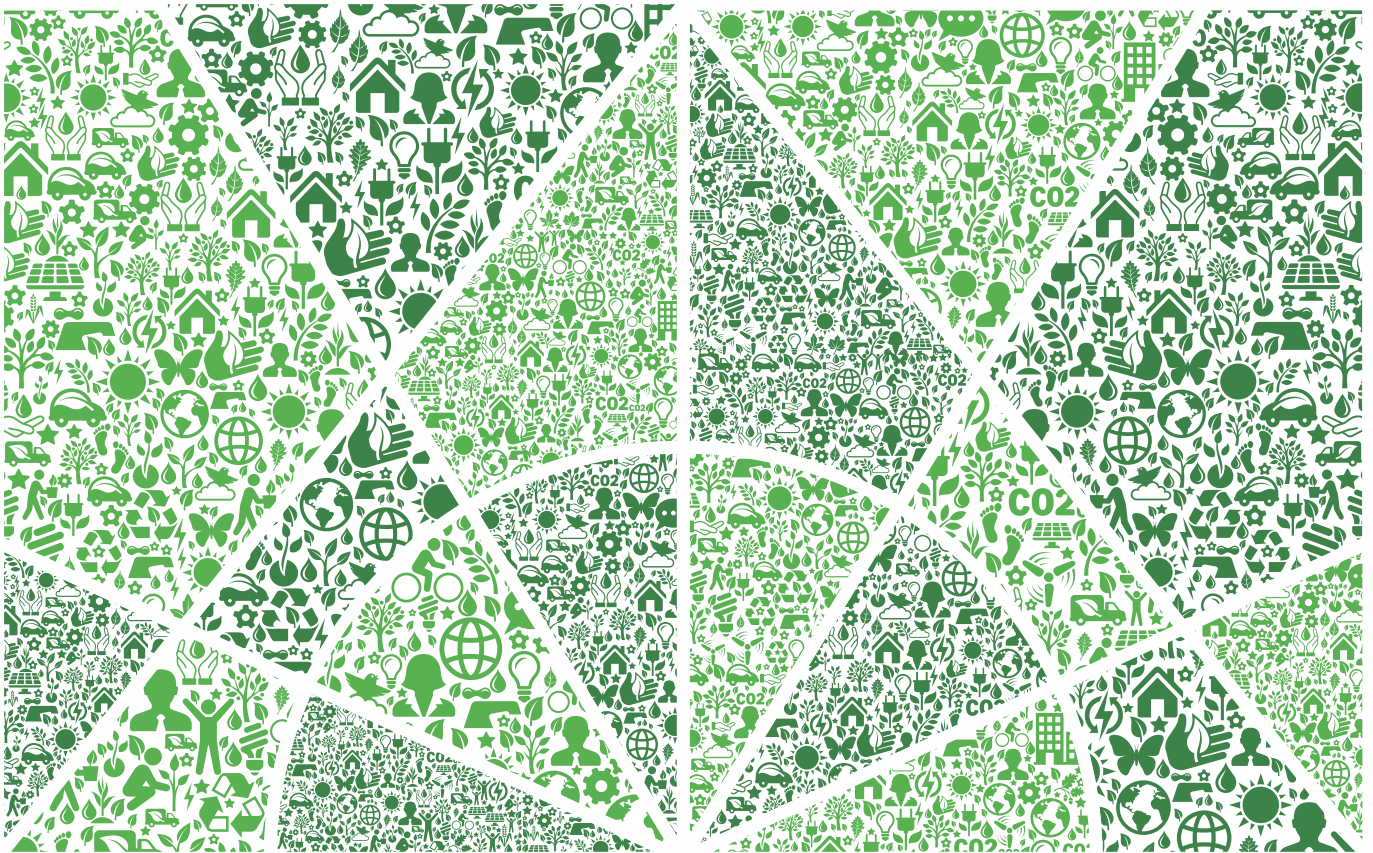




SUSTAINABILITY REPORT 2018-19



Transforming towards a
Resilient
Responsible &
Reliable
Future

Transforming towards a Resilient, Responsible and Reliable Future

We at Hindalco, are on a path of transformation. As the stakeholder expectations evolve and resources become scarce, adopting sustainable business practices has become an imperative for the Company's future proofing.

We operate with an integrated business model spanning from bauxite and coal mining to production of value added aluminium and copper products. This involves exposure to the dynamic business environment in India as well as at a global level. Considering variations in the business environment, we have continued our focus on strengthening systems and frameworks. This helps us in improving the business performance while developing resilient corporate governance and risk management practices.

As we are part of resource intensive industry involving complex operations, the focus on environment, society and health and safety is of paramount importance for us. We understand our responsibility towards environmental and social impacts of our operations and take necessary steps to minimise these impacts. In order to ensure well-being of our workforce, we constantly strive to improve our health and safety performance. Our initiatives in the areas of environment, community stewardship, and health and safety as outlined in the report demonstrate our approach towards operating in a responsible manner.

We operate with an employee strength of more than 25,000 people. We have developed an employee centric work culture resulting in our long term success. In addition to this, our focus on research and development, customer centricity and efficient supply chain operations help us become a reliable organisation.

This report provides a brief summary of our progress on the path of transformation towards a resilient, responsible and reliable future.





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Chairman's Statement



THE RISING CHALLENGES OF CLIMATE CHANGE AND RESOURCE SCARCITY HAVE PUT US ON A PATH OF TRANSFORMATION TO RENDER A MORE RESILIENT AND RESPONSIBLE FUTURE WITH EACH PASSING DAY.

Sustainability is no longer just an environmental obligation for corporations. Today, it is a business imperative and needs to be hard-wired into corporate strategy.

We believe in developing sustainable business practices in every sense of the term. Environmental propriety, responsible growth in revenues and earnings, safety and societal sensitivity are our top priorities. As an organisation navigating through an uncertain business environment, we understand the need to encourage innovation and emerge as a greener, stronger and smarter business.

The rising challenges of climate change and resource scarcity have put us on a path of transformation to render a more Resilient and Responsible future with each passing day. Our vision of this future is incomplete without accounting for the resource intensiveness of our operations. One of the foremost aspects of our commitment to transform is therefore to future-proof our endeavours exploring ways we can reduce our impact on the environment and finding avenues where we can make up for it.

Hindalco is gearing up for this future with its Purpose of Manufacturing Materials that make a Greener, Stronger Smarter world. From aluminium auto body sheets to LPG cylinders and from aluminium cans to EV batteries, we are trying to offer consumers choices that are good for the environment and the conscience.

The proof of Hindalco's efforts is now before you the 9th Annual Sustainability Report (FY 2018-19), a comprehensive account and analysis of our endeavours.

I am confident that Hindalco will continue to take decisions that deliver on its commitments to the environment, our people, our customers and communities. Together, we will build an even better tomorrow.

Kumar Mangalam Birla
Chairman



About the Report

This is the 9th Sustainability Report of Hindalco Industries Limited covering the reporting period from 1st April, 2018 to 31st March, 2019. This report provides a brief summary of our approach to sustainability, the progress we are making and the roadmap for the future. The report has been prepared in accordance with the GRI Standards: Comprehensive option. The report content and quality are aligned with the Reporting Principles as defined in GRI Standards.

The report covers our India operations including the aluminium, copper and mining businesses except the unit at Kollur which is currently not operational. India operations contribute 35% to our total revenue. Our wholly-owned subsidiary, Novelis, publishes its own sustainability report with material topics specific to its operations hence has been omitted from the boundary of this report. Novelis contributes 65% to our total revenue as per FY 2018-19 consolidated financial statement.

This report has been independently assured by Ernst & Young Associates LLP. The assurance is based on International Standard on Assurance Engagements (ISAE) 3000 and AccountAbility 1000 Assurance Standard (AA1000AS) 2008. The Assurance Statement is provided as part of this report.

We would welcome any feedback on the contents and approach of this report at hindalco.sustainability@adityabirla.com

We publish our sustainability reports on an annual basis. All of our sustainability reports, including the previous sustainability report published in December 2018, are available on our website <http://www.hindalco.com/sustainability/sustainability-reports>



Message from the Managing Director



WE ASPIRE TO BECOME AN INDUSTRY BENCHMARK IN TERMS OF OUR SUSTAINABILITY PERFORMANCE AND TO ACHIEVE THIS, WE ARE CONTINUOUSLY EVOLVING AND IMPROVING OUR BUSINESS PRACTICES AND OPERATIONS.

I am delighted to share our Annual Sustainability Report for the FY 2018-19. This report highlights our journey of transformation towards a Resilient, Responsible and Reliable future. Our relentless efforts towards sustainability over more than a decade, have enabled us to achieve greater levels of operational excellence.

During these years, we have demonstrated an approach to future proofing wherein we set clear policies and institutional frameworks. These policies and frameworks enable us to monitor our performance, encourage innovation, focus on continuous improvements and strengthen the dialogue with stakeholders. All these efforts have translated into a growth model which leverages new avenues for a profitable business and enhances our existing capacities.

We are committed to perform our operations in an environmentally conscious and socially responsible manner. We aspire to become an industry benchmark in terms of our sustainability performance and to achieve this, we are continuously evolving and improving our business practices and operations.

This year, our aluminium and copper businesses continued to deliver consistent operational and financial performance. The aluminium business, recorded a primary aluminium production of 1.29 million tonne. The output of aluminium value added products (excluding wire rods) stood at 0.32 million tonne. In the copper business, our cathode production reached 0.35 million tonne and continuous copper rod production touched 0.25 million tonne. Our revenue from India operations stood at INR 45,908 crore for FY 2018-19. I am glad that we could overcome challenges faced by uncertainty in the commodity markets on account of fluctuations in global trade.

We recorded an EBITDA of INR 7,532 crore and profit after tax of INR 2,678 crore for our India operations. We strive to enhance operational excellence, customer centricity and resource security to deliver long term stakeholder value. Given our integrated business model, we are well poised to cater to the entire spectrum of market requirements. Use of best-in-class technology, R&D capabilities and implementation of innovative sustainable initiatives enabled us to bring positive transformation resulting in reduced costs.

We continuously innovate to provide our customers with value-added, differentiated products which play a vital role in positioning us in the international market. We are partners in the growth of multiple industries such as automobiles, power generation and transmission, industrial machinery components, packaging, etc. As our products are a part of the B2B segment, we strive to add more value through efficient after-sales services. This enables us to grow and touch the lives of millions of people.

We have always been mindful of the impact that our operations have on the environment and communities around us. We focus on clean manufacturing, responsible mining, optimum resource consumption and reducing the environmental footprint of our operations. We have continued to be a part of Xynteo – a Norway based environmental advisory platform, spearheading collaborative efforts among different industry sectors for catalysing ideas. Through Xynteo, we are partnering with various industry leaders to develop solutions for a sustainable environment as well as healthcare.

We continued our journey towards achieving Zero Liquid Discharge (ZLD) for 100% of our plants. So far we have achieved the ZLD status for 11 of our 15 plants. We are confident that by FY 2020-21, all our plants will have achieved this status. We are taking steps towards becoming resilient to risks due to water stress. During the reporting period, all our manufacturing plants were assessed for water stress and suitable mitigation measures are being taken.

With the commissioning of a 30 MW captive solar power plant at Aditya Aluminium in FY 2018-19, we have initiated additional solar projects to achieve 100 MW installation by FY 2020-21.

As a responsible corporate citizen, we aim to ensure that waste generated from our operations is disposed with minimum impact on the environment. During the reporting period, we have reused and recycled about 57% of the solid waste generated from our plants. We have also taken initiatives towards responsible plastic waste disposal. We

have initiated a biodiversity study in collaboration with IUCN at three of our operational locations.

Our talented and dedicated workforce is one of the strongest elements in our transformation for future proofing. Our well-structured processes for talent management have helped us become an employer of choice. We have continued our focus on improving diversity in our workforce. During the reporting period, we hired 27% women engineers at the entry level. As a result of our efforts, women constituted 5.44% of our management and staff employees in FY 2018-19.

We are committed to actively contribute to the social and economic development of communities and the weaker sections of society. Our efforts in healthcare, education, sustainable livelihood, infrastructure development and social reforms positively impacted a population of more than 1.2 million in 731 villages across 11 states in India. During the reporting period, as part of our CSR engagements, we spent INR 34.14 crore. Our CSR engagements go beyond direct investments and are planned in a manner which enable sustainable value creation for local communities near our operations.

I would like to express my gratitude towards all the stakeholders who are contributing significantly in our journey of transformation. Their tireless efforts and loyalty towards the company empowered us to impact the society at large in a positive manner. We assure our commitment to create a Resilient, Responsible and Reliable model for future growth.

Satish Pai
Managing Director

Key Highlights



Waste Management

(Including mining waste management)

- **8%** of bauxite residue (Red mud) utilised as a raw material for cement and construction industry.
- **100%** of fly ash reused and recycled for backfilling of low lying areas, construction applications and responsible disposal.
- **146%** of copper slag and phosphogypsum re-used for various applications.



Water Availability

- Water stress assessment carried out for all the plant locations.
- Zero liquid discharge status achieved for **11** of the 15 operational units.



Energy security

- INR **153** Crore invested in energy conservation equipment and projects.
- **30** MW solar power plant commissioned at Aditya Aluminium.



GHG Emissions

- Achieved **13 %** reduction in specific GHG emissions in aluminium production from the base year of FY 2011-12.
- Purchased **13,08,311** Renewable Energy Certificate (REC), This is equivalent to GHG offset of **10,72,815 tCO_{2e}**.



Occupational Health & safety

- Monetary incentive for facilities on achieving 'Zero fatalities' for three consecutive years.
- Implemented contractor safety management programme & behaviour based safety management programme.



Ethics & Integrity

- Zero complaints received on violation of the Code of Conduct.
- Continued adherence to Hindalco Management Framework.



Environmental and other Compliances

- **2.13%** CSR spend of the net profit.
- **3,979.94** Acres of green belt developed.



R&D Innovation & Technology

- Developed aluminium bulker.
- Aluminium foil for Li-ion batteries accredited by Indian Space and Research Organization (ISRO).
- Developed Oxy-free copper products which are being used in various applications including strip- manufacturing.



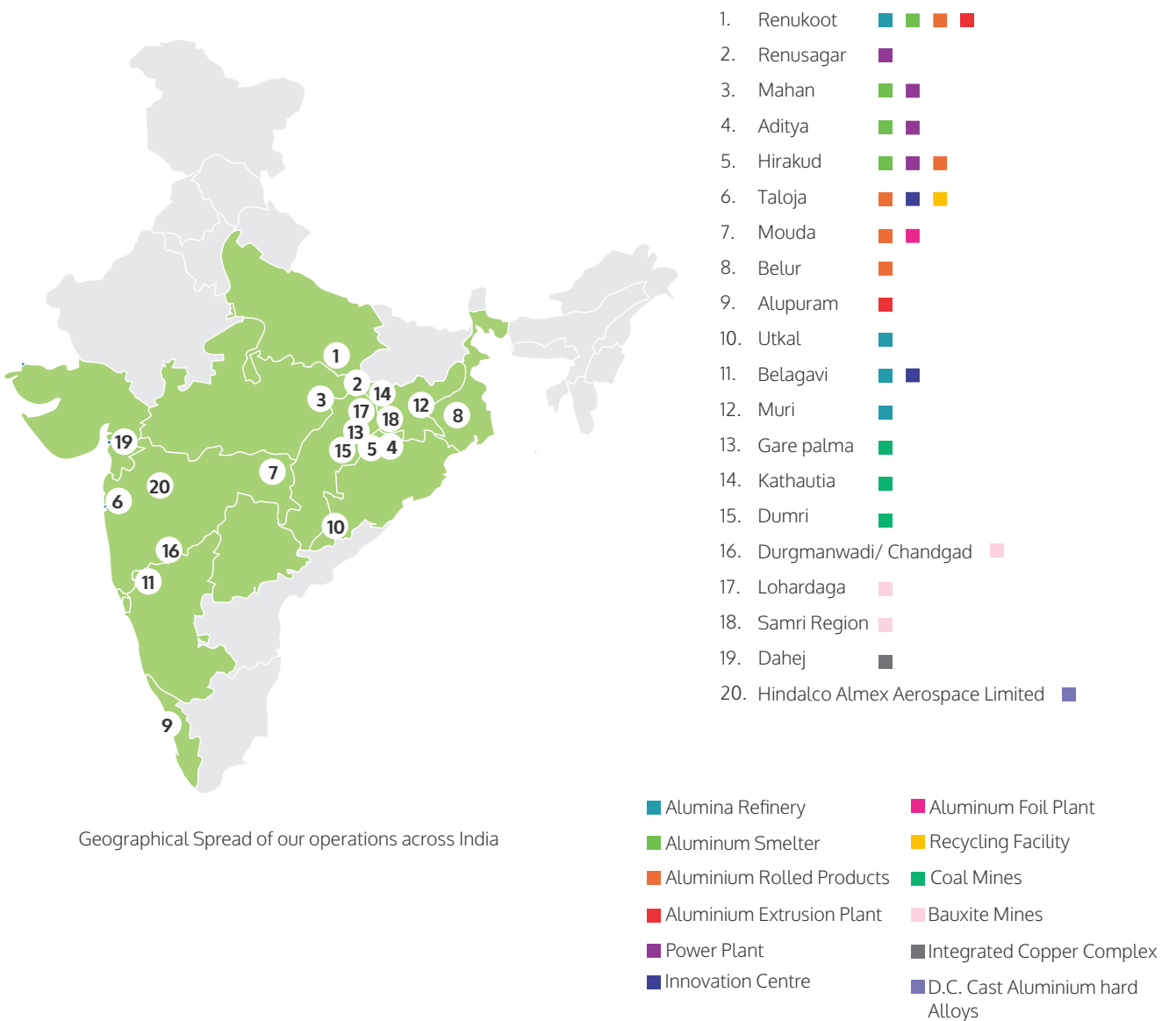
Plant Efficiency

- Reduced specific process energy consumption by **15%** in aluminium production as compared to the base year FY 2011-12.
- Increased consumption of recycled input materials.



About Hindalco

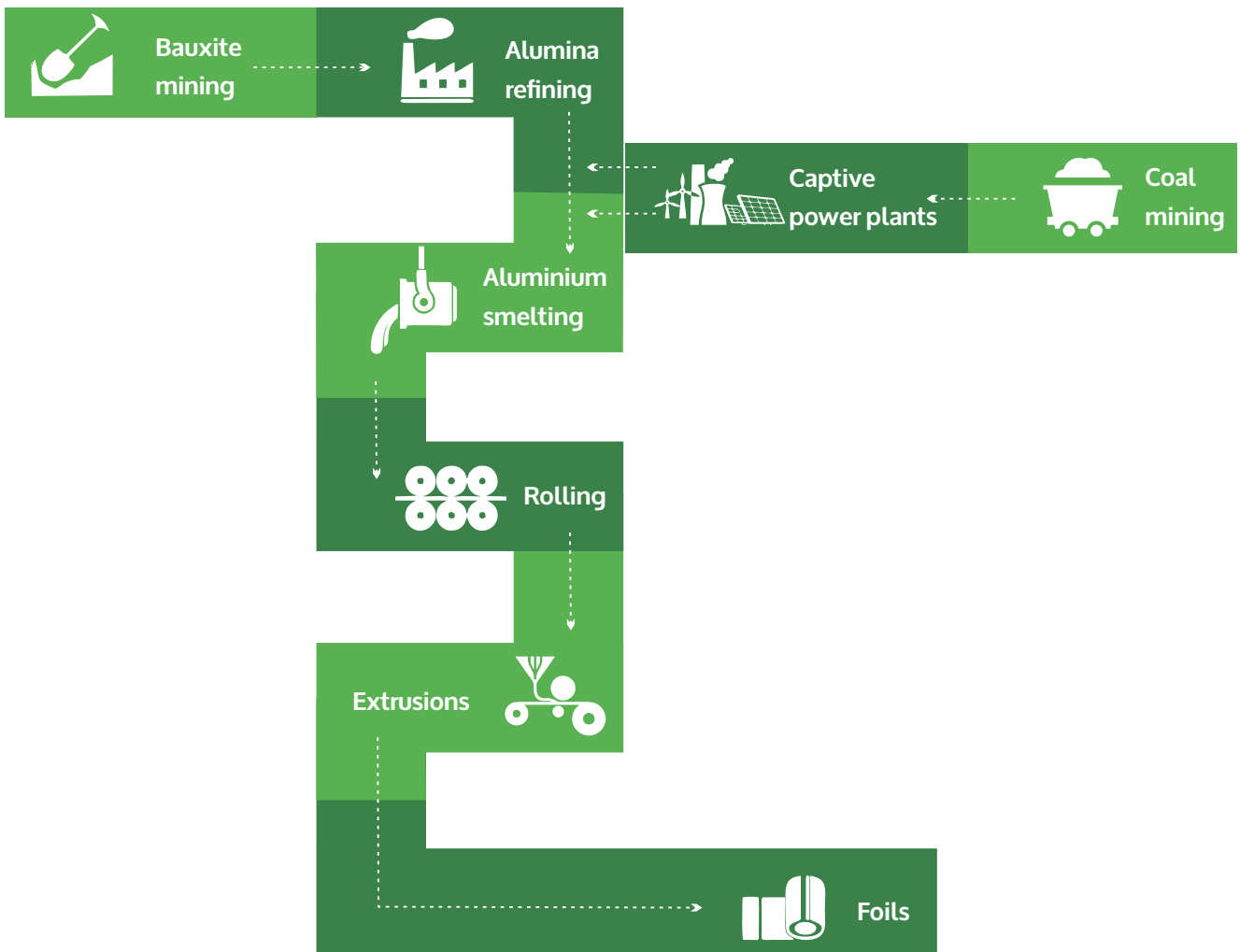
Hindalco Industries Limited is a flagship company of the Aditya Birla Group headquartered in Mumbai. It is an industry leader in aluminium and copper products with mining and manufacturing operations spread across nine states in India as depicted in the map below:





Aluminium business:

We are Asia’s largest manufacturer of primary aluminium and aluminium products. Our aluminium operations provide integrated, unique and unified value chain in plants and processes. In India, our aluminium operations cover the entire value chain as depicted below:



Aluminium business value chain

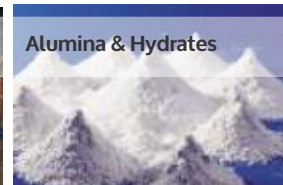
ASIA'S LARGEST MANUFACTURER OF PRIMARY ALUMINIUM AND ALUMINIUM PRODUCTS.

We own and operate bauxite mines and alumina refineries followed by state-of-the-art technology smelters giving outputs across a range of alloys with exceptional quality. Our captive bauxite mines in Jharkhand, Chhattisgarh, Maharashtra and Orissa, provide the raw material to our alumina refineries located at Belagavi, Muri and Renukoot. Utkal Alumina (Odisha) located in close proximity to Baphlimali bauxite mines has access to superior quality bauxite ore which is transported to the refinery through an 18 km long-distance conveyor, considered an engineering marvel. The Utkal facility supplies alumina to new age smelters at Mahan and Aditya, through dedicated BTAP wagons and aluminium bulkers.

To ensure uninterrupted power for primary aluminium production, all Hindalco smelters are fully backed by captive power plants, with secured coal supplies from captive mines - Gare Palma IV/4 and IV/5 in Chhattisgarh and Kathautia and Dumri in Jharkhand. Balance coal is sourced through linkage contracts. The coal mines operate on the highest standards of mines safety and quality production.

Our multi-pronged branding strategy for aluminium products resulted in wider popularity of our brands. Some of our brands include Eternia Windows, Maxloader and Hindalco Extrusions under the extrusions segment; Lithographic sheets, Everlast Roofing under the flat rolled products segment; and Freshwrap and Superwrap under the aluminium foil segment.

Our finished products include alumina, primary aluminium in the form of ingots, billets and wire rods, value-added products such as rolled products, extrusions and foils. We produce metallurgical and chemical grade alumina and hydrates. These products offer a wide spectrum of applications such as high-grade refractories, ceramics, fire retardant plastics, alum, zeolite and many more. Today, our customised products serve 37 countries across the world.



Products - Aluminium business

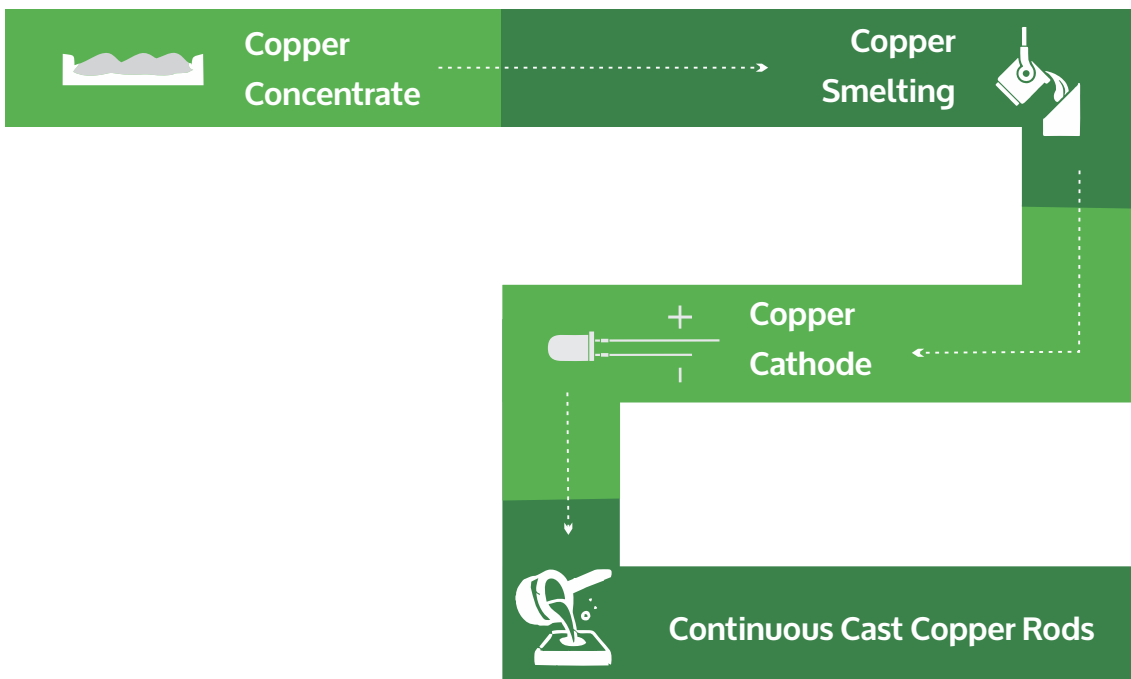


Chemical business

As part of the chemical business, we produce chemical grade speciality aluminas and hydrates. Our two refineries - Belagavi alumina refinery and Muri alumina refinery contribute significantly to the chemical business.

Copper Business

Our Copper Business operates one of the largest single location custom copper smelters in the world. The complex at Dahej, houses the copper smelter, refineries, rod plants, by-products plant, captive power plant, a captive jetty and other utilities. There is also a precious metals recovery plant which produces gold, silver, selenium and platinum.

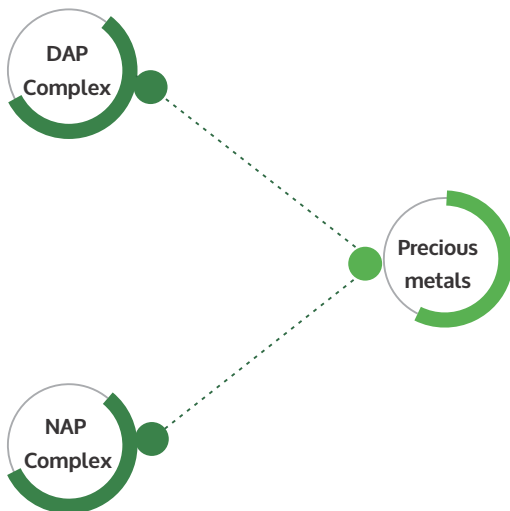


Copper Business Value Chain

LISTED ON MAJOR NATIONAL AND INTERNATIONAL STOCK EXCHANGES

The co-product - sulphuric acid is utilised to produce phosphoric acid and fertilizers such as Di-ammonium Phosphate (DAP).

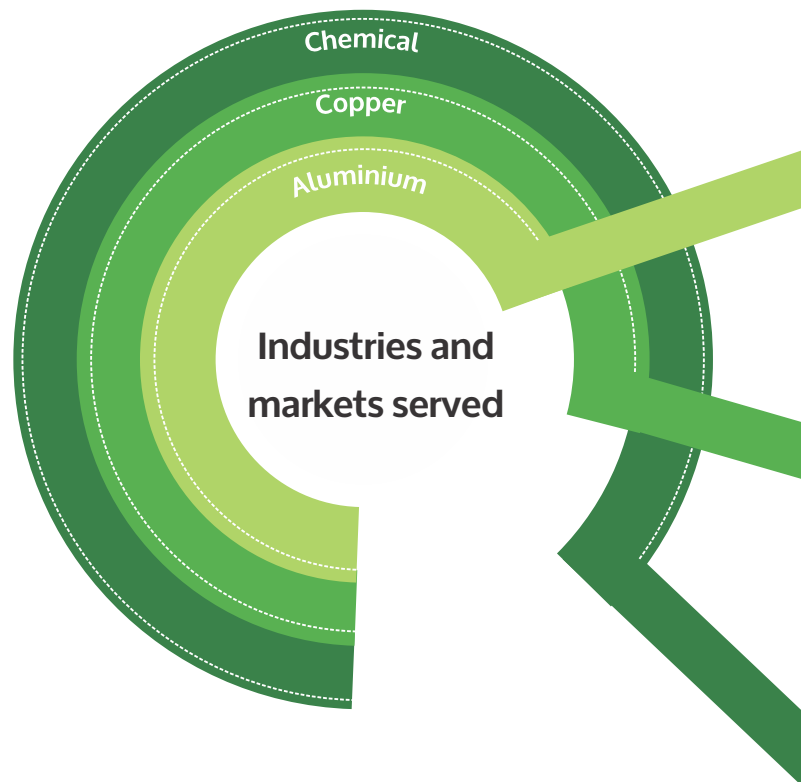
We are one of the major manufacturers in India for 19.6 mm diameter copper rod used for railway electrification. Our brands - Birla Copper and Birla Balwan have gained significant customer acceptance under the copper mainstream products and co-products segments.



Byproducts of Copper operations

Industries and markets served

Our products are used across the world in several industries ranging from automobiles to packaging and pharmaceuticals as illustrated as below:



Listing on Exchanges

We are listed on the Bombay Stock Exchange, the National Stock Exchange of India Limited and Luxembourg Stock Exchange. Our aluminium is accepted under the "High-Grade Aluminium Contract" at London Metal Exchange (LME) and the copper produced is registered as quality grade "A" accreditation at the LME.



- Automotive and transport
- Building and construction
- Defence
- Electricals and electronics
- Industrial applications
- Pharmaceuticals and packaging
- White Goods



- Agrochemicals
- Automotive and transport
- Consumer durables
- Electrical equipment
- Railways
- Wire and cable industry



- Ceramics
- Refractories


Stakeholder Engagement and Materiality Analysis

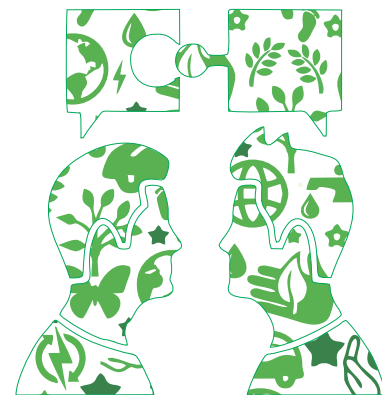
Stakeholder Engagement




Engagement with our stakeholders offers us an opportunity to understand their expectations, address their concerns and helps us in prioritizing our focus areas.

Our stakeholder engagement mechanism is guided by our group level policy. The concerns and feedback received across economic, environmental and social aspects are reviewed by our top management in the monthly meetings and necessary plan of actions are formulated based on the same.





The details of the stakeholder engagement process are presented in the table as follows:

Stakeholder Group	Engagement Mechanism	Frequency of Engagement	Stakeholder expectations	Our approach
Employees 	<ul style="list-style-type: none"> Emails and Meetings Intranet Portals (Hi) Employee Satisfaction Surveys Training Programs Performance appraisal reviews Grievance Redressal Mechanisms 	Continuous	Fair wages and Rewards Job security Work life Balance Training & Skill development Career Growth Occupational Health and Safety Transparent Communication	<ul style="list-style-type: none"> 100% compliant in terms of payment of minimum wages. 68.87% of the total workforce is covered under the provision of collective bargaining Wellness 2.0 - program for developing emotional wellness. A world of opportunities (AWOO) campaign for employees and their families. Training need identification. Gyanodaya - leadership centre for training senior management. Behavioural competency program. Life enhancement program. Opportunities for technical learning through Hindalco Technical University. 'Poornata' - employee performance management system and also involved performance goals and target setting. 'My development plan' program for each employee. Implemented 19 safety standards aligned with industry best international standards. Behaviour based safety and contractor safety management programme. Health and Safety management system at all operating locations. Road and driving safety guidelines to all employees. Sufficient notice regarding changes in operations to management, staff and other employees.



Stakeholder Group	Engagement Mechanism	Frequency of Engagement	Stakeholder expectations	Our approach
 Customers	<ul style="list-style-type: none"> Emails and Meetings Customer Satisfaction Surveys Grievance Redressal Mechanisms 	Continuous	Timely Delivery Quality Pricing Post-sales Support Product related certifications EHS Management Systems	<ul style="list-style-type: none"> Net Promoter Score model - Combination of top down and Bottom up approach Aluminium and copper manufactured as per London Metal Exchange specifications. Aluminium foils used for Li-ion batteries tested by ISRO and ARAI. Health and Safety management system at major operating locations.
 Suppliers	<ul style="list-style-type: none"> Emails and Meetings Vendor Assessment & Review Supplier Audits Signed Contracts Training Workshops and Seminars Social Gatherings 	Continuous	Timely Payment Continuity of orders Capacity Building Transparency	<ul style="list-style-type: none"> Supply chain and Procurement Policy. Supplier risk management process. Supplier Code of Conduct.
 Communities	<ul style="list-style-type: none"> Training & Workshops Regular Meetings Need Assessment & Satisfaction Surveys CSR Reports 	Continuous	Local Employment Environmental pollution control Infrastructure development Training & Livelihood programs Participation in social services	<ul style="list-style-type: none"> Capacity building programme of the rural youth through computer education Achieved ZLD status in 11 plants Energy efficient operations Water risk assessment Assistance in development and construction of village approach roads, check dams, bus stops etc. Skill development programme on tailoring and beautician for women Organized dowry-less marriages Distribution of blankets to orphanage and old age homes Conducted social awareness camps

UNDERSTANDING EXPECTATIONS, ADDRESSING CONCERNS AND PRIORITIZING OUR FOCUS AREAS ACROSS ECONOMIC, ENVIRONMENTAL AND SOCIAL ASPECTS IS THE PRIMARY AIM OF STAKEHOLDER ENGAGEMENT

Stakeholder Group	Engagement Mechanism	Frequency of Engagement	Stakeholder expectations	Our approach
Investors and shareholders 	<ul style="list-style-type: none"> Board Meetings Annual Reports Website 	Quarterly	Sustainable Growth & Returns Market share Operational performance Risk Management Corporate governance	<ul style="list-style-type: none"> Stable operational performance. Focus on cost reduction. Focus on value added products. Enterprise Risk Management. Structured governance approach. Committees of Board of Directors. Hindalco Management Framework.
Government and regulatory bodies 	<ul style="list-style-type: none"> Annual Reports Communication with regulatory bodies Formal Dialogues 	As per requirement and at least once a year	Tax and royalties Compliance to laws & regulations Employment Pollution prevention Local economy growth	<ul style="list-style-type: none"> Regular payment of all the applicable taxes and royalties. Compliance with all the applicable regulatory requirement. Equal opportunity employer. Skill development and training. Emission reduction initiatives. Adoption of renewable energy. Installation of pollution control devices. Adherence to norms and standards of Central/State Pollution Control Boards. Preference to local vendors / suppliers and employment of local people. Community stewardship initiatives.
Media 	<ul style="list-style-type: none"> Social Media Press Releases Interviews Website 	As per requirement	Community relations	<ul style="list-style-type: none"> Community stewardship initiatives.
Industry associations 	<ul style="list-style-type: none"> Meetings 	As per requirement	Regulations, compliance with industry standards	<ul style="list-style-type: none"> Adherence to norms and standards of Central/State Pollution Control Boards.

Materiality Assessment

We have identified material topics as an outcome of the stakeholder engagement process. During the process, stakeholders provide their feedbacks and highlight the topics that are of importance to them. In addition to this, we prioritize material topics by consulting with our senior management in view of the business objective and market scenario. Inputs received from senior management and stakeholders are used to map topics in the order of their importance to respective stakeholder groups.

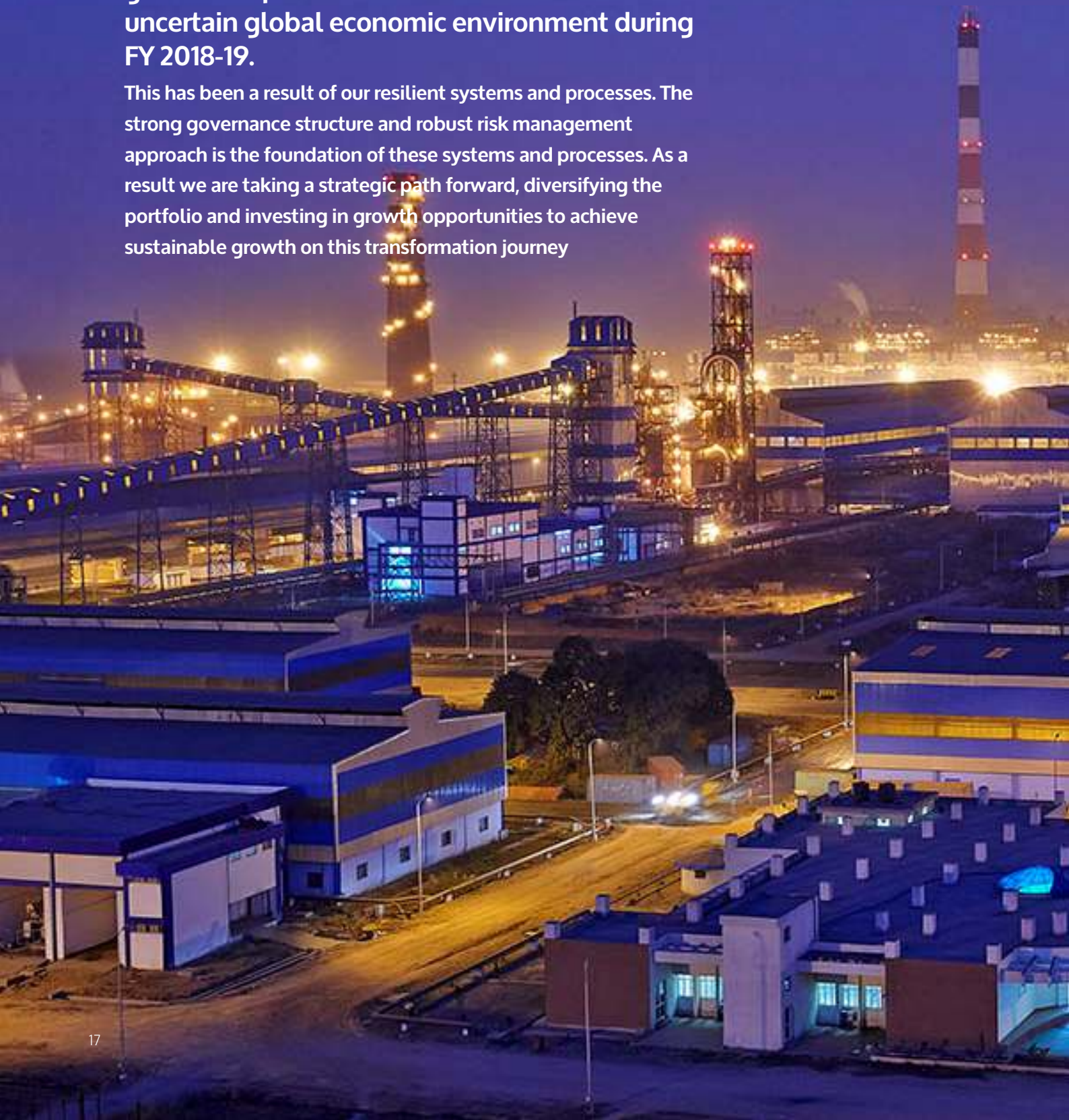
A detailed materiality assessment exercise was carried out during the previous reporting cycle. The process followed for the same is provided in our Sustainability Report for FY 2017-18. Results of this assessment exercise were reviewed by our senior management from the point of view of relevance and adequacy and based on the review, materiality topics finalized for FY 2018-19 are represented in the table below:



Resilient

We are proud to have achieved a sustained growth despite intensified trade wars and uncertain global economic environment during FY 2018-19.

This has been a result of our resilient systems and processes. The strong governance structure and robust risk management approach is the foundation of these systems and processes. As a result we are taking a strategic path forward, diversifying the portfolio and investing in growth opportunities to achieve sustainable growth on this transformation journey





Aditya Aluminium- Lapanga

Message from the Chief Financial Officer and CEO (Copper Business)



OUR PERSISTENT FOCUS ON SUSTAINABILITY AND OPERATIONAL EXCELLENCE HAS RESULTED IN IMPROVED RESOURCE SECURITY THUS ENABLING US TO FACE MARKET VOLATILITY AND EXPAND OUR MARKET PRESENCE

In our endeavour to become a leading metals company, we have always balanced our economic growth with environmental and social interests. A part of this balanced approach is our focus on innovation and resource efficiency, helping us to develop products and applications that maximise recycling and minimise resource extraction. This is coupled by increasing the use of recycled input materials which reduces stress on the environment and operational costs at the same time. Our persistent focus on sustainability and operational excellence has resulted in improved resource security thus enabling us to face market volatility and expand our market presence. As a result of our efforts, we have been able to maintain consistent performance during FY 2018-19 despite a volatile business environment. Our focus on value added products have helped us achieve greater profitability.

Excellence in operational efficiency and sustainability performance is achieved by following a unique approach in line with the Hindalco Management Framework (HMF), which is an effort to standardize processes suitable for our business environment. In order to ensure effective implementation of the framework and processes, we have a robust internal control mechanism in place. This has led to a culture of enhancing stakeholders' value and safeguarding the company's assets. All these systems and processes enable us to confidently transform ourselves towards a Resilient, Responsible and Reliable future.

Praveen Kumar Maheshwari

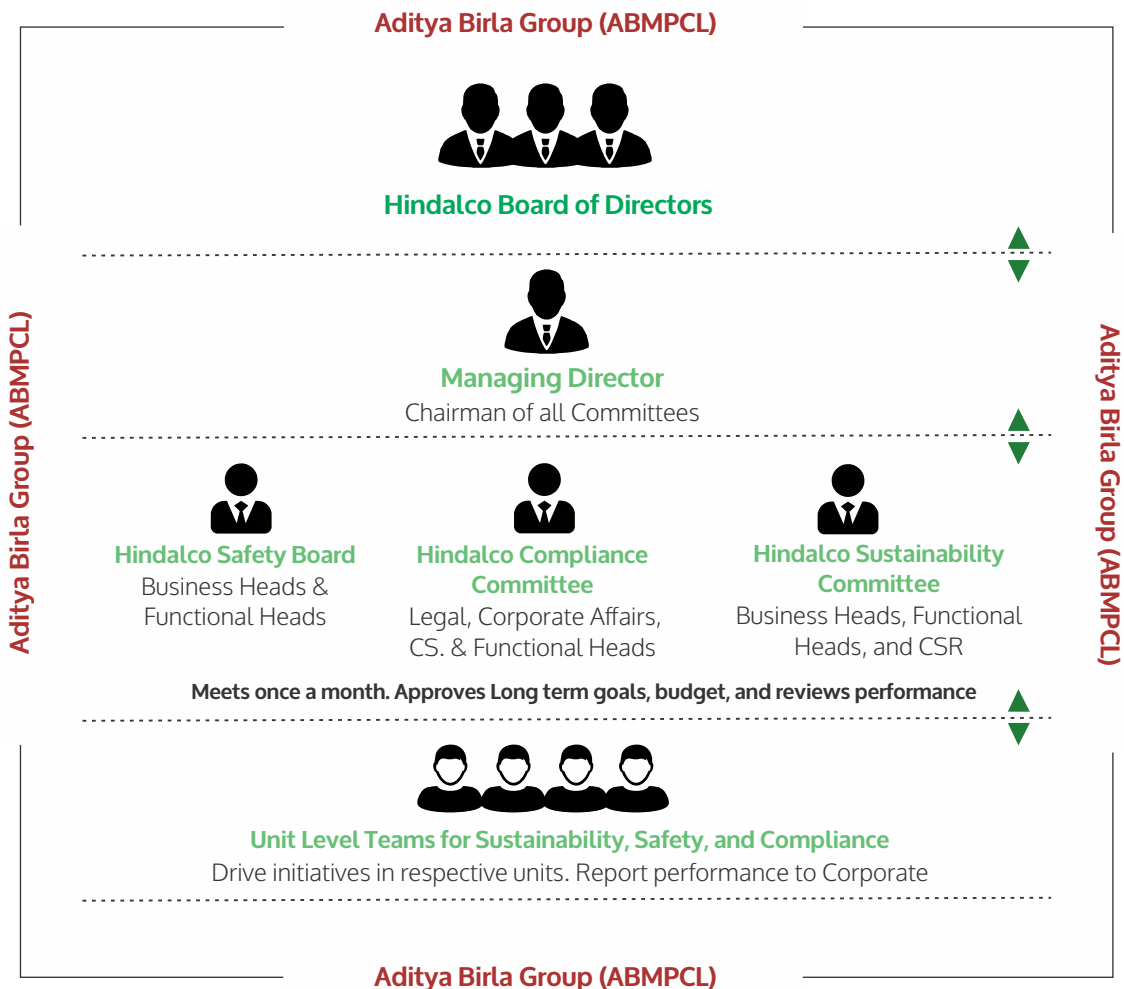
Chief Financial Officer and CEO (Copper Business)

Corporate Governance

Being a part of the Aditya Birla Group, we are committed to adopt the best governance practices and its adherence in the true spirit at all times. Our governance philosophy rests on five basic tenets viz., Board accountability to the Company and the shareholders, strategic guidance and effective monitoring by the Board, protection of minority interests and rights, equitable treatment of all shareholders as well as full transparency and timely disclosure.

Our governance structure and practices are designed to have the processes and internal controls enabling us to become more resilient and compliant with all relevant guidelines. Our governance approach showcases the level of commitment and responsibility across the organizational hierarchy ranging from our Board of Directors to the workmen at our operating locations.

Governance Framework



Board of Directors

As on 31st March 2019, our Board comprised of 10 non-executive directors of which 6 were independent directors. The Board is chaired by Mr. Kumar Mangalam Birla and met 7 times during the reporting period. Our Board members are proficient in and have sound knowledge of the economic, environmental and social domains that impact our business.

Name of Director	Nature	Category
Kumar Mangalam Birla	Non-Executive	Chairman, Non-Independent Director
Rajashree Birla	Non-Executive	Non-Independent Director
A. K. Agarwala	Non-Executive	Non-Independent Director
D. Bhattacharya	Non-Executive	Non-Independent Director
M. M. Bhagat	Non-Executive	Independent Director
K. N. Bhandari	Non-Executive	Independent Director
Ram Charan	Non-Executive	Independent Director
Y. P. Dandiwala	Non-Executive	Independent Director
Girish Dave	Non-Executive	Independent Director
Satish Pai	Executive	Managing Director
Praveen Kumar Maheshwari	Executive	Chief Financial Officer & Whole time Director
Alka Bharucha	Non-Executive	Independent Director

Our Board plays an important role in strategic supervision, ensuring good governance and functioning of the Company. All the statutory and materially significant information is presented to the Board for review and strategic inputs.

The annual performance evaluation of the Board and other key managerial personnel is carried out by the Directors, in accordance with the Companies Act, 2013 and Listing Regulations as issued by SEBI. Further details on performance evaluation and its outcomes have been delineated in our annual report for FY 2018-19.

Committees of the Board of Directors

Based on the level and nature of responsibility, the Board has constituted three types of committees - Committees of the Board of Directors, Business Committees and Executive Committees. All observations, decisions and recommendations are placed before the Board for information or their approval by the committees through the governance framework.



The CSR committee recommends activities and expenditure to be incurred aligned with Schedule VII of the Companies Act, 2013 to the Board. It oversees the progress of CSR initiatives taken up by the company from time to time. The composition of CSR committee as on 31st March 2019 is as follows:

- Mrs. Rajashree Birla, Chairperson, Aditya Birla Centre for Community Initiatives and Rural Development.
- Mr. Satish Pai, Managing Director, Hindalco
- Mr. D. Bhattacharya

- Mr. Askaran Agarwala
- Mr. Y. P. Dandiwala, Independent Director
- Dr. (Mrs.) Pragnya Ram, (Permanent Invitee)
- Mr. Anil Malik, Secretary to the Committee

Our sustainability committee is a part of business committees and is tasked with overseeing our sustainability performance. The committee recommends the approval of Sustainability Report and Business Responsibility Report (BRR) which is a part of our Annual Report to the Board. The Board and senior management is periodically acquainted to varied economic, environmental and social topics through discussions and presentations from our sustainability department.

The Apex Safety Board (ASB) reviews safety performance of all of our units on a monthly basis and suggests necessary interventions to business heads and cluster heads to mitigate safety risks. Apart from this, the Environmental, Occupational Health & Safety committee seeks inputs from shop floor regarding the safe operational conditions and provide relevant inputs in monthly safety meetings.

The Nomination and Remuneration Committee approves the Board's appointment and remuneration as per guidelines laid down in our Remuneration Policy. Apart from this, we safeguard whistle-blowers through our Value Standards Committee (VSC), wherein the whistle blower may raise their concerns with reference to the violation of Code of Conduct.

Details pertaining to other committees to the Board are outlined in our Annual Report for FY 2018-19.



AS PART OF THE GOVERNANCE APPROACH, ALL OUR INTERNAL STAKEHOLDERS ARE REQUIRED TO FOLLOW THE CODE OF CONDUCT BASED ON THE CORE VALUES OF INTEGRITY, COMMITMENT, PASSION, SEAMLESSNESS AND SPEED.

Code of Conduct

The Code of Conduct (CoC) as adopted by the Board is applicable to all Directors, Senior Management, and Employees. The CoC is communicated to relevant stakeholders through respective communication channels and is available on www.hindalco.com/investorcentre/code-of-conduct. As part of the governance approach, all our internal stakeholders are required to follow the Code of Conduct based on the Core Values of Integrity, Commitment, Passion, Seamlessness and Speed. All our Directors, senior management and employees have confirmed their adherence to the CoC for the reporting period. During the reporting period, we did not receive any complaints on violation of the CoC. Also, there were no complaints or

legal action voiced against us for anti-competitive behaviour and violations of anti-trust legislations. As part of our corporate governance structure and the CoC, we have placed necessary safeguards to avoid any conflict of interest. As per regulatory requirements, we maintain necessary registers for recording interests of all Directors with reference to conflicts of interest. In addition to this, the management is also required to confirm that they have not entered into any material transaction that could have potential conflict of interest to our business. Any incident of conflict of interest is brought to the notice of management as per the provisions of CoC.

During the reporting period, no non-compliance or, penalties have been imposed on the Company by Stock Exchange (s) or SEBI or any statutory authority on matters related to capital markets. We haven't received any complaints regarding breaches of customer privacy or loss of customer data either. During the reporting period, no significant fines, penalties, or non-monetary sanctions were imposed for non-compliance with environmental and socio-economic laws and regulations.





Management Systems

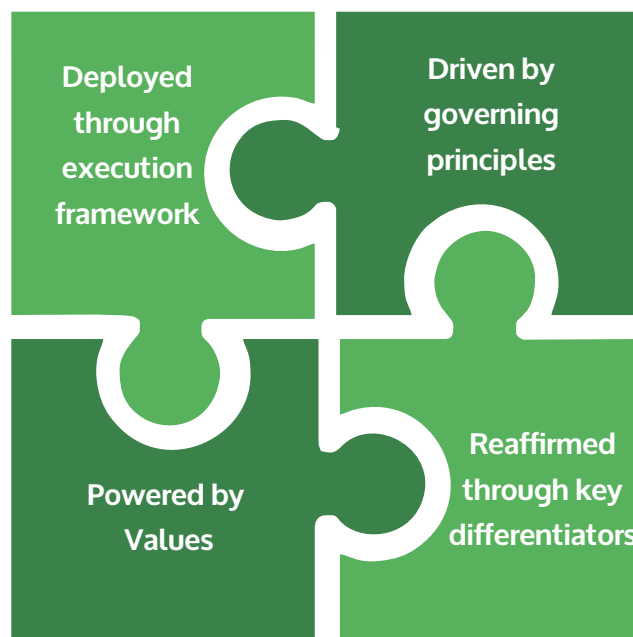
We have institutionalized a management framework termed as Hindalco Management Framework (HMF). Our management framework is in alignment with the Aditya Birla Group Values and is steered by the CoC. It consists of essential functions and controls encompassing all the performance aspects. The framework plays an important role in helping us adhere to compliances and maximize the potential for continuous improvement.

Sustainability framework

Our sustainability framework outlines a strategic commitment to a Greener, Stronger and Smarter tomorrow. Three pillars of - responsible stewardship, strategic stakeholder engagement and future proofing form the basis of our sustainability framework. The framework helps us in developing our systems and processes with a focus on a resilient future. As a part of these commitments, we have management systems and controls in place towards key sustainability areas.

Further, we have developed policies that help us to migrate from simple legal compliances to align our practices with international standards and to further achieve the best industry practices. These policies include:

- CSR Policy;
- Environmental Policy;
- Energy and Carbon Policy;
- Safety and Occupational Health Policy;
- Governance and Compliance Policy;
- People Policy;
- Technology Policy;
- Information Technology Policy;
- Quality Policy;
- Sustainability Policy;
- Policy on Prevention, Prohibition, and Redressal of Sexual Harassment at the workplace.



Hindalco Management Framework (HMF)

Key Industry and Trade Associations

We are associated with following industry and trade associations that provide platform for discussing various industry related issues and possible solutions for the same:

- Aluminium Association of India
- Confederation of Indian Industry
- Federation of Indian Chambers of Commerce & Industry
- Maharashtra Chamber of Commerce, Industry & Agriculture
- Automotive Research Association of India
- Indian Electrical and Electronics Manufacturers Association
- Primary Copper Producers Association
- International Copper Association of India
- Indian Copper Development Centre
- Winding Wire Association

Message from Chief Risk Officer



THE ENTERPRISE RISK MANAGEMENT HELPS US TO STRENGTHEN OUR COMMITMENT TO BEING A RESPONSIBLE ENTERPRISE BY ADOPTING A HOLISTIC APPROACH TO RISK MANAGEMENT.

As one of the largest non-ferrous metals companies in the country, we focus on continuous identification and management of risks to our business. This helps us to strengthen our risk management system and to move towards a resilient future. We understand the impact of climate change and environmental risks on the business and are taking conscious steps to reduce our exposure to these risks. The Enterprise Risk Management (ERM) framework helps us to track and manage such risks in addition to other business risks. The ERM further helps us to strengthen our commitment to being a responsible enterprise by adopting a holistic approach to risk management.

Anil Mathew

Chief Risk Officer

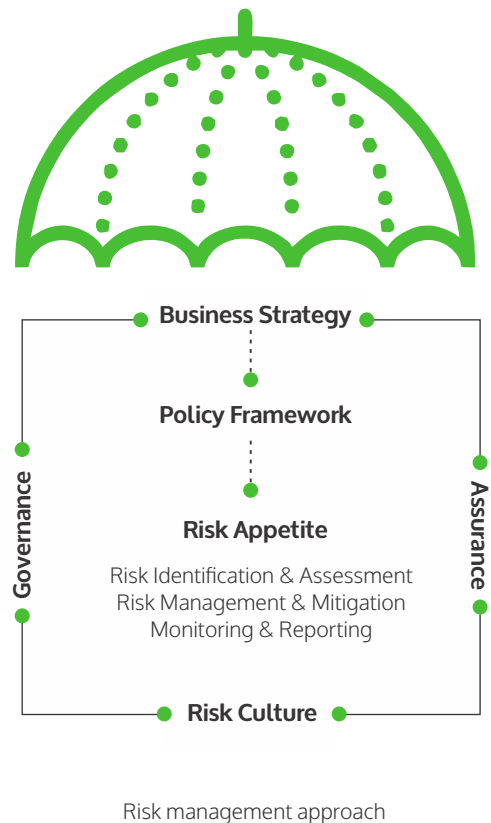
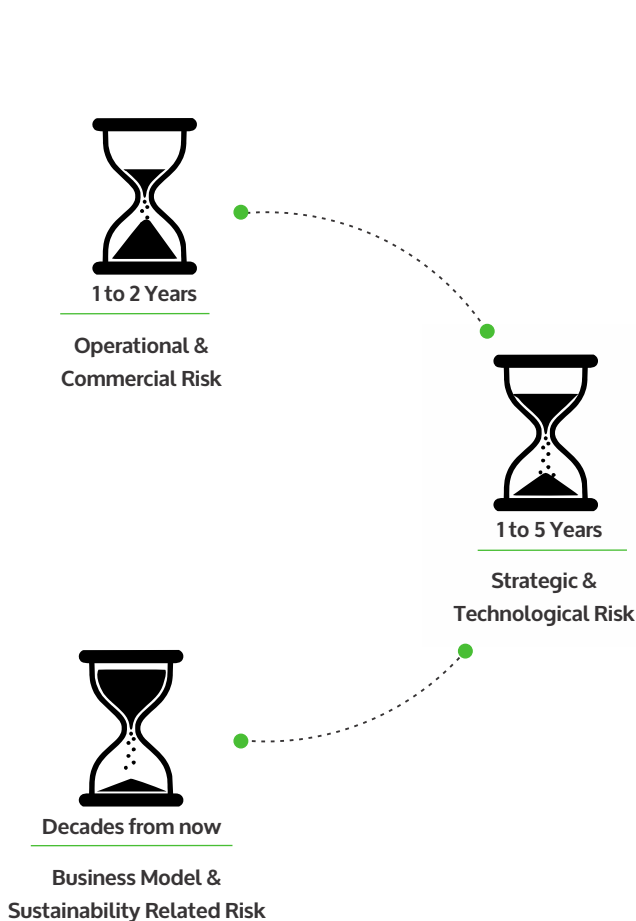
Risk Management Framework



We believe risk management is of vital importance for our massive operations spread across various geographies. Our risk management process includes our comprehensive risk management policy that lays the foundation of our risk management approach. This approach is devised in a way to be able to anticipate all plausible uncertainties and threats. It also encompasses key operational areas such as mining operations, energy management, resource procurement, waste disposal, safety practices, and community development etc.

Some of the major types of risks which have been identified in our business operations are mentioned below:

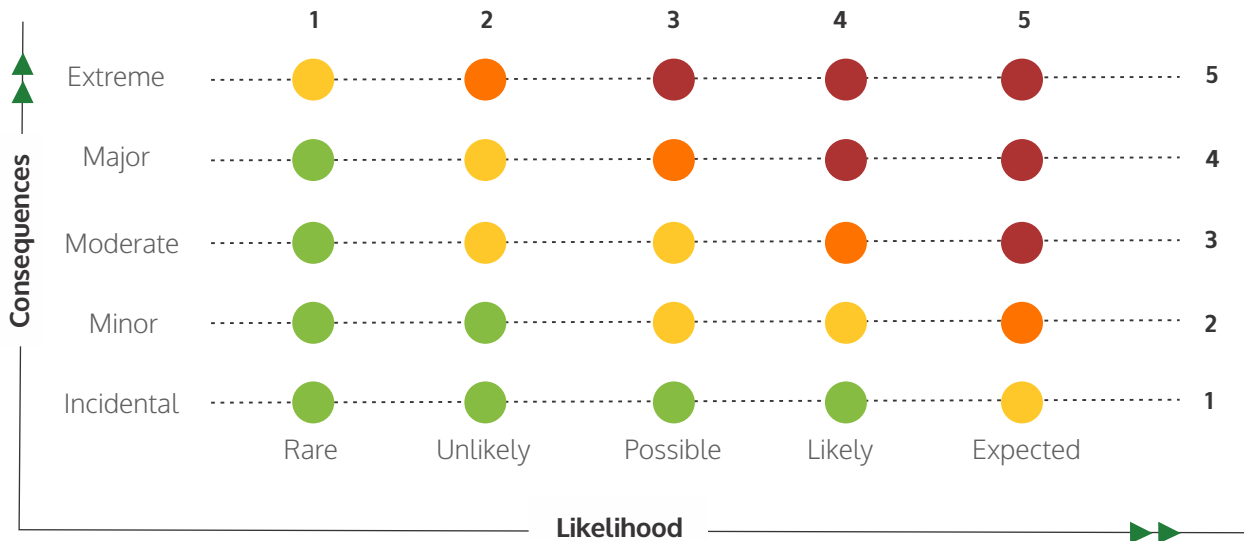
Our risk management approach consists of three steps - risk Identification and assessment; risk management and mitigation; and monitoring and reporting. Risks are identified based on a scenario, sector specific analysis, strategic lens and risk intelligence. These risks are documented in the form of risk registers. Based on the risk identification and severity of risks, mitigation strategies are developed considering short term and long term impact of the organisation's performance. Regular monitoring and review of these risks enable us to analyse the changes in a business ecosystem, evaluate assumptions underlying the existing business model, effectiveness of the strategies and identify alternative future scenarios.



We also understand that considering only monetary implication of any risk event is not enough; hence in our assessment we also consider regulatory & reputational aspects. This helps us in prioritising as the Company determines immediate and long term remedial measures.

Transparency and objectivity act as the cornerstone of our risk monitoring and reporting. This assists management to

undertake very precise and effective steps enhancing the viability of business across the board. The underlying philosophy of our risk management framework is 'Plan, Be Prepared and Prevent'; this is culminated in a disciplined and proactive approach towards managing risks. The risk reporting tool helps us understand the risk magnitude based on the consequences and likelihood of identified risks.



Snapshot of risk reporting tool



Preventing measures

Avoid occurrence of risk events

Responding measures

Minimize ramification of risk events

Crisis management

Recover in quick enough time

An important part of our risk management efforts is to sustain rigor anchored with the robust risk management culture in the whole process. To ensure this, we have built culture and risk management capabilities across the ranks. Risk management activities are carried out and sustained at various levels like the corporate, business units and plants. There is constant augmentation of risk management capabilities amongst employees through participation in identification, mitigation planning, execution and reporting.

Despite all such efforts, we acknowledge that it is not always possible to anticipate & prevent risk events. It is of equal importance to invest in developing risk response capabilities of the organization. Business teams across plants and functions have prepared Emergency response plans, Crisis Management action plans and Business continuity strategies to respond to any untoward incidents.

A ROBUST RISK GOVERNANCE ENSURES THAT ALL COMMITTED ACTIONS ARE PROGRESSING WELL AND TIMELY COURSE CORRECTIONS ARE TAKEN AS REQUIRED.

During the reporting period, we faced challenges due to the trade war between China and US. The imposition of massive tariffs on Chinese products by the US created a space for Chinese manufacturers to export their downstream products to India at significantly low costs. We sensed this as an emerging risk affecting our domestic markets and International markets as well. To mitigate this risk, we undertook several operational changes and focused on value-added products. We also raised this challenge while working with industry associations to prevent dumping of foreign products and implementation of fair trade in India. Apart from this risk, the trade politics, duties and free trade agreements (FTAs) are identified as emerging risks for copper business.

The estimated domestic demand of refined copper is well within the production capacity of domestic primary producers however, about a third of the domestic consumption is imported as it is an economic alternative for customers. The imports are primarily from the FTA countries (majority through ASEAN FTA). To mitigate this risk, we strategize our sourcing to get maximum cost benefits. In addition to this, we participate in representations made to various external Government Agencies on industry specific and FTA related issues.

Hedging helps us in minimising the risk due to price fluctuations. The copper Prices are governed by prices prevailing on London Metal Exchange (LME) bourse from time to time. The buying and selling side prices are hedged by us thereby becoming neutral to the LME price fluctuations.

The risk management approach also helps us to identify risks due to climate change. So far we have identified risks related to water availability, extreme weather events, land use patterns and land availability as few risks due to climate change. These risks are part of our risk register and required

mitigation plans are in place to minimise impacts due to risks related to climate change.

There are clearly defined roles across the ranks and span of the organisation. A robust risk governance as such established ensures that all committed actions are progressing well and timely course corrections are taken as required.

The risk management framework is reviewed on a periodic basis by the senior management through the risk management committee. Additionally, there are site level risk leadership teams helping us understand relevant operational challenges. These committees along with the risk management committee at the apex level constitutes a robust risk review framework.

Economic Stewardship



The resilient performance of our business reflects the strength of our integrated business model, excellent operational capabilities and diversified product portfolio. Our focus towards developing innovative products and a customer centric approach have helped us to deliver improved economic performance despite dynamic market demands.

Our approach to economic stewardship is focused on creating value for communities where we operate. Our operations and related economic activities form an important source of employment and livelihood for surrounding communities, enabling an improved quality of life for them. In view of this, we contribute directly and indirectly to the local and regional economy by providing fair paying employment opportunities, local procurement wherever possible, regular payment of statutory taxes and by investing in community infrastructure. This however, is based on various factors including the nature of our

operations, business environment, customer preferences and regulatory requirements.

During the reporting period, we were able to achieve the highest ever consolidated profits with revenue from India operations reaching INR 45,908 crore - an increase of more than 5% over the previous year. We recorded an EBITDA of INR 7,532 crore - an increase of 5% as compared to previous year, on account of stable operational performance. As a result of stringent cost control and lower interest costs, our PAT stood at INR 2,678 crore - a 22% year on year increase.

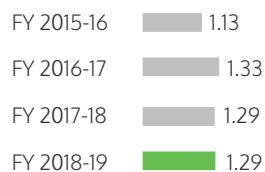
While our aluminium business showcased a steady performance during the reporting period, the copper business was impacted by lower sales due to the planned maintenance shutdown of our copper unit for a couple of months. The financial performance highlights of aluminium and copper businesses are provided in the table below:

India Operations (Hindalco standalone and Utkal)	Aluminium (including Utkal)			Copper		
	FY 2017-18	FY 2018-19	% change	FY 2017-18	FY 2018-19	% change
Revenue from operations (INR crore)	21,089	23,775	13%	22,382	22,155	-1%
Segment EBITDA (INR crore)	4,790	5,202	9%	1,539	1,469	-5%

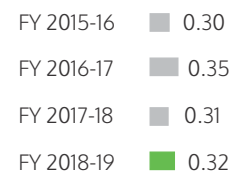
While production of alumina and primary aluminium remained stable during this year, our focus on downstream operations showcased encouraging results with a 13% increase in aluminium value added product volumes. The production trend of our aluminium products is indicated in the graphs below:



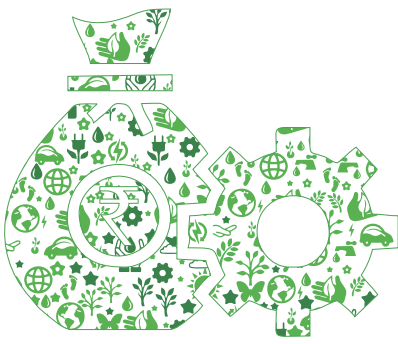
Alumina (Million MT)



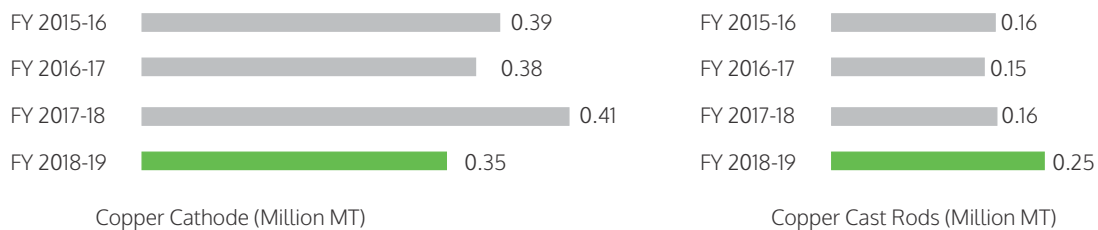
Aluminium (Million MT)



Aluminium Value Added Products
Excluding wire rods (Million MT)



In the copper business, we achieved an increased share of value added products with an increase of 43.75% as compared to the previous year on account of the ramping up of CCR-3. The copper cathode production however, was impacted due to a planned maintenance shutdown for about two months. The three year production trend of the copper business is indicated in graphs below:



On account of the operational performance, we have generated significant value for our stakeholders. Details of the economic value generated, distributed and retained during the reporting period is provided in tables below:

	Hindalco India- Aluminium	Hindalco India- Copper	Hindalco India- Corporate	Utkal Alumina International Ltd.
Economic value generated (INR crores)				
Net Sales by business	23,610.89	22,138.27	-	4,073.00
Revenue from financial instruments	37.99	91.81	835.77	117.06
Revenue from sale of assets	(13.64)	(10.02)	(1.88)	-
Total generated	23,635.24	22,220.06	833.89	4,190.06
Economic value distributed (INR crores)				
Operating Costs	19,114.11	20,624.16	(234.44)	1,772.70
Employee Wages and Benefits	1,641.15	143.81	196.76	62.11
Payments to providers of capital	911.59	143.26	628.19	277.64
Payments to government	-	-	605.01	351.53
Community investments	0.84	-	16.16	-
Depreciation and Other Exceptional Income	1,503.29	167.92	21.95	300.98
Total Distributed	23,170.99	21,079.15	1,233.63	2,764.96
Economic Value retained (INR crores)				
Total Retained	464.25	1,140.91	(399.74)	1,425.10



We interface with the government as part of our various business activities. We regularly pay required taxes and also receive benefits on account of various government schemes and policies. The table below represents the significant financial assistance received from the government during the reporting period:

Significant financial assistance from government Subsidies	Hindalco India – Aluminium (INR crore)	Hindalco India – Copper (INR crore)
a) Export	322.24	0.84
b) Domestic	36.72	-

Being a responsible organization, we provide benefits to our employees like medical benefits, post retirement and provision for liabilities towards earned leaves. For managerial employees, a certain percentage of their remuneration is contributed towards the superannuation fund like the national pension scheme. We also contribute towards the provident fund through Government and approved trusts. The table below represents our spending related to defined benefit plan obligations and other retirement plans:

Defined Benefit Plan Obligations	Hindalco - India - Corporate (INR crore)	Utkal Alumina International Ltd. (INR crore)
Present value of Defined Benefit Obligations at the beginning of the year	895.24	6.92
Current Service Cost	56.99	1.06
Interest Cost	65.49	0.51
Actuarial (Gain) or Loss	(5.79)	(0.58)
Benefits paid	(50.15)	(0.17)
Present value of Defined Benefit Obligations at the end of the year	961.78	7.74



Birla Centurion- Mumbai

Responsible

We recognize the importance of conducting business in a responsible manner from environment and social perspective.

We are committed to establish healthy and safe workplace, minimize our environmental footprints and undertake community development interventions for the betterment of the society.



Flat Rolled Products line- Mouda

Message from Head - Manufacturing Centre of Excellence



OUR COMPREHENSIVE SUSTAINABILITY FRAMEWORK, INCLUDING THE IMPLEMENTATION OF AN ENVIRONMENT MANAGEMENT SYSTEM AT ALL OUR LOCATIONS, HAS BEEN CRITICAL TOWARDS ENSURING THIS VISION.

At Hindalco, our way of ensuring relevance is through our continued commitment to evolve. Being one of the largest non-ferrous metal companies, our focus is to achieve operational excellence while minimising resource use and being accountable to the environment and society. Our primary products - aluminium and copper have minimum impact on the environment during their use. These metals have significant recycling potential, thus reducing stress on the environment each time they are recycled. Being lightweight in nature, our products have been instrumental in reducing the environmental footprint of various applications ranging from new generation automobiles to aerospace and bullet trains.

In the wake of imminent climate emergencies and stringent national and global commitments, our endeavours have therefore consistently been towards synchronizing our value chain. We have been on a journey of continuous improvement, so as to continue creating sustainable value for all our stakeholders. We have accordingly adopted various standards of sustainable performance in all our operations. Our comprehensive sustainability framework, including the implementation of an environment

management system at all our locations guides us to carry out our operations with excellence and agility in every aspect, thus ensuring quality, safety and long term sustainability.

The impact of our endeavours on our environment and society has been key towards driving our sustainability ambitions. Further, improving resource efficiency and innovation can drive our ambitions more efficiently. We have been successful at employing both in addition to a robust mechanism for monitoring and evaluation, so as to keep a check on the relevant parameters and KPIs on a regular basis.

This report is a part of our commitment to continue striving for a Resilient, Responsible and Reliable future and we believe our dedication will make us successful in fulfilling this commitment.

Bibhu Mishra

Head- Manufacturing Centre of Excellence



Copper Plant- Dahej

Message from Senior President, Mining and Minerals



WITH A COMMITMENT TO NOT TO OPERATE, EXPLORE, MINE OR DRILL IN ANY WORLD HERITAGE AREAS AND IUCN CATEGORY I-IV PROTECTED AREAS, WE TAKE STEPS TO PROTECT THE BIODIVERSITY AROUND OUR MINING OPERATIONS.

While conducting captive mining operation, we leverage the cutting edge technologies to minimize impact of our operations on the environment and the society. Furthermore, we foster a culture of promoting well-being of the communities in the areas we operate. This is achieved by our well rounded approach to sustainability involving sustainable mining practices, energy conservation, material recycling, environment friendly disposal of industrial wastes, safety practices and socio-economic development of the communities.

We are proud to be associated with Xynteo – a knowledge sharing platform involving multiple industries working towards developing solutions for sustainable environment. As part of Xynteo, we are associated with India specific programme titled “Xynteo India2022”. The programme is aligned with Niti Aayog's strategy for New India @75 and we are supporting the programme by developing solutions for sustainable mining practices.

With a commitment to not to operate, explore, mine or drill in any World Heritage areas and IUCN category I-IV protected areas, we take steps to protect the biodiversity around our mining operations. Accordingly, in collaboration with IUCN, we are carrying out biodiversity impact assessment of four of our operational locations. Through our efforts, we strive to preserve the integrity of the social-economic and natural ecosystems with technological and management capabilities.

Pramod Unde

Senior President, Mining and Minerals

Responsible Mining

Mining forms a significant part of our value chain. Our mines are located across four states in India – Jharkhand, Odisha, Chhattisgarh and Maharashtra. In these geographies, we have total 34 mines out of which 29 mines are operational. Out of these 29 operational mines, 25 are bauxite mines and 4 are coal mines. While we extract natural resources such as bauxite, coal etc. the metals produced as an outcome are transformed into end-products that contribute to the resilient and responsible economic growth of the nation. In doing so, we understand the consequences that mining operations have on the environment and society. This drives our focus on the preservation and restoration of ecosystems while carrying out mining operations in a responsible way.

34

Mines



4

Indian states



Our approach to responsible mining is defined by three key parameters viz., watershed management; mine design and plans; and monitoring parameters.

In view of this, we focus on reducing water consumption, rainwater harvesting, minimising land disturbance, preventing pollution and reclaiming land to an equivalent condition post closure. In addition to this we also focus on biodiversity management, proper rehabilitation and resettlement of the impacted communities

Watershed management

- Bunds
- Gully plugs
- Contours and terraces
- Rain water harvesting pond

Mine design and plans

- Systematic mine planning and material extraction
- Implementation of progressive and final mine closure plan

Monitoring parameters

- Ambient Air Quality
- Water Quality
- Noise level

SUSTAINABLE MINING WITH ADVANCED MINING EQUIPMENTS TO ENSURE MINIMUM DUST POLLUTION AND NOISE POLLUTION

We are working towards developing the best in class mining practices which can be recognised as a model for India's mining industry. Our sustainable mining approach involves specific goals in three key aspects - environment, community and business. This will help take us from meeting regulatory compliance to creating sustainable positive impacts. We further aim to enhance the resilience and prosperity of communities we operate in. These two goals are coupled with the business goal to leverage innovations to build profitable and responsible mining operations.

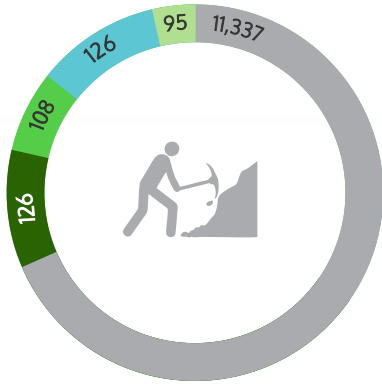
As one of the initiatives towards the sustainable mining program, we use advanced mining equipment such as surface miner and ripper dozer. These equipment carry out operations with minimum dust emissions and also reduce noise pollution by avoiding drilling and blasting. Use of these equipment also improves efficiency of operations by continuous and pre-crushed production. Out of about 8.7 million tons of bauxite that we extract annually, more than 50% is transported through ropeways and conveyors resulting in dust-free transportation. Also, during the reporting year, 2.17 million tons of coal was extracted from our operational coal mines. Further, as a step towards adoption of clean energy, we encourage the use of solar energy at our mine locations for ancillary purpose.

We take conscious steps towards the conservation of top soil during the excavation. The top soil is used in reclaimed area and plantation is done to prevent soil erosion. We further focus on water conservation and take rainwater harvesting initiatives in mining areas. Additionally, we avoid consumption of groundwater for our mining activity as a major part of the water requirement at mines is fulfilled through harvested rainwater.

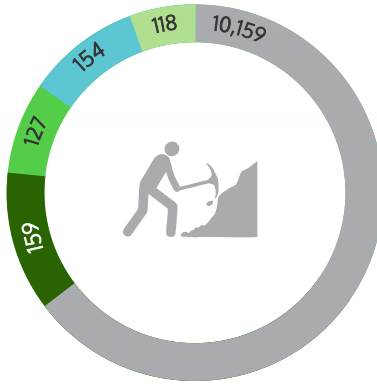
We are vigilant towards impacts of our mining operations on biodiversity. In order to gauge the impacts of our operations on biodiversity, we have collaborated with environmental experts to conduct biodiversity impact

assessment studies. Further, we carry out plantations at mining sites and in nearby villages on a regular basis and in a scientific manner. We also restore mined out areas with proper slope, drainage and plantations of native species. In addition to this, our volunteer task force continued to patrol forests and also aid the local forest departments for conservation of ecosystem. The responsibility to ensure sustainable mining operations lies with the environment management cell at the respective mine location. Till end of the reporting period, we operated about 414.80 ha of area that fall under the disturbed and not rehabilitated category. Further, our mining operations resulted in generating 23.39 million MT of the overburden.

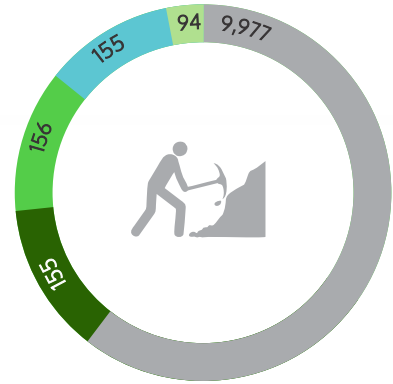




FY 2016-17



FY 2017-18



FY 2018-19

- Total mining area leased (operational) (Ha)
- Total area mined out (Ha)
- Total area reclaimed (Ha)
- Total area disturbed (Ha)
- Total area rehabilitated (Ha)

Mining Management



Bauxite Mines- Baphlimali

As a responsible organisation, we comply with all the applicable regulatory requirements related to our mining operations. During the reporting period, there was no incident of strikes, lock outs or, disputes related to land use or, customary rights of local communities and indigenous people observed at our mining operations. There were no Artisanal and Small-scale mining (ASM) operations conducted on or adjacent to our mining sites.

Our mining operations are reviewed periodically – internally as well as by external agencies. The Federation of Indian Mineral Industries (FIMI) conducts sustainability audits of our mines on a periodic basis. Along with these audits, internal audits are conducted on a regular basis. We take the cognizance of all the findings and recommendations from these audits and incorporate them to the best of our abilities.

Case Study: Biodiversity study at our manufacturing units and mines

We have a commitment to not operate, explore, mine or drill in any World Heritage areas and IUCN category I-IV protected areas. We have adopted the group level biodiversity policy wherein it is our constant endeavour to protect the biodiversity through application of mitigation hierarchy (avoid, minimize, restore & offset) when operating in areas with globally or nationally important biodiversity. Moreover, we strive for no net loss of biodiversity at our operated as well as owned sites having biodiversity risks.

We have signed a Memorandum of Understanding with the International Union for Conservation of Nature (IUCN) to conduct a biodiversity assessment at Gare Palma coal mines, Baphlimali bauxite mines, Utkal Alumina and Aditya Aluminium. The study is being conducted for four seasons viz. winter, summer, monsoon and post-monsoon. Winter season sampling is now complete at all the four locations.

In the winter survey at Gare Palma mine, 50 points were sampled for flora and fauna in core and buffer areas. A total of 87 species of birds, 53 species of butterflies, 2 species of frogs, 6 species of reptiles, 11 species of mammals and 147 species of wild plants were recorded within the study area. In addition to this, 27 species of ornamental plants from gardens and parks and 35 major and minor crop species from agricultural fields were also recorded.



Case Study: Xynteo India 2022

We have continued to be part of Xynteo – a Norway based environmental advisory spearheading platform for galvanizing leaders and catalysing ideas.

The Xynteo India2022 programme has a vision of developing a business model that demonstrates a fine balance between social and environmental factors, and sound economic considerations for the development of mining areas. Through this programme, we are collaborating with various industry leaders to develop solutions for a sustainable environment as well as healthcare.

The India2022 program is aligned with Niti Aayog's Strategy for New India @75 and supports initiatives for increasing forest cover, empowering local communities around mines, conserving biodiversity and increasing waste recycling.

As part of collaboration with other corporates, we have participated in the Swachhta curriculum and Swachhta doot campaign in collaboration with Hindustan Unilever. Both these campaigns extend the Government of India's Swaccha Bharat Mission and were run in the Raigarh district of Chhattisgarh state. As a part of the Swachhta curriculum, we have conducted training and behavioural change programmes for school children while Swachhta doot campaign was focused on creating awareness about cleanliness and sanitation across 12 villages near our mining community.

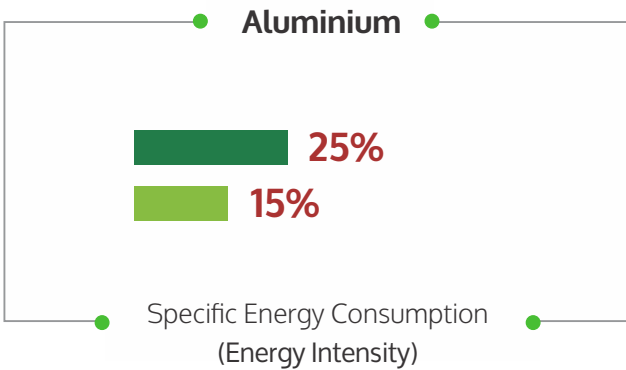
With a focus on mining safety, we have signed a MoU with Monash University to develop technology solutions for enhanced safety and operational efficiency in mining operations. We have also participated in a Pan-India programme for developing comprehensive guidelines for sustainable mining. This programme includes interviewing small and medium enterprises in the mining sector, global mining companies and industry bodies, to understand and evaluate the best practices.



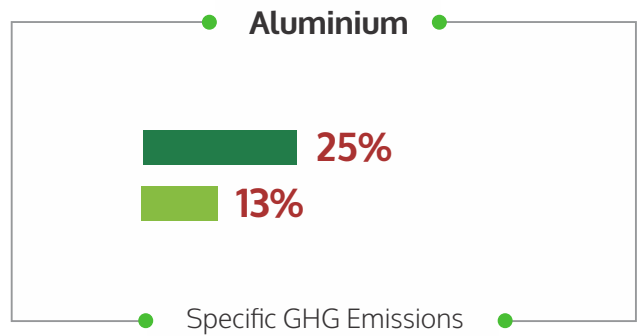
Environmental Stewardship

Performance highlights

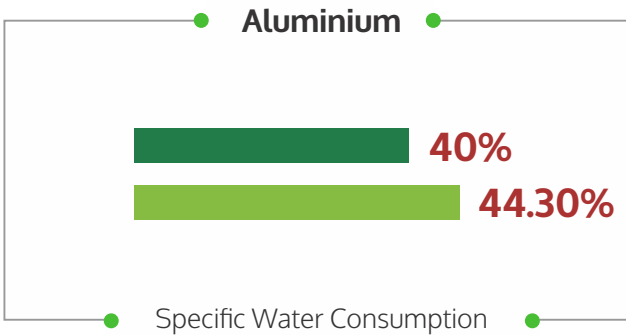
■ Target
 ■ Achieved
 ■ Achievement additional to the target



Base year: FY 2011-12 | Target year: FY 2024-25

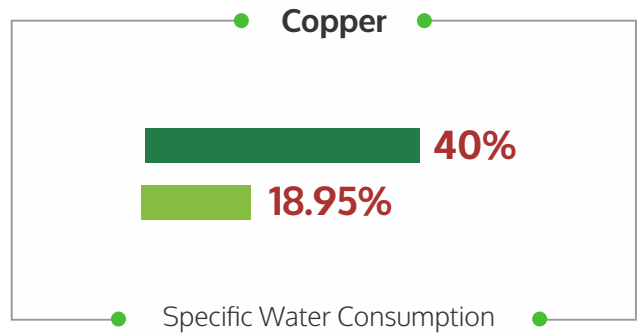


Base year: FY 2011-12 | Target year: FY 2024-25



Base year: FY 2011-12 | Target year: FY 2024-25

Additional target to achieve 5% reduction YoY upto 2021 is committed.



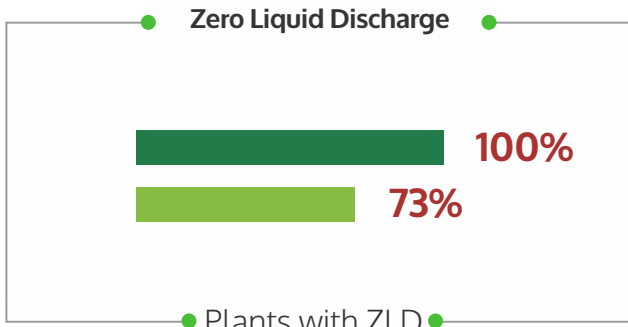
Base year: FY 2011-12 | Target year: FY 2024-25

14.42%

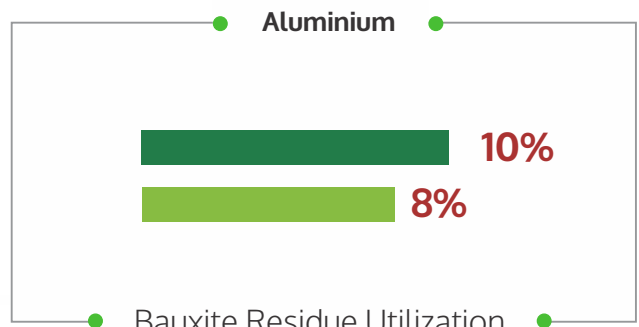
Percentage of recycled raw material (external scrap) as percentage of production in Copper business

GREEN COVER OF 3,980 ACRES

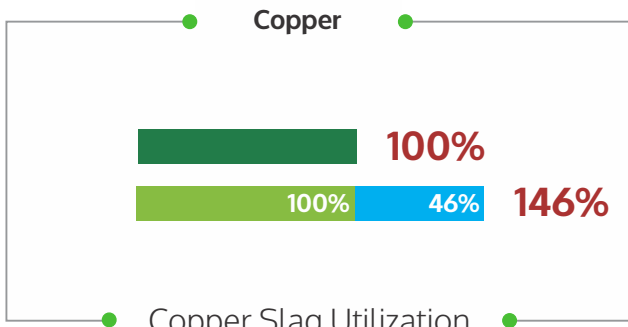
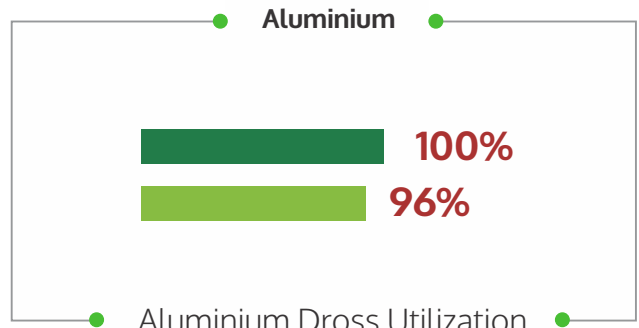
Achievement as on 31-Mar-2019



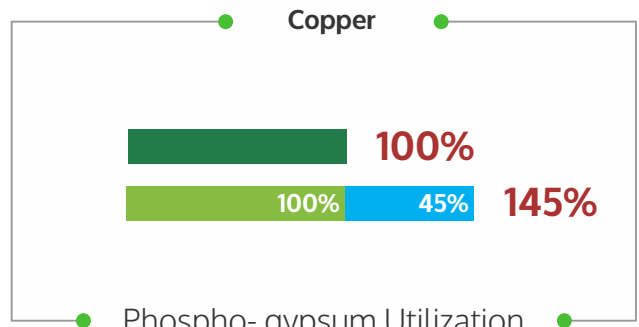
Target year: FY 2020-21



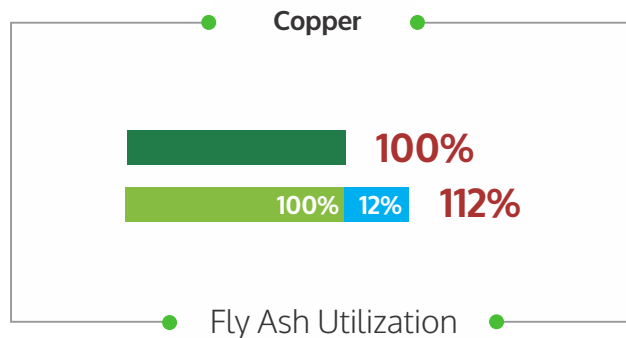
76% utilization for useful applications such as in construction industry, brick manufacturing, backfilling of low lying areas etc. and remaining disposed in responsible manner.



100% of copper slag is utilized in FY 2018-19, and 46% of previous years' slag has been utilized.



100% of Phospho-gypsum is utilized in FY 2018-19, and 45% of previous years' gypsum has been utilized.



100% of Fly Ash is utilized in FY 2018-19, and 12% of previous years' Fly Ash has been recycled and used.



We are committed to adopt the highest standards of environmental performance in our operations. In planning and implementing various activities, we focus on minimizing and remediating any impact on the environment.

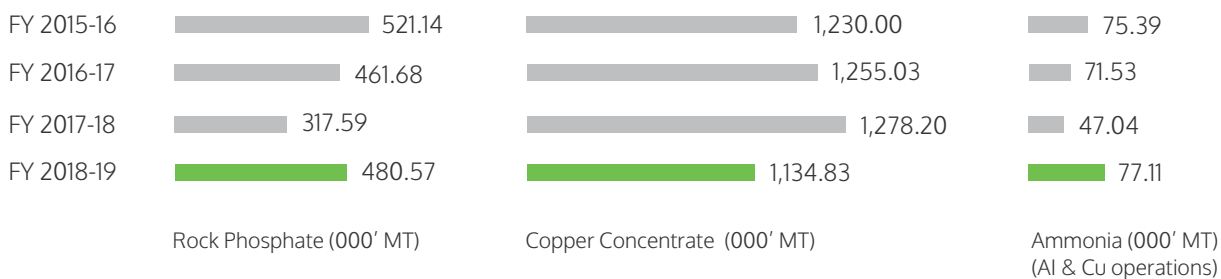
In order to better manage our environmental performance, we have implemented environment management system at all locations. All our operating units are certified to ISO 14001: 2015 Environment Management System Standards. We aim to ensure 100% compliance with all environmental regulatory requirements. The environmental performance at the company and unit levels is reviewed monthly by the Hindalco Sustainability Committee chaired by the Managing Director. This includes a review of progress against environmental KPIs.

Material Management

Material consumption

A majority of our input raw materials are non-renewable natural resources. Efficient consumption of these resources is not only a step towards environmental conservation, but for us, it's a business imperative. We follow a multi-dimensional approach of resource sustainability throughout our value chain.

On account of a planned maintenance shut down, some of our copper smelters were not in operation for a couple of months. As a result our copper concentrate consumption was lower as compared to the previous year. The following graphs indicate details of raw materials consumed as part of our copper operations:

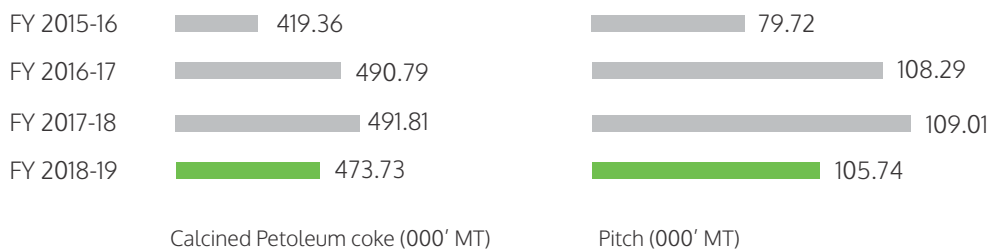
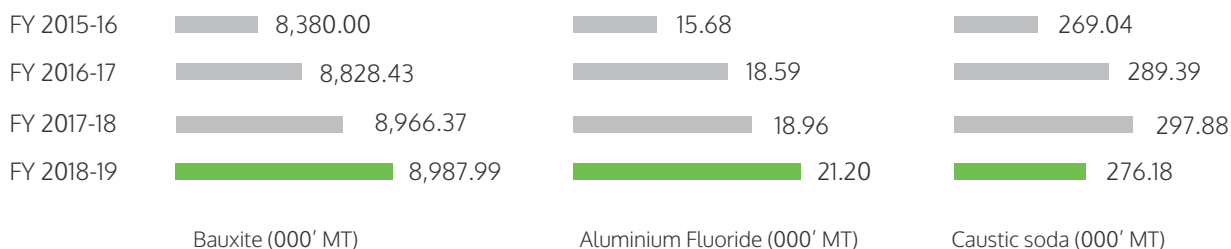


While being self-sufficient in alumina sourcing, our environmental footprint in transportation of bauxite is reduced due to close proximity of alumina refineries from bauxite mines. During the reporting period, we experienced stable consumption of our raw materials for aluminium production. The graphs below represent details of raw material consumed for aluminium production.



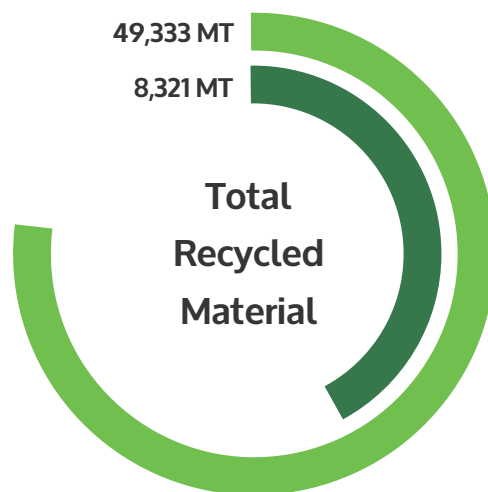
Bauxite Belt Conveyor from Baphimali Mines to Utkal Alumina

During the reporting period, our total packaging material consumption was 59,756.63 MT of which 1,262.53 MT was wood, 1,490.68 MT was paper and 57,002 MT was other packaging materials.



Material recycling

Aluminium is the most valued material in the recycle bin due to its characteristic of being recyclable an infinite number of times. Over time, we have explored opportunities and have invested significantly to enhance our recycling capability. During the reporting period, scrap copper as a recycled input material constituted 2.93% of the total input materials for copper production. The table below indicates details of recycled input materials in our aluminium and copper operations:



■ Aluminium (External) ■ Copper (External)

Recycled material consumption



Energy Management

We are committed to improve energy efficiency through technological innovations thereby reducing our energy costs and GHG emissions. Further to energy optimization, we also focus on addressing our energy needs through clean energy sources. We have set clear energy efficiency targets at both the operating unit and company level. The energy performance is monitored regularly against these targets and is reviewed by the top management on a periodic basis. Energy and carbon management plans have been established for both aluminium and copper operations and are being implemented as planned.

We constantly encourage our employees to undertake qualifications of an Energy Manager and Energy Auditor and also create awareness among our staff to drive energy efficiency throughout our organization. During the reporting period, 12 of our professionals qualified the Energy Manager and Energy Auditor examination conducted by the Bureau of Energy Efficiency (BEE).

Energy consumption

Our energy needs are met by a mix of renewable and non-renewable sources of energy. During the reporting period, we consumed a total of 277.20 million GJ energy which included 0.41 million GJ consumed for our mining operations. The energy consumption trend for aluminium and copper businesses are represented in the graphs below:



Aluminium business-
Energy consumption (Million GJ)



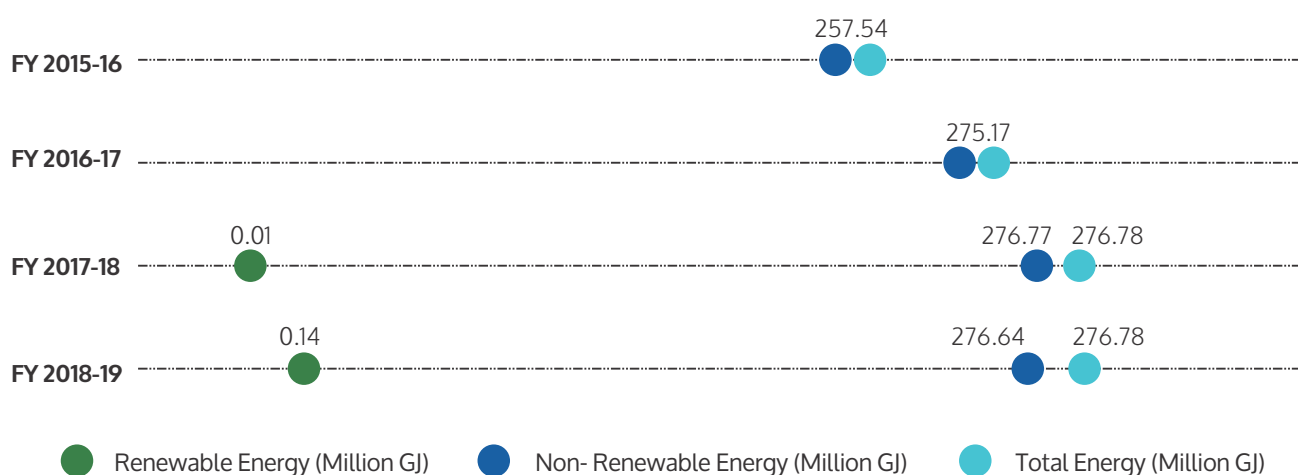
Copper business-
Energy consumption (Million GJ)

OUR ENERGY NEEDS ARE MET BY A MIX OF FOSSIL FUEL, CAPTIVE SOLAR PLANTS, OTHER RENEWABLE ENERGY SOURCES

The majority of our energy consumption is derived from fossil fuels, with a small share of renewable energy through our captive solar power plants. The energy consumption breakdown as per different sources of energy is represented in the table below:

Fossil Fuels	276.63 million GJ
Purchased Electricity	2.41 million GJ
Renewable energy	0.14 million GJ
Steam / heating / cooling and other energy (non-renewable) purchased	0.13 million GJ
Total non-renewable energy (electricity and heating & cooling) sold	2.53 million GJ

Following table indicates details of renewable and non-renewable energy consumed during last four years:



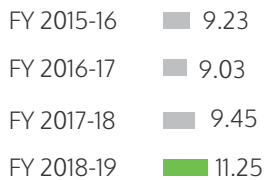
ENERGY CONSUMPTION IS MEASURED WITH ENERGY METERS FOR ELECTRICITY CONSUMPTION AND FLOW METERS FOR DIESEL CONSUMPTION

Energy Intensity

While we observe steady energy consumption for our operations, there is a decrease in the energy intensity (specific energy consumption) of the aluminium operations as compared to the previous year. However, the energy intensity of copper operations has increased during the reporting period on account of a scheduled maintenance shutdown of our Dahej smelter for a couple of months. The energy intensity trends of aluminium and copper businesses are as presented in the graphs below:



Aluminium business- Energy Intensity (GJ/MT)

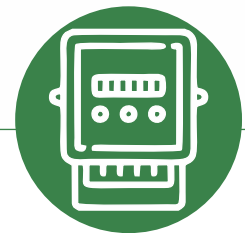


Copper business- Energy Intensity (GJ/MT)

The energy intensity for aluminium is reported for process energy consumed for primary aluminium production, which includes energy consumed for aluminium refinery, aluminium smelter and carbon anode plants in their ratio of use per ton of metal. Similarly, energy intensity for copper is reported for process energy consumption for Copper production, which includes energy consumed by copper smelter and copper refinery per ton of copper produced from copper concentrate.



The energy consumption as presented above is measured with the help of meters available at various points. These include energy meters for electricity consumption, flow meters for diesel consumption etc. We have used industry standard and energy conversion factors for arriving the total energy consumption.



Energy Conservation

Energy efficiency has a great significance in our overall energy management programme. We continuously strive to explore opportunities to improve energy efficiency across various processes in our operations. As a result of our initiatives, we have been able to constantly improve upon the energy intensity of our operations. Some of the energy efficiency initiatives taken up during the reporting period are as follows:

1 Reduction in steam consumption in aluminium refinery units through process optimization and loss reduction.

2 Reduction in aluminium smelter energy consumption through various initiatives like new design, copper insert collector bar, bus bar, riser design change, step stub anode, anode current density equalization, magnetic compensation bus bar etc.

3 Auxiliary power reduction through automation & process optimization.

4 Replacement of metallic fan blade of cooling towers with Flat Rolled Products (FRP) blades.

5 Rationalization of motor, pump & fan capacities and replacement of inefficient pumps and motors with high efficiency pumps and motors.

6 Reduction in lighting requirements by installing translucent roofing sheets and sun pipes, replacement of conventional lights with energy efficient LED lights.

7 Installation of Variable Frequency Drives (VFD) in variable load applications.

8 Compressed air system efficiency improvement through replacement of inefficient compressors, arresting leakages, process optimization etc.

Case study: Improvement in energy efficiency of aluminium smelter

The primary aluminium production is energy intensive by nature. Improvement in energy efficiency of the smelter helps in reduction of GHG emissions and energy costs. With focus on improving energy efficiency of aluminium smelters, we work closely with Aditya Birla Group's corporate research and development centre - ABSTCPL. The ABSTCPL has advanced computational modelling, experimental and analytical facilities for developing and testing innovative solutions.

The copper insert collector bar (CuCB) pot technology is one of the technologies developed at ABSTCPL. Use of CuCB in smelters was tested in smelter at Hirakud and subsequently in smelters at Mahan. We observed that use of CuCB helps in reducing energy consumption of smelter pot by about 300 kWh per tonne of aluminium. Looking at the success of this technology, we are now looking forward to implement this in all other smelter pots across our operations.

In addition to development of CuCB, an innovative magnetic compensation was developed for energy reduction in Hirakud 235 kA potline. This indigenously developed technology is first of its kind in India and helps in reducing energy consumption by 150 kWh/ton in the potline.

With focus on future proofing, we aim to develop a digital twin of aluminium smelter, which would predict the pot behaviour in advance and suggest actions for running the smelter at highest energy efficiency and productivity.



ON THE RIGHT PATH ON REDUCING GHG EMISSIONS AND INCREASING THE SHARE OF RENEWABLE ENERGY IN THE OVERALL ENERGY MIX

Emissions Management

GHG emissions

We are focusing on reducing GHG emissions and increasing the share of renewable energy in the overall energy mix. Commissioning of 30 MW captive solar power plant at Aditya aluminium in November 2018 marked an important milestone in our transformation towards future proofing.

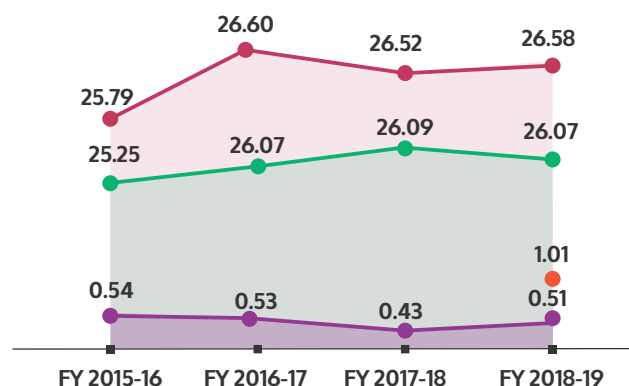
Solar projects at seven locations have been initiated and with this collective capacity of 100 MW Renewable to be reached by FY 2020-21. We have also initiated a feasibility study for renewable hybrid power for additional 200 MW capacity.

During the FY2018-19, the company purchased 13,08,311 renewable energy certificates (REC), this is equivalent to GHG offset of 10,72,815 tCO_{2e}.

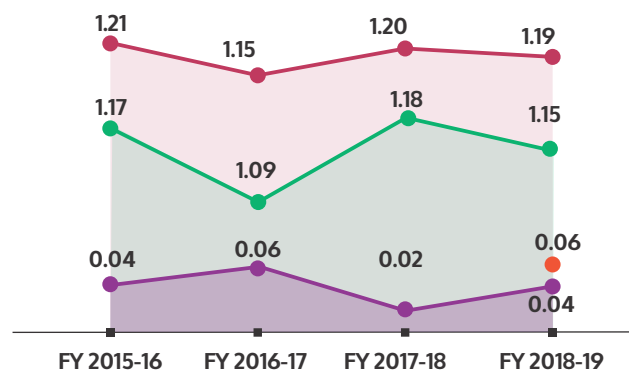
The scope-1 and scope-2 GHG emissions from our aluminium and copper operations are presented in the tables below.

We are in the process of developing a mechanism to monitor, measure and report scope-3 GHG emissions for our operations.

The GHG emissions are estimated based on guidelines defined in the World Resource Institute's (WRI) Greenhouse Gas (GHG) Protocol. Relevant industry standard emission factors and emissions factors prescribed by the Intergovernmental Panel on Climate Change (IPCC) have been used appropriately to determine GHG emissions.



Aluminium operations



Copper operations

- Total GHG Emissions (million tCO₂)
- Scope 1 GHG (million tCO₂)
- GHG Offset through REC Purchase (million tCO₂)
- Scope 2 GHG Emissions (million tCO₂)

Case Study: Solar power plant at Aditya Aluminium, Odisha

We aspire to enhance the share of renewable energy sources in our total energy mix. Our aluminium smelter at Aditya Aluminium is the first of its kind to commission a 30 MWp captive solar plant. This solar plant was commissioned in November 2018 marking an important step towards adoption of clean energy.

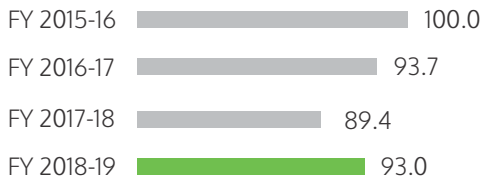
The solar plant is connected and synchronized to the 220 kV system. This resulted in an improvement in the reliability and stability of power transmission. In addition to this, we have installed a Supervisory Control and Data Acquisition (SCADA) system to monitor the plant performance effectively. Energy generated from the solar power plant is consumed for plant operations.



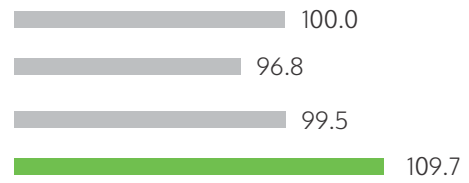


GHG emissions Intensity

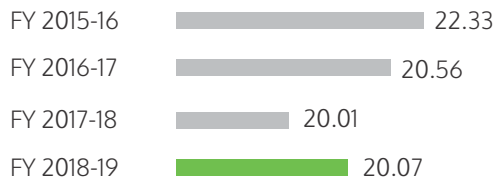
GHG emissions intensity for aluminium is reported for process energy consumed for primary aluminium production, which includes GHG emissions from aluminium refinery, aluminium smelter & carbon anode plant in their ratio of use per ton of metal. Similarly, GHG emission intensity for copper is reported for process energy consumed for Copper production, which includes GHG emissions from Copper Smelter & Copper Refinery per ton of copper produced from copper concentrate. The GHG emissions intensity index and trend for aluminium and copper business is as presented below:



Aluminium business- GHG Emission intensity index



Copper business- GHG Emission intensity index



Aluminium business
GHG Emissions Intensity (tCO₂/MT)



Copper business
GHG Emissions Intensity (tCO₂/MT)

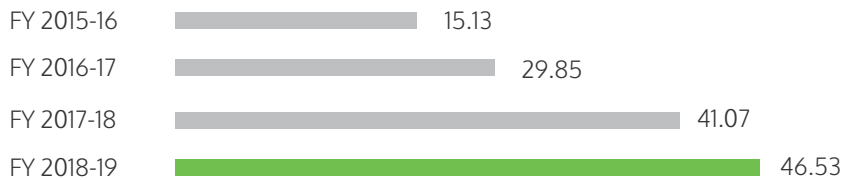


Alumina Plant- Belagavi

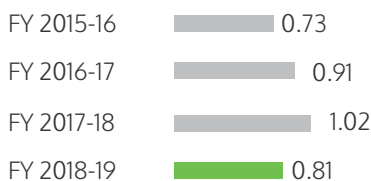
NOx, SOx and other significant air emissions

In addition to our GHG emissions, we monitor significant air emissions such as SOx, NOx, Particulate Matters and Fluorides. Each of our plants have necessary controls and measures in place to manage these emissions well within the permissible limits. We ensure that ambient air quality parameters conform to limits prescribed in the National Ambient Air Quality Standards (NAAQS) 2009. During the reporting period, we increased coverage of stack monitoring across the plant locations. As a result, 38 new stacks are now brought under regular monitoring. This has however resulted in an indication of increase in these air emissions. As per industry specific standards, the specific emissions for our aluminium process were 11 kg/MT for SOx, 5.7 kg/MT for NOx, and 3.5 kg/MT for Particulate Matter during the reporting period

The details of SOx, NOx, Particulate Matter and Fluoride emissions during the past few years are presented in the graphs below:



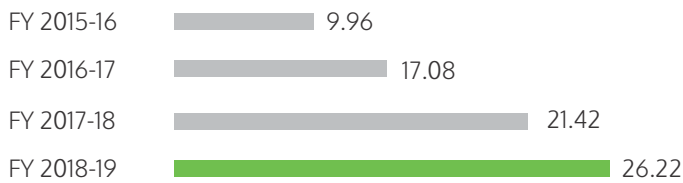
Aluminium business- SOx Emissions (000' MT)



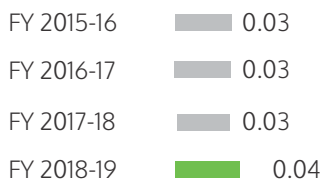
Copper business- SOx Emissions (000' MT)

OUR PLANTS HAVE NECESSARY MEASURES AND CONTROLS IN PLACE TO MANAGE SO_x, NO_x, PARTICULATE MATTERS, FLUORIDES WELL WITHIN THE PERMISSIBLE LIMITS

NOx Emissions

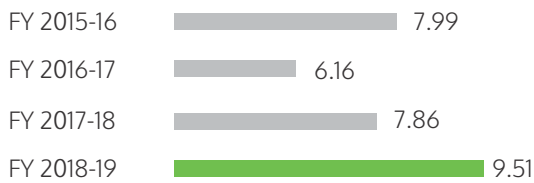


Aluminium business- NOx Emissions (000' MT)

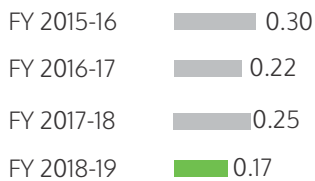


Copper business- NOx Emissions (000' MT)

Particulate Matter (PM) Emissions



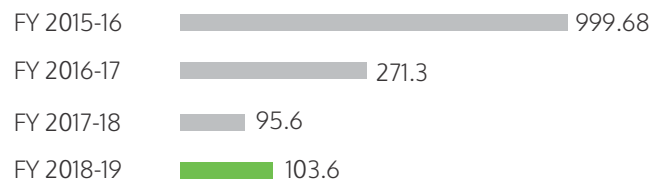
Aluminium business- PM (000' MT)



Copper business- PM (000' MT)

Fluorides

With the usage of low fluoride content, raw materials and with tail gas scrubber modifications we achieved zero fluoride emissions in copper business during the reporting year.



Aluminium business- Fluorides (MT)



Copper business- Fluorides (MT)

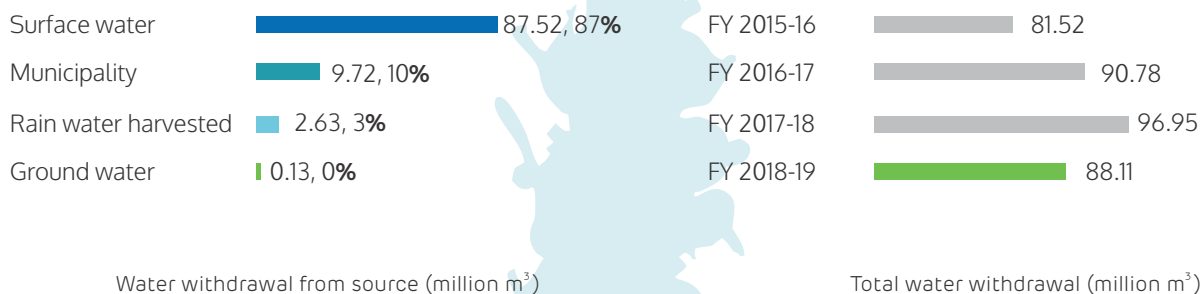


Water Management

With the ever increasing concerns around water security, water quality, rising costs and increasing regulations, we have adopted an integrated approach for water management. We had set the target of achieving 40% reduction in water consumption by 2025, compared to the base year of FY 2011-12 and have accomplished this well before time during the reporting period. We have now taken up an incremental target to reduce specific water consumption by 5% year-on-year till 2020. Additionally, to analyse the risks associated with water availability, we have conducted a water risk assessment of our plants.

Water withdrawal

We withdrew about 88.11 million m³ of water during the reporting period, out of which the maximum share was of surface water (water sourced through a river) with a negligible share of ground water extraction. During the process, we ensure that no water sources are significantly affected due to water withdrawal for our operations. Our total water withdrawal and breakup of the same according to source is presented below:



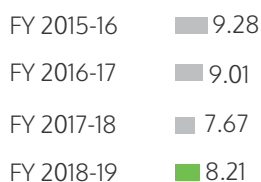
WORKING TOWARDS REDUCING OUR FRESH WATER CONSUMPTION TO 53.91 MILLION CUBIC METER DURING FY 2019-20

Water consumption

We consume water as part of our operations out of which some water is supplied to our colony and nearby communities as portable and drinking water. During the reporting year, total water consumed in colony and community was 14.51 million m³. In our operations, we try to maximise the consumption of recycled water and wherever recycled water is not available in sufficient quantity and with required quality, we make use of the fresh water. We are working towards reducing our freshwater consumption to 53.91 million m³ during FY 2019-20. The total water consumption and the water consumption segregated business wise is presented in the graphs below:



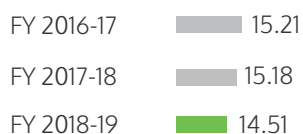
Total Water Consumption (million m³)



Copper business- Water consumption (million m³)



Aluminium business- Water consumption (million m³)



Water consumption (Colony and Community) (million m³)

The total freshwater consumption from various sources is as provided in the table below (in million m³):

	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Total municipal water supplies	7.51	0.10	0.09	0.33
Fresh surface water	56.37	54.05	55.62	53.16
Fresh ground water	0.11	0.07	0.00	0.67
Total Freshwater Consumption	63.99	54.22	55.71	54.16

In addition to the above, we utilise the rainwater for consumption in our operations. Following is the quantum of harvested rainwater during past four years:

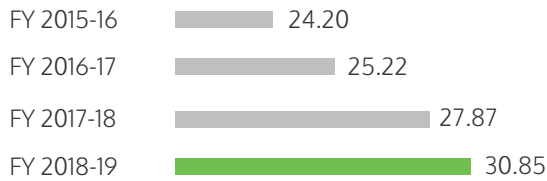
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Rainwater Harvested (million m³)	0.01	0.09	2.90	1.44

**ALUMINIUM:
30.85% OF RECYCLED WATER
CONSUMPTION**

**COPPER:
15.26% OF RECYCLED WATER
CONSUMPTION**

Water Recycling

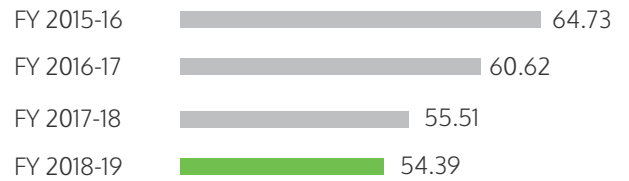
During the reporting period, our aluminium and copper business consumed 30.85% and 15.26% of recycled water respectively. The detailed trend of our water recycling percentage over the years is presented in graphs below:



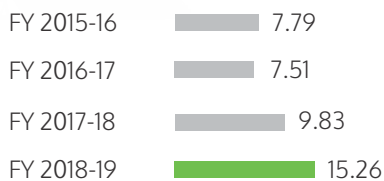
Aluminium Business- water recycled (%)

Water Intensity

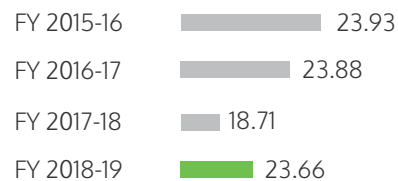
Following a process based approach, our water intensity for aluminium operations was about 12.80 m³/MT which is a combined impact of refining, smelting, rolling and extrusion operations indexed to the production of primary aluminium in MT. Refining is indexed to 1.92 MT of alumina to 1.0 MT of smelted aluminium. The water intensity following a gate to gate approach is presented in the graphs below:



Aluminium Business
Specific water consumption - (m³/MT)



Copper Business- water recycled (%)



Copper Business
Specific water consumption - (m³/MT)



Case study: Reduction in fresh water consumption at the Muri plant

The Muri plant has a 4 stage falling film evaporator where the process heating is done through live steam.

Earlier, the condensate generated from the process was sent to the power plant, which was then used as boiler feed water and the excess condensate was earlier drained to ETP due to its high conductivity.

The site now reuses the condensate generated as cooling tower makeup water. Because of its high conductivity and high temperature, a 3 way control valve and a Plate Heat Exchanger (PHE) is installed.

The 3 way control valve automatically bypasses the condensate if the conductivity exceeds a certain limit while the PHE cools the condensate with Heat exchange through Demineralized feed water.

With this, the site has achieved a reduction in its fresh water consumption by 20 m³/hr

Case study: Reduction in water consumption at Hirakud FRP

The Hirakud FRP facility had a combined ETP & STP which resulted in inappropriate water quality. During the reporting period, the site segregated the ETP & STP through in-house modifications in the treatment process.

The plant installed a compressed air pipeline in the effluent collection tank to avoid cake formation. Also a new tube skimmer and belt skimmer are installed for arresting oily sludge and free oil in the ETP. A dual media filter was also installed in the ETP resulting in the reuse of ETP water as cooling tower make up water after RO treatment.

Similarly, modification in STP was undertaken, which included the use of "Bio Clean" instead of cow dung to reduce biological oxygen demand and replacement of dual media filter with activated media filter to further reduce the chemical oxygen demand.

As a result, the site has achieved dual benefits. The average daily water consumption has reduced by 8% and there is a significant improvement in water quality of the treated waste water.



Case study: Water conservation initiatives at Renukoot

In collaboration with CII and Triveni water institute, we have conducted a study on the water saving potential at the Renukoot site. During the study, we have identified about 4,532 m³ of water saving potential per day and based on the assessment, we have prepared the roadmap for zero liquid discharge.

To achieve the zero liquid discharge stage, we focused on the reduction in fresh water consumption and minimising effluent generation from our processes.

During the journey of achieving the ZLD stage, we have undertaken initiatives which are mentioned below:

- Spraying ETP treated water in green field and using green belt development on red mud area – 2,200 m³/day
- Optimization of Cycles of Concentration (CoC) of cooling tower in all over the plant - 300 m³/day
- Cooling water of vacuum pump of drum filter area of Alumina plant is connected with C.T for recycling – 200 m³/day
- Also, we have implemented various initiatives to reduce fresh water consumption, some of these are listed below:
- Modification in condensate handling system of Alumina Plant for segregating and utilizing good condensate as DM feed water at Boiler – 1,900 m³/day
- Reuse of ACF/MGF back wash, conductivity meter testing water and gland seal water as DM feed water in Boiler – 400 m³/day
- Use of ETP Treated Water in Urinal and Toilets for flushing and nearby gardening – 900 m³/day
- Water pressure optimization in drinking water supply by Installation of Orifice and Local pump installation in high elevation area – 900 m³/day
- Arrest water overflow from tanks by replacing faulty float valves with solenoid valves at Alumina plant Hammel mann pumps – 200 m³/day

Our efforts so far resulted in the reduction of fresh water consumption by 6,800 m³/day and a reduction in effluent generation by 7,650 m³/day.



WASH Pledge

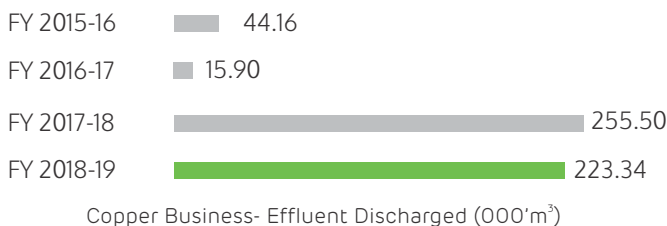
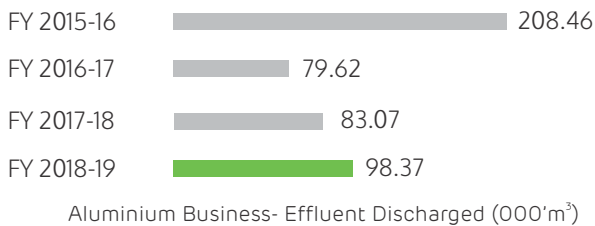
The UN Sustainable Development Goal (SDG) number 6 clearly expresses the urgency of clean water and sanitation. In alignment to this goal, ABG Companies signed the WASH (Water, Sanitation and Hygiene) pledge to reaffirm their commitment to provide safe and sustainable drinking water, sanitation and hygiene to all its employees. We are proud to state that all our operational sites are WASH Compliant.



Effluent Management

We recognize our responsibility to reduce the impacts of effluents generated from our operations. Our waste water quality is regularly monitored. This helps us to ensure that water quality parameters such as pH, Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Colour, fluorides and Total Soluble Solids (TSS) etc. are well within the permissible limits. We have also achieved Zero Liquid Discharge (ZLD) status for 11 of our plants and work is ongoing for other locations. We are planning to achieve ZLD status for 100% of our plants by FY 2020-21.

During the reporting period, our effluent discharge from aluminium operations was 98,371.65 m³ and from copper manufacturing operations was 2,23,340 m³. During the reporting year, no water bodies were affected by effluent discharged from our operations. The effluent discharge trend for the past few years from our operations is as provided in the graphs below:

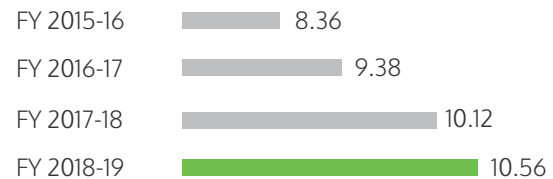


Waste Management

Our operations generate significant quantities of mineral waste, as well as some non-mineral and hazardous wastes. We have ingrained the 'avoid, reduce, reuse and recycle' approach across our operations. We continuously strive to minimize the quantum and maximize the recycling and reuse of the waste generated.

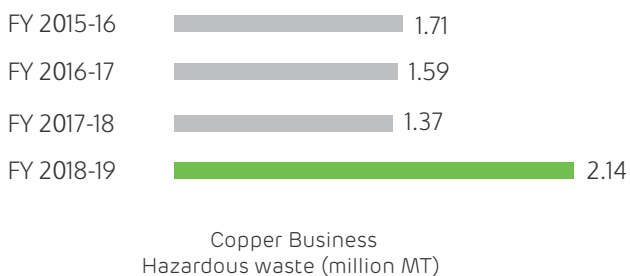
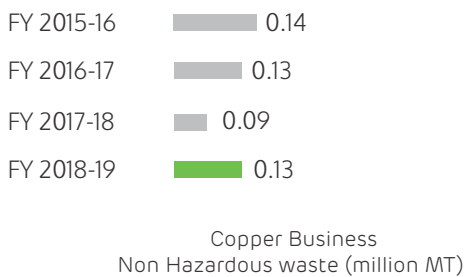
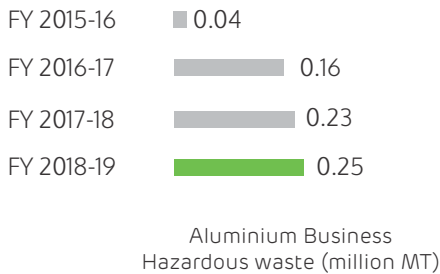
Our 'Value from Waste' initiative is aimed at achieving 100 utilization of key wastes by 2025. In alignment to this initiative, our wastes like bauxite residue, fly ash, spent pot lining, aluminium dross, vanadium sludge, copper slag and phospho-gypsum are collected, stored and disposed. The total waste generation from our operations during the reporting period was 13.07 million MT, of which 0.37 million MT was hazardous waste and 12.70 million MT was non-hazardous waste. Major part of solid waste generated from our operations constitutes bauxite residue and fly ash, and we focus on maximum utilization of these wastes.

The trend of waste generated from our aluminium and copper operations is provided in the graphs below:



Aluminium Business
Non Hazardous waste (million MT)

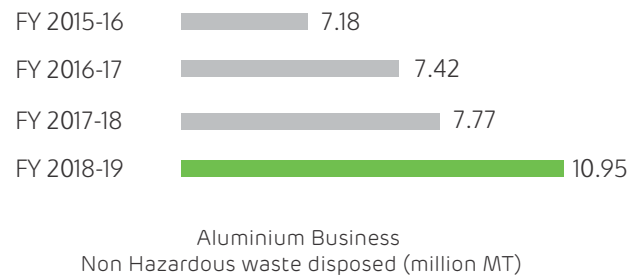
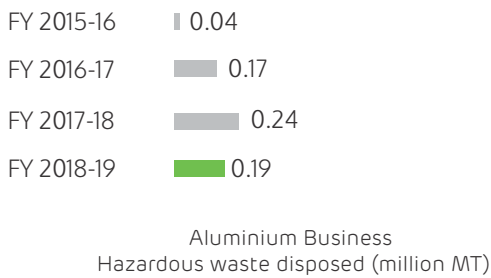
Bauxite Residue Storage- Utkal Alumina



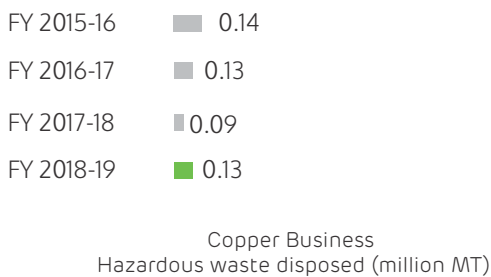
As part of our circular economy approach, we have identified avenues for utilization of waste generated from our industry as a raw material for various other industries. We have taken specific initiatives for waste disposal of bauxite residue and spent pot lining. The spent pot lining is processed in-house for further reuse as a refractory application. The bauxite residue is sold to cement industries as useful raw material and for manufacturing of paver blocks. The project for utilisation of bauxite residue with geo-polymer for construction application was initiated during the reporting period and is under progress as of now. In addition to these initiatives, a study was carried out for utilisation of bauxite residue for backfilling of mines. This has helped us dispose of the waste generated from the previous financial year as well. In FY 2018-19, a total of 13.75 million MT of waste was disposed, of which 0.32 million MT was hazardous waste and 13.43 million MT was non-hazardous waste. We are working towards reducing the waste generation and disposal to 8.66 million MT by FY 2019-20.

During the month of April 2019, there was an incident of spillage that occurred in the red mud cake storage area of the Alumina plant situated at Muri. There was no material impact of this incident on our financial performance. We are in process of identifying the root cause of the incident and accordingly steps will be taken to ensure that such incidents do not happen in the future at any of our facilities. However, there was no incident of significant spills during the reporting period and no trans-boundary dispatch of hazardous materials happened from any of our locations during the reporting period. The following graphs indicate a four year trend of hazardous waste disposed from our aluminium and copper operations along with the disposal destination:

IDENTIFIED MULTIPLE AVENUES TO USE WASTE GENERATED AS A RAW MATERIAL FOR OTHER INDUSTRIES



68% of the hazardous waste from our Aluminium operations in FY 2018-19 was recycled / reused, 31% was secured in a landfill/TSDF and 1% was disposed of by incineration. 52% of the non-hazardous waste from our Aluminium operations was disposed of in landfills and ash ponds, 42% was recycled/reused, 6% was sold to an authorised waste recycler and 0% was disposed of at a Municipal landfill.



98% of the hazardous waste from our copper operations in FY 2018-19 was disposed of in secured landfill/TSDF while 2% was sold to the recycler. 100% of the non-hazardous waste from our copper operations in FY 2018-19 was sold to the recycler.

Case study: Recovery of aluminium metal through processing of aluminium dross at Aditya Aluminium

Currently, the installed capacity of the smelter plant is 3,60,000 TPA Aluminium. The aluminium dross generation in the smelting process is expected to be at the tune of 2,800 TPA. This is due to the turbulence created during the pouring operation as the metal comes in contact with atmospheric oxygen. This dross is categorized as a hazardous material according to the Hazardous Waste Rule 2016. Aluminium content in this dross varies from 10-20% and thus, this metal can be recovered.

The metal lumps and fines recovered in this process are put into a hearth for melting, which is a batch process. The site has five number of hearths installed for the melting process. The fumes generated in the melting process are sent to Fume Treatment Centre (FTC) for further treatment.

The waste generated in this process is in the form of residue which is disposed-off in the Common Hazardous Waste Treatment Storage & Disposal Facility (CHW-TSDF).

Through this, the site has successfully reduced its waste generation and increased its potential for metal reuse. Adding to this, the site has also reduced its raw material and energy consumption.

Year	Generation (in MT)	Reused along with bath Materials (in MT)	Reprocessed in DPU (in MT)
2017-18	2,434	1,733	1,481
2018-19	2,538	308	2,121

Year	Resource Recovered in MT (Metal Aluminium)	Resource Conserved, in MT			
		Alumina	CP coke	AlF ₃	Power (Electricity in MWH)
2017-18	70.55	134.76	29.1	0.899	1,010
2018-19	84.66	161.4	35.02	1.141	1,214

Case study: Plastic Waste Management at Belur plant

Currently, our Belur site conducts periodical awareness programs to sensitize their employees about plastic waste and its impacts. It has also arranged for additional bins and storage facilities which are exclusively dedicated for plastic waste.

In March 2019, the site has identified and signed an agreement with two SPCB authorized plastic waste recyclers. A total of around 1 MT of plastic waste is sold to the recyclers per month.

The site has invested around INR 5 lakhs for having the requisite bins and storage facilities, while the yearly return from plastic waste is around INR 1 lakh.

Case study: Bauxite Residue (red mud) utilisation in cement industry at Belagavi plant

With focus on long term sustainability of the alumina refinery, our Belagavi plant explored and successfully implemented the opportunity for use of bauxite residue as a useful raw material in cement manufacturing. Showcasing our focus towards circular economy, the initiative has marked an important step in our transformation towards resilient, responsible and reliable future. If implemented at scale, the initiative will help in resolution of one of the biggest waste management challenge in the aluminium industry.

The alumina Industry worldwide generates about 155 to 160 million MT of bauxite residue annually. Out of this, India generates close to 10 million MT of the bauxite residue annually. In absence of any large scale, commercially viable technology for the use of bauxite residue, there is a need to store the same in an environmentally benign manner. The traditional methods of wet ponding at low solids content in specially created lakes have been gradually replaced by the high pressure filtration methods. We recognized this as a long term sustainability and business competitiveness tool and embarked on ambitious projects for utilisation and disposal of bauxite residue at one of its refineries at Belagavi. The Belagavi alumina refinery have been working since many years for utilization of bauxite residue with the help of various research institutes, literatures and our innovation centre, HIC-A. In FY 2012-13, our Belagavi Unit started discussion with cement plants for using Bauxite Residue for cement manufacturing as a replacement of Laterite, Lithomarge and some part of sub grade bauxite. Based on this success and feedback, we started working with most of the cement plants in Karnataka and Andhra Pradesh and started bauxite residue utilization in almost 12 to 14 cement plants so far.

We started this project with only 7 to 8% of our generation of Bauxite Residue utilization in one Cement Plant in FY 2014-15. However, by increasing the scalability of the project we have reached up to 35% of our generation of Bauxite Residue utilization in almost 12 Cement Plants in FY 2018-19 and in FY 2019-20 we have taken an ambitious target of 70%. We are continuously visiting Cement Industries and increasing the awareness and benefits of utilization of bauxite residue in Cement Industries

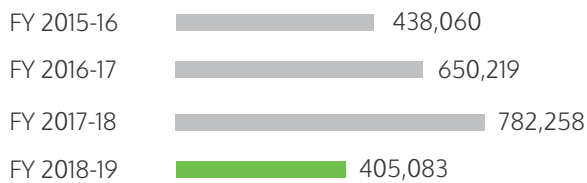




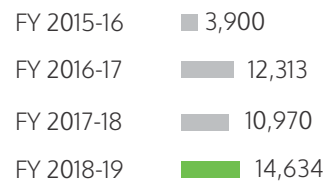
WE HAVE DEVELOPED 3,979.94 ACERS OF GREEN BELT

Green Belt Development

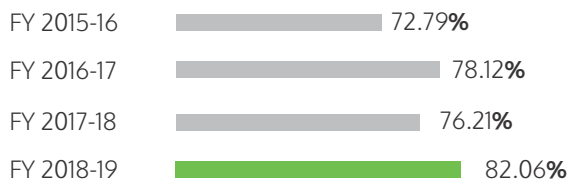
We are committed to preserve and improve the biodiversity of the area we operate in and maintain its ecological balance. With our green belt development programme, we endeavour to increase the green cover across our sites. We foster over 24 lakh trees across all our sites. In our entire journey, we have developed a green belt of 3,979.94 acres so far. The trend of tree plantation along with survival rates for the past four years is as presented in the graphs below:



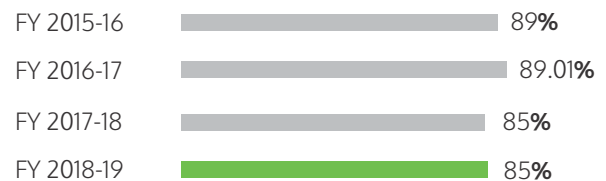
Trees planted (Aluminium and mines)



Trees planted (Copper)



Survival rate (Aluminium and mines)



Survival rate (Copper)

Environmental compliance

With respect to the environmental compliance, we monitor and drive compliance with all relevant legislation regulating the management of environmental impacts. We further aim to ensure that our operations are compliant with relevant environmental laws and regulations. As a result, no monetary fines or forms of non-monetary sanctions were levied upon us for any non-compliance with environmental laws and regulations during the reporting period. Our total expenditure on environment protection during the reporting period was INR 397.23 crore.

Health and Safety

Ensuring safety of employees, associates and other stakeholders including communities, customers, suppliers, and business partners, is an integral part of our operations. Our objective is to achieve “Zero Harm” and to achieve the same we have adopted three pronged approach i.e. felt leadership for safety, embracing world class processes and practices and right organisation for implementation.

Our safety efforts are led by an Apex Safety Board (ASB) which is convened by the corporate safety head. The ASB meets every month in a meeting chaired by the Managing Director. All business heads and cluster heads are members of ASB meetings. Additionally, at each of the unit, we have a unit level safety board chaired by the unit safety head. Apart from this, each unit has a safety committee having equal participation from management and workers. The main objective of this committee is to seek inputs from workers and provide them a right platform to participate in the safety program. Each sub-facility of the unit has a shop floor safety committee.

To ensure line function, officials remain interested and committed for implementing safety, their contribution and achievement is measured in their performance appraisal process. For this, each individual has to take one or more goals and targets having a minimum weightage of **10%** in the goal setting process.

Almost all our facilities are compliant to the international Occupational Health & Safety (OHS) management system and are certified with OHSAS 18001. Our proactive H&S programs and systems support in identifying, assessing and managing the H&S risks. At each unit, we have 6 safety sub committees which take care of functional health and safety requirements.

During this reporting period, we have developed the Behaviour Based Safety (BBS) management programme. This programme promotes interventions that are people-centric and often acknowledge one-to-one or group observations of employees performing routine tasks. Along

with coaching, training and mentoring, this also helps in setting goals and provides timely feedback on safety-related behaviour. This initiative encouraged people to work in groups and made them aware of assessing their own behaviour as safe or unsafe.

Highlights FY 2018-19



Provided Monetary Incentives for achieving Zero fatalities in the last three years at two facilities.



Implementation of Contractor safety and Behaviour Based safety management Programmes.



Provided fire extinguisher and fire safety training to corporate employees in Mumbai.



Developed warehouse safety guidelines.

Approximately, **50%** of our employee base consists of contractors and their safety is a focal point in all our business operations. During the reporting period, we have introduced a Contractor Safety Management (CSM) system to ensure safe working conditions for our contractors. Under the CSM, we have a dedicated team in place which carries out regular safety checks and monitors contractor’s performance .

During the reporting period, we also had a focus on safety in logistics and carried out a series of safety trainings for all its associates like transporters, ware house owners and also carried audits of their facilities, work methodologies and practices and warehouses.

Key initiatives taken during the reporting period for improving safety are as follows

H&S management System at all locations for enhancing the safety precautions.

01

02 Employees are imparted off the job safety training, training on home safety and fire prevention. Each employee was also gifted with one portable multipurpose fire extinguisher to fight fire in case of any eventuality.

02

Ergonomic training on fire safety to all the employees in corporate offices

03

04 Road and driving safety instructions and guidelines are provided to all the employees.

04

We monitor our safety performance across all our operational units and endeavour to develop 'zero harm' workplace. Our consolidated safety performance for the reporting period is as follows:

Description	Aluminium & Mines		Copper	
	Employees	Contractors	Employees	Contractors
Total no. of lost time accidents (Reportable Accidents)	25	27	6	5
Total no. of fatal accidents	0	2	2	0
Total no. of man-days lost	2,786	13,429	12,182	4,331
Lost Time Injury Frequency Rate (LTIFR)	0.52	0.39	1.99	0.57
Lost Time Injury Severity Rate (LTISR)	57.59	195.07	4,031.81	494.91
Total number of Minor Injuries (Non-reportable Accidents)	238	349	12	57
Total Man-hours worked (in Million)	48,373,448	68,842,592	3,021,472	8,751,008

IN FY 2018-19 TOTAL RECORDABLE INJURY FREQUENCY RATE (TRIFR) FOR EMPLOYEES WAS 0.13 PER MILLION HOURS WORKED AND FOR CONTRACTORS IT WAS 0.10 PER MILLION HOURS WORKED

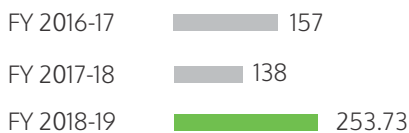
We have set up a target of reducing our LTIFR less than 0.1 and LTISR less than 50 by FY 2021-22. In terms of year on year targets, we have undertaken a target of reducing LTIFR and LTISR by more than 20% compared to the previous year. In FY 2018-19, unfortunate accidents happened at Aditya Aluminium, Gare Palma mines and Dahej, resulted in four casualties. We have investigated these four incidents and deterrent corrective measures have been undertaken at all these locations.



Lost time accidents



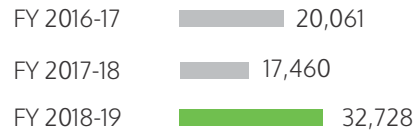
Fatalities



LTISR



LTIFR



Number of mandays lost

In addition to health and safety indicators as stated above, we have started measuring Total Recordable Injury Frequency Rate (TRIFR) from FY 2018-19. This is a step towards improving our safety monitoring as per international standards. During the reporting period, the TRIFR for employees was 0.13 per million hours worked and for contractors, the TRIFR was 0.10 per million hours worked.

Safety Trainings

In supporting the well-being of our employees and promoting an inclusive and diverse culture, we have set some mandatory controls in place. These controls also help in identifying and mitigating the occupational health risks. As a part of it, trainings are provided to all our employees and contractor staff in order to increase the competency in identifying and preventing the H&S risks. The following table indicates details of the same:

Category	Aluminium & Mines	Copper
Management staff	219,929	9,959
Permanent workmen	482,140	30,778
Contractual workforce	939,506	68,233



Health Awareness

We believe in a safe working environment and reducing any occupational health impacts on our employees. In order to identify health impacts of operations, we have conducted Qualitative Exposure Assessments (QLEA) and Quantitative Exposure Assessments (QnEA). We have completed QLEA and QnEA for our mining locations and plants. Based on the outcomes of these assessments, workers involved in occupational activities having high risk of specific diseases are identified and necessary safeguards are adopted .

During the reporting period, we have focused on the implementation of three Occupational health standards related to Occupational Health at all our locations. Implementation of these standards included trainings on first aid, occupational safety and awareness programmes on health issues related to HIV, TB, and malaria.

Case study: Implementation of safety standards across the organization

As the next step towards improving the safety culture across the organization, we have customized and implemented 19 safety standards which are aligned to the industry best international standards.

Out of these 19 standards, eight standards are mandatory to be implemented uniformly across all manufacturing sites. To implement these standards a unique organization structure consisting of only line function officials is formed. It consists of six Safety Sub-committees at each unit. Each of these committees is headed by a senior level officer at unit. To support sub-committees, safety standard implementation task forces are formed. There are a minimum of eight taskforces at any unit. The task forces consist of line officials from different disciplines. To channelize the efforts of taskforces, each taskforce has a minimum of two Subject Matter Experts (SMEs). These are specially chosen officials based on their qualification, duration and nature of experience. They are then further trained specially to enable them to discharge their duties as SME. This unique organizational structure has ensured that a majority of line function officials have some direct responsibility towards safety. This organizational arrangement is in addition to the safety department and is highly competent along with qualified safety professionals available at each operating site. Almost all safety professionals at Hindalco, have undergone the international NEBOSH certification safety course and completed it successfully during last two years.



Community Stewardship



'No one', said Mahatma Gandhiji, 'is free, until everyone, regardless of caste and creed, is rid of not only discrimination but also deprivation'. On this 150th Birth Anniversary of the Father of Nation, we reaffirm our pledge to inclusive growth.

As inclusive growth is our overall vision, we feel it is worthwhile to link our community engagement with the UN Sustainability Development Goals (SDGs). We have set expectations in line with these goals. The SDGs are a bold universal agreement to end poverty every which way. Its laudable vision is also to craft an equal, fair and secure world for people, the planet and prosperity by 2030. These were adopted by 193 member states at the UN General Assembly Summit. The SDGs, came into effect on January 1st, 2016.

The SDGs outline 17 clear goals, all of which are universally relevant. They have also given 169 targets, specific to the different goals. Our Government, has accepted the goals and based the structure, the focus of our nation's social investment is on the SDGs as well.

India has made huge strides. Poverty, in India is down to **21%** according to the Government estimates. In a highly laudatory article on India recently in the New York Times, it mentioned that "A booming economy is lifting 40 million out of poverty and is expected to have the majority of its population in the middle-class already equal to the entire US population by 2025".

As a point in reference, let's take the year 1947, when we became an independent country. In 1947, life expectancy was 32 years. Today, it is nearly 69 years. Infant mortality is down from 161 for every thousand births to 40 now. Access to quality maternal health services has more than tripled as have institutional deliveries, which now stand at over 80 according to the WHO Report. The overall death rate, which was at 25.5 per thousand, has fallen to 7 per thousand. So, we see a phenomenal improvement.

Even as the struggle for equality, for dignity and for raising the quality of life of each and every person in 1.2 billion cohort is still on, every effort is being made to mitigate this issue. The Government, has done enormous work and continues to focus on poverty alleviation but we have to do more. Fortunately, social investment, is gaining traction. There is the eco system of investors, entrepreneurs and enablers all of whom are significantly engaged in social impact initiatives. India, is in the midst of a historic transformation. There is the promise of the end to poverty by 2022. A decent roof over every individual's head and a life of dignity through sustainable livelihood.

Pursuing the SDGs, I strongly believe is one of the ways to fast forward inclusive growth and our social progress. In this context, I am very pleased to share with you that in our CSR engagement, we are totally in sync with the first 8 goals. The remaining 9 goals pertain to sustainability, responsible industrialization and geopolitical issues. On sustainable development, climate change, ecosystems, among others, our Group is in line with them.

Rajashree Birla
Chairperson

Aditya Birla Centre for Community Initiatives and Rural Development



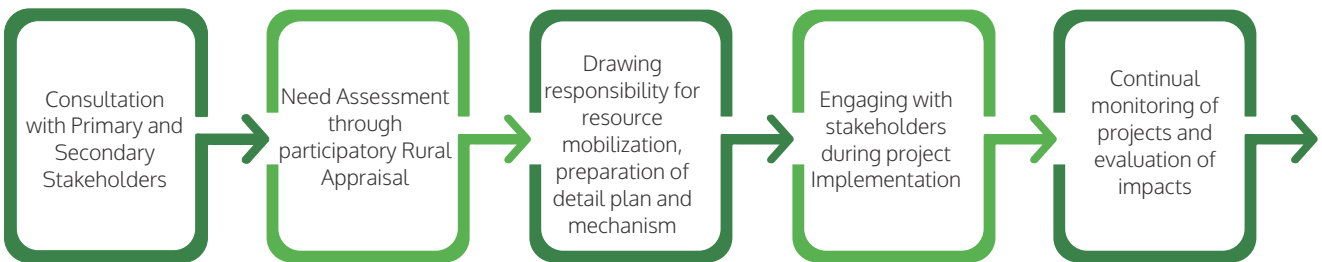
CSR Initiative- Utkal Alumina



Being a part of the Aditya Birla Group, reaching out to underserved communities is core to our sustainability commitment. Our community stewardship strategy adopts development programmes which are aimed at long-term empowerment of communities. Accordingly, we have identified five focus areas to work for community development which are depicted in the diagram below:



The CSR policy serves as a guiding principle for our community stewardship activities. With reference to the guiding principles, we engage with communities on a regular basis to assess the impact of our business operations on them and to understand their needs. Based on these assessments, suitable development programmes are designed and implemented. An adequate capacity building of the community and associated stakeholders is carried out to ensure long term sustenance of the programme. Our community engagement process is explained in the diagram below:



Provision of education, healthcare services, livelihood opportunities and infrastructure development in the local community has also helped us foster harmonious relations with the communities, leading to reduced risk of social conflicts over the use of natural resources such as land and water. With an increasing geographical spread of our business operations, these initiatives not only secure our social license to operate, but also enable us to enlarge our social footprint.

Monitoring and evaluation is carried out on a regular basis in line with the framework developed for each of the programmes. Outcomes of these evaluations are discussed with our top management as a part of CSR committee meetings. Feedback and inputs received are translated into an effective implementation of programmes. Further, in addition to regular monitoring and evaluation activities, we carry out internal audits and impact assessment studies on a periodic basis.



CSR Initiative- Sustainable Livelihood

In order to ensure that our business operations do not have any negative impact on the surrounding communities, we regularly engage and consult with local communities to understand any issues faced and seek their opinion. We have undertaken community consultation for all 21 of our production assets, while 200 development projects are currently in the process of community consultation.

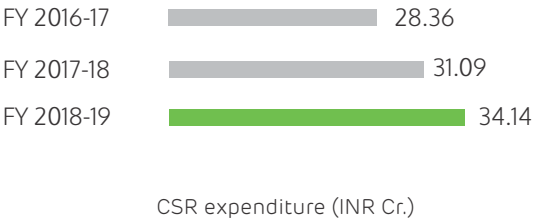
We have a robust framework in place that guides us in developing our specific initiatives. Our projects are structured in consultation with the community. We engage them before we start the implementation of our participatory process. The projects we introduce are as per the needs of the local communities. We conduct a baseline study to understand the necessity of the project in an area before execution. This study includes health indicators, literacy levels and demographic data. We evaluate and review our projects continuously and support their needs until they become self-sustainable. We believe in embedding social responsibility into our work culture. We regularly involve our employees to support our community development programmes based on their interest and skill sets. We acknowledge their efforts in these activities and reward them at a unit level .

Geographic Spread of our Initiatives

We have broadened our geographic spread by catering to the needs of communities around our operations through developmental programmes. We support 731 villages across 11 states creating an impact in the lives of approximately 1.2 million people.

We aim to spend a minimum of 2% of our average net profit for the preceding three years, on community initiatives as part of the corporate social responsibility

(CSR). During the reporting period, we have spent INR 34.14 crore, which is 2.13% of our net profit. Adding to this, we have spent INR 11.04 crore through our Enterprise Social Commitment (Hirakud, Aditya and Utkal) and INR 10.57 crores under Utkal and Dahej Harbour and Infrastructure Limited (DHIL). We have donated INR 0.90 crore for philanthropic causes. We have also mobilized INR 98.99 crore (including administrative expense) through various Government schemes to support the local communities. A three year trend of our spend on CSR is indicated in the table below:



Our initiatives and their impact

The details regarding the impact of our initiatives with specific focus areas are as indicated. While the values pertaining to expenditure are for Hindalco standalone, the impacts are from initiatives taken up by Hindalco as a consolidated entity.

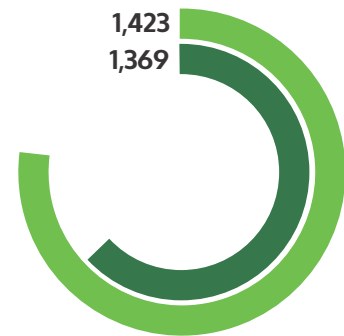


Education

We believe that education is the first step towards social and economic wellbeing of a society. We endeavour to impart a culture of learning at each stage through our focused educational initiatives. Our educational initiatives cover pre-school education, educational support programme, vocational and technical education training and infrastructure of the school.

Through our Shala Pravesh Ustav we have been able to increase the retention rate to about 97% in government schools. Adding to this, the project achieved 100% of enrolment in the government school at Dahej. Our Digital education programme in these schools has seen a huge participation, covering about 500 students.

In partnership with the Department of Education, NIIT foundation, Odisha Knowledge Corporation Ltd. and Rajiv Gandhi Computer Academy, we have initiated a capacity building of the rural youth through computer education. During the reporting period about 60% of the youth engaged in this programme received livelihood opportunities through employment and self-employment.



■ Allocated (INR Lakhs)
 ■ Actual (INR Lakhs)

Expenditure on Education

Impact of our initiatives in Educational Sector

Initiatives	Unit	FY 2018-19
Anganwadis and Balwadis	No. of centres	106
Students in Anganwadis and Balwadis	No.	6,512
Rehabilitation of Malnutrition children	No.	318
Adult Literacy Program	No. of Adults	566
Schools	No.	18
Students	No.	8,247
Distribution of Educational materials and uniforms	No. of students	19,922
Construction, repair and maintenance of schools and Fixtures	No. of schools	64
Scholarships	No. of students	666
Teacher support to schools	No. of teachers	65
Mid-day meal Programme	No. of students	40,000

15 AMBULANCE SERVICES FOR EMERGENCY PATIENTS HELPED SAVE 4,077 CRITICAL PATIENTS ACROSS 86 VILLAGES

An impact assessment study carried out during FY 2017-18 for our education sector initiatives indicated following impact:

Key Performance Indicator	Unit	Baseline (FY 2010-11)	Impact (FY 2017-18)
Total literacy rate	%	72.8%	80.2
Women literacy rate	%	71.4%	71.4
School enrolment	%	86%	100
School attendance	%	65%	95
School dropouts	%	22%	2.65



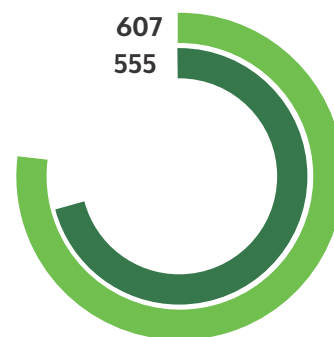
Healthcare

Our healthcare initiatives aim at improving accessibility and availability of better health care services for the vulnerable and weaker sections of the society. These initiatives include preventive health care programs, curative health care, mother and child care, quality/support programmes and development of healthcare infrastructure.

Under the Jeevan Mitra Seva Yojana we have provided 15 ambulance services for emergency patients in Muri. This initiative helped save 4,077 critical patients across 86 villages.

In collaboration with the Gram Panchayats we were able to provide access to safe and clean drinking water to about 1 lakh beneficiaries. This includes ensuring availability of potable drinking water through hand-pumps, wells and RO plants. We also took the initiative for supply of water through tankers and laid down pipelines for water access.

Our focused programme on adolescent girls' healthcare benefitted about 4,023 girls. We organized 55 adolescent health awareness talks and to support hygienic living we installed 5 sanitary napkin vending machines at Dahej and Taloja.



■ Allocated (INR Lakhs)
■ Actual (INR Lakhs)

Expenditure on Healthcare

Impact of our initiatives in Healthcare

Initiatives	Unit	FY 2018-19
Hospitals	No.	4
Dispensaries/Clinics	No.	24
Patients benefited from hospitals/ Dispensaries/Clinics	No.	244,034
Medical Camps Organized	No. of Camps	1,904
	No. of Beneficiaries	157,418
Children Immunized	No. of Children	184,307
Adolescence Health care	No. of girls registered	4,023
19 Family welfare centres to provide safe motherhood and child survival services	No. of mothers	50,626
Mothers Registered for Antenatal / Postnatal Care (ANC / PNC)	No.	4,276
TB Cases Released from Treatment	No.	364
Eye-Camps	No. Camps	31
	No. of cases (IOL) operated	134
	No. of Beneficiaries	3,192
Child immunization (Base line: 79% in FY 2014-15)	%	100%
Institutional delivery (Base line: 43% in FY 2014-15)	%	88%
Villages free from Tuberculosis	No.	8



Healthcare Initiative- Mahan

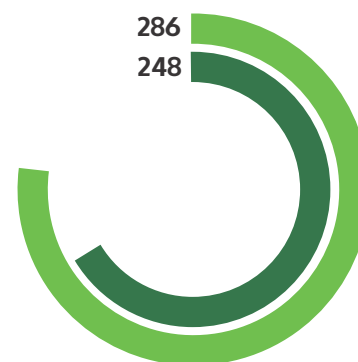
DURING THE REPORTING PERIOD, WE TRAINED 250 ASPIRANTS AND CONDUCTED CAPACITY BUILDING PROGRAMMES FOR 679 PEOPLE



Sustainable Livelihood

We partner with communities and support them in leading a life of dignity and self-esteem. Our operations are mostly near rural areas where farming is a primary source of income for a household. To attain better productivity through farming we promote capacity building sessions on agriculture and allied activities. We organise camps and provide training on modern agriculture farming techniques. We help them through demonstration plots and soil testing. We promote farmers clubs for collective growth among themselves by sharing their knowledge on procurement of inputs and economies of scale.

At Aditya Birla Rural Technological Park, we have organized training for more than 27 batches. We have provided training on computer literacy, cosmetology, repair of electric and electronic goods, handicrafts, bag making, soft toys, tailoring and knitting, ways to enhance agricultural output and veterinary science. During the reporting period we trained 250 aspirants and conducted capacity building programmes for 679 people.



■ Allocated (INR Lakhs)
■ Actual (INR Lakhs)
Expenditure on Sustainable Livelihood projects

Impact of our initiatives in Sustainable Livelihood

Initiatives	Unit	FY 2018-19
Vocational Job Oriented Skill Training Programme	No. of Beneficiaries	5,864
Technical Skill Training	No. of Beneficiaries	367
Farmers meeting / Melas	No. of Farmers	19,182
Distribution of Agriculture Tools, seeds, fertilizers and insecticides	No. of Farmers	5,233
Animal Immunization	No. of Cattles	47,964
Self Help Groups Formed	No. of Groups	1,584

Case study: Sustainable Water ATM

Kersol is a village located in Bharuch Gujarat, where the groundwater is contaminated due to ingress of saline water. The available piped water is not safe for drinking purpose as it contains a high amount of Total Dissolved Solids (TDS). Understanding this, we planned to develop a surface water based system for access to safe and clean drinking water which is owned and managed by the community.

The objective of this programme is to provide safe and clean drinking water to each household. To attain this, we partnered with Piramal Sarvajal. The Community Awareness and Local Marketing (CALM) team of Piramal Sarvajal conducted pre-launch and awareness activities.

Through this programme, we were able to provide accessible safe drinking water to 176 households covering approximately 818 people. In order to make the project self-sustainable, Piramal Sarvajal provided a prepaid water ATM card to all individual households. With this card, the villagers have access to safe and healthy drinking water at INR 0.30 per litre.

Case study: Skill Development & Livelihood

Farmers across India typically face inconsistent incomes due to dependency on rainfall, market situation, weather etc. With a view to provide a consistent income source to farmers, we initiated a skill development programme for women.

The objective of this programme is to enhance the skill set of women resulting in consistent income and an improved confidence level.

Through this programme, we have introduced tailoring and beautician courses. So far, about 280 women have received the benefit of the programme. The up-gradation of skill helped them in supporting their families by supplementary income.

We are proud that the programme has received the large enterprise category award at “**ICC Social Impact Award summit**” from the Indian Chamber of Commerce.



Skill Development Initiative

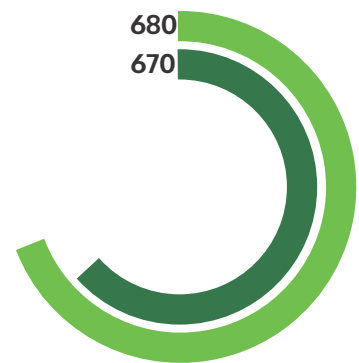


CSR Initiative- Infrastructure Development



Infrastructure Development

We develop infrastructure in the community to increase the accessibility and facilitate people. The development of infrastructure includes assistance in development and construction of village approach roads, culvert, panchayat bhawan, pond excavation, bathrooms, protection wall, channel pitching, rural houses, check dams, bus stops etc.



■ Allocated (INR Lakhs)
■ Actual (INR Lakhs)

Expenditure on Infrastructure development projects

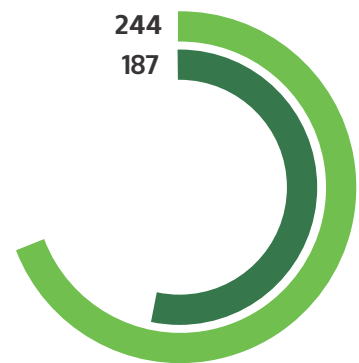


Supporting Social Cause

We believe the better way in bringing behavioural change is through social reform. We help communities to fight against child labour, illiteracy, child marriages abuse of the girl child and women, alcoholism and poor hygiene. We support and encourage them through cultural programmes and sport events.

We collaborated with government agencies and other Groups including communities to bring social awareness among the people. During the reporting period we have conducted 336 social awareness camps reaching out to 79,570 participants. We organized 8 dowry-less mass marriages where 1,553 marriages were solemnized.

We distributed about 6,219 blankets to the needy people and supported 1,924 orphanage and old age residents.



■ Allocated (INR Lakhs)
■ Actual (INR Lakhs)

Expenditure on Supporting social cause

Impact Assessment and Review Process

In-order to measure the effectiveness of our community development programmes, we have developed a framework for impact assessment and a review process. As part of the process, we have carried out social audit for identifying the impact on communities post establishment of Utkal Alumina International Limited (UAIL). This study was conducted by the Xavier Institute of Management, Bhubaneswar. The results of the study indicated that the establishment of UAIL had a significant impact on the development of the community. The existence of UAIL has unfolded many opportunities for development in various aspects such as agriculture, infrastructure, economic status, education, accessibility and health care. The impacts observed due to establishment of UAIL are as outlined in the diagram below:

The results obtained revealed the development in five focus areas through our initiatives and helped to the communities to become more resilient.

2

Average annual household expenditure has gone up from Rs. 25,110/- in 2005 to Rs. 64,325/- in 2018

4

1

Average annual household income has gone up from Rs. 24,520/- in 2005 to Rs. 68,200/- in 2018.

3

Percentage of pucca houses in the area has gone up to 35.16% in 2018 as compared to 4.39% in 2005.

5

There has been a significant increase in the standard of living, literacy rate, education and quality of life.

7

The accessibility for basic amenities has increased such as medical assistance, housing, safe drinking water and transportation.

Percentage of electrified households has gone up to 91.56% in 2018 as compared to 17.08% in 2005.

6

Due to establishment of the UAIL, migration of people has significantly reduced

8

Rehabilitation and Resettlement Colony at Mahan Aluminium- Bargawan

Reliable

We are committed to develop a reliable relationship with our employees, customers and suppliers.

We strive to promote employee development, innovation in produce development process and sustain a robust and environmentally conscious supply chain operations on their transformation journey.





Flat Rolled Products Plant- Hirakud

Message from Chief Human Resource Officer



OUR MULTIDISCIPLINARY TEAMS OF TECHNICAL EXPERTS, SCIENTISTS AND ENGINEERS ENABLE US IN DEVELOPING COMPETENCIES THAT HELP US BECOME A GREENER, STRONGER AND SMARTER BUSINESS.

Our long term success rests on our workforce of more than 25,000 people who have high commitment levels and are working to meet challenges of the future. We continue to be a reliable employer by focusing on talent acquisition, capacity building of our employees and accelerating innovation through collaborations. Our robust talent management programme focuses on developing a leadership pipeline and attracting the best talent by offering challenging career opportunities. Our learning and development programmes are well integrated with our business objectives resulting in enhanced leadership capability. Our multidisciplinary teams of technical experts, scientists and engineers enable us in developing

competencies that help us become a Greener, Stronger and Smarter business. Diversity and inclusion help us to create a workforce that enables employee friendly policies facilitating growth with equal opportunities. Further, we are committed in building the trust among all our suppliers, employees and customers through Hindalco Management Framework (HMF). It enables us to successfully progress on a path of transformation towards a resilient, responsible and reliable future.

Samik Basu
Chief Human Resource Officer

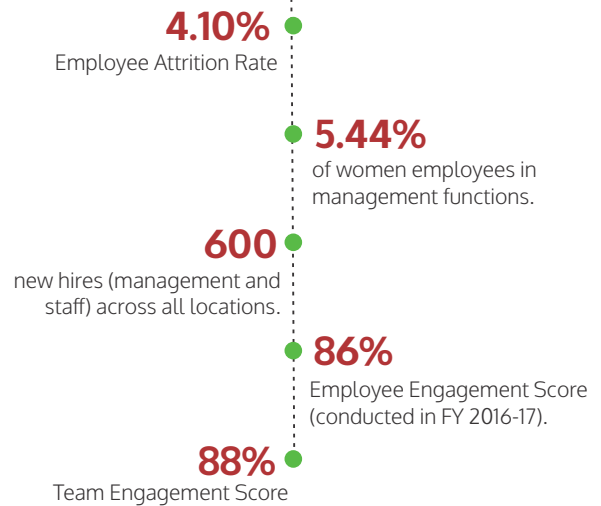
Employee Stewardship

Our employees play a vital role to foster a growth driven culture. We strive to achieve equitable and sustainable development by focusing on talent acquisition, training and development, performance management and diversity at workplace. Our values have inculcated a deeper sense of responsibility and connect amongst our employees. We are following HR 2020 Strategy to integrate human capital with various business priorities.

We believe on structured capability building of our employees. Employees are provided with opportunities to enhance their behavioural, functional and technical competencies through various interventions like on the job exposure, projects, coaching, mentoring and classroom trainings. We believe that organization culture is very important towards systemic capability building. Keeping this in view, we consistently keep working on culture transformation interventions. We believe that it is imperative to keep our employees engaged, aligned, energized and motivated through well-structured employee engagement activities.

We ensure that our HR policies and procedures are regularly reviewed by the management at both plant and corporate levels. Our HR strategy is centred on manpower productivity, talent development & retention and best in class learning opportunities.

Highlights



Parental leave availed by 382 employees with 375 of them joining back and 7 employees availing the leave as on 31st March 2019 (Management and staff).



**VALUE MONTH CELEBRATION | VALUE CAFÉ | CHANGE AGENTS | VIBES | TEAM VIBES |
BEST EMPLOYER SURVEYS | WELLNESS 2.0 | HELP PROGRAM | ASK HR | ABG AWARDS |
PRATIBHA SCHOLARSHIP | AWOO CAMPAIGN | POSH COMMITTEE**

Organization Effectiveness

Organization effectiveness adds value in enriching our human capital. We have identified roles and responsibilities for reinforcing various enablers related to our values, culture, behaviour and skill development.

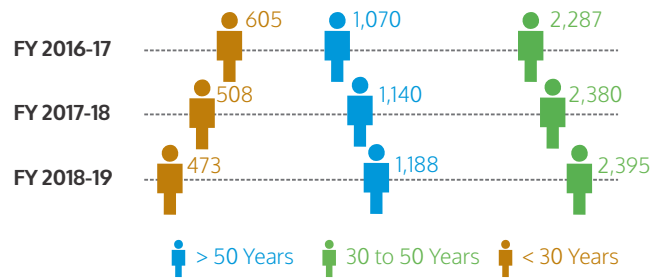
- Organization Integrators align our employees with organization's values and purpose. This is done through various initiatives such as value month celebration, value café etc.
- Change agents shape our culture and facilitate change management by developing organization capacity.
- Key Enablers and leadership manage initiatives and processes to ensure effectiveness. These enablers implement various initiatives such as ABG Awards, Pratibha scholarship program, AWOO campaign, wellness programs for employees and their families. They also operationalize Values Standards committee at business and unit level and further equip committee members to carry out enquiries in a systematic way. Key enablers further operationalize POSH committee and equip Internal Complaints Committee (IC) members to carry out necessary communication and processes as per regulatory requirements.

In FY 2018-19, our total employee count in India reached to 25,643 with on-roll workmen forming the bulk of our operations at about 70.12%. Business wise, details of our workforce is provided in the table below:

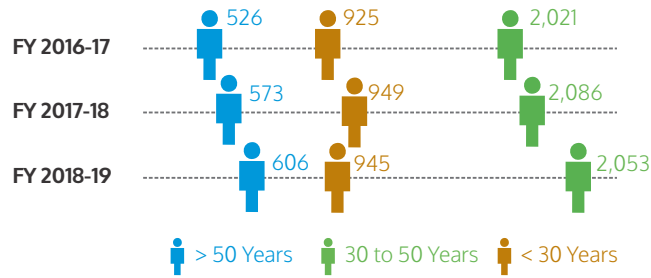
Manpower details: Permanent	Aluminium and mines	Copper	Total
Total Manpower Strength (Management Staff and Workmen)	24,034	1,609	25,643
Number of Management & Staff	7,192	468	7,660
Number of Management & Staff (Male)	6,802	441	7,243
Number of Management & Staff (Female)	390	27	417
Number of on-roll workmen	16,842	1,141	17,983
Number of on-roll workmen (Male)	16,524	1,128	17,652
Number of on-roll workmen (Female)	318	13	331
Number of contract workmen	31,899	2,821	34,720
Number of contract workmen (Male)	30,781	2,655	33,436
Number of contract workmen (Female)	1,118	166	1,284

Catagory wise and age wise details of our employees are mentioned below:

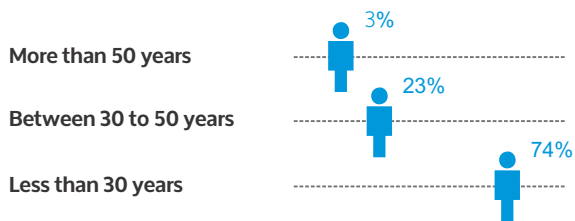
Management employees (Age wise)



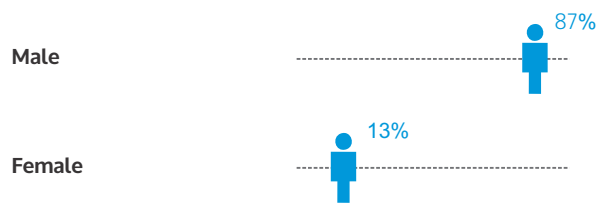
Staff employees (Age wise)



New hires - Category wise



New hires - Gender wise



Category	Aluminium and mines	Copper	Total
Total employees hired	537	63	600
Employees hired - Male	470	53	523
Employees hired - Female	67	10	77
Employees hired (> 50 years old)	16	-	16
Employees hired (30-50 years old)	126	14	140
Employees hired (< 30 years old)	395	49	444

Our employee friendly policies and career growth prospects resulted in reduction of total employee turnover from 10.5% to 6.10% compared to last year. Details of employee turnover for FY 2018-19 are mentioned below:

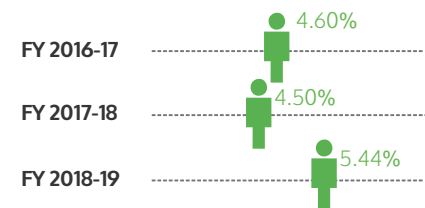
Category	Aluminium and mines	Copper	Total	Rate
Total employee turnover	430	38	468	6.10%
Employees turnover - Male	406	35	441	6.08%
Employees turnover - Female	24	3	27	6.47%
Employees turnover (> 50 years old)	23	4	27	1.50%
Employees turnover (30-50 years old)	213	24	237	5.33%
Employees turnover (< 30 years old)	194	10	204	14.38%

Diversity at workplace

We promote diversity and inclusion at our workplace. We respect various cultures, nationalities, religions, cast, creeds, race, and sexual orientation and continue our efforts towards increasing gender sensitivity through gender intelligence sessions for various grades of employees. We support women employees through self-motivation programs during critical phases of life, developing a financial acumen, establishment of a stringent Prevention of Sexual Harassment (POSH) policy and a robust maternity policy.

As per the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, we have institutionalized the Internal Complaint Committee (IC) across all our units and office locations. We diligently spread communication with respect to IC circulars to all our employees. Our comprehensive mandatory e-learning course available on the 'Gyanodaya' portal provides relevant insights about the Act and POSH policy to all our employees. Employees receive a course completion certificate post completion of this e-learning course. We achieved 100% coverage of our female employees through this e-learning course on POSH.

Women employee in management staff



Target for FY 2019-20

- We are planning to start a targeted career journey for our women managers.
- We will be starting a second phase of training of second layer leadership which constitutes managers on gender intelligence and generation intelligence.

Our Review Framework

We have institutionalized a 3C+2S review framework which focuses on improving employee productivity across multiple areas of our business such as operations, cost efficiencies, safety, sustainability and systems and processes. Every member of our workforce is aligned with the organisational goal of driving cost efficiencies, thereby conserving cash for future growth. This framework is based on 3 pillars - Customer, Cost and Cash (3C). We make concerted efforts to ingrain Safety and Sustainability; and systems and processes (2S) across these 3 pillars.

3C

+

2S

CUSTOMER

CASH

COST

**SAFETY AND
SUSTAINABILITY**

**SYSTEMS AND
PROCESSES**

Employee Care and Human Rights:

We seek to conduct our business operations in a manner that respects the human rights and dignity of our people. We promote equal opportunity employment and believe in propagating a work environment without any form of discrimination. Our geographically diverse employee portfolio consists of employees who belong to four nationalities. These include one employee from Uganda, three employees from Nepal and three employees from United States of America. All other employees are Indian nationals.

We recognized that worker unions at all our operations in India and more than 68.87% of the total workforce is covered under the provision of collective bargaining. We support the right to collective bargaining of our workers and ensure full transparency and trust with our entire workforce. Our long-term meaningful relationships with the unions and all settlements follow prevailing labour legislation at the national and state levels. Our agreements with trade unions cover all relevant health and safety topics for operations at respective locations.



Flat Rolled Products Plant- Talaja

We have also developed a Human Rights Policy in the reporting year which reinforces our commitment to respect and uphold the human rights of all our stakeholders and guides the actions taken to fulfil our commitment. In order to identify potential human rights related risks, we have a due diligence process which is conducted annually through company-wide compliance monitoring. This entails undertaking a detailed monitoring at 100 of our sites to ensure compliance to various human rights related requirements such as no child labour, working conditions, minimum compensation, equal opportunity, freedom of association etc. Compliances to Factories Act and labour laws are audited by the legal team and findings are presented to the senior management. Moreover, every business unit has an SOP (Standard Operating Procedure) in place to ensure compliance to labour rights. We also assess human rights related risks in our supply chain, which is a part of the overall supplier evaluation.

The risks identified are addressed through the implementation of appropriate corrective actions which can range from risk prevention through awareness sessions and precautionary measures, risk reduction through building capacity and safeguards or risk elimination through modifications in the business process or termination of contract.

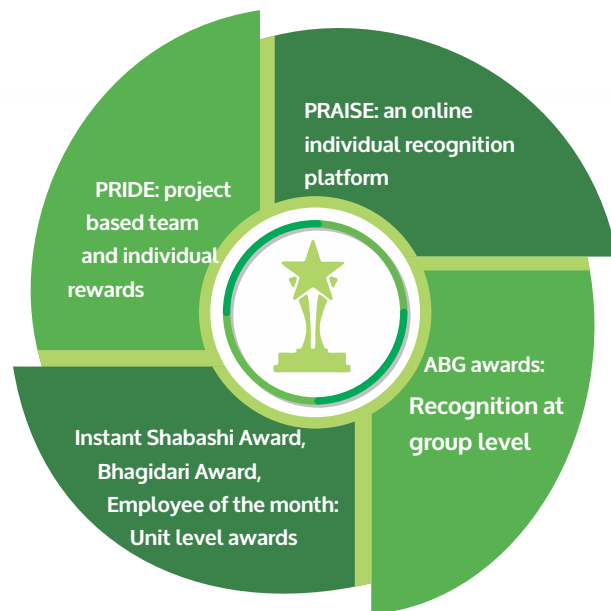
Cases of human rights violations are dealt strictly through warnings, counselling, penalties and even termination of employment depending upon the severity of violation. None of our operations were identified as having significant risk of violation of right to collective bargaining.

We are committed towards providing benefits to our permanent employees as per defined plan obligations. These benefits include medical insurance, residential accommodation at plants, group personal accident insurance as well as parental leaves. All employees who availed parental leave during the previous reporting period are currently employed with us after 12 months of return to work. We are an equal opportunity employer and believe in providing equal benefits to all our employees without any form of discrimination. The ratio of basic salary and remuneration of women to men is always 1:1 for respective job bands. The remuneration structure of our employees is based on their job roles and industry wide benchmarking exercise carried out periodically. During revision of the remuneration structure, views of all the relevant stakeholders are taken into account.



We believe communication is one of the critical aspects for developing a responsible work environment. In case of any significant changes in operations, we notify all our management staff and workmen about it. The management staff is notified at least 3 months in advance whereas workmen are notified as per requirements of local regulations. We also provide trainings to unionized employees on aspects such as skills, business objectives and values which result in better contribution to the Company and the Group. We ensure that all our units are 100% compliant in terms of local and national laws, minimum wages, payment of wages and the Factories Act and all other prevailing regulatory requirements.

Our Code of Conduct and policies emphasize upon human rights issues such as child labour, forced or compulsory labour, sexual harassment and discrimination. We extend these policies to all employees, contractual employees and other partners across our value chain. During FY 2018-19, there were no grievances related to human rights violation or discrimination at any unit. All our security personnel are aware of basic human rights and are trained on organizational policies and procedures.



Flat Rolled Products Plant- Hirakud

Performance Evaluation approach

We always believe that the performance of each employee contributes in establishing sustainable business. Our employee performance management system involves a goal setting process and performance review for each financial year. We ensure that all employees participate in at regular performance reviews.

Learning and development

We nurture our employees by emphasizing on their learning and development, career progression and overall wellbeing. In view of this, we have rigorous Training Needs Identification (TNI) process that factors in organisation wide learning priorities, inputs from unit HR teams on specific competency focus, analysis of “My Development Plan” of individual employees, inputs from performance management and inputs from potential assessments and DACs.

The TNI process is an integral part of our annual performance management system that is supplemented by a training planner at the business level after seeking requisite inputs.



Training of senior leadership

Accelerated Leadership Program

Guidance for leaders to step up

Chairman series program

To enable leaders to deliver on business strategies

Functional Academy

To enhance functional competencies of leaders



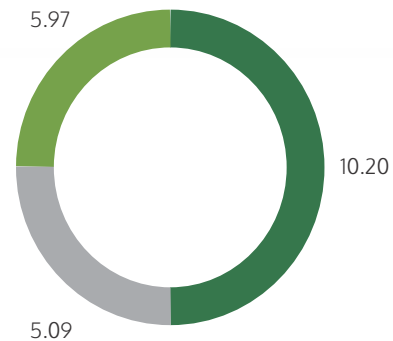
ABG has established exclusive leadership centre called Gyanodaya for training of senior leadership. In these training programs, senior leadership receives high-quality learning interventions which are aligned with our strategic vision and leadership solutions.

- Behavioural competency programs at all levels cater to the key competencies needed to realise organisation and individual aspirations (Vision & Strategy, Business Acumen, Team work & Collaboration, Develop Oneself & Others, Innovate & Improve, Customer Focus, Get Results, Communicate to Influence & Engage).
- Life enhancement programs (Turning a New Leaf - a week long special intervention for retiring employees with spouse, Gender Intelligence - to educate employees on gender sensitization).
- Wellness Programs (Live well Series I - awareness program for physical wellbeing, Live well series II - awareness program for emotional wellbeing)

Training man days

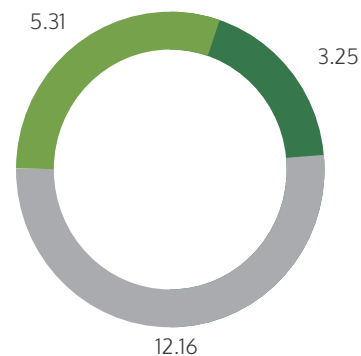
Following are details of trainings provided to our employees during the reporting period:

Category	Aluminium and mines	Copper	Total
Total training man-days	1,34,289	16,415	1,50,704
Training man-days (management)	48,483	2,543	51,026
Training man-days (On-roll workmen)	85,806	13,872	99,678



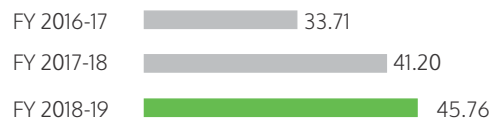
Average training man-days - Aluminium and mines

Male Female On roll workmen



Average training man-days - Copper

The three year trend of average hours of training per employee is presented in the table below:



Average Hours of Training per Employee

We take pride to share that we have exceeded our target of average 40 training hours per employee by FY 2019-20.

Hindalco Coaching Program - Building and enabling organization

During the year, we launched the Hindalco Coaching Program in partnership with Gyanodaya - Aditya Birla Group Learning Center and internationally recognized coaching and leadership development institutions. This program places significant emphasis on promoting coaching culture and coaching style of leadership. We believe that this will play an instrumental role in shaping the future leaders and create an enabling organization.

Functional / Technical Competency Development

We have built a competency framework around functional and technical development needs reflecting Hindalco business realities of today and tomorrow. This will help the employees, managers and leaders to choose specific functional / technical needs during the TNI/ MDP exercise. This also enables Hindalco Technical University to enhance offerings of existing training programs and develop new programs in line with the identified technical competencies.

Hindalco Technical University:

Hindalco Technical University is a platform focused on fostering technical excellence in our employees. Following are objectives of Hindalco Technical University:



Key highlights of the University for FY 2018-19:

- Specialised Workshops on Smelter Technology by subject matter experts
- Specialised Workshops on Reliability by eminent speakers in Downstream
- Downstream Summits on Extrusion and Rolling
- Residential Programs on Industrial Hydraulics. Gearbox, Bearing and digitization at SNTI Tata Steel, Jamshedpur, Rexroth Sanand and IIT Chennai
- Launched Energy Auditors/ Energy Managers across Hindalco through HTU
- GET Programs designed by HTU and executed by external faculty
- Virtual Reality Process introduced

HTU's journey so far:



Hindalco is Transforming

This year in Hindalco's journey of transformation, a team of 70 from across the organization came together to align on the company's go forward strategy for the next 10 years in the context of external trends, disruptions, global challenges, opportunities and internal capabilities. This team also identified the culture and capabilities that are required to deliver this strategy - collaboration, customer centricity, ownership & accountability, talent development, world class downstream capability. They developed a stop - start - continue list in terms of leadership behaviours that needs to be demonstrated going forward. To start building the required capability and culture for the future many significant steps have been taken across the

organisation. The "Parivartan RKT 2.0" intervention in Renukoot , Kayakalp in Hindalco Mining Group and "Change To Win" in Dahej Copper Plant are a few leading examples of this.

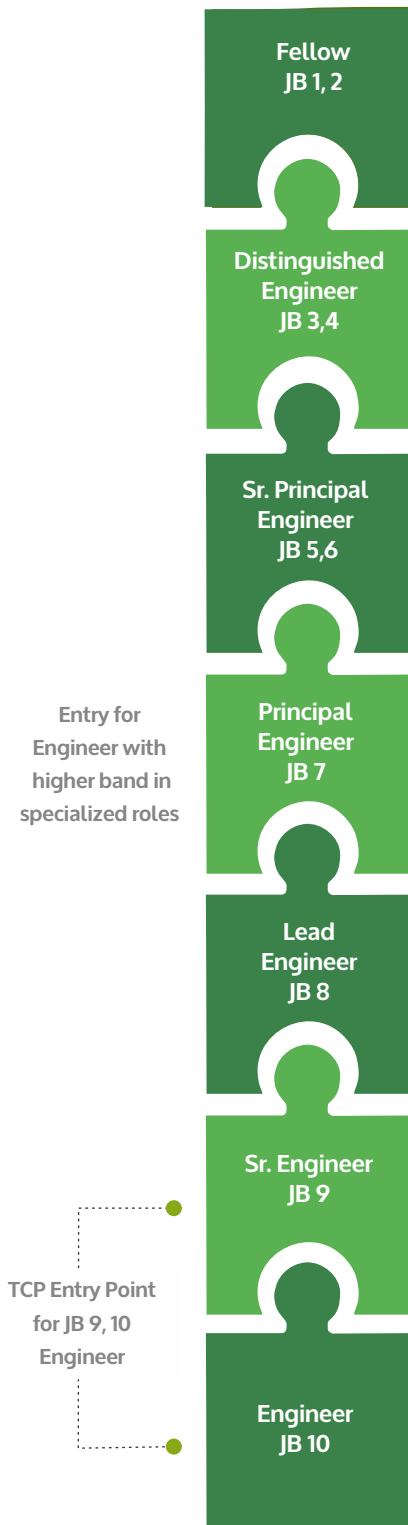
Technical Career Path (TCP)

Hindalco is a large manufacturing organization wherein technology and technical expertise are fundamental sources of competitive advantage. To gain competitive advantage in the marketplace, our business needs to build specialized capabilities in key technical areas. This requires designing specialist jobs, building a specialist ecosystem and actively nurturing specialists. While these jobs are few in number, specialist jobs are highly knowledge centric and/or specific to the core of our business. In quite a few areas, technical specialists are home grown and take a long time to develop. As the business and external market conditions are becoming more complex, there is an urgent need to develop, nurture and retain incumbents with specialized skill sets that are key to the business growth. The normal managerial career ladder is not adequate to cater to these needs in many cases and hence Hindalco has come up with Technical Career Path.

Case study: New initiative for VR training to new joiners

With the objective to provide exposure to new joiners and visitors for understanding the processes in smelters and mines, we have developed six virtual reality cases out of which 4 are for explaining processes from smelters and 2 are for mines. This project was launched in December 2018. We ensure that our new joiners and trainees should have an understanding of all the processes related to smelters and mines in detail and within a safe environment. Through this initiative, more than 400 employees in smelters and the same as that in mines were covered under this training. Some of the programs conducted so far are:

- Alumina Refinery Workshops
- Smelter Operation workshops
- Advanced Analytics by IIT Chennai
- Reliability engineering for downstream
- Industrial Hydraulics workshop by Bosch
- Vibration analysis, bearing maintenance technology, sealing solution technology by SKF
- Lean manufacturing workshop
- Six sigma green belt workshop
- Electrical reliability and safety through conferences and seminars
- Partnered with SKF, IIT Chennai, Mahindra, SNTI and BMGI



Case study: Responsible and reliable workplace

With the objective of promoting the health and safety of pregnant employees and mothers, we have developed three major policies such as:

- Maternity leave policy as per the guidelines from Government of India
- Paternal leave policy which allows male employees to avail 5 days of leave to take care of their new-born.
- Safe commute during the pregnancy period which facilitates pregnant employees to claim their cab fares or salary of drivers. Also this policy facilitates women to travel with new-borns till two years of their age.

It gives us a great sense of privilege to state that these transformations resulted in the progression of more women to senior management positions in the organization.

To promote gender diversity at the workplace, we have implemented a gender intelligence program which focuses on strengths of both genders and value addition done by both the genders



Case study: Women at Hindalco (WAH) Conclave

We organized the first Hindalco Women's conclave at Taloja, Mumbai in March 2019 to promote various forms of diversities w.r.t. gender, thoughts, religion, jobs etc. A total of 136 women employees from various departments such as Engineering, Industrial Relations, CSR, HR and shop floor were a part of this conclave.

The conclave includes an open ended discussion with our MD Mr. Satish Pai and CHRO Mr. Samik Basu. Employees and top management put their thoughts and ideas about bringing in behavioural change and a change in mind-set in both the genders.

We also invited eminent speakers, leaders from industries and panellists for delivering lectures on self-confidence, gender intelligence, inclusiveness, cultural transformation and international career pathing.

These thought-provoking and insightful sessions provided a good platform to our employees to be part of a unique conversation with successful women in manufacturing industries.



Product Stewardship

We at Hindalco, innovate and design our products in a responsible way for a better tomorrow. We continue to collaborate with industry experts in order to continuously improve the product specifications so as to meet changing industry requirements. This helps us in developing products that are greener, smarter and stronger. Some of our collaborations include think tanks and institutions such as IITs, NITI Aayog, Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC) and Institute of Minerals and Materials Technology (IMMT). These collaborations help us to develop solutions for a reliable future.

We have a strong focus towards our growth strategies and our value added products form an important part of this. We focus on enriching the product mix in aluminium and improving our capacity in copper business. We witnessed increased production at Dahej on account of streamlined operations of Continuous Copper Cast Rod (CCR-3) plant. This has helped us to serve the growing demand of copper in the domestic market.

We have a diversified portfolio of products to cater to the need and demand of various customers. These include various industry sectors such as pharmaceuticals, automobile, defence, building & construction, white goods, packaging, agrochemicals etc. All our products comply with local and international regulations concerning product and service information and labelling. During the reporting period, there was no incident of any non-compliance concerning marketing communications, product and service information and labelling.

We have undertaken Life-cycle Assessment (LCA) studies of some of our products to understand impacts of our products on the environment during its lifecycle. The LCA



study complies with the requirements of ISO 14040:2006 and 14044:2006. A majority of our products from the aluminium business are now covered under the LCA study.

Our Research and Development (R&D) centres are well equipped with state-of-the-art technology to continuously improve our products. We align our product development process as per feedback received from our customers on a regular basis. Currently we have two R&D centres one at Belagavi and the other at Taloja. Both these centres are recognized by the Department of Scientific & Industrial Research (DSIR), Government of India and are ISO 9001:2000 certified. The Taloja centre is accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL) in accordance with the ISO/IEC 17025:2005 standard. Both these R&D centres are also associated with Aditya Birla Science & Technology Company as well as with external research institutions.

Following are some examples of our efforts in research and development:

Aluminium-Jute packaging material

As part of our product development process, we combined properties of aluminium foil and jute to develop a combined packaging material. The aluminium foils are impervious to moisture, bacteria and all gases, and jute is an environment friendly natural material with good elastic properties. The combined material is a good fit for packaging and also can also be utilised for various other purposes. We have partnered with the National Jute Board to explore opportunities for useful application of this product.



Aluminium foil for Li-ion batteries

Catalysing the growth of the electric vehicles market, we have developed aluminium foils which can be used for packaging of Li-ion batteries. These foils are qualified by the Indian Space Research Organisation (ISRO) and Automobile Research Association of India (ARAI). Application of these foils in Li-ion batteries is expected to reduce the use of plastic in battery manufacturing and increase the lifespan of batteries.

Aluminium Bus

Aluminium can be extruded into complex shapes, allowing its application in intricate design and integrally strong structures. Modern buses with aluminium bodies are several hundred kilograms lighter than those built using conventional material such as steel. We closely working with ARAI to develop the bus built on an aluminium body. This will help in increasing the carrying capacity of the bus for a given maximum permitted weight and reduces running costs due to improved fuel efficiency.

Copper Products

We have increased the variants in our value added products category for downstream niche markets. We produce 99.9% pure copper as per London Metal Exchange (LME) specifications. We have developed oxy-free copper products which are being used in various applications including strip-manufacturing.

Case study: Technology absorption in Bauxite and Alumina operation

Our emphasis on new product development, innovation and research in technology has helped us undertake a competitive edge over the years. We have undertaken research in alumina refinery operation for improving efficiency, resource optimization and customer satisfaction. This has resulted in enhancing sales volumes of our value added products. Some of the initiatives taken during the reporting period are as follows:

- Development of high purity alumina (3N) which is used in electronic and electrical ceramic applications.
- Development of different types of low/ultra-low soda alumina for ceramics, spark plugs and technical ceramics applications.
- Development of disposable low soda alumina for Refractory and environmental ceramics applications.
- Development of high density precipitated superfine hydrate used in high voltage cable applications.
- Quality improvement of selected alumina and hydrates for both domestic and export markets.
- Research in developing useful applications of bauxite residue.

In addition to this, we have developed a plan of action for our R&D efforts. This plan is focused on energy conservation initiatives, effective utilization of waste in construction and backfilling operations and quality improvement of low grade bauxite through the beneficiation process.

Case study: Aluminium Dry Bulker

In line with our philosophy to develop products that make the world greener, stronger and smarter; we took an initiative to develop an indigenous aluminium bulker. The choice of aluminium was due to its properties of being a light weight metal and having an unlimited recycling potential. Traditional bulkers are manufactured using steel. The steel is heavier than aluminium and is corrosive in nature resulting in a large amount of GHG emissions and a shorter life span of the bulker.

We replaced steel with aluminium for manufacturing the bulker. This resulted in a product which is about 1,800 kg lighter as compared to its conventional counterpart. The aluminium bulker is non corrosive in nature which improves the life of the bulker by almost three times as compared to the steel bulker. This product redefines the transportation of cement, fly ash etc. by reducing emissions and increasing the mileage. It has been observed that the aluminium bulker can carry about two tonne of material in addition to the capacity of the steel bulker. This results in profit for the bulker owner in addition to improved fuel efficiency of the vehicle. The improved fuel efficiency translates into monetary savings of about INR 50,000 per year along with reduced GHG emission per tonne of material transported.



Customer Centricity

To ensure that our customer enjoys all aspects of our superior service with each area of business, we developed clear policies, rules and supporting mechanisms. We thrive and align our actions to meet the customer complex requirements. With the focus on transformation to a reliable future, we concentrate on improving responsiveness and building long term relationships with our customers. Our top management team is responsible for reviewing the customer centricity projects and initiatives.

There are four key dimensions of customer centricity at Hindalco:

- Listening, learning and acting on customer feedbacks.
- Ensuring faster resolution in case of customer complaints.
- Improving ease of doing business.
- Creating higher customer engagement.

Customer Centricity at Aluminium Business:

We employ a mix of both Bottom Up NPS and Top Down NPS to receive a well-rounded picture on our customer's perception. Over the years, Hindalco has moved from a Customer Satisfaction model to the adoption of Net Promoter System (NPS) model.

Since FY 2015-16 we have included primary aluminium products as well as value added products covering about 97% of the product mix as part of the NPS Top Down survey over the years.

The Primary (Wire rod) business is a great example where the NPS score has increased from 49 to 64 during FY 2015-16 to FY 2018-19. This is an indication of our commitment towards customer centricity.

We are also working on reducing the complaint closure time for all received customer complaints. Complaint closure time gets monitored on a regular basis with the intent of keeping the number of open complaints which are more than 30 days old as close to zero. This has resulted in prompt processing of credit notes for customers. We leverage technology to create solutions that solved the key pain points at each stage of the customer's journey.

Various digital initiatives like price ready reckoner, order entry simplification, status/stage of the material ordered, integrated warehouse management, GPS based live tracking of consignment, and automated payment due notification, automated payment acknowledgement etc., were conceptualized and implemented.

Customer Centricity at Copper Business:

Our copper business adopted an active listening and observing approach to customers for improved experience during their interactions with the company.

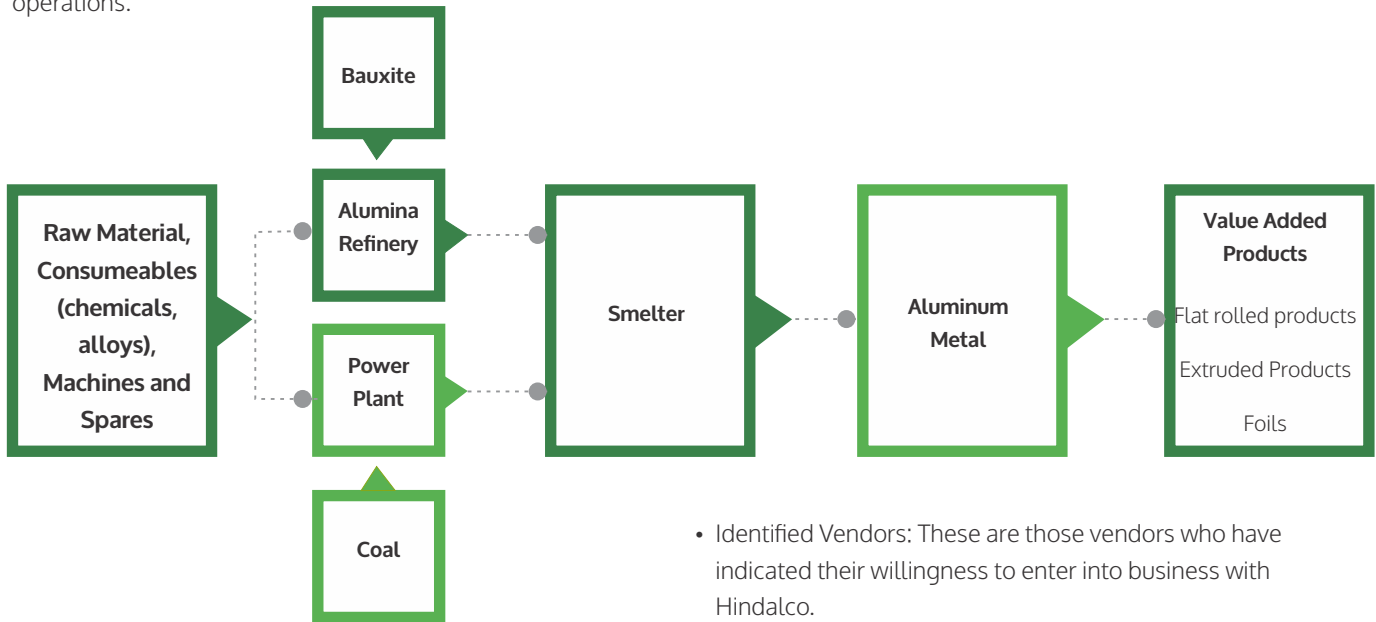
We ensure that feedback received from customers is analysed and relevant actions are taken. Also customer issues are analysed and action plans are prepared among cross functional teams at plant and zone level. The action plans are implemented, reviewed and monitored as per time lines on a regular basis. Based on this, we communicate to respective customers on the status of their feedback. On the basis of these feedbacks received from customers, an annual workshop is carried out at plants as well as zones, Feedbacks from customers are received through double blind survey.

The satisfaction levels of the customer and their perception about the company is captured using Net Promoter Score (NPS) methodology. This is collected regularly during feedback by a call centre and annually in the double blind survey as well. We witnessed the increase in NPS score of copper business from 44 to 64 while the industry score transitioned from 49 to 53.

To enhance customer engagement, we meet and interact with our customers regularly. These include the senior management going and meeting shop floor employees at customers' premises and also our shop floor employees meeting cross functional teams at customers' premises. Apart from these customer visits, events like cluster meets, dealer meets, and new product launches are also organised frequently.

Supply Chain Management

As a market leader in the non-ferrous metal and mining sector in India, we have significantly large operations and logistics management systems. We cater to the market needs with value added products in our downstream operations. We aspire to excel in the effective management of resources and minimize our ecological footprint through improved supply chain operations.



We acknowledge an extensive network of our suppliers and vendors which includes raw material suppliers, transporters and service providers. During FY 2018-19, we were associated with more than 11,220 suppliers in Aluminium Business and about 2,450 in Copper Business. Majority of our suppliers are based in India and the remaining are majorly spread across China, Japan, Togo, Indonesia and South Africa. Currently 34% of our suppliers have ISO 14001 certification. We target to increase by 5% to 10%, the supplier base with ISO 14001 or equivalent management system by FY 2020-21.

Suppliers are majorly classified on the basis of products supplied by them. All suppliers undergo a screening process at the time of selection. This screening is done through a due diligence process to ascertain the commercial feasibility of collaboration and evaluate the suppliers on parameters such as price competitiveness, quality, response time and Environmental, Social and Governance (ESG) criteria such as health and safety, environmental standards, working conditions, labour rights etc. The ESG parameters constitute a weightage of a minimum of 25% in our overall supplier evaluation. Based on the score received, suppliers can be categorized into one of the following categories:

- Identified Vendors: These are those vendors who have indicated their willingness to enter into business with Hindalco.
- Empanelled vendors: These are those vendors who are eligible for undertaking trial orders.
- Approved Vendors: These are those vendors who are finally selected and approved post performance evaluation including trial orders.

Suppliers with a score 2.5 and below lose the opportunity to receive business from us. During the reporting year, about 38% of our critical suppliers scored below 2.5 of the rating criteria. We plan to help our suppliers in improving their ESG performance and aim to reduce this percentage by 3% to 5% by FY 2020-21. We undertake spend analysis to identify suppliers who are critical for our sustained business performance. Critical suppliers, by the virtue of goods/services they provide have a significant impact on our competitive advantage and market success. These include suppliers supplying high value goods and services, critical/core products and services and non-substitutable suppliers.

In 2018-19, Hindalco engaged with 14,000 tier-1 suppliers, out of which 1,053 were critical suppliers accounting for 95% of total procurement spend.

One of the key factors in our sustainability framework is future proofing by creating value for all our stakeholders. Suppliers being an imperative pillar of our operations, we have greater emphasis on sustainable supply chain management. This has been a priority in our materiality matrix and our customers understand the vitality of the same. Our "Supply Chain and Procurement Policy" demonstrates our commitment to empower our suppliers to align themselves with various aspects of sustainability such as resource conservation, use of alternative materials and renewable energy, water stewardship, safety, health, adherence to human rights across the supply chain. This has resulted in fostering an environment that supports our supply chain partners to assure their sustainability and co-existence. During the reporting year, we have started a sustainability assessment of our supply chain partners. The assessment results are taken into account while taking business decisions related to the specific supplier.

The logistics and transport segment of our supply chain has a greater contribution to strengthen the local economy. During the reporting period, we spent INR 28.49 thousand crore on strategic procurement for aluminium, procurement of copper concentrate and procurement of coal cumulatively. This has enabled the creation of a large number of indirect employment and income opportunities for our local suppliers. As a part of direct employment, we

have about 176 personnel dedicated to the procurement operations and 160 employees running our logistics operations.

Supply Chain Code of Conduct

As a part of our long term sustainability approach, we expect our supply chain partners to adhere to our Supply Chain Code of Conduct in letter and spirit. We carry out periodic assessments of our suppliers and vendors with regard to this Code.

- Anti-Corruption and Anti-Bribery.
- Statutory Compliance with all applicable laws, rules and regulations.
- Fair Treatment to its Employees, and Health & Safety of its Employees.
- Recognize Employees Right to Privacy & Personal Dignity.
- Forced Labour (ensure fair remuneration and working hours set forth by applicable laws) and Child Labour (prohibited).
- Compliance with Environmental Regulation.
- Business Ethics (adhering to policies, best practices, guidelines and internal controls at Hindalco).



Mahan Aluminium- Bargawan

Supply chain risk assessment:

To bring in more buoyance to our Supply Chain Risk Assessment, we have a vigorous supplier risk management process. This process has five broad parameters: health & safety, financial attributes, environmental awareness, labour management & human rights aspects and market dependency. Each supplier is assessed under the risk score calculated based on these parameters. This risk score gives an overview of the supplier risk which plays a major role in the strategy building for sourcing and lower exposure to the supply chain risks. Most of the new vendors have undergone for the screening based on the sustainability criteria of Environmental Awareness, Human rights and Social Aspects. We also undertake site visits to assess the supplier's performance as and when required. During the reporting year, 100% of our raw material suppliers were assessed through sustainability risk assessments and we target to assess 100% suppliers by 2020. Any non-compliances identified are addressed through the implementation of corrective action plans, which are then periodically reviewed.

We have included sustainability in our vendor evaluation framework through the integration of risk scores for our suppliers in categories with substantial business exposure. In some categories, we are tracking our Tier 2 suppliers to understand the risks associated with our supply chain. We have decided to reduce the commodity-wise risk score each year by taking suitable vendor-mix and vendor development decisions in order to make our supply chain more sustainable. In the reporting year, 38% of our raw material suppliers scored less than 2.5 in sustainability assessments. We aim to reduce the percentage of suppliers scoring 2.5 by 5% by 2020.

Strategic procurement with focus on ESG

We are committed to transform towards a reliable supply chain. Our strategic procurement function has developed a framework which includes energy conservation and GHG emission reduction aspects in supplier evaluation criteria.

The strategic procurement function conducts an activity of

vendor registration every two years in which the existing and newly developed vendors are assessed on various parameters. As per the assessment score of parameters a final vendor rating is evaluated based on which the vendor is categorized as approved, empaneled or identified. This categorization decides our relationship with the vendor.

Major evaluation parameter for assessing environment, social and governance aspects are mentioned below:

- Working standard for labors/workers.
- Implementation of Accident, Health & Safety policy.
- Health and Safety standard compliance as per statutory requirement.
- Risk identification standard implemented.
- Compliance of work permits.
- Compliance to Quality management system and quality control.
- Waste management system.
- Financial assessment done on the basis of Altman-Z method for bankruptcy prediction on the basis of vendor's financial information.

On the basis of the information on the abovementioned parameters the assessment for our complete vendor base. Percentage of the suppliers who have been assessed and respective compliance levels with the standard is mentioned below:






	FY 2016-17	FY 2017-18	FY 2018-19
Supplier Base	298	298	335
% supplier compliance	40%	40%	67%

Mapping of Climate Change Risks in the supply chain

In FY 2018-19, we have attempted to map the risks associated with Climate Change in our supply chain which include risks related to water, biodiversity etc. with the aid of a third party agency. This is an ongoing exercise from last year. The result of this exercise has helped us to develop the Risk Visualization Map which is pivotal to locate the risks at the supplier locations. This enabled us to proactively understand possible disruptions on our supply chain and improved decision making in procurement.

Our Contribution to Sustainable Development Goals

Sustainable Development Goal	Our Contribution	Page Number
 <p>1 NO POVERTY</p>	<ul style="list-style-type: none"> Sustainable Livelihood and infrastructure development Projects Job Oriented Training skills 	79, 80
 <p>2 ZERO HUNGER</p>	<ul style="list-style-type: none"> Training and educating the farmers for increasing the harvest and reap. Supporting activities in agriculture and horticulture. 	78
 <p>3 GOOD HEALTH AND WELL-BEING</p>	<ul style="list-style-type: none"> Catering the health care to rural patients through hospitals, dispensaries. Specialized health camps and Eye Camps Mother, child care and adolescent girls health care initiatives Infrastructure development for hospitals and the community 	76, 77
 <p>4 QUALITY EDUCATION</p>	<ul style="list-style-type: none"> Aditya Birla Schools and Hindalco Technical University Pre-schools, Balewadis, Anganwadis and Play schools Gyanodaya E-portal Learning School support Programs Infrastructure development, New school Building Construction Enrolment Awareness, events and focus on technical training 	75, 89, 95
 <p>5 GENDER EQUALITY</p>	<ul style="list-style-type: none"> Diversity and inclusion at workplace HR 2020 Business Objectives Women at Hindalco. 	86, 89, 97
 <p>6 CLEAN WATER AND SANITATION</p>	<ul style="list-style-type: none"> Implementation of ZLD at 11 sites Rain water Harvesting Renovation of health centres and issues related to water and sanitation Implementation of WASH Access to safe and clean drinking water 	57, 58, 59, 60, 61, 76, 79
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<ul style="list-style-type: none"> Transforming towards renewable energy Training employees to become Energy Auditors and Energy Managers Investing in Energy Efficiency 	47, 48

Sustainable Development Goal	Our Contribution	Page Number
	<ul style="list-style-type: none"> Decent work environment Training on health and safety Implementation of online data management tool “Enablon” 	67, 68, 69
	<ul style="list-style-type: none"> Collaboration with think tanks and government institutions Development of Aluminium Bulker and OFC copper Accredited R&D centres at Belagavi and Taloja Infrastructure development initiatives for communities 	42, 80, 100
	<ul style="list-style-type: none"> Reducing inequalities by supporting the social reform. Training programs for unemployed youth Support program for the BPL, Old age and Needy, Support to differently abled. 	80
	<ul style="list-style-type: none"> Conducted LCA of our products Health & Safety impact assessment for the products Reducing the consumption of the virgin material Transfer from road to rail whenever it is possible. 	46, 98, 102
	<ul style="list-style-type: none"> Installed 30 MW solar power plant. Restoring the ecosystems. Conserving the minerals. Risk and sensitivity analysis. 	41, 52
	<ul style="list-style-type: none"> Green Belt development program Effective water management for preserving the top soil Initiatives for reducing the dust pollution Preserving the seed bank by local Plantation. 	38, 39, 66
	<ul style="list-style-type: none"> Organized a dowry-less mass marriages and other activities related to social reforms. 	80
	<ul style="list-style-type: none"> Initiated a biodiversity study in collaboration with IUCN at three of our operational locations. Through XynteoIndia2022 we are partnering with various industry leaders to develop solutions for a sustainable environment as well as healthcare. 	41, 42

Assurance Statement



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Independent Assurance Statement

The Board of Directors and Management
Hindalco Industries Limited
Mumbai, India

Date: 19 July 2019

Ernst & Young Associates LLP (EY) was engaged by Hindalco Industries Limited (the 'Company') to provide independent assurance on its annual Sustainability Report (the 'Report') for the Financial Year 2018-19.

The development of the Report is based on the Global Reporting Initiative (GRI) Sustainability Reporting Standards ('GRI Standards'); its content and presentation is the sole responsibility of the management of the Company. EY's responsibility, as agreed with the management of the Company, is to provide independent assurance on the report content as described in the scope of assurance. Our responsibility in performing our assurance activities is to the management of the Company only and in accordance with the terms of reference agreed with the Company. We do not therefore accept or assume any responsibility for any other purpose or to any other person or organization. Any dependence that any such third party may place on the Report is entirely at its own risk. The assurance report should not be taken as a basis for interpreting the Company's overall performance, except for the aspects mentioned in the scope below.

Scope of Assurance

The scope of assurance covers the following aspects of the Report:

- Data and information related to the Company's sustainability performance for the period 1st April 2018 to 31st March 2019;
- The Company's internal protocols, processes, and controls related to the collection and collation of sustainability performance data;
- Verification of sample data and related information through consultations at the Company's Head Office in Mumbai and physical visits to the following manufacturing locations:
 - Renukoot Aluminium Complex (Refinery, Smelter, Extrusion, CoGen Power Plant);
 - Birla Copper, Dahej.
- Review of data on a sample basis, at the above-mentioned manufacturing locations, pertaining to the following General Disclosures and Specific Disclosures of the GRI Standards:

General Disclosures:

- o Organizational Profile (102-1 to 102-13)
- o Strategy (102-14, 102-15)
- o Ethics and Integrity (102-16, 102-17)
- o Governance (102-18 to 102-39)
- o Stakeholder Engagement (102-40 to 102-44)
- o Reporting Practice (102-45 to 102-56)

Specific Disclosures:

- o Environmental Topics:
 - Materials (301-1, 301-2, 301-3), Energy (302-1, 302-2, 302-3), Water (303-3, 303-4, 303-5), Emissions (305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7), Effluents and Waste (306-1, 306-2, 306-3), Supplier Environmental Assessment (308-1)
- o Social Topics:
 - Employment (401-1, 401-2, 401-3), Labor/Management Relations (402-1), Occupational Health and Safety (403-5, 403-9), Training and Education (404-1, 404-2), Supplier Social Assessment (414-1), Marketing and Labeling (417-1)

Limitations of our review

The assurance scope excludes:

- Operations of the Company other than those mentioned in the 'Scope of Assurance';
- Aspects of the Report and data/information other than those mentioned above;
- Data and information outside the defined reporting period *i.e.* 1st April 2018 to 31st March 2019;
- The Company's statements that describe expression of opinion, belief, aspiration, expectation, aim or future intention provided by the Company;
- Data and information on economic and financial performance of the Company.

Assurance criteria

The assurance engagement was planned and performed in accordance with the International Federation of Accountants' International Standard for Assurance Engagements Other than Audits or Reviews of Historical Financial Information (ISAE 3000) and the second edition of AccountAbility's AA1000 Assurance Standard 2008 (AA1000 AS). Our evidence-gathering procedures were designed to obtain a 'Limited' level of assurance (as set out in ISAE 3000) on reporting principles and a 'Type 1, Moderate' level of assurance (as per AA1000 AS), as well as conformance of sustainability performance disclosures as per GRI Standards.

What we did to form our conclusions

In order to form our conclusions we undertook the following key steps:

- Interviews with select key personnel and the core team responsible for the preparation of the Report to understand the Company's sustainability vision, mechanism for management of sustainability issues and engagement with key stakeholders;
- Interactions with the key personnel at the Company's manufacturing plants to understand and review the current processes in place for capturing sustainability performance data;
- Physical audits of the Company's corporate office and manufacturing locations as mentioned in the 'Scope of Assurance' above;
- Review of relevant documents and systems for gathering, analyzing and aggregating sustainability performance data in the reporting period;
- Review of selected qualitative statements and sample case studies in various sections of the Report.

Our Observations

The Company continues to demonstrate its commitment to sustainable development by releasing its ninth sustainability report. The Report has been developed as per the GRI Standards, and includes a description of the stakeholder engagement process, materiality analysis and the key material topics.

Our Conclusions

On the basis of our review scope and methodology, our conclusions are as follows:

- **Inclusiveness:**
The Company has described its stakeholder engagement approach and activities in the Sustainability Report. We are not aware of any matter that would lead us to conclude that the Company has not applied the principle of inclusivity in engaging with the key stakeholder groups identified in the Report.
- **Materiality:**
The Company has identified key issues material to its sustainability performance and described the process for materiality analysis in the Sustainability Report. Nothing has come to our attention that causes us to believe that material issues so identified have been excluded from the Report by the Company.
- **Responsiveness:**
We are not aware of any matter that would lead us to believe that the Company has not applied the responsiveness principle in its engagement with stakeholders identified in the Report on material aspects covering its sustainability performance.
- **Reliability of performance Information:**
We reviewed the accuracy and completeness of sustainability information in the Report. Nothing has come to our attention that causes us not to believe that the data has been presented fairly, in material respects, in keeping with the GRI Standards and the Company's reporting principles and criteria. Some data pertaining to key performance disclosures underwent change as part of our assurance process. There is scope to further



enhance understanding of reporting requirements among data owners and strengthen internal controls to ensure uniform and accurate reporting.

Our assurance team and independence

Our assurance team, comprising of multidisciplinary professionals, has been drawn from our climate change and sustainability network and undertakes similar engagements with a number of significant Indian and international businesses. As an assurance provider, EY is required to comply with the independence requirements set out in International Federation of Accountants (IFAC) Code of Ethics¹ for Professional Accountants. EY's independence policies and procedures ensure compliance with the Code.

for Ernst & Young Associates LLP

Chaitanya Kalia
Partner
Mumbai



AA1000
Licensed Assurance Provider
000-43

¹ International Federation of Accountants (IFAC) Code of Ethics for Professional Accountants. This Code establishes ethical requirements for professional accountants. The guidance related to network firms was updated in July 2006.

GRI Content Index

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GRI 306: Effluents and waste 2016			
306-1	Water discharge by quality and destination	61	-
306-2	Waste by type and disposal method	61-62	-
306-3	Significant spills	62	-
306-4	Transport of Hazardous waste	62	-
306-5	Water bodies affected by water discharges and/or runoff	61	-
Sector specific aspects			
MM3	Total amounts of overburden, rock, tailings, and sludges and their associated risks	39-40	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	66	-
103-2	The management approach and Evaluation of the management approach and its components	66	-
103-3	Evaluation of the management approach	66	-
GRI 307: Environmental Compliance 2016			
307-1	Non-compliance with environmental laws and regulations	66	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	104	-
103-2	The management approach and Evaluation of the management approach and its components	104	-
103-3	Evaluation of the management approach	104	-
GRI 308: Environmental Compliance 2016			
308-1	New suppliers that were screened using environmental criteria	104	-
Social			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	86	-
103-2	The management approach and its components	86	-
103-3	Evaluation of the management approach	86	-
GRI 401: Employment 2016			
401-1	New employee hires and employee turnover	87-89	-
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	91	-
401-3	Parental leave	86	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	92	-

Disclosure No.	Disclosure Title	Page No.	Exclusion
103-2	The management approach an Evaluation of the management approachd its components	92	-
103-3	Evaluation of the management approach	92	-
GRI 402: Labour and Management Relations 2016			
402-1	Minimum notice periods regarding operational changes	92	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	67	-
103-2	The management approach an Evaluation of the management approachd its components	67	-
103-3	Evaluation of the management approach	67	-
GRI 403: Occupational Health & Safety 2018			
403-1	Occupational health and safety management system	68	-
403-2	Hazard identification, risk assessment, and incident investigation	67, 68	-
403-3	Occupational health services	67	-
403-4	Worker participation, consultation, and communication on occupational health and safety	67	-
403-5	Worker training on occupational health and safety	68, 69	-
403-6	Promotion of worker health	70	-
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	67, 70	-
403-8	Workers covered by an occupational health and safety management system	67	-
403-9	Work-related injuries	68, 69	-
403-10	Work-related ill health	70	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	93	-
103-2	The management approach and its components	93	-
103-3	Evaluation of the management approach	93	-
GRI 404: Training & Education 2016			
404-1	Average hours of training per year per employee	94	-
404-2	Programs for upgrading employee skills and transition assistance programs	93, 94	-
404-3	Percentage of employees receiving regular performance and career development reviews	93, 94	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	89	-
103-2	The management approach an Evaluation of the management approachd its components	89	-
103-3	Evaluation of the management approach	89	-

Disclosure No.	Disclosure Title	Page No.	Exclusion
GRI 405: Diversity and Equal Opportunity			
405-1	Diversity of governance bodies and employees	89	-
405-2	Ratio of basic salary and remuneration of women to men	91	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	91	-
103-2	The management approach and its components	91	-
103-3	Evaluation of the management approach	91	-
GRI 406: Non-discrimination			
406-1	Incidents of discrimination and corrective actions taken	91, 92	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	90	-
103-2	The management approach and its components	90	-
103-3	Evaluation of the management approach	90	-
GRI 407: Freedom of Association and Collective Bargaining			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	91	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	91, 92	-
103-2	The management approach and its components	91, 92	-
103-3	Evaluation of the management approach	91, 92	-
GRI 408: Child Labor			
408-1	Operations and suppliers at significant risk for incidents of child labor	91, 92	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	92	-
103-2	The management approach and its components	92	-
103-3	Evaluation of the management approach	92	-
GRI 409: Forced or Compulsory Labor			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	92	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	73	-
103-2	The management approach and its components	73	-
103-3	Evaluation of the management approach	73	-

Disclosure No.	Disclosure Title	Page No.	Exclusion
GRI 413: Local Communities 2016			
413-1	Operations with local community engagement, impact assessments, and development programs	74	-
413-2	Operations with significant actual and potential negative impacts on local communities	74	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	104	-
103-2	The management approach an Evaluation of the management approachd its components	104	-
103-3	Evaluation of the management approach	104	-
GRI 414: Supplier Social Assessment 2016			
414-1	New Suppliers that were screened using social criteria	104	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	98	-
103-2	The management approach an Evaluation of the management approachd its components	98	-
103-3	Evaluation of the management approach	98	-
GRI 416: Customer Health & Safety 2016			
416-1	Assessment of the health and safety impacts of product and service categories	98	-
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	98	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	98	-
103-2	The management approach an Evaluation of the management approachd its components	98	-
103-3	Evaluation of the management approach	98	-
GRI 417: Marketing and Labelling 2016			
417-1	Requirements for product and service information and labelling	98-99	-
417-2	Incidents of non-compliance concerning product and service information and labelling	98-99	-
417-3	Incidents of non-compliance concerning marketing communications	98-99	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	101	-
103-2	The management approach an Evaluation of the management approachd its components	101	-
103-3	Evaluation of the management approach	101	-
GRI 418: Customer Privacy 2016			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	101	-

Disclosure No.	Disclosure Title	Page No.	Exclusion
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	98	-
103-2	The management approach an Evaluation of the management approachd its components	98	-
103-3	Evaluation of the management approach	98	-
GRI 419: Socio Economic Compliance 2016			
419-1	Non-compliance with laws and regulations in the social and economic area	98	-
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	38	-
103-2	The management approach an Evaluation of the management approachd its components	38	-
103-3	Evaluation of the management approach	38	-
Sector specific aspects			
MM8	Number (and percentage) of company operating sites where artisanal and small-scale mining (asm) takes place on, or adjacent to, the site; the associated risks and the actions taken to manage and mitigate these risks.	39, 40	-

Alignment with Business Responsibility Report

As per Regulation 34 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, following are details as required for Business Responsibility Report:

Section A: General Information of the Company

1.	Corporate Identity Number (CIN) of the company	L27020MH1958PLC011238			
2.	Name of the Company	Hindalco Industries Limited			
3.	Registered address	Ahura Centre, 1 st Floor, B Wing, Mahakali Caves Road, Andheri (East), Mumbai - 400093			
4.	Website	www.hindalco.com			
5.	E-mail id	anil.malik@adityabirla.com			
6.	Financial Year reported	1 st April, 2018 to 31 st March, 2019			
7.	Sector(s) that the Company is engaged in (industrial activity code-wise)	ITC Code	Product Description		
		7601	Aluminium Ingots		
		7606	Aluminium Rolled Products		
		7605	Aluminium Redraw Rods		
		740311	Copper Cathodes		
8.	List three key products/ services that the Company manufactures/ provides (as in balance sheet)	740710	Continuous Cast Copper Rods		
		<ul style="list-style-type: none"> Aluminium Ingots / Rolled Products Copper Cathodes Concast Copper Rods 			
9.	Total number of locations where business activity is undertaken by the Company	I. Major International Locations			
		<ul style="list-style-type: none"> USA Germany United Kingdom Brazil South Korea 			
		II. Number of National Locations:			
		<ul style="list-style-type: none"> 4 Aluminium 1 Copper Unit 4 Chemical Units (including one unit of Utkal Alumina International Limited, wholly owned subsidiary of the Company) 4 Power Units 5 Rolled FRP 2 Extrusions 1 Foil Registered Office and Zonal Marketing Offices Bauxite and Coal Mines in the state of Jharkhand, Chhattisgarh, Maharashtra and Orissa 			
10.	Markets served by the Company	Local	State	National	International
		✓	✓	✓	✓

Section B: Financial Details of the company (Standalone)

Paid-up Capital (₹)	222.39 Crore
Total Turnover (₹)	45,749 Crore
Total Profit after Taxes (₹)	1,205.43
Total Spending on Corporate Social Responsibility (CSR) as percentage of profit after tax ()	The company has spent - 34.14 Crore as CSR spent which is which is 2.28% of the average net profit for the previous three financial years.
List of activities in which expenditure in 4 above has been incurred	a. Education b. Health Care c. Women empowerment d. Sustainable livelihood e. Infrastructure Development

Section C : Other Details

1. Does the Company have any Subsidiary Company/Companies?

Yes, as on 31st March, 2019, the Company has 45 (forty five) subsidiaries - 10 (ten) domestic and 34 (thirty four) foreign.

2. Do the Subsidiary Company/Companies participate in the BR Initiatives of the parent company? If yes, then indicate the number of such subsidiary company(s):

Hindalco's Sustainability Report covers the India Operations including Mines. Further, Novelis Inc., also publishes Sustainability Report based of Global Reporting Initiative (GRI) framework.

3. Do any other entity/entities (e.g. suppliers, distributors etc.) that the Company does business participate in the BR initiatives of the Company? If yes, then indicate the percentage of such entity/entities?

At present, suppliers and distributors with whom the Company does business, do not participate in the Business Responsibility initiatives of the Company directly.

Details of Director/Directors responsible for BR :

A. Details of the Director/Directors responsible for implementation of the BR policy/policies

DIN Number	01055000
Name	Mr. Y. P. Dandiwala
Designation	Independent Director

B. Details of BR Head

Sr. No.	Particulars	Details
1.	DIN Number (If applicable)	NA
2.	Name	Mr. Anil Malik
3.	Designation	President & Company Secretary
4.	Telephone Number	022-66626666
5.	Email ID	anil.malik@adityabirla.com

Linkage with BRR Principles

Linkage with BRR Principles as per National Voluntary Guidelines (NVG) on Social, Environmental & Economic Responsibilities:

	NVG Principle	Section	Page No.
NVG Principle 1	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability	Chairman's Statement	
		About Hindalco	
		Corporate Governance	
NVG Principle 2	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle	Product Stewardship	
NVG Principle 3	Businesses should promote the well-being of all employees	Stakeholders engagement and Materiality Analysis	
		Employee Stewardship	
		Health and Safety	
NVG Principle 4	Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalised.	Stakeholders engagement and Materiality Analysis	
		Responsible Mining	
		Employee Stewardship	
		Community Stewardship	
NVG Principle 5	Businesses should respect and promote human rights	Employee Stewardship	
NVG Principle 6	Businesses should respect, protect and make efforts to restore the environment	Sustainability Framework	
		Environmental Stewardship	
		Responsible Mining	
		Supply Chain Management	
NVG Principle 7	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner	About Hindalco	
		Sustainability framework	
		Responsible Mining	
NVG Principle 8	Businesses should support inclusive growth and equitable development	Corporate Governance	
		Economic Stewardship	
		Community Stewardship	
NVG Principle 9	Businesses should engage with and provide value to their customers and consumers in a responsible manner	Sustainability Framework	
		Stakeholders engagement and Materiality Analysis	
		Customer Centricity	

Annexure- I

Glossary

- 2S – Safety, Sustainability and systems and processes
- 3C – Customer, Cost and Cash
- ABG – Aditya Birla Group
- ABSTCPL – Aditya Birla Science and Technology Company Private Limited
- ACF – Activated Carbon Filters
- Al – Aluminium
- ANC – Antenatal Care
- ARAI – Automobile Research Association of India
- ASB – Apex Safety Board
- ASEAN – Association of South East Asian Nations
- ASM – Artisanal and Small Scale Mining
- AWO – A World Of Opportunities
- BBS - Behaviour Based Safety
- BEE – Bureau of Energy Efficiency
- BOD – Biological Oxygen Demand
- BRR – Business Responsibility Report
- C.T. – Cooling Tank
- CALM – Community Awareness and Local Marketing
- CCR – Continuous Cast Copper Rod
- CHW TSDF – Common Hazardous Waste Treatment Storage & Disposal Facility
- CII – Confederation of Indian Industry
- CO₂ – Carbon-dioxide
- CoC – Code of Conduct
- COC – Cycles of Concentration
- COD – Chemical Oxygen Demand
- CPP – Captive Power Plant
- CSM – Contractor Safety Management
- CSR – Corporate Social Responsibility
- Cu – Copper
- CuCB – Copper insert Collector Bar
- DAP – Di-Ammonium Phosphate
- DHIL – Dahej Harbour Infrastructure Limited.
- DM feed – Demineralized feed
- DSIR – Department of Scientific and Industrial Research
- EBIDTA - Earnings Before Interest, Tax, Depreciation and Amortization
- ERM - Enterprise Risk Management
- ESG - Environment, Social Governance
- ETP - Effluent Treatment Plant
- FAME - Foundation for Accelerated Mass Empowerment
- FICCI - Federation of Indian Chambers of Commerce and Industry
- FIMI - Federation of Indian Mineral Industries
- FRP - Flat Rolled Products
- FTA - Free Trade Agreement
- GHG - Greenhouse Gases
- GJ - Giga Joules
- GoI - Government of India
- H&S - Health & Safety
- Ha - Area in Hectare
- HIV - Human Immunodeficiency Virus
- HMF - Hindalco Management Framework
- ICC - Internal Complaint Committee
- IMMT - Institute of Minerals and Materials Technology
- IOL - Intraocular lens
- IPCC - Intergovernmental Panel on Climate Change
- ISAE - International Standard on Assurance Engagement
- ISO/IEC - International Organization for Standardization/ International Electrotechnical Commission
- ISRO - Indian Space Research Organization
- IUCN - international Union for Conservation of Nature
- JNARDDC - Jawaharlal Nehru Aluminium Research Development and Design Centre
- LCA - Life Cycle Assessment
- LED - Light Emitting Diode
- LME - London Metal Exchange
- LTIFR - Lost Time Injury Frequency Rate
- LTISR - Lost Time Injury Severity Rate
- MGF - Multigrade Sand Filter
- MT - Million Tonne
- NAAQS -National Ambient Air Quality Standards
- NABL - National Accreditation Board for Testing and Calibration Laboratories
- NAMC - National Award for Manufacturing Competitiveness
- NEBOSH - National Examination Board in Occupational Safety and Health
- NIIT - National Institute of Information Technology
- NPS - Net Promoter Score
- NSE - National Stock Exchange of India Limited
- ODS - Ozone Depleting Substance
- OHS - Occupational Health & Safety

Glossary contd...

- OSHAS - Occupational Health and Safety Assessment Series
- PAT - Perform, Achieve and Trade
- PAT - Profit After Tax
- PHE - Plate Heat Exchanger
- PM - Particulate Matter
- PNC - Postnatal Care
- POSH - Prevention of Sexual Harassment
- QLEA - Qualitative Exposure Assessments
- QnEA - Quantitative Exposure Assessment
- R&D - Research & Development
- REC - Renewable Energy Certificate
- RO - Reverse Osmosis
- SCADA - Supervisory Control and Data Acquisition
- SDG - Sustainable Development Goals
- SEBI - Securities and Exchange Board of India
- SMEs - Subject Matter Experts
- SOP - Standard Operating Procedure
- SPCB - State Pollution Control Board
- STP - Sewage Treatment Plant
- TB - Tuberculosis
- TDS - Total Dissolved Solids
- TERI - The Energy and Resources Institute
- TNI - Training Needs Identification
- TRIFR - Total Recordable Injury Frequency Rate
- TSS - Total Soluble Solids
- UAIL- Utkal Aluminium International Limited
- UN - United Nations
- VSC - Value Standard Committee
- WAH - Women at Hindalco
- WASH - Water, Sanitation and Hygiene
- WRI - World Resource Institute
- WHO - World Health Organization
- ZLD- Zero Liquid Discharge

Annexure- II

Awards and Accreditation

CSR Awards

Aditya Aluminium

- Kalinga CSR Award for outstanding contribution in the field of CSR innovation by the Institute of Quality Environment Management System Ltd.

Mahan Aluminium

- FICCI CSR Award 2018 for commendable work done in the field of Agricultural Development.
- CII-ITC Sustainability awards 2018 for Excellence in CSR and community development.
- FAME Excellence award in Gold category for excellence in Agricultural Development Projects.

Birla Copper

- "ICC Social Impact Award/ Summit" from "Indian Chamber of Commerce" for "Empowering Rural Population".

Renukoot

- CSR Times Award 2018" in New Delhi for Sustainable Livelihood project.
- Indywood CSR Excellence Award 2018 for contribution towards Integrated Rural Development Programmes.

Lohardaga

- FAME CSR Excellence award in 2018 Gold category towards excellence in "Community Development Projects".

Business & Sustainability category Awards

Corporate Level Awards

- Frost & Sullivan and TERI Sustainability Awards 4.0 - 2018 Achieved – Leadership Award in Mega Large Business – Metals Sector'.
- "Breaking New Grounds" Award at the Global Diversity Equity Inclusion Summit by Business World, UNDP, and Ask Insights.

Aditya Aluminium

- India Manufacturing Excellence Award, 2018 in "Gold" category by Frost & Sullivan.
- CII Eastern Region First Prize in Safety, Health and

Environment Management Practices.

- CII National Supervisory Skills Competition Award for Excellence in Supervisory Skills for operations and maintenance of manufacturing units.
- Top plant of the world – in Coal category awarded by Power magazine for the best coal based CPP (Captive Power Plant).

Renukoot

- SEEM National Energy Management Platinum Award-2017" in Non-ferrous category for Energy Conservation.

Hirakud

- National Award for Manufacturing Competitiveness (NAMC) Gold Category.
- FAME Excellence Gold Award-2018 for Environment Protection.
- Platinum Award category in India for Best HR Strategy Awards for 2018 in the Mining and Metals category.
- State Safety Award (First Prize) for lowest weighted frequency rate of Accident in Odisha.
- National Award for Excellence in Energy Management-2018 as most energy Efficient Unit.

Taloja

- 4-Star CII ENCON Award 2018, for Energy conservation in the large scale industry category.

Muri

- National Award for Manufacturing Competitiveness (Silver) Award by the International Research Institute for Manufacturing.
- Greentech Gold Award for Environment by Greentech Foundation.

Jharkhand Bauxite Mines

- Awarded 15 prizes at the Annual Safety Week Celebration 2018 by Directorate General of Mines Safety
- III star rated by CII on Safety, Health & Environment.

Gare Palma Mines

- H B Ghosh Memorial Safety Award for best underground mine safety practices



ANITYA BIRLA



HINDALCO

F. R. E.
TALOJA

ADMINISTRATIVE BLOCK

Admin Block
Assembly Point No. 1
Hindalco



Flat Rolled Products Plant- Talaja

Please contact: Head Sustainability
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