a key tenet of Birla Cellulose. Keeping customer goals in mind, we align our sustainability decisions in order to support our customers and amplify their efforts in making the planet and society better. Our value chain partners produce products and provide services based on environmental, social and economic expectations of the customers.

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

Customers

Birla Cellulose has a global footprint with customers in nearly 50 countries, and has a stronghold on each and every global textile cluster.

We have a comprehensive mechanism that leverages multiple aspects across the ecosystem to fulfil the expectations and preferences of customers and markets:



MISSION HAPPINESS

Mission Happiness is an umbrella of various engagement activities with customers done on a real-time basis to deliver a positive and uniform customer experience.

Employees are encouraged for being agile and proactive towards customers' requirements.



CUSTOMER MEET

We engage with our customers on a continuous basis to understand and share key industry trends, future business plans and new developments in the textile / non-woven sector.

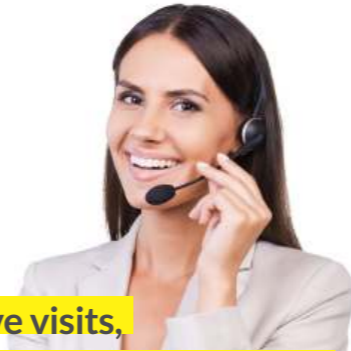
Customer Meet is one of the key initiatives to reach out to customers.



CUSTOMER TECHNICAL SERVICES (CTS)

Robust customer service systems and rigorous mechanisms are in place to build a long-term relationship with our customers.

The CTS engages with the customer through reactive/proactive visits, complaint resolutions, new product rollouts, process optimisation projects, etc.



Value Chain Partners

LIVA ACCREDITED PARTNER FORUM

LIVA Accredited Partner Forum (LAPF) is a group of value chain partners - starting from spinners to fabricators and processors, to produce fabrics that meet LIVA standards.

The accredited forum has a certification mechanism in place and provides support on marketing, vendor management, design innovation, product perfection and sustainability.



Marketing



Vendor Management



Design Innovation



Product Perfection



Sustainability

LAPF DESIGN STUDIOS

LAPF Studio is a hi-tech experience centre with more than 2,000 samples of Viscose, Modal & Excel (Lyocell) fibres on display with detailed technical specifications. It is a one-stop platform for buyers who prefer to review, desire variety and seek convenience in buying along with the feasibility to connect with value chain partners. LAPF Studios are hubs to connect with garment manufacturers & exporters, local & international brands, international buying houses, agents & traders, and fashion design houses.



Brands and Retailers



Brands and retailers have their fingers on the pulse of the trends as per consumer interests. Key information on new products, new developments and new market opportunities are also discussed during our interactions with global fashion brands and retailers.



Employees

Our employees are our growth partners. They are aligned with the shared goal and common purpose of our business, and work towards achieving it.

Birla Cellulose supports them by providing an environment where they feel safe, work towards the goals, and thrive.

On the workers side, we form collective bargaining agreements with union representatives in a transparent and fair manner through detailed discussions.

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



Local Communities

Empowering the community has always been a key component of our business strategy.

Birla Cellulose has partnered with nearby communities to actively contribute to their social and economic development.

The businesses prosper when local community supports and contributes. We work together with the community and make them an active participant in our business through employment generation and various initiatives for mutual growth.

For more details, refer to our 'Social Responsibility' section on page 85.



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 with Various Organisations & Associations

Birla Cellulose is part of several multi-stakeholder organisations, industry bodies & associations, and engages with them to keep abreast on the latest developments in the industry/sector. Partnerships with these bodies help us introduce new standards and best practices to contribute in shaping the future of MMCF industry.

Here are some of the key partnerships:

Canopy

Birla Cellulose works closely with Canopy and developed a robust wood sourcing policy in alignment with the CanopyStyle initiative. Moreover, we collaborate with them to develop innovative solutions such as development of next generation fibres, and conservation solutions that help protect ancient and endangered forests.

Sustainable Apparel Coalition (SAC)

Birla Cellulose is a member of SAC since its inception and has been driving Higg Index across the manufacturing units. We have regular discussions to further improve the standards and systems such as Higg FEM, Higg FSLM, Higg MSI and other tools as promoted by SAC. Birla Cellulose contributed to SAC's 3-year strategic plan for the global fashion industry.

ZDHC - Roadmap to Zero Programme

ZDHC's mission is to enable brands and retailers in the textile, apparel, and footwear industries to implement sustainable chemical management best practices across the value chain. Through collaborative engagement, standard-setting, and implementation, it aims to achieve zero discharge of hazardous chemicals. Birla Cellulose is a contributing member of ZDHC and is a member of several task teams related to MMCF guidelines, supplier advisory group and standard-setting.

Changing Markets Foundation (CMF)

MMCFs have the potential of being one of the most sustainable fibres if the key sustainability issues are addressed appropriately. Birla Cellulose is committed to working together with Changing Markets Foundation to address the health and environmental issues highlighted in its 'Roadmap for Responsible Viscose Manufacturing'.





Textile Exchange (TE)

Textile Exchange is positively impacting climate by accelerating the use of preferred fibres across the global textile industry.

Birla Cellulose is a member of Textile Exchange. We are a key partner in TE's Climate+ Strategy project and MMCF Roundtables.

We worked with TE on the MMCF Producer Transparency Questionnaire which will help global fashion brands/retailers to gain uniform, easy to read and comparable information of their MMCF fibre suppliers on the production site level.

Birla Cellulose participated in TE's Corporate Fibre & Materials Benchmark (CFMB) and Biodiversity Benchmark. We engage with representatives of global brands and supply chain partners on sustainable product offerings through Textile Exchange hub networks.

Fashion for Good

Fashion for Good is the global initiative that is here to make all fashion good. It's a global platform for innovation, made possible through collaboration and community. With an open invitation to the entire apparel industry, Fashion for Good convenes brands, producers, retailers, suppliers, non-profit organisations, innovators and funders united in their shared ambition.

Sorting For Circularity India Project



Fashion for Good launched the Sorting for Circularity India Project, a consortium project to understand both the pre-consumer and post-consumer textile waste streams in India, and to pilot sorting and mapping solutions. The project aims to build an infrastructure towards greater circularity in the years to come.

The project brings together industry players including Fashion for Good partners Adidas, Levi Strauss & Co., PVH Corp., Arvind Limited, Birla Cellulose and Welspun India. A key technology partner for the project is Fashion for Good innovator Reverse Resources who provides the analysis of the pre-consumer textile waste streams in addition to designing and running the pre-consumer pilot. The project is supported through catalytic funding provided by Laudes Foundation.



Fashion Forever Green Pact

The Fashion Forever Green Pact is a call to immediate action for the fashion industry-brands, retailers and manufacturers alike- to adopt responsible sourcing in support of the world's forests.

Renewable fibres such as MMCFs have taken the lead as a more sustainable alternative. Nevertheless, the majority of these fibres are sourced from uncertified forests, leaving these ecosystems vulnerable to deforestation, illegal logging and threatening the people that rely on them. With uncertified sourcing expected to grow, the fashion industry must take action to safeguard forests from further harm.

FSC certification is a vital tool that can help protect forests worldwide. FSC's responsible forestry standard, linked to a strict chain of custody certification, is a proven solution to tackle today's climate and biodiversity challenges. This means choosing FSC helps protect the future of forests and the communities that depend on them.

Birla Cellulose has joined Fashion Forever Green Pact as a signatory. By joining, companies proactively commit to responsible procurement policies, sustainable sourcing of 100% of FSC-certified MMCFs within a year of signing and labelling at least one collection with the FSC label by 2025.

Birla Cellulose's all sites are certified with FSC® certification and only viscose producers with a full 'green shirt' designation within the Canopy Hot Button Ranking can join this initiative.

The Microfiber Consortium

Birla Cellulose is among the initial signatories of 'The Microfiber Consortium' (TMC) as a research member. It will help TMC in carrying out testing, help develop guidelines and participate in studies. The purpose is to be aware of the developments happening in this area and engage with the development and research work as well as guidance and test methods.



Social *Responsibility*

- CSR expenditure of about \$ 1.89 million in FY22.

- 85% reduction in LTIFR over FY15.

- In FY22, 17 teams across all the units of Pulp & Fibre Business were lauded for their breakthrough innovations & contributions.

- 903 farmers were covered through on-field demonstration of crop varieties, training and exposure visits.

- Nagda site was awarded with 'TERI-IWA-UNDP Water Sustainability Awards 2021-2022'

- Nagda won National Awards for Excellence in CSR - 7th Edition 2021, Special COVID Category - Best COVID19 Solution for Community Care.



As per one of the definitions of circularity, it is a system of exchange and production which aims to increase resource use efficiency and reduce environmental impact at all stages of the product life cycle, while developing the well-being of individuals. Hence, for any attempt at circularity to be truly comprehensive, it must encompass the development of people – both, as employees and as part of the community.

Our Social Responsibility pillar ensures the overall well-being of our stakeholder groups, primarily focussing on our employees, their development and safety, and our communities.

DEVELOPING OUR PEOPLE

Management Approach

We constantly motivate, nurture and safeguard our people to help them function at their best. Developing a high-performance organisation and building a strong talent pipeline are a crucial part of our Talent Development agenda.

Our development process begins with the identification of business-wide areas for improvement, mapping them as per individual requirements and then, arranging skill enhancement programmes for the benefit of both - the employees and the company.

Our programmes incorporate employee engagement, employee health and wellness, talent management, change management, organisational effectiveness, among other aspects.

We ensure that our employees learn and grow as our business flourishes and adapt to the current dynamics with greater ease.



Learning & Development

TECHX - TECHNICAL EXCELLENCE ACADEMY FOR STRENGTHENING TECHNICAL CAPABILITIES

The technical trainings continued via online platforms and were divided into four modules - Process, Mechanical, Electrical & Instrumentation and Power Plant.

These modules have a plethora of topics being covered under it. For e.g., Water Chemistry; Energy Conservation; Overview of Auxiliary, Viscose and Spinning; Overview of Pulp, Mass and Energy Balance; and Power Plant Efficiency, to name a few.



Some key highlights of TechX –

In 2021, TechX Training Need Identification (TNI) was done for 925 engineers capturing their technical training needs and customising the programmes as per their learning needs

320 employees were covered between April 2021 and March 2022

A feedback survey with the TechX participants rated the technical programmes at 95% satisfaction

The team has so far launched three newsletters on TechX for widespread awareness and appreciation of the same

FIRST-TIME MANAGER PROGRAMME

The aim of this programme is to enrich the gradual shift of employees from being a part of a team, to leading a team. As this shift requires sustained support from the organisation, the FTM programme was brought back for the second time. 16 Managers with only recent exposure to the concept of team handling were part of this programme. Topics covered included Managerial Communication, Feedback Skills, Planning, Delegation, Influencing and Coaching Skills, and Conflict Management. A Learning Satisfaction Index of 4.3 on a scale of 5 was achieved.

PROJECT MANAGEMENT

Project Management training was conducted to support and educate employees on stakeholder management, project planning and risk management. This training, conducted in January 2022, covered various modules related to Project Life cycle, Critical Path Method, Power of Project Management, Resource Matrix, and more. A total of 19 participants attended the sessions. Post trainings, participants gave a feedback score of 3.8 on a scale of 4.

PRESENTATION SKILLS

Presentation skills training was conducted for employees to educate them on the various styles of presentation – how and where of verbal, vocal and visual is seen and how to customise them accordingly. It was a four-session programme, spread over a month, that started with a pre-programme (reading material) for participants, followed by interactive virtual session. Later there was a group presentation with the facilitator sharing feedback for further skill enhancement. A Learning Satisfaction Index of 4.5 out of 5 was achieved.



Talent Management

Our vision is to identify, build and nurture talent to deliver superior business results while addressing individual career aspirations.

We facilitate growth through well-defined career pathways while ensuring diversity of talent to strengthen our organisation.

Our business has aggressive growth plans. One of the critical requirements for this growth is 'adequate' talent pool to take up the roles at various levels within the organisation such as Department Heads or Function Heads, which are expected to increase with the growing business. We work to ensure that our people feel motivated, safe and secure as well as empowered to carry out their work in the best possible manner.

Our business follows a very extensive process of talent management for identifying and developing high potential employees across the business. All eligible candidates are identified basis their consistent performance and other pre-defined criteria and potential assessment are initiated for them. The managers of such eligible employees assess their respective team members on the behavioural competencies which are further reviewed by the skip-level Manager.

The potential rating along with the rationale for recommendation based on the Potential and Performance Grid, is forwarded for validation and ratification to the Talent Council – a team comprising Senior Management. Employees selected by the Talent Council are put through a DAC (Development and Assessment Centre) and subsequently an MDP (My Development Plan) is created for every selected employee. This MDP is reviewed on an ongoing basis by the Talent Council to monitor the progress and identify the career development opportunities. The successors are marked for critical positions. These successors are additionally groomed to take on higher roles.



PROJECT SPOTLIGHT

The project Spotlight is designed to create comprehensive profile of an individual covering their personal and professional career experiences. A detailed profile helps the management in taking critical decisions around succession planning, role movements, job enlargements. It gives deeper view of employees detailed career journey, critical skills and capabilities, career aspirations and development need, family details such as spouse, children, their education details, work details and any challenges and concerns. The spotlight covers employees in combination of critical role holders and talent pool members. Currently the team has 87 members in this list.

BLEND & GROW - GUIDE TO MANAGER TRANSITION SUPPORT PROGRAMME

This programme offers a smooth transition experience to the manager who would take the charge of leading the new team. It is designed to support the managers as well as the team members to settle down well. It focusses on the softer aspects of transition, especially around winning the support of new team, building rapport with peers, gaining support from supervisors. **During the reporting period, 20 managers and more than 50 team members benefited from this programme.**

HR Portfolio: Organisation Effectiveness

CAREER DISCOVERY PROGRAMME

The Career Discovery Programme, launched during the reporting period, offers career counselling to our employee's children in helping them to make one of the most important decisions of children's lives and parenting support at critical junctures. Once enrolled, the child will receive career counselling up to their Graduation/ Post Graduation. This programme covers following -

- 1 Psychometric Assessment
- 2 One-on-One Career Counselling
- 3 Lifelong Access to Mentoria's Knowledge Gateway
- 4 Access to Webinars from Subject Matter Experts
- 5 Master Counsellor Workshops
- 6 Access to career helpline

PRIDE AWARD

The PRIDE Award is a well-established, institutionalised and aspirational recognition scheme at ABG. They focus on exceptional contributions, noteworthy innovations or modifications in any of the fields having a direct & significant bearing on the business. In FY22, 17 teams across all the units of Pulp & Fibre Business were lauded for their breakthrough innovations & contributions.

GENDER DIVERSITY

We recognise that gender diversity adds significant value to an organisation. We operate in an industry that is largely male-dominated and hence, we make conscious efforts to induct more women into our workforce and provide them with the support they need to progress. We enable women to work at our operations including plant sites and change the perception of the society. We have a policy of zero tolerance towards any form of sexual harassment and conform to the Group policy on prevention of sexual harassment at workplaces.

WISE (Women Investing in Skills & Experiences)

The objective of this programme is to develop women employees at junior level with focus on building mindset, confidence to lead, opportunity to come together and gaining perspective that has direct relevance to their professional journey. The Programme covered 45 women employees for this journey in Batch 2 this year.





SUSTAINABILITY E-LEARNING COURSES



RESPECTING HUMAN RIGHTS

The Human Rights and the well-being of our employees and communities around us are critical to the success of our business and its sustainability in the long term. Birla Cellulose is committed to upholding the human rights standards across its operations as well as protect it across its supply chain as well. We have established a Human Rights policy in accordance with the United Nations Global Compact (UNGC), International Labour Organization (ILO) and other internationally recognised frameworks.

For our detailed Human Rights Policy, [click here](#)

The Human Rights Due Diligence (HRDD) Tool recognising the needs of various stakeholders has been developed by the Aditya Birla Group.

It has a list of 78 possible potential abuses corresponding to 36 Human Rights in a business setup. Birla Cellulose is using this tool to identify the probability of occurrence and the possible consequence due to risks leading to potential human rights abuse on employees, suppliers, contractors and communities.

Each site has a cross-functional team (HRDD team) who is responsible for using this tool. The team should mandatorily include personnel from Human Resources, Procurement, Operations, Sustainability, Legal, and CSR departments. Each site has to complete the process and develop action plans corresponding to each Potential Abuse.

The due diligence process is being conducted with the aim of accurately identifying:

Any Human Rights likely to be directly affected by site activities

Any rights holders (suppliers, contractor workmen) whose Human Rights could be or are affected by the site's operations or wider activities

Any Human Rights concerns of key stakeholders, such as customers, local community or wider society, in relation to the site's operations or wider activities.

Our commitment entails respecting human rights and seeking to avoid involvement in human rights abuses, identifying, assessing and minimising potential adverse impacts through due diligence and management of issues, and resolving grievances from affected stakeholders effectively.

Employees by Gender

		FY21	FY22
Permanent	Male	8,326	8,263
	Female	689	720
Temporary	Male	3,038	2,727
	Female	154	82

Employees Turnover

Employees Hired		FY21	FY22
Management	Male	99	314
	Female	16	48
Non-management	Male	40	108
	Female	14	25
Permanent	Male	125	236
	Female	42	48
Employees Separated		FY21	FY22
Management	Male	266	286
	Female	21	42
Non-management	Male	91	76
	Female	25	17
Permanent	Male	353	342
	Female	47	33

Employee Training

		Average Hours of Training per Employee (Hrs)	
		FY21	FY22
Permanent		8.93	14.28
Temporary		7.49	26.05



We have a robust framework on occupational health & safety management system and are committed to ensuring a safe & health work environment to our employees, contractual workforce, visitors, stakeholders and the community at large.

Our goal of 'Zero Harm' has led us to benchmark with leading organisations and continually strive to achieve excellence in occupational health & safety.

BUILDING A SAFETY CULTURE

The safety culture of an organisation is the product of individual and business values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment style and proficiency of, an organisation's health and safety management.

Our safety governance structure begins at the business level, followed by eight unit-level sub-committees involving line functions.

To strengthen the existing structure and its effectiveness, we are conducting evaluation of these 8 sub-committees and regularly providing feedback for improvement. Action plans have been identified and are being tracked for its compliance.

Our senior leaders are actively involved in the process of building and improving the safety culture. We had conducted safety culture workshop where all senior leaders from units participated, ideas were discussed and brainstormed, and detailed action plans developed for improving safety culture to the next level.

Further, to measure safety culture at Unit level, we have conducted safety culture survey involving Subject Matter Expert (SME) at our Harihar Unit. Action plans were made to address the gaps and the learning were shared with other Units to improve the safety culture.



Safety Training, Employee engagement and Assessment

The Pulp & Fibre Business established the Safety Training & Education Management System (STEMS) in 2019 to identify safety training needs, and to design and coordinate training plans for all of its employees as well as contract workforce. The portal was further enhanced by upgrading with e-learning safety modules on 12 key safety standards. These are animated video-based learning modules with validation.

We have developed 'INSPIRE' an e-booklet comprising key elements of safety standards, training modules, and learning from Incidents. Monthly Online Quiz of key Safety standards through 'ASK to Learn' is in practice for better and wider understanding of the requirements.



To strengthen the line management responsibility and employee engagement in safety excellence journey, we have introduced the concept of 'Area/Grid' Ownership. We have sorted overall plant locations into sub areas and grids under the ownership of individuals to bring more accountability in safety as well as daily operations. The overall roles & responsibilities for the identified Area/Grid Owners are well-defined and are displayed at strategic locations inside plant premises.

Inter-unit Safety Standard Assessment are conducted regularly for key standards involving internal auditors from Line management. Further learnings from this assessment were shared with all Units for horizontal implementation.

Project Safety Management

With approx. 5,500 contract workmen, more than 100 earth-moving equipment, 1,850 km of cabling, and 180,000 m³ of concreting covering 240,000 m² area at the site, the Vilayat Expansion project size was 1.5 times that-of previous projects.

Maintaining safety at each step and having a Safe Start-up was most critical for the project's success. This was made possible through the implementation of these steps:

- Single-window system for contract workmen safety induction and pre-work approval
- All the heavy equipment and erected scaffolds at the site were inspected and issued Green Tag before usage
- Lifting plan made mandatory for any lifting above 2 MT load
- 100% portable power tools inspection management
- Customised 1-day safety training for technicians developed as MMT Module
- Extensive HAZOP study in two phases
- Pre-Startup Safety Review (PSSR) carried out at three levels – Unit Safety Team / CTC and with external 3rd party experts
- Section-wise Pre-Commissioning Checklist compliance
- Individual Equipment Pre-run with existing plant material to ensure better preparedness

Through systematic and rigorous implementation of all these steps, we were able to achieve 'More than 1,000 Safe Man Days during Construction' – a new ABG benchmark



Process Safety Management



In continuation with the integrated approach to Process Safety Management (PSM) directed at the elimination of incidents and the mitigation of risks, we introduced the following key processes:

PROCESS SAFETY INFORMATION (PSI) LIBRARY

We have units which are operating since more than few decades. So, creating Process Design Basis and Equipment Design Basis documents is a challenge. Personnel were trained to collect all the process safety information according to the process blocks and their Fire and Explosion Index score.

We are in process of compiling the information for record keeping and ease of retrieval through Process Safety Information Library.



BARRIER-BASED RISK MANAGEMENT PROCEDURE

A Training and workshop on Bow Tie Analysis was conducted for understanding the incident pathways and implementation of applicable and reliable safety barriers that are in place to prevent and mitigate the risks. We initiated the process with the top 10 identified high-risk scenarios.

IDENTIFICATION OF SAFETY CRITICAL EQUIPMENT

Failure in Safety Critical Equipment could result in death or irreversible health effects, significant property damage, or long-term environmental impact. These equipment are identified and adequate maintenance programmes are established to ensure reliability.

PROCESS HAZARD ANALYSIS

People were trained on PHA study using HAZOP/What-if Tools. The trained persons will use their knowledge in conducting regular PHA studies and for MOC's. The response from the people were encouraging and it will improve the process safety culture.

Transportation Safety

Transportation plays a key role in receiving our Raw materials and dispatching finished goods. The safety of driver and the goods are equally important when they are in transit. During reporting year, we have strengthened following key processes to improve transport safety.

Installed GPS, monitoring and escalation is in practice for all in-bound and out-bound vehicles

Carried out Journey Risk Assessment for identified critical routes and mapped with GPS

Carried out Transporter Assessment before formal sign-off of 'Transport Agreement'

Restricted night driving for all HAZCHEM transport



Occupational Health

In continuation with the implementation of the Group Occupational Health technical standards, the following initiatives have been implemented:



OHM subcommittee formed at Business and Unit-level

Self-Assessment Questionnaires (SAQs) for three standards were released - Occupational Health Management, HIV TB & Malaria, and First Aid & Emergency Medical Care

Business procedure on Hearing Conservation, First Aid & Emergency Medical Care, Occupational Risk Assessment, and Hygiene & Sanitization have been released for implementation. Gap assessment has been conducted to evaluate the resource requirement and implementation path

Qualitative Exposure Assessments (QLEA) completed in all units and subsequently Quantitative Exposure Assessment (QNEA) initiated at all Units

Train-the-Trainer session on First Aid conducted for all Indian Units

Pilot implementation of exhaust velocity measurement carried out at one unit

Implementation of recommendations arising out of the above initiatives are being monitored in Apex safety meetings for compliance.



COVID-19 Preparedness & Response



COVID-19 brought a number of uncertainties within the organisation and the second wave of FY22 challenged our emergency preparedness and readiness. At Aditya Birla Group, wellbeing and health of fellow colleagues and their families is of paramount importance. Several measures were undertaken in response to the pandemic:

COVID VACCINATION DRIVES

We ensured that all our employees and their family members benefited. The drive comprised vaccination campaign, vaccination booth, counselling with individuals.

O2 SUPPORT

As a proactive measure we also ensured Oxygen requirement through Oxygen concentrators at all our OHC/Colony Medical Centres.

COVID ASSISTANCE PROGRAMME

COVID related benefits for COVID impacted families were announced in FY22 covering all Management and Non-Management Cadre employees as a one-time measure.

COVID EMPLOYEE CARE (INDIA) FY22 BENEFITS INCLUDE

- Reimbursement of hospitalisation cost
- Caregiver leave for employee to help them support their family
- Family assistance on death of the employee

HOME CARE COVID - MEDICAL INSURANCE GUIDELINES

A policy was released on supporting Home Treatment and Domiciliary Expenses of COVID-19 treatments, as a special case.

HAZARD PAY

The Management considered giving a special, one-time cash incentive / reward to select employees in Management Cadre for their tremendous demonstration of resilience, commitment, and exemplary work-ethic, particularly during the Lockdown period, for successfully restarting the Plant in record time, and also for producing fibre without any Capex investment and servicing our customers.

Digitalisation in Safety

Contract Safety Management (CSM) is a crucial part of Safety Governance Structure. Monitoring and tracking the performance of contractors play a vital role in improving the safety culture and safety management system.

We have adopted a three-pronged approach to measure overall contractor performance.



It focusses on Pre-qualification of contractor before awarding the contract, periodic assessment through CFSA (Contract Field Safety Audit) and Post evaluation after completion of job/end of the contract agreement.

The Contractor Performance Score Card comprising the three-step evaluation process has been digitalized on safety portal SHIELD.

Business Safety Performance

The aforementioned initiatives have supported positively in achieving the overall safety performance during the reporting period FY 21-22 as follows:

	UoM	FY20	FY21	FY22
Total no. of lost time accidents (Reportable Accidents)	Number	33	25	32
Lost Time Injury Frequency Rate (LTIFR)	per million hours worked	0.87	0.94	0.65



Birla Cellulose, over the past decades, has been making continuous efforts on social fronts and thus has been successful in creating an impact on the economic and social development of weaker sections of society.

ENSURING ALL-INCLUSIVE GROWTH

We focus on taking everyone along in our growth journey as an organisation, by helping communities around us become self-reliant. The communities around our operations are key stakeholders for the organisation and we believe in inclusive growth with them.

Management Approach

The Aditya Birla Centre for Community Initiatives and Rural Development is the community development arm of the Group. Community Service is a vital part of our strategy and is deep-rooted in the Aditya Birla Group's philanthropic philosophy of actively contributing to the social and economic development of the areas in which we operate.

The process begins with collective evaluation of the needs of the community, based on which we set priorities together. We then partner with them in driving focused implementation efforts.

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

Our focus is on the all-round development of the communities around our plants.

Our partners in development are government bodies, district authorities, village panchayats, and the end beneficiaries - the villagers.

We proactively engage with the communities on issues of health, sanitation, hygiene programmes, and support infrastructure development such as schools and medical facilities in surrounding villages for socio-economic development.



Key Focus Areas

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



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



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



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



SOCIOECONOMIC DEVELOPMENT

We advocate and support:

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





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

Nagda

- 903 farmers were covered through on-field demonstration of crop varieties, training and exposure visits. Farmers were made aware of government schemes to enhance agriculture productivity and increase income.
- Farmers were motivated towards organic farming through vermicomposting practices to improve soil health and ensure better returns from agriculture.
- Conducted an intensive Fruit Wadis programme to motivate farmers to grow fruits. 10,208 saplings of forest and fruit species were distributed to the villagers under this programme. Last year, this programme helped farmers earn better income compared to their traditional crops.

Harihar

- Supported nearby villages in horticulture activities through the distribution of Maize seeds in Nalavagala, Kavalettu, Mankanur, Nadiharalahalli, Hulikatti, Vadayarayanhalli, Hirebidare and Airani villages
- Distributed saplings of Coconut, Mango, Lemon, Mahogany, Indian Beech Tree, Guava, Silver Oak, Teak, Malabar Neemwood and Pomegranate under the farm forestry project, benefitting 71 farmers till now

Vilayat

- Provided mango samplings to farmers to change their cropping pattern and improve fruit production
- Launched Kitchen Garden project in 5 villages to increase the vegetable output and help people earn extra income

ANIMAL HUSBANDRY

Nagda

- Covered 35 villages through animal husbandry initiatives. 9,735 animals were treated and vaccinated under this initiative. Provided alternative sources of livelihood in coordination with local veterinary hospitals and NGO's



VETERINARY CAMP

Harihar

As part of the sustainable livelihood pillar, the Harihar site organised a Veterinary Camp in the villages of Kavalettu, Nalavagala and Mankanur. 684 livestock were treated and tested benefitting 156 farmers in villages

SELF-EMPLOYMENT

Vilayat

Grasim helped women to get self-employment, while working from their homes. Vilayat team supported and provided market linkages for them to procure the raw material, leading women to earn individually around INR 250/- to 300/- per day by making facemasks. On average INR 5,000/- per month income was generated by women and 217 members got the benefit.

Education

Education is not just fundamental for the personal, economic, and social development of an individual but also has a significant positive impact on the holistic growth of a nation.

We, at Birla Cellulose, recognise this and have been focussing on empowering communities by spreading awareness about the importance of education and implementing various initiatives right from computer literacy programmes and knowledge-based training to educational tours and infrastructural development of schools.





GIRL CHILD EDUCATION

Nagda

- Girl child education programmes were organised to improve school enrolment and reduce dropouts
- Anaemia check-up programmes were organised in rural and urban areas

Kharach

CSR team, with the help of local schools, identified 118 girls from 17 schools in the nearby areas and supported their education under the Girl child education programme. The entire event was organised in the presence of school representatives, parents, and village leaders.

Harihar

Extended support to a girl child belonging to a family of an accident victim by enrolling her into Aditya Birla Public School

Vilayat

Provided financial assistance to 179 girls from 15 villages, who were unable to afford to get an education due to their poor financial condition

Donated 3 computers to a primary school near Vilayat, which initially had no computer facility.

SUPPORTING SCHOOL INFRASTRUCTURE

Kharach

- Established a minicomputer lab for primary school which will help around 250 students in getting digital education.

Harihar

- Provided continuous support for educational institutions despite the COVID-19 situation
- Distributed textbooks, face masks, sanitizers, and nutritional supplement support to pre-primary level students. Health check-ups were conducted, and ration kits were donated.
- Distributed 33 desks with chairs to nearby schools. Through this distribution, 245 students benefited in the school.



Healthcare

Our endeavour is to provide quality healthcare facilities to the people living in villages and elsewhere, through our hospitals, primary healthcare centres, Mother and Childcare projects, immunisation programmes,

with a thrust on polio eradication, healthcare for visually impaired, physically challenged and preventive health through awareness programmes.

NAGDA

- Immunisation camps were conducted in collaboration with the government programmes to support the drive for eradication of Polio, Hepatitis B, Diphtheria, and Tetanus. Facilitated by the local Sub-Health Centre, the programme covered 49,410 children.
- Being an industrial town, Nagda has the potential risk of HIV/AIDS. Therefore, a comprehensive awareness campaign was started in collaboration with an NGO. Equipped with testing facility and an experienced team, a programme was organised to spread awareness of HIV/AIDS, on-spot testing, promote safe sex and reduce discrimination against AIDS victims, especially those in rural areas. 104 on-spot testings were done including truck drivers, cleaners, and the migratory population. **More than 1,085 people benefitted through awareness programmes.**
- To provide quality health services in nearby villages, the company promoted Grasim Jan Seva Trust has been running a fully-fledged 150-bed hospital (Indubhai Parekh Memorial) equipped with the latest medical facilities. Another 80-bed (G. D. Memorial) fully equipped hospital is being run at Ujjain for catering to the needs of the community. **Around 1.44 lakh people have availed of the benefits from these hospitals.**
- Conducted mobile health camps in villages for the prevention of seasonal diseases. During the year, 226 camps were organised benefitting 7,591 people.
- As part of a major initiative in reproductive and child healthcare, we have adopted 35 villages to reduce anaemia in pregnant women, improve antenatal care, enhance child nutrition, timely vaccination and institutional delivery.
- Conducted an awareness programme on sanitary napkins and held anaemia check-up camps for adolescent girls. The girls were also made aware about the Government benefit schemes. **A total of 6,975 beneficiaries were covered under the programme.**
- We continue to support families in villages and rural areas post COVID-19. We have taken all possible relief measures towards maintaining the healthy life in the surrounding community. In close coordination and collaboration with health, district administration and gram panchayat, we continue to take initiatives on sanitization/disinfection of the public places, installation of oxygen plants, RTPCR tests, distribution of facemasks, medicine kits, etc. **These initiatives benefitted 54,329 people of Nagda town and villages.**





HARIHAR

- The team supported primary health centres in the villages for COVID-19 vaccination, testing and awareness, distribution of facemasks, hand gloves, sanitizers. We conducted 27,942 vaccinations and 1,705 RT-PCR tests, distributed 7,500 masks, and covered 5,703 people in awareness and survey on COVID-19.
- Distributed nutritional supplements to 8,144 malnourished children for 3 months in Davanagere district. Mother and child nutrition programmes at the Anganwadis, health and anaemia check-ups of adolescents, distribution of iron tablets, etc. were also part of this programme.
- Supported 838 children through immunisation programmes to reduce the child mortality rate.
- Set up a 600-litre per minute oxygen generation plant worth INR 90 lakhs at the Government Hospital. The plant is directly connected to the beds of COVID-19 patients
- Waste management is one of the major activities under Swachh Bharat Mission. To collect waste at the Kodyal village, we have provided a waste collection vehicle – both dry and wet – to the Gram Panchayat. The cost of the machine is INR 6 lakh.
- Supply of potable drinking water was made available to 4 nearby villages, benefiting 28,000 people.



KHARACH

- 25 Oxygen cylinders were donated to three local COVID-19 hospitals in Kosamba. People from surrounding villages benefited from this noble cause.
- Extended support to local government by providing 20 beds, grocery and vegetables to the patients at COVID-19 Care Centre in Katpor village in Hansot taluka
- Pradhanmantri Surakshit Matrutva Abhiyan: Participated in a community activity conducted at PHC Illav. Dr Meghana Bhalerao was the lead Doctor, who examined 40+ pregnant ladies and advised them on issues related to pregnancy, hygiene, nutrition, etc. Distributed specially recommended nutrition food packets to females belonging to BPL category.

VILAYAT

- Grasim took effective initiatives for the community, employee and their family, in addition to providing strong support to the taluka and district administration of Bharuch.

Following activities carried out for the community during the pandemic

Name of Activity	Beneficiaries	Location
Oxygen concentrator: 6	-	More than 1,500
COVID vaccination camp	Nearby villages	29,540
Sodium Hypochlorite spray	Nearby villages	800 litres
Oxygen booster remedy	Nearby villages	7,500
2 Oxygen Plants (size 30 m3/hour)	Vadodara & Ahmedabad	12,786

- During COVID-19, hospitals faced shortage of oxygen. Grasim stood strongly with the government and provided 6 oxygen concentrator machines to the district collector.

- Organised 41 COVID-19 vaccination camps for the nearby villagers, employees and their families. The team had to face many challenges to prepare the community for vaccination.
- Oxygen plants were handed over to GMERS (Gujarat Medical Education & Research Society – Health & Family Welfare Development, Government of Gujarat) Hospital at Vadodara and Ahmedabad, benefitting more than 12,786 people.
- Initiated a Mobile Medical Unit project in villages of Bharuch district to provide easy access to healthcare. The nearest hospital is 25 km away. Through this project, we reached 10,083 patients in the reporting period.
- **Our goal under “Maa Vatsalya” project is to reduce the malnutrition rate of 25 villages, where we work.** Under the project, we provided 105 ration kits to children, who are in the red zone. The kits include 5.5 kg of food-making items like nutritional gravy, jaggery, mix dal, peanuts, etc. 55 Anganwadi children from nearby villages of Vilayat benefitted from the project.

THAI RAYON

- Donated disinfectants to 4 communities around the site, namely Posa Municipality, Hua Phai Champalor and Sai Thong, to be used for spraying COVID-19 disinfection in communities and detention centers and prevent the spread of COVID-19
- Donated PPE kits to Ang Thong Provincial Public Health Office for the safety of officer performing their duties during the COVID-19 outbreak
- Provided oxygen tanks to Anghong Hospital to help patients which have suffered from a shortage of medical supplies due to COVID-19 outbreak

PT IBR

- Organised monthly medical check-up for Cilangkap villagers and spend an amount of IDR 16,58,88,000
- Provided 250 food packages (IDR 35,000,000) to the Purwakarta DANDIM office which will be donated to residents of Purwakarta community affected by COVID-19

Infrastructure Development

Infrastructure, especially in rural areas, is directly related to the holistic growth of communities, since good infrastructural facilities result in human development and economic growth which in turn has a positive effect on the eradication of poverty.

To achieve the same, we have been investing in infrastructural development in rural areas to ensure that communities have clean drinking water, sanitation facilities and proper roads, among other facilities.





NAGDA

- Grasim over the years has constructed 4 dams on river Chambal to limit the adverse situation arising out of scarcity of water. Almost 35% of the water stored in these reservoirs is used for irrigation, while over 10% is used by Nagda mandi, Khachrod township and the Railways. **More than 1,50,000 people use approx. 45% of the total water storage created by Grasim.**
- Renovated four village-level check dams, installed one Reverse Osmosis plant, and provided drinking water facilities in two villages as part of our water harvesting and conservation initiatives, benefiting 1,150 people.

- Completed Street light project in 10 villages by installing 130 lights.
- Provided 50 cement benches for common public places for the community's comfort and use.
- Hygiene and cleanliness were never perceived as a priority, especially in rural areas. Hence, the aim was to first motivate people and bring change in their attitude and behaviour towards sanitation, health and hygiene. 24 programmes were organised in villages in collaboration with Panchayat and health experts, benefitting 3,032 people.



Programmes	Units	Progress during the year		
		2020	2021	2022
Individual toilet construction	No. of toilets	375	390	3,032
Drinking water tank	No. of villages	05	04	04
Strengthening and support in Nal Jal Yojana and other safe drinking water schemes/RO	No. of villages	01	02	03
Regular drinking water supply	Litres per village	40,000 for 5 villages	40,000 for 5 villages	1,000 for 2 villages
Repairing of water harvesting structure	No. of villages	05	06	04

HARIHAR

- 25 Cement benches were installed at Kodyal Hospet Gram Panchayat area, benefitting around 3,500 people.
- During COVID-19, the Kavalettu village faced problems to burn the corpses as the village did not have any facility. Through CSR, a cremation shed with the burning chamber for the corpse was constructed at the village.
- At the Nalavagal village, desilting of canal was done to support the free flow of water in the village. 50 farmers benefitted from this activity.
- Installed a Solar High Mast light at Hirebidare village under our rural infrastructure development.

KHARACH

- Installed New RO Plant in Koba Primary School to make available a safe and hygienic drinking water facility for 106 students.
- Constructed drinking water borewell at Juna Asarma village resulting in a continuous supply of water to 200 families.
- Covered the PHC Ilav with curtains to ensure privacy during treatment and stay at the Hospital.
- At the Amod village panchayat office, there were no adequate facilities for the members and visitors, therefore, we provided basic furniture for Gram Sabha and Gram Vikas meetings at the Panchayat office.
- Under our infrastructure support activity, we supported Hansot Police Station by building a police outpost, which helped them in reaching to villagers smoothly.



VILAYAT

- Renovated 7 classrooms and provided good infrastructure facility at a primary school located in the Karmad village near to our plant. 200 students benefitted from this initiative.
- Derol Aganwadi (AW) structure was in very poor condition. After request from the village sarpanch, Grasim team surveyed the building and began construction work with the help of civil department. The project was completed within 9 months.
- The Derol panchayat requested us to build cloth washing platform to provide a better life to villagers. CSR team arranged for the same with facilities like good seating arrangement, proper washing stations, 24x7 water tank facility, and individual tap for every single station. 600 households are taking benefits of this facility. The initiative will also protect them from heat and rain, saving time and water and helping keep the village clean.

THAI RAYON

- Donated THB 100,000 to support the prevention and deterrence and help people who have been affected by the disaster
- Renovated the exercise equipment of the community, Moo 4, Hua Phai, which has deteriorated so that it can be used again and support the community in their wellbeing
- Donated rice to 16 primary schools, which has been organized continuously for over 20 years now





Recognitions

Aditya Birla Group in Thailand continues enjoying a key spot among the leaders of CSR in Thailand. For the fourth consecutive year Aditya Birla Group in Thailand has bagged the AMCHAM CSR Excellence Award (2022), endorsing that ABG Thailand is a force for good among communities and in conducting business. This is a unique recognition from the American Chamber of Commerce in sync with the US Embassy. It stretches beyond community engagement to exemplary ethical business practices.



Aditya Birla Group in Thailand has bagged the AMCHAM CSR Excellence Award (2022)



TERI-IWA-UNDP Water Sustainability Awards 2022 under Category 'Water for All' to Grasim, Nagda.



Nagda won National Awards for Excellence in CSR – 7th Edition 2021, Special COVID Category - Best COVID19 Solution for Community Care



Manufacturing Today Conference & Awards 2021, Excellence in CSR - Grasim Industries Limited - Vilayat Unit (Bharuch - Gujarat)

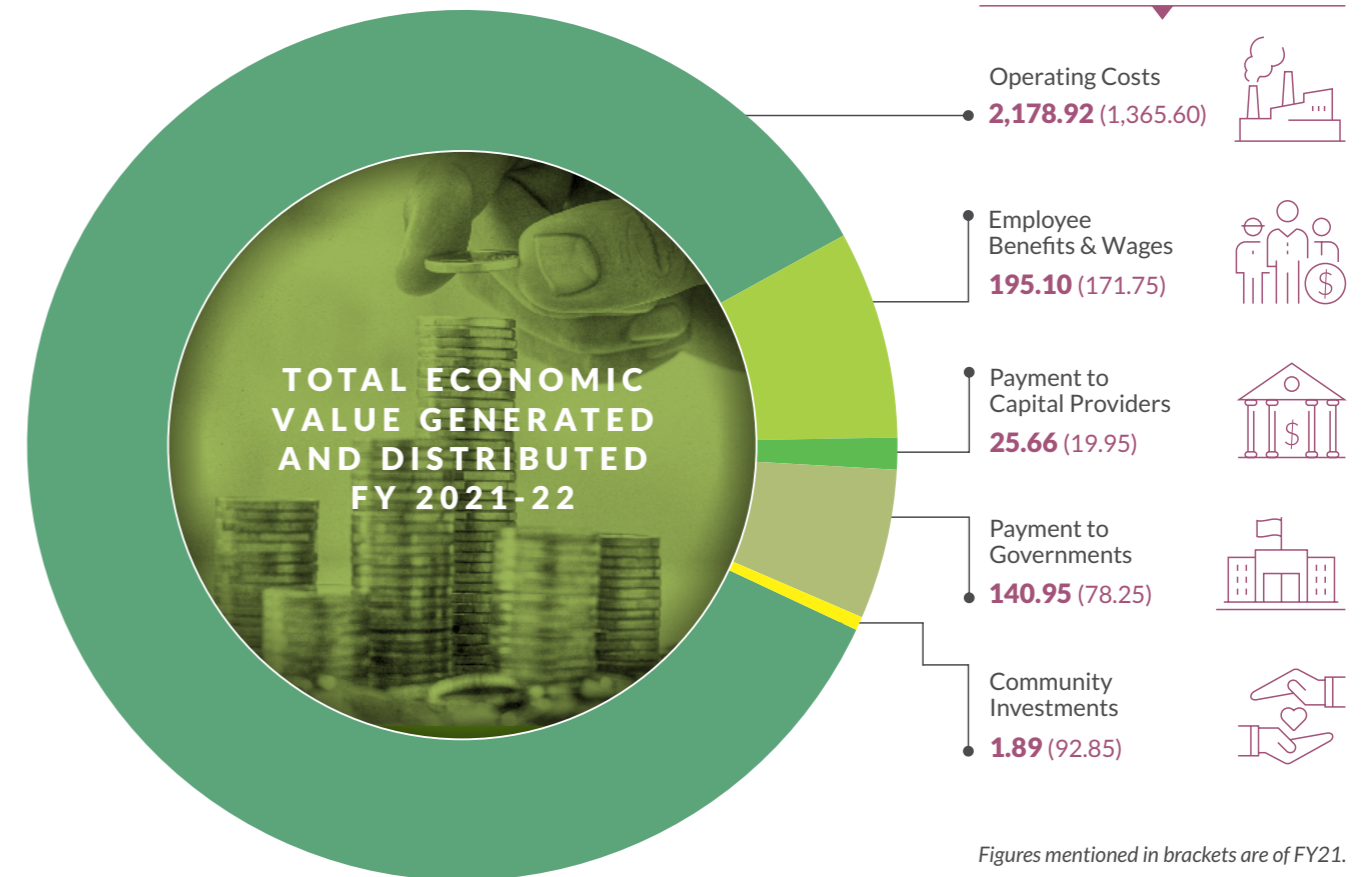


Socio-economic Development

We continued to create economic value for our stakeholders and tirelessly worked towards achieving our financial targets.

We proactively adapted to prevailing market conditions, anticipated risks (including environmental risks) and invested in pioneering initiatives.

These efforts made our economic performance stronger, which is one of the pillars of business sustainability. All the parameters for the economic value generated, distributed, and retained by Birla Cellulose have been tabulated herein.



(in USD million)

Economic Value Retained

194.82
(77.57)



(in USD million)

Economic Value Generated

Revenues
2,737.35
(1,715.47)



(in USD million)

Economic Value Distributed

Operating Costs
2,178.92 (1,365.60)



Employee Benefits & Wages
195.10 (171.75)



Payment to Capital Providers
25.66 (19.95)



Payment to Governments
140.95 (78.25)



Community Investments
1.89 (92.85)





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Independent Assurance Statement

To,
 The Board of Directors and Management
 Grasim Industries Limited, Pulp & Fibre Business
 Mumbai, India

Scope

We have been engaged by Grasim Industries Limited (the 'Company') to perform a 'limited assurance engagement,' as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on the Pulp & Fibre Business (Birla Cellulose) of Aditya Birla Group' Sustainability Report (the "Subject Matter") for the year ended 31st March 2022. This statement applies to the sustainability disclosure of Birla Cellulose, which includes following units:

1. Staple Fibre Division, Nagda, India
2. Birla Cellulosic, Kharach, India
3. Grasim Cellulosic Division, Vilayat, India
4. Harihar Polyfibers & Grasilene Division, Harihar, India
5. Excel Fibre Division (Nagda & Kharach)
6. PT Indo Bharat Rayon, Indonesia
7. Thai Rayon Public Co. Ltd., Thailand
8. Birla Jingwei Fibres Co. Ltd., China
9. Domsjo Fabriker, Sweden
10. AV Group NB Inc., Canada (AV Cell & AV Nackawic Mills)

Criteria applied by Entity

In preparing the Sustainability Report for FY'22, the company applied the Global Reporting Initiative (GRI) Standards.

The Entity's responsibilities

Entity's management is responsible for selecting the Criteria, and for presenting the Sustainability Report FY'22 in accordance with that Criteria, in all material respects . This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ('ISAE 3000'), and the terms of reference for this engagement as agreed with Birla Cellulose on 4th April 2023. Those standards require that we plan and perform our engagement to obtain limited assurance about whether, in all material respects, the Subject Matter is presented in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.



We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Our Independence and Quality Control

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Sustainability Report FY'22 and related information, and applying analytical and other appropriate procedures.

Our procedures included:

- Conducted interviews with select personnel and corporate teams to understand the process for collecting, collating and reporting the subject matter as per GRI Standards
- Checked that the calculation criteria have been correctly applied in accordance with the methodologies outlined in the Criteria
- Undertook analytical review procedures to support the reasonableness of the data
- Verification of data, on a selective test basis, for the following business entities and indicators, through consultations with the business team and sustainability team

S. No.	Sites	Geography
1	Thai Rayon Public Co. Ltd.	Anghthong, Thailand
2	Grasim Cellulosic Division, Vilayat	Gujarat, India
3	Staple Fibre Division, Nagda	Madhya Pradesh (MP), India



S. No.	Indicators	GRI Reference
1	Energy consumption	302-1
2	Water Withdrawal	303-3
3	Water Discharge	303-4
4	Water Consumption	303-5
5	Direct (Scope 1) GHG emissions	305-1
6	Energy indirect (Scope 2) GHG emissions	305-2
7	Waste diverted from disposal	306-4
8	Waste directed to disposal	306-5
9	New employee hires and employee turnover	401-1
10	Work-related injuries	403-9
11	Average hours of training per year per employee	404-1
12	Diversity of governance bodies and employees	405-1

We also performed such other procedures as we considered necessary in the circumstances.

The assurance scope excludes:

- Data and information outside the defined reporting period (1st April 2021 to 31st March 2022)
- Data and information on economic and financial performance of the Company
- Data, statements and claims already available in the public domain through Annual Report, or other sources available in the public domain
- The Company's statements that describe the expression of opinion, belief, inference, aspiration, expectation, aim or future intention provided by the Company
- The Company's compliance with regulations, acts, guidelines with respect to various regulatory agencies and other legal matters

Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to Sustainability Report FY'22 for the period from 01st April 2021 to 31st March 2022, in order for it to be in accordance with the Criteria.

Restricted use

This report is intended solely for the information and use of Grasim Industries Limited, Pulp & Fibre Business and should not be used by anyone other than those specified parties.

Chaitanya Kalia
Partner
13.06.2023
Mumbai

GRI CONTENT INDEX

GRI Standard	Disclosure	Location in the Report
GRI 2: General Disclosures 2021	2-1 Organizational details	9
	2-2 Entities included in the organization's sustainability reporting	20
	2-3 Reporting period, frequency and contact point	19
	2-5 External assurance	20
	2-6 Activities, value chain and other business relationships	17-18
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	2-11 Chair of the highest governance body	03-04
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	2-24 Embedding policy commitments	21
	2-28 Membership associations	82-84
	2-29 Approach to stakeholder engagement	72
2-30 Collective bargaining agreements	81	
GRI 3: Material Topics 2021	3-1 Process to determine material topics	22
	3-2 List of material topics	23
	3-3 Management of material topics	24
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	110
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	106-108
GRI 302: Energy 2016	302-1 Energy consumption within the organization	56
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	45
	303-2 Management of water discharge-related impacts	55
	303-3 Water withdrawal	54
	303-4 Water discharge	54
	303-5 Water consumption	45
GRI 304: Biodiversity 2016	304-3 Habitats protected or restored	34-35
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	56
	305-2 Energy indirect (Scope 2) GHG emissions	56
GRI 306: Waste 2020	306-3 Waste generated	55
	306-4 Waste diverted from disposal	55
	306-5 Waste directed to disposal	55
GRI 308: Supplier Environmental Assessment 2016	308-2 Negative environmental impacts in the supply chain and actions taken	32



GRI Standard	Disclosure	Location in the Report
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	92
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	96
	403-2 Hazard identification, risk assessment, and incident investigation	95
	403-4 Worker participation, consultation, and communication on occupational health and safety	93-96
	403-5 Worker training on occupational health and safety	94
	403-6 Promotion of worker health	96
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	93-96
	403-8 Workers covered by an occupational health and safety management system	21
	403-9 Work-related injuries	98
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	92
	404-2 Programs for upgrading employee skills and transition assistance programs	88
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	99-109
GRI 414: Supplier Social Assessment 2016	414-2 Negative social impacts in the supply chain and actions taken	32



Birla Cellulose
Fibres from nature

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