

# Partners for the Future

SUSTAINABILITY REPORT 2019-20



**aluminium  
& power**



## Partners for the Future

Vedanta Aluminium and Power Business (referred hereafter as the Sector) is delighted to present its Sustainable Development Report covering material sustainability issues related to its Sector and stakeholders, and contains the company's approach towards managing material issues, its initiatives, and various outcomes achieved during FY 2019-20. We intend to publish this annually going forward. The report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards and meets its core requirements as stipulated. Further, the report is also mapped to the United Nations Global Compact (UNGC) Principles and United Nations Sustainable Development Goals (UN-SDGs).

Vedanta Limited (referred hereafter as Vedanta or the Company) is a global diversified natural resource company with interests in metal and mining, oil and gas, and in energy generation.

Vedanta Aluminium and Power, a business vertical of Vedanta, has its Aluminium and Power operations entirely located in India. The company's Aluminium brands are listed on the London Metal Exchange (LME) and the company caters to domestic as well as international markets. India being one of the fastest growing emerging markets, the company has a focused approach to cater domestic market while maintaining its share in international market.

Vedanta Limited has been publishing the Group level Sustainable Development Report for several years to appraise stakeholders on the sustainable development challenges, approach, initiatives and outcomes. The Sector specific Sustainable Development Report provides us with an opportunity to engage business specific stakeholders while communicating our Sector specific material issues, our management approach, initiatives and outcomes. This is our first such attempt in this direction.

The report presents a unique opportunity for the company to improve engagement with all of its stakeholders and initiate a constructive dialogue on managing all material issues of mutual interest. This is sure to strengthen our relationship with all our stakeholders and allow us the honour of having the necessary social license to operate.



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# Overview





# Overview

## Our Business

**Vedanta Limited** is a globally diversified natural resources company having interest in aluminium, copper, zinc, lead, silver, iron ore, oil & gas, and commercial energy. Each one of these businesses are run independently as a separate vertical.

**Vedanta Aluminium & Power** vertical manages the Aluminium and Power Business of the Company which includes two bauxite mines, two coal mines, one alumina refinery, two smelting operations, and one independent power plant, all of which are located in India. Vedanta Aluminium Business is the largest aluminium producer in India while Vedanta Power Business is one of India's largest private sector power producers.



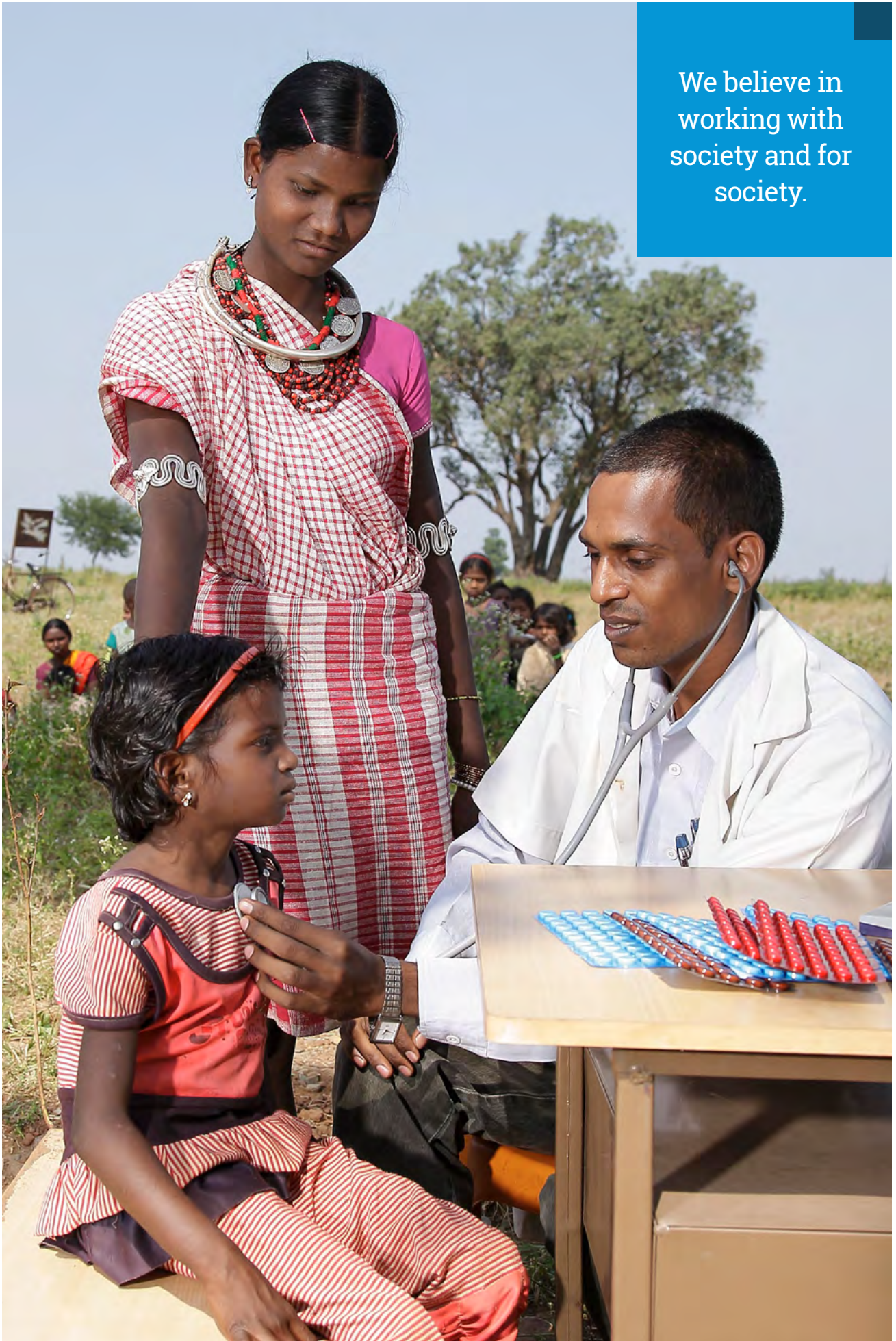
Power plant, Jharsuguda

Sustainable  
development is  
our core belief  
around which  
all our activities  
revolve



Alumina refinery, Lanjigarh





We believe in  
working with  
society and for  
society.



## SUSTAINABILITY PERFORMANCE

**18%**

**REDUCTION**

In Carbon Dioxide equivalent emission intensity from 2012 baseline by Vedanta Aluminium and Power.

**3.6**

**MILLION M<sup>3</sup>**

Reduction in fresh water consumption. 4% reduction of total fresh water usage over previous year.

**12%**

**OF WOMEN**

Employees against 11% in FY 2019-20.

**US\$**

**4.74**

**BILLION**

Economic value generated.

**0.3**

**MILLION**

Lives improved through community investment projects.

**0.18%**

Contribution through direct impact, 0.47% through indirect impact and 1.04% through induced impact by Vedanta Aluminium & Power to GDP of India as reported by the Institution of Competitiveness, IFC.

**US\$**

**203**

**MILLION**

Wages and benefits paid.

**US\$**

**148**

**MILLION**

Tax borne.

**US\$**

**14**

**MILLION**

Spent in community investments.

**Our Bodai-Daldali Mine Ranked**

**6<sup>th</sup>**

**GLOBALLY**

By Responsible Mining Foundation for sustainability parameters.

**0.40**

**LTIFR**

**1.9**

**MMT**

Aluminium production.

**11**

**BILLION KWH**

Power sale.

**10.49**

**MU**

Renewable power purchased from bio-mass based power plant.

**104<sup>+</sup>**

**THOUSAND**

Renewable energy certificates purchased.



## OUR SUSTAINABILITY TARGETS

TARGETS FOR 2021	
SAFETY OF OUR WORKFORCE	Zero fatal accidents
	Initiate reporting of Total Recordable Incident Frequency Rate (TRIFR) for the Sector
	Achieve a score >75% in six safety performance standards
ENVIRONMENT MANAGEMENT	Undertake a detailed study to understand the flood risk due to extreme weather change and implement the mitigation plan
	Develop 2025 GHG intensity reduction targets for the Sector
	Sustain 100% utilization of ash
PEOPLE AND DIVERSITY	Continue to focus on Code of Conduct training for all professional employees including new hires
	Achieve 30% female representation at employee level



## Overview

### From the Chairman's Desk



Anil Agarwal, Executive Chairman, Vedanta Resources Limited

Aluminium can be a harbinger of growth, alleviating poverty and unlocking immense opportunities in some of the most remote and under-served regions of the world.

Our people are our most important and irreplaceable assets



Innovation is one of the core values of Vedanta



Giving back to the society is core purpose of our business



Our vision of 'Zero Harm, Zero Waste and Zero Discharge' is enshrined in our approach



**It is with a great sense of pride that I take this opportunity to congratulate the leadership team and all members of our Aluminium & Power Business for producing their first-ever Sustainable Development Report for the Sector. This will undoubtedly enable us to have a transparent dialogue with all our stakeholders and accelerate our journey towards growth by imbibing best-in-class sustainability practices. Our vision of 'Zero Harm, Zero Waste and Zero Discharge' is enshrined in our approach towards achieving a sustainable future for our company. I am convinced that Aluminium is the 'Metal of the Future', and sustainable development of the Aluminium Business is essential for driving the progress of humankind. I have always believed that our business exists to meet the current and future needs of society; bring value to communities through avenues such as job creation, investments in enhancing people's lives through various programmes, and by offering multiple business opportunities .**

Vedanta has made significant progress in making its workplaces safer for employees. Our people are our most important and irreplaceable assets, and I am sure that our CEOs will not leave any stone unturned to continue to keep our employees safe and healthy. It is, therefore, extremely unfortunate that we lost two lives at our Aluminium and Power operations in FY 2019-20. I encourage all our employees and business partners to ensure that our operations are safe for our entire workforce. On my part, I remain personally committed to it completely and whole heartedly.

Innovation is one of the core values of Vedanta. I am happy that the aluminium business has implemented cutting-edge digital solutions for our aluminium smelters, the first-ever in India. This will lead to faster and sustainable growth for the company while improving the safety of our operations.

Climate change has emerged as one of the most pressing issues of our time and it is imperative that we respond to it with the urgency that is required. While I note that our business has taken several measures to manage its climate change impact and made significant progress in this area in line with the NDCs of the Government of India, I also look forward to the impact delivered by several other initiatives that are underway.

**Our vision of 'Zero Harm, Zero Waste and Zero Discharge' is enshrined in our approach towards achieving a sustainable future for our company. I am convinced that Aluminium is the 'Metal of the Future', and sustainable development of the Aluminium Business is essential for driving the progress of humankind.**

**Giving back to the society is an essential component of the way we conduct ourselves. I am happy that the Aluminium and Power Business, which operates in some of the remotest areas of India, has touched the lives of more than 300,000 people through its community investment programmes. I am delighted that the Lanjigarh Alumina Refinery has partnered with NITI Aayog, Government of India, to develop Lanjigarh district under the 'Aspirational Districts Programme' by the central government. I believe that a business of our scale can have a large positive impact on developmental outcomes of the region.**

I am a strong advocate for promoting gender diversity. I am happy to note that women constitute 12% of our

full-time employees. I would like to see that number increase to 30%. The efforts of our CSR team to promote women's empowerment in the local community through establishment / strengthening of SHGs have resulted in a significant improvement in the quality-of-life for women and their families. Here, I am particularly pleased with the progress made by Subhalaxmi Co-operative supported by our Jharsuguda unit. The work done by this SHG in capability development of women in the region and promoting financial inclusion and self-reliance amongst them are small, yet meaningful, steps that will help take India a long way forward on the path of sustainable development. It is my wish and hope to see more such efforts by our units in the coming times.

Our world is facing a tough time fighting against the COVID-19 pandemic. Vedanta has pledged its support to the States and Central government during these trying times. We have contributed 13.3 Million USD to PM Cares Fund and set up 13.2 Million USD corpus for relief of community at large.

**Vedanta's employees have always believed in the spirit of service. I am very pleased by the way our employees have come forward and offered help in their own way. This they did, through monetary donations, community outreach, ration distribution, awareness drives on personal hygiene and sanitation.**

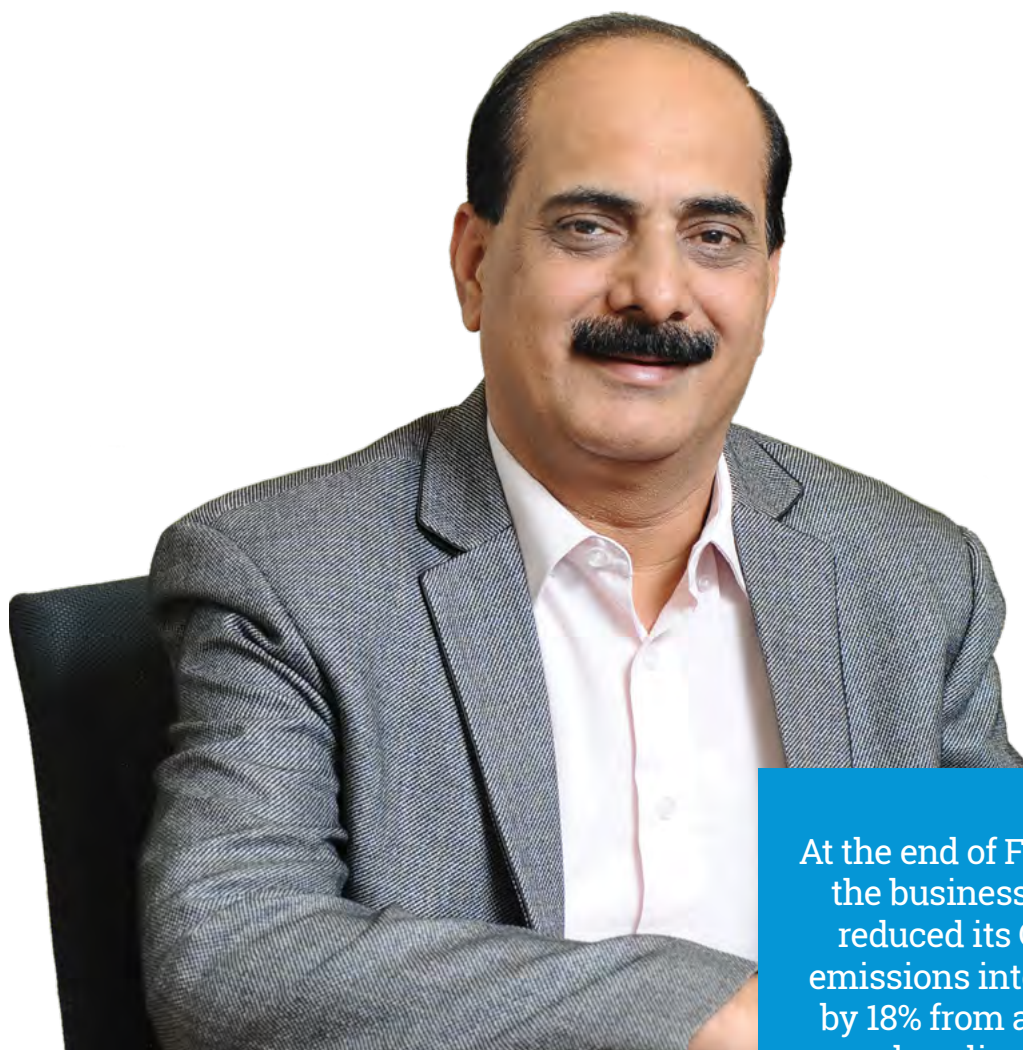
Vedanta aims to play a pivotal role in India's growth story. We plan to do this by integrating the principles of sustainability management in our decision-making and being cognizant of our fiduciary, social and environmental responsibilities. Let all of us, as stakeholders, work together with a single-minded focus to achieve this objective.

**-Anil Agarwal,**  
Executive Chairman,  
Vedanta Resources Limited



## Overview

### Group CEO's Corner



Sunil Duggal, Group CEO, Vedanta Limited

At the end of FY2020, the business had reduced its GHG emissions intensity by 18% from a 2012 baseline.

Over the years, the Aluminium & Power business has been central to Vedanta's growth story. With operations in some of the most remote regions of the country, sustainable business practices have been an essential component of their success. I am thrilled that this business is releasing its first Sustainability Report, which will serve to reinforce the company's foundation for conducting business in a sustainable manner.

To describe 2020 as a dynamic year is an understatement. The macro environment has been extremely challenging with the impact of the COVID-19 pandemic. The virus outbreak, which saw lockdowns across geographies, has become one of the biggest threats to the global economy, disrupting businesses and supply chains world over. During these testing times our priority was to ensure the health and safety of our employees,

contractors and stakeholders, while ensuring business continuity to all extent possible.

While the full impact of this pandemic will be assessed in the longer term, in the short-term it has required companies to be agile and responsive towards all their stakeholders. The Aluminium & Power business, which has long been following sustainable management practices, found an



**in-built resilience in our systems that comes from having a long-term outlook, human-centred business practices, and a culture of resource optimization. I am happy to see that the Sector's response to the pandemic has focused on its responsibilities to our employees, business partners and their families. The company has also worked hard to ensure that the workplaces remain safe, fully compliant with the environmental regulations, and continue to operate as close to normal as possible.**

To ensure that the most vulnerable sections of society are able to meet their basic needs, the Vedanta Group set up a dedicated 13.2 Million USD corpus for providing relief. The Aluminium & Power sector has provided nearly 200,000 masks to the local communities

**In FY2020, the business spent near US\$14 million on community programs and initiatives. Its efforts on projects spanning healthcare, skills development, agriculture, and women's empowerment have improved the lives of 300,000 people who have benefitted from these programs.**

and local administrations of Odisha, Chhattisgarh and Punjab. In Jharsuguda, the company provided 10 ventilators, 3,000 corona kits, oxygen concentrators, nebulizers, and other medical equipment. In Lanjigarh, nearly 1,110 workers were provided with daily meals and other essentials, and TSPL donated 0.3 Million USD to the CM relief fund. The businesses continue to serve the community and

ensure that they remain alongside the local administration in combating the virus.

## COMMITTED TO SAFE BUSINESS OPERATIONS

We began this fiscal year with a strong commitment to improve our safety performance. While there have been significant gains made across our businesses, I am deeply saddened by the loss of 2 lives this year. I have taken stock of the business response and have sought commitments from the management teams that such incidents will not repeat. We are determined to achieve absolute 'Zero Harm' in our operations.

## IMPROVING OUR ENVIRONMENTAL PERFORMANCE

Our unwavering focus on operating a sustainable and responsible business continued to deliver results in FY2020 and affirmed by third-party experts. Work on improving the stability and the management of our tailings dam facilities continues. Most of the recommendations from an independent third-party audit of our tailings facilities (conducted by Golder Associates in FY2019) have been implemented by the BUs. In addition, we have updated the Tailings Dam Performance Standard and have added a detailed set of Guidance Notes that all our BUs must adhere to when managing their tailings facilities. With a view to de-risk our tailings dam facilities, we have embarked on a programme to de-water tailings before storing them in the tailings facilities.

**Our alumina refinery's Bauxite Residue Disposal Area (BRDA) has led the way. We plan to adopt this approach in other locations as well. Details about each of our tailings structures can be found on Vedanta Limited's website and it is in alignment with the voluntary disclosure requested by the Church of England in 2019.**

The Aluminium & Power business has

**Vedanta's vision has always been to drive inclusive growth that build communities, enhances the country's self-reliance and does so in an environmentally responsible manner.**

continued with its work on reducing its GHG emissions. At the end of FY2020, the business had reduced its GHG emissions intensity by 18% from a 2012 baseline. The business will shortly be announcing commitments for GHG reduction until FY2025.

Additionally, the company has also achieved a reduction of ~3.5 million m3 of reduction in freshwater consumption and purchased 10.49 MU of renewable power from a biomass-based power plant.

## INVESTED IN IMPROVING COMMUNITIES

**Like the rest of the Group, the Aluminium & Power Business remains committed to improving the lives of the communities who live alongside its operations. In FY2020, the business spent near US\$14 million on community programs and initiatives. Its efforts on projects spanning healthcare, skills development, agriculture, and women's empowerment have improved the lives of 300,000 people who have benefitted from these programs.**

Vedanta's vision has always been to drive inclusive growth that build communities, enhances the country's self-reliance and does so in an environmentally responsible manner. I hope this report highlights the depth of our work in achieving this vision.

**-Sunil Duggal,**  
Group CEO, Vedanta Limited

## Overview

### CEO's Corner



Ajay Kapur, CEO – Aluminium and Power and MD – Commercial, Vedanta Ltd.\*

We work with a shared vision for growth, in our mission to create immense value for our country, customers and communities.

At Vedanta, sustainable business development and exceeding stakeholders' expectations are of paramount importance to us. Our approach to sustainability incorporates corporate governance, a 'Culture of Care' that amalgamates global best practices in occupational health, industrial safety, environment and human capital, and a strong sense of responsibility to our communities.

We work with a shared vision for growth, in our mission to create immense value for our country,

customers and communities, and I am heartened that we can demonstrate good outcomes in this direction. So, it is with immense pleasure that I present the first Sustainability Report of Vedanta Aluminium & Power Business, for FY 2019-20.

**Transparent disclosures pertaining to our operations and activities, economic and social value creation, and people practices form the basis of a strong, meaningful and fruitful relationship with our stakeholders, rooted in trust and respect. With this**

**Sustainability Report, we have strived to transparently reflect our position along these facets, and bring along our stakeholders on this journey towards a more sustainable future.**

Good governance and sustainable development are the twin pillars that drive our business aspirations. The Aluminium & Power Business' approach to sustainability is based on our Group's Sustainable Development Framework. Our efforts are focused on addressing the material issues across our sustainability commitments

of – adding value to the lives and livelihoods of our stakeholders and enhancing the lives of the local communities; causing 'zero harm' to the environment and the society; ensuring continual improvement of our performance in ESG (Environment, Social and Governance); and creating a safe, holistic and encouraging atmosphere for our employees and partners at our plants.

Although, FY 2020 has been a year of great achievements, I am deeply grieved by the loss of two precious lives at our operations. While we strongly focus on our vision of zero harm, these incidents continue to remind us to strengthen our systems and remain vigilant about workplace health and safety risks. I, as the head of the business, and all of our Business Unit leadership teams, are committed make the workplaces safe and secure to operate in. The incidents were thoroughly investigated to analyse root causes, and the findings were discussed at Group Executive Committee and communicated across the Group to prevent recurrence of any such incidents in the future.

**The Vedanta Safety Standards echo our commitment to building a safety-first work culture, integrated with global best practices and learnings from material happenings across the world, especially in the mining and metals industry. At Vedanta, the onus of safety is across all levels, from leadership to shopfloors, and finds realization through best practices like Behaviour-Based Safety (BBS) and Visible Felt Leadership (VFL). On this front, we have made strong strides in identifying significant safety risks and implementing critical controls.**

With climate change being a critical material issue, the most important global-scale issue that humankind is facing, we are cognizant of our role in ensuring a better future for all and the responsibilities that we must own. We are working on improving our carbon footprint while enabling our local communities to become more resilient in the face of extreme weather conditions and shifting weather patterns, which affect their agrarian livelihoods. Against a 2012 baseline, the Aluminium Business has reduced its GHG emission intensity by 20% by FY 2019-20. This compares very favourably with the stated position of our Group's goal of 16% reduction of GHG emission intensity by FY

2019-20 with respect to the year 2012 as a baseline. We are committed to relentlessly driving performance improvement in this regard.

On the matter of business resilience against climate-related risks, we have realised the necessity of innovative design improvements at our operations. BALCO has carried out a detailed risk assessment, including review of the existing infrastructure. We are currently in the process of implementing the necessary changes in plant infrastructure design and emergency response measures. With implementation of the proposed changes, we should be well prepared to deal with and mitigate similar scenarios in the future.

Our approach to sustainability incorporates corporate governance, a 'Culture of Care' that amalgamates global best practices in occupational health, industrial safety, environment and human capital, and a strong sense of responsibility to our communities.

We believe in the power of innovation and technology to bolster our operational excellence. We are a digital-first company, fast transforming our processes to cater to a rapidly evolving and diverse market. Our Aluminium Business has collaborated with GE Digital to deploy their cutting-edge Digital Smelter Solution at our aluminium smelter in Jharsuguda, making us the first aluminium producer in India and third in the world to do so. We have constructed ash dykes and Bauxite Residue Disposal Area (BRDA) for storage of our high-volume, low toxicity waste s. The stability of these structures is of prime importance to us. In our BRDA at Lanjigarh, we have piloted wick drain technology which will not only improve stability of the structure but will also enhance its

storage density.

**Sustainable mining practices is a critical focus area and I take pride in stating that our Bodai Daldali bauxite mine in the state of Chhattisgarh was ranked among the top six mines out of a total of 180 mines assessed across the globe by the Responsible Mining Index Foundation. The mines were assessed on environment, health, safety and Social parameters covering life-cycle management, community wellbeing, working conditions, environmental responsibility, etc. Integrated supply-chain and resource security being critical for sustainable growth of the business, we secured the Jamkhani coal mine, which is in close proximity to our aluminium smelter at Jharsuguda, in the state of Odisha. Once operational, besides providing fuel security to our smelter operations it is also expected to reduce our operational costs.**

At Vedanta, we strive to foster strong relationships with our communities in our areas of operations, and align our business growth with improvement in their quality of life. This is enshrined in our Group's philosophy, with our Chairman, Mr. Anil Agarwal spearheading the effort. Through our multi-dimensional developmental initiatives in livelihood, health, women and child development, education, water, community infrastructure and many more, last year, we have reached out to more than 300,000 people hailing from our areas of operations, positively impacting their lives. During the COVID-19 pandemic, we have worked relentlessly towards ensuring health and safety of our and our business partners' employees, to safeguard them against the disease. Beyond operations, we have lent all possible support to the government administrations and local communities to bolster preparedness at grassroots. From supporting standalone COVID Hospitals in the regions to contributing to the government relief funds to distributing meals and dry ration to thousands of underprivileged people, we have, and continue to aid in the fight against COVID-19.

With these initiatives and many more, we envisage sustainable growth and a greener, more prosperous tomorrow for all.

**Ajay Kapur**

CEO – Aluminium & Power and  
MD – Commercial, Vedanta Ltd.\*

\*Mr. Ajay Kapur has taken up the additional responsibility of MD – Commercial since the performance period captured in this report.



## Overview

### Dy. CEO's Corner



Rahul Sharma, Dy. CEO – Aluminium Business\*

We aim to sustainably harness natural resources and turn them into tools of prosperity, in the process transforming the lives of millions of people.

At Vedanta's Aluminium & Power Business, sustainability is embedded in the way we run our operations and conduct our business. As India's largest producer of aluminium and value-added aluminium products, our Aluminium & Power Business carries with it the responsibility of fulfilling the raw materials needs of critical industries, alongside positively transforming the lives of millions of people whose lives and livelihoods are knit with our operations and supply-chain. We take our responsibility as harbingers of growth in some of the

remotest regions of India with a great sense of pride.

**Aluminium is critical to India's global aspirations, taking the country closer to its destiny by fuelling key industry sectors. With applications spanning important industry sectors, like aviation, automobiles, and electric vehicles, building and construction, electricity and renewable energy, the demand for aluminium is expected to grow exponentially. We take immense pride in our technical prowess in aluminium, and a deep commitment**

**towards ensuring sustainable growth of the business, keeping the society, environment, and economy at the heart of our aspirations.**

With a strong focus on industrial safety, occupational health, and environment protection, we have made significant strides towards ensuring 'Zero Harm, Zero Waste and Zero Discharge' operations. Aligning our businesses on a collective carbon strategy, we leverage global expertise and green technology for the most

efficient, and therefore judicious, use of resources. We have deployed best-in-class technologies at our world-class alumina refinery and state-of-the-art aluminium smelters to manage risk in all forms, setting priorities and commitments, measuring, monitoring, and reporting our performance. We developed this Sustainability Report to maintain an ongoing and engaging dialogue with our partners and stakeholders, offering them a ring-side view of our processes and practices. The report stands testimony to our relentless efforts to harmonize the various facets of people, nature, and business for sustainable development. As the business embarks on a transformational journey of growth over the next few years. We are committed to creating a lasting positive impact on the environment, our communities, partners, and customers, and ensuring that we take gainful strides towards nurturing a better future for all.

**Safety is the single most important pillar around which our business operations are centred, and we strive to make our workplaces safe for everyone who walks into our operations. Our people are our most important assets, and we have fostered a 'Culture of Care' for all where the onus of safety is on each one of us, employees, and partners alike. We have built an organization which truly believes in a culture of meritocracy for growth and development of all. We have always strived to be an equal opportunity employer and make all of our job roles gender neutral. We have implemented robust people practices ensuring that our work environment is holistic, and encourages our people to deliver their best.**

Innovation and Entrepreneurship are the hallmarks of Vedanta's organizational culture, directly stemming from our Chairman, Mr. Anil Agarwal's vision for the company. This value system is what makes us agile in responding to complexities in the business and markets, and nurtures our growth mindset. We have collaborated with global technology leaders to deploy cutting-edge digital technologies that will make our aluminium smelters and power plants future ready. Besides unlocking greater

efficiencies and optimizing resource utilization, these will also improve the safety and reliability of our operations. Management of our environmental footprint forms a significant component of our sustainability endeavours, and we have applied its principles to the entire lifecycle of all our operations with all requirements mapped against international standards. We are proactively working on enhancing our performance in energy management, climate change, waste management, water management, air emissions, tailing dam/ash dyke management, and biodiversity management. We have taken several steps to manage our climate change impact in line with the Nationally Determined Contributions (NDCs) of the Government of India, and are committed to significantly reducing our carbon footprint in the shortest span of time.

Vedanta Limited is one of the proud signatories of Declaration of the Private Sector on Climate Change with Ministry of Environment, Forest & Climate Change (MoEF & CC), Government of India with a mission to substantially reduce GHG emissions, enhance energy and material efficiency, improve processes and technologies, deploy water efficient processes and promote sustainable and green mobility. As per our commitment, we have achieved a reduction of 20% in GHG emission intensity in the aluminium business from 2012 baselines and as a group reduced our GHG emission intensity by almost 14% from 2012 base line levels. This is equivalent to removing more than 9 million tons of carbon dioxide from the atmosphere.

**Giving back to the society is the ultimate purpose of our business, and we have invested in many sustainable community development programmes. With operations in some of the most remote regions of India, our social interventions have touched the lives of more than 300,000 people through community investment programmes. I am especially proud of our partnership with NITI Aayog, Government of India, to develop Kalahandi district under the Aspirational Districts Programme.**

**As a part of our social interventions, we strive to provide sustainable**

**livelihood opportunities to our host communities through skill development, micro-finance, micro-entrepreneurship, education, health and self-help group (SHG) programmes. Seeing our efforts bear fruit in terms of improving the healthcare, education, and infrastructure facilities in the areas where we operate, we are committed to expanding the reach of our programmes even further. I am thankful to the state governments and our communities for partnering with us in the successful implementation of these programmes. I believe that the cumulative impact of these meaningful steps will turn the wheels of prosperity of rural India, which will take the country along with it on the path of socio-economic growth and development.**

As the world reeled under the devastating socio-economic impact of COVID-19 this year, Vedanta pledged its support to our country, communities, and customers. All of our Business Units have risen to the cause and extended all possible support to the government and the people of India, from financial contribution to relief funds to providing medical equipment, PPE kits, food, and other essentials, as well as undertaking sanitization activities in the periphery. I am especially proud of all our employees, their families, and our business partners, who voluntarily made personal contribution to these efforts in any way they could.

**We aim to sustainably harness natural resources and turn them into tools of prosperity, in the process transforming the lives of millions of people. India is one of the fastest growing economies in the world today and the Vedanta Aluminium and Power Business is determined to fulfil its responsibility for making India the global manufacturing hub of aluminium. And we shall strive to ensure that this responsibility materializes in a manner which is both equitable and sustainable, with the firm belief that sustainability really does mean better business.**

**-Rahul Sharma**  
Dy. CEO – Aluminium Business\*

\*Mr. Rahul Sharma was CEO – Alumina Business during the performance period captured in this report.

## Overview

# Our Operations and Assets

The **Vedanta Aluminium and Power** Sector is managing its operational assets as independent business units. Our Aluminium Business manages two small bauxite mines with a capacity of 1.25 Million Tonnes/Annum and 0.75 Million Tonnes/Annum respectively at Kawardha and Mainpat districts in the state of Chhattisgarh. **We operate a strategically-located world-class alumina refinery at Lanjigarh**, in Odisha's Kalahandi district, a region which has one of largest reserves of high-grade bauxite in India. The current design and operation capacity of the refinery is 2 Million Tonnes per annum of Hydrated Alumina, which shall be further expanded to 6 Million Tonnes/Annum on completion of the project as planned.

We also manage a total installed Aluminium capacity of 2.2 MTPA. Our Aluminium smelter, located at Jharsuguda in the state of Odisha, India, is one of the **world's largest single-location aluminium smelters** outside China with a capacity of 1.6 Million Tonnes/Annum.

Our iconic subsidiary, the **Bharat Aluminium Company (BALCO)**, operates another independent smelting business unit located at Korba in the state of Chhattisgarh, India, with production capacity of 0.595 Million Tonnes/Annum.

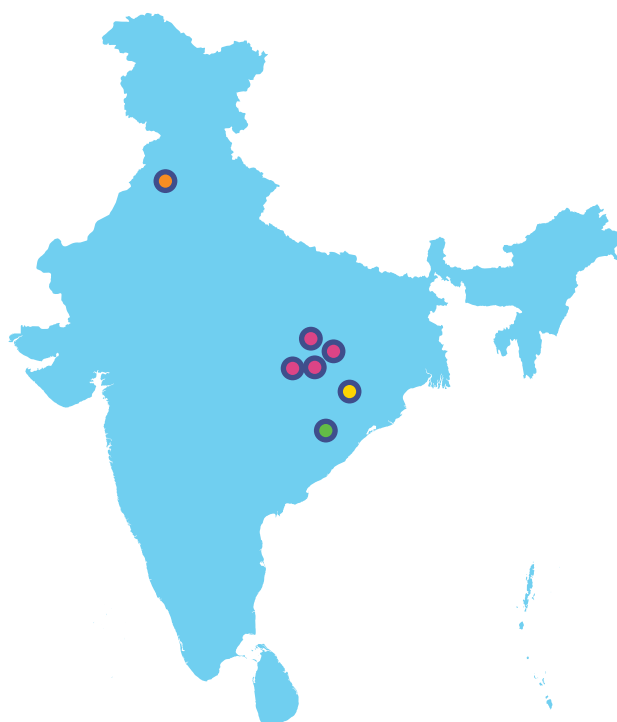
As aluminium smelting is a very energy intensive business, both these aluminium smelters have 100% coal-based captive power plants to ensure reliable source of continuous power supply to the smelters.

Vedanta owns the Chotia coal block in Chhattisgarh, which has an annual capacity of 1 Million Tonnes/Annum. The mine supplies coal to our captive power plant at BALCO. Recently, Vedanta has acquired the Jamkhani coal block in Sundargarh district, Odisha. It has an approved mining capacity of 2.6 million, tonnes, with the total extractable reserves being 114 million tonnes. Being in close proximity to our Jharsuguda smelter, the Jamkhani coal block will prove to be extremely beneficial in providing energy security for the business and consequently, in strengthening our operations and performance.

The Sector's power business includes **Talwandi Sabo Power Limited (TSPL)**, a wholly owned subsidiary of Vedanta Ltd., which sells power to state of Punjab. Similarly, our BALCO and Jharsuguda also have IPP units at respective complexes which sells the power to the grid.

### LOCATIONS

- Jharsuguda (Odisha), Jamkhani coal mine
- Lanjigarh (Odisha)
- Korba (Chhattisgarh), Chotia coal mine, Mainpat and Bodai Daldali bauxite mines
- Mansa (Punjab)



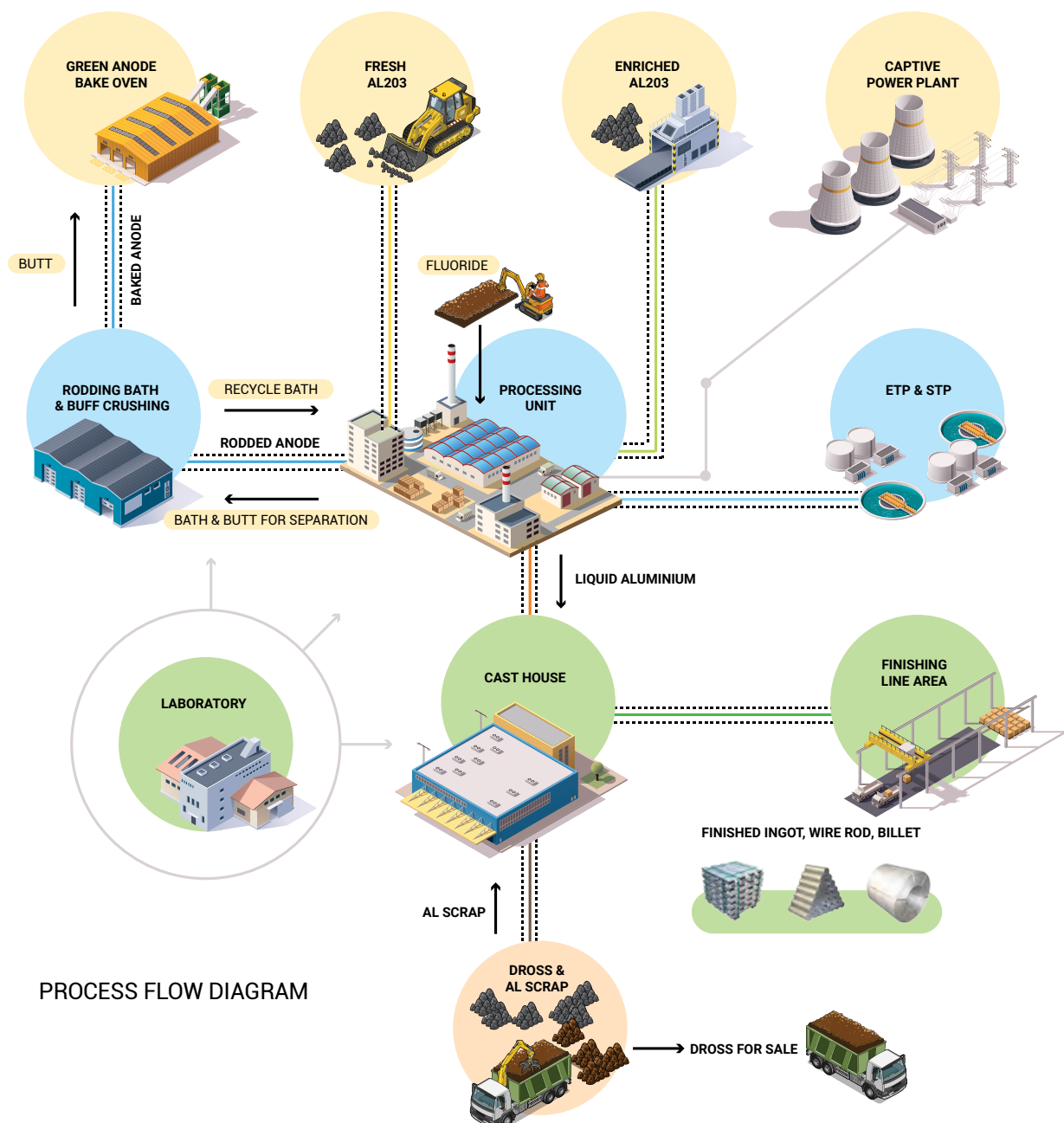




We focus on creating an enabling environment to support employees pursuing personal and professional excellence

## Overview

### Process Flow



PROCESS FLOW DIAGRAM

BUSINESS UNIT	PRODUCT	CAPACITY
VEDANTA ALUMINIUM - JHARSUGUDA	ALUMINIUM	1.6 MILLION TONNES/ANNUM
BALCO	ALUMINIUM	0.595 MILLION TONNES/ANNUM
VEDANTA ALUMINIUM – LANJIGARH	ALUMINA	2.0 MILLION TONNES/ANNUM
TSPL	POWER	1980 MW



## Our Products



### ALUMINUM – THE METAL OF FUTURE

Aluminium is a uniquely positioned metal due to its inherent properties of high strength-to-weight ratio, non-corrosivity, superior thermal, mechanical and electrical properties, as well as 100% recyclability. With these unique properties, aluminium has become the fastest growing metal and is expected to maintain its position as the **'Metal of the Future'**.

Aluminium Consumption in India is 2.5kg per capita against the global average of 11kg per capita consumption. Vedanta is the largest manufacturer of aluminium and value-added

products in India, and is well placed to capitalize this growth opportunity in the world's fastest growing economy. The Company leverages cutting-edge technology to deliver a range of products to a wide spectrum of industries.

**The growth of the Aluminium Industry is critical for India's industrial vision of achieving 25% of GDP from manufacturing by 2022.**

– NITI Aayog (report)



Aluminium Wire Rods



Aluminium Billets



Aluminium T-Ingots



Aluminium Primary Foundry Alloy (PFA)



Aluminium Slabs

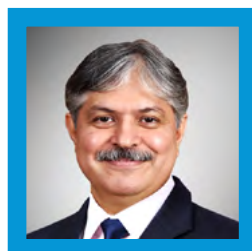


Aluminium Sheets

## Our Leadership Team



**SUNIL DUGGAL**  
CEO, Vedanta Limited



**AJAY KAPUR**  
CEO, Vedanta Aluminium & Power



**C. N. SINGH**  
CEO, Vedanta Aluminium Jharsuguda



**ABHIJIT PATI**  
CEO, BALCO



**RAHUL TRIVEDI SHARMA**  
CEO, Alumina



**VIKAS SHARMA**  
CEO, TSPL





Sustainable  
development is  
our core belief  
around which  
all our activities  
revolve



# Governance and Management Approach





# Governance

## AND MANAGEMENT APPROACH

At Vedanta, our goal is to create long term value for all our stakeholders through research, discovery, acquisition, sustainable development and utilization of diversified natural resources. Like other Group companies, we at Vedanta Aluminium and Power Sector also follow the Group's values, code, and governance practices to manage our business.

## Core Values

We imbibe the Vedanta Values. They are a vital part of our culture and an essential underpinning of our growth and success.





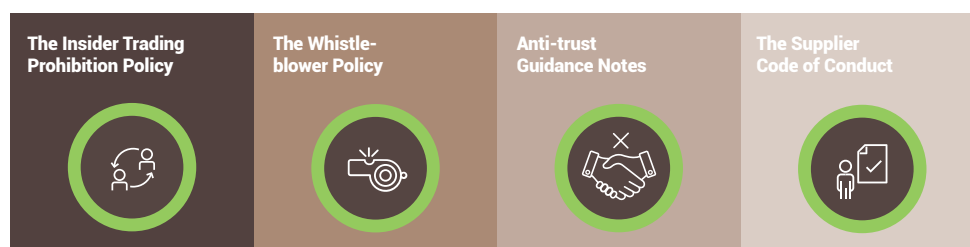


We follow the  
Group's values,  
code, and  
governance  
practice

## Governance

# Vedanta Code Of Business Conduct and Ethics

Ethics and integrity are material issues for Vedanta and our stakeholders. We are committed to a zero-tolerance approach towards fraud, bribery, and corruption. Our code complies with the law of the land and goes beyond compliance to raise the bar and set the expected standards of behaviour. In addition, our code covers the topics of insider trading, non-discrimination and equal opportunities at the workplace, gender diversity, non-harassment, human rights at workplace, etc. It is applicable across the organizational hierarchy, irrespective of the location of operation.



The implementation of Code of Business Conduct and Ethics (CBCE) is supported by the following additional policies and guidance notes:

- **The Insider Trading Prohibition Policy**
- **The Whistle-blower Policy**
- **Anti-trust Guidance Notes**
- **The Supplier Code of Conduct**

All these policies, notes and codes are publicly available on our website and

are incorporated into contracts, where relevant, in order to ensure transparent and easy access to our policies in the public domain. Vedanta's Whistle-blower Policy communicates our commitment to a 'policy against retaliation', and commitment to maintaining confidentiality, in case of involvement of a company employee as a whistle blower. We have a hot line as well as a registered E-mail ID published to receive any Code of

Business Conduct and Ethics (CBCE) related issues from stakeholders. Any issues raised related to Code of Business Conduct and Ethics through the whistle blower policy or otherwise are thoroughly investigated by our Management and Assurance team independent of the business operation and the results are presented to the Audit Committee.

OPEN COMPLAINTS ON APRIL 1 <sup>ST</sup> 2019	<b>0</b>
NUMBER OF WHISTLE-BLOWER CASES OPENED IN 2019-20	<b>31</b>
NUMBER OF WHISTLE-BLOWER CASES UPHELD AND FOUND CORRECT IN 2019-20	<b>11</b>
NUMBER OF WHISTLE-BLOWER CASES CLOSED IN 2019-20	<b>29</b>
OPEN COMPLAINTS ON MARCH 31 <sup>ST</sup> 2020	<b>2</b>

We have taken appropriate disciplinary actions against erring employees, contract workforce and vendors, including warning, counseling, transfer and separation.

Awareness of CBCE among the employees is important. To make sure that all of our employees are well-versed with our Code, mandatory training is provided to new recruits

and refresher workshops on anti-corruption policies and procedures are conducted for our employees. As part of our commitment to continual improvement, and going 'beyond legal compliance', we have rolled out an E-learning module for the CBCE across the Sector and provide issuance of post-training E-certificates.



# Risk Governance Framework

Vedanta has a robust governance framework to manage risk, helping us balance the risk-reward equation expected by stakeholders.



The Vedanta Board regularly reviews the internal control system to ensure that it remains effective. The Board's review includes the Audit Committee's report on the risk matrix, significant risks and actions put in place to mitigate these risks.

The Audit Committee is in turn supported by the Group-level Risk Management Committee (GRMC), which assists them in evaluating key business risks and mitigative action plans. [Please refer to Vedanta Limited Annual Report Page no. 46 to 51, for further information related to Aluminium and Power Sector related business risks.\)](https://www.vedantalimited.com/InvestorReports/Vedanta%20Integrated%20Report%202019-20.pdf) <https://www.vedantalimited.com/InvestorReports/Vedanta%20Integrated%20Report%202019-20.pdf>



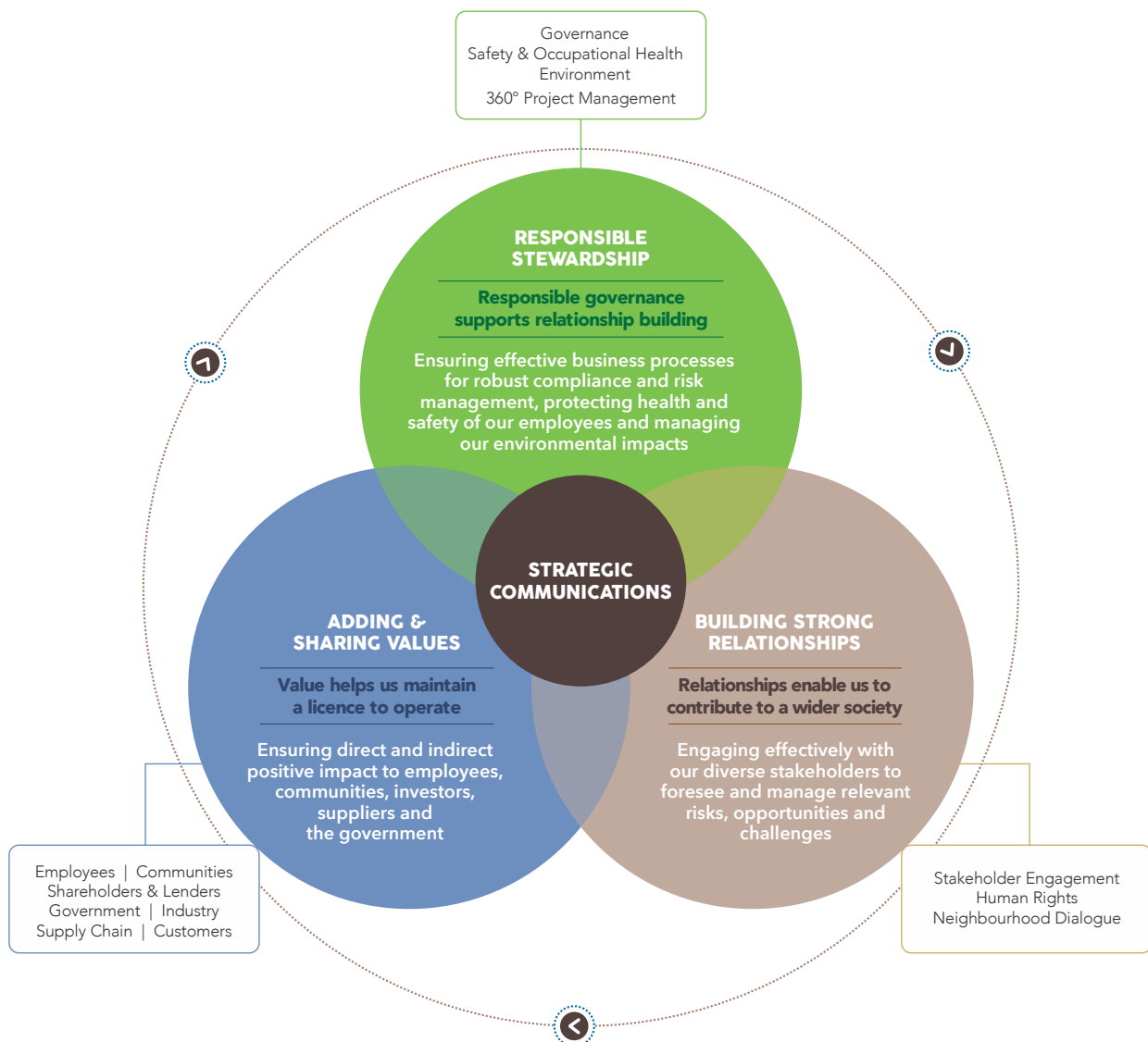
Robust  
Governance  
framework helps  
balance risk-  
reward equation

## Governance

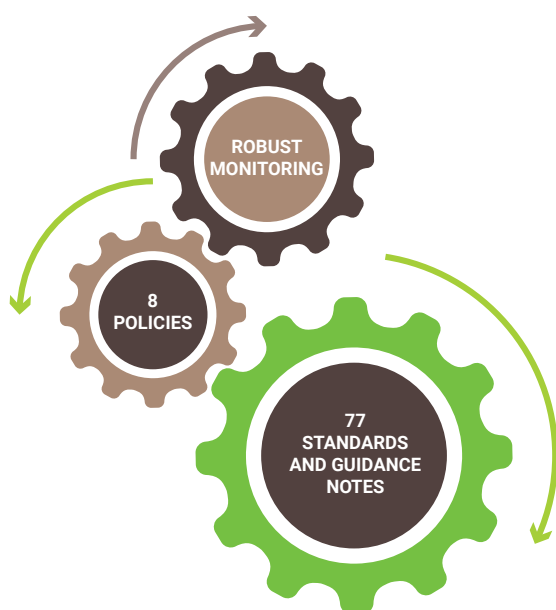
# Our Sustainable Development Framework

Our goal is to create long-term value for all of our stakeholders. To deliver on this promise, we have developed the Vedanta Sustainability Framework that enables our business units to adopt sustainable business principles into their systems and procedures.

The Vedanta Sustainability Framework is central to our sustainability agenda. It has allowed the Group to operationalize the intent that is centered on our four strategic pillars of: Responsible Stewardship, Building Strong Relationships, Adding and Sharing Value, and Strategic Communications.



Further, as part of the Framework, Vedanta Sustainability standards were developed in line with global sustainability management standards and guidelines aligned to IFC, ICMM, GRI, and other industry specific institutions.



- **8 Policies:** Biodiversity, Energy & Carbon, HIV-AIDS, HSE, Human Rights, Social, Supplier & Contractor Sustainability Management, Water.
- **77 Standards and guidance notes:** Covering all of the policy subject areas in line with ICMM, IFC Performance Standards.
- **Robust Monitoring:** Annual audit (VSAP) conducted at all Vedanta locations to check compliance with VSF and monitored by Group EXCO.

## Vedanta Sustainability Assurance Programme (VSAP)

VSAP is our sustainability assurance tool which we use to assess the compliance of all our businesses with the Vedanta Sustainability Standards requirements. The assurance programme is a formal third party audit process designed to check and score compliance with respect to Vedanta Sustainability standards related to environment, health, safety, community, and stakeholder relationship management at business units by an independent, third-

party auditors.

VSAP is an annual process with clear tracking of results by the Sustainability Committee and the Executive Committee, which in turn report to the Board. As per the identified gaps, respective businesses make management plans and undertake corrective actions, which are periodically reviewed, evaluated, and documented.



Employee at BALCO cast house

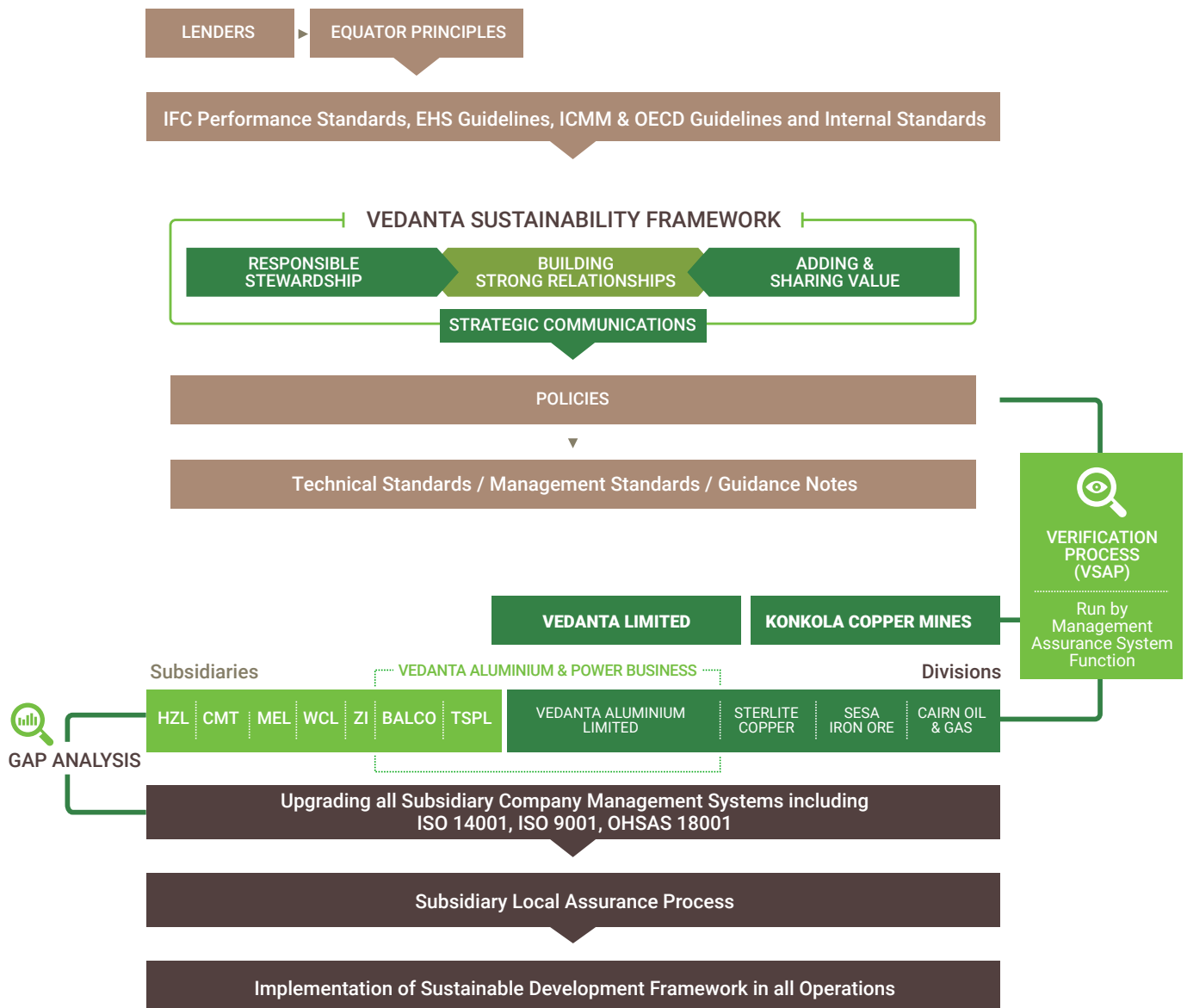
## Governance

# Managing Sustainability

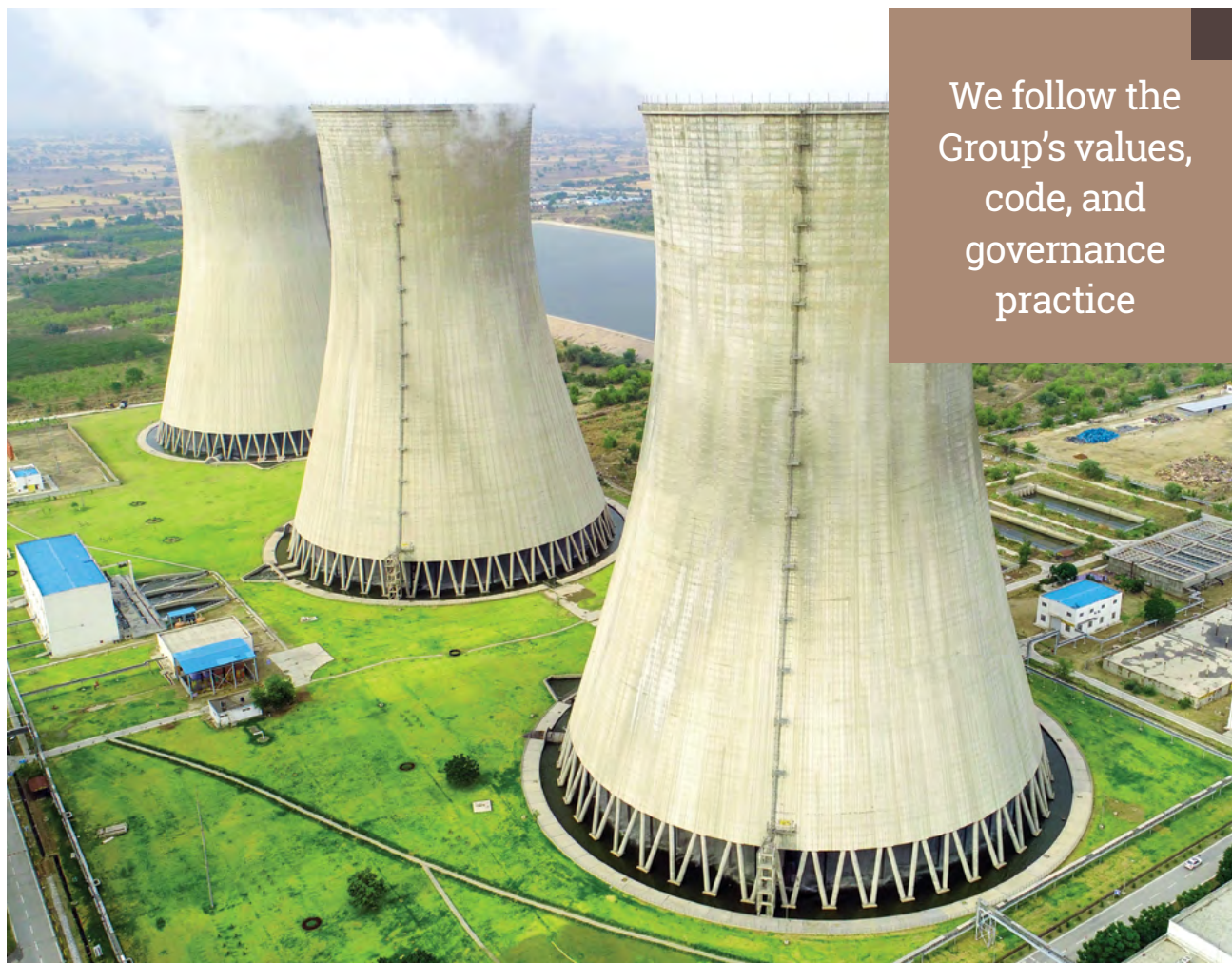
Sustainability is driven through all levels at Vedanta and the Sector also has a clear structure for managing and implementing our Sustainability Framework across all of our business units. The Group level sustainability committee comprises an Independent Director, Group CEO, and Business Unit CEOs, and provides oversight to the Group Sustainability function.

Every Unit and Business has its own sustainability and / or HSE committees to review unit / business level sustainability and HSE performance on a regular basis. The HSE & Sustainability related business risks and performance are also reviewed at Group EXCO and Sustainability Committee which provides information to the Board of Directors.

The Vedanta Sustainability Framework (VSF) and the various committees which manage sustainable business development at Vedanta are shown under:







- **SUSTAINABILITY COMMITTEE:** The Committee oversees the Group's management of sustainability matters including HSE related business risks, targets and performance, engagement with host communities, human rights, and other related matters.
- **REMUNERATION COMMITTEE:** The Committee reviews and recommends to the Board on the executive remuneration policy and determines the remuneration packages of each of the Executive Directors.
- **AUDIT COMMITTEE:** The Committee oversees the Group's financial reporting, the efficacy of the internal control and risk management framework, and scrutinizes the work of the internal and external auditors.
- **NOMINATION COMMITTEE:** The Committee reviews the size, structure and composition of the Board and ensures that the appropriate balance of skills, experience, diversity, and independence are present, and leads the Board appointment process.
- **EXECUTIVE COMMITTEE:** The Committee meets monthly and is responsible for implementing strategic plans formulated by the Board, allocating resources in line with delegated authorities, and monitoring the operational and financial performance of the Group.

## Sector Sustainable Development Committee

In line with the Vedanta Group's philosophy, we have a Sustainable Development Committee for our Aluminium and Power Sector. The committee consists of the Sector CEO, Unit CEOs and Environment & Safety Heads of business units. In FY 2019-20, the committee conducted two

meetings which revolved around the material matters of HSE and Sustainability such as HSE incidents and learning, climate change – emerging risks, compliance status, tailings management, flood mitigation, lifecycle assessment of aluminium, sustainable agriculture and CSR initiatives.

## Governance

# Materiality Assessment

The expectations of all the stakeholders of an organization are deemed to be the real drivers for socially responsible, ethical, and sustainable behaviours.

We know that our business gives rise to a number of social and environmental impacts, both positive and negative. In consultation with our influential and interested / impacted stakeholders, we prioritize which of these issues we will handle. A process of materiality helps us to do this.

## Approach and Methodology

We conduct materiality assessment to understand stakeholders' impact on and expectations from the company using GRI framework, and the same are presented in terms of priority of material issues with highest issue presented at the top.

With the help of a third-party agency,

we have carried out Stakeholder Engagement and Materiality Assessment for Vedanta to capture the material environment, social, and governance related issues. A total of seven stakeholder categories were considered, based on the degree of impact and sphere of influence they have on the company.

Following this, we used a consultative process to inform our management and stakeholders of all material environmental, social, and governance issues. We have then mapped material issues in the order of priority for the company and the stakeholder groups.



Employees at potline operations, Jharsuguda plant

# Material Issues for the Aluminium & Power Sector

## ENVIRONMENT

- Energy and Climate Change
- Solid waste Management
- Water Management
- Biodiversity
- Air Emissions
- Tailing Dams Management
- Noise and Vibration
- Resource Efficiency
- Materials Management
- Use of Recycled material

## SOCIAL

- Community Development
- Diversity & Equal Opportunity
- Occupational Health & Safety
- Human Rights
- Land Acquisition & rehabilitation
- Talent Management
- Local sourcing
- Upholding rights of indigenous people
- Local Employment

## GOVERNANCE

- Supply chain Sustainability
- Compliance to Government Regulations
- Brand Image
- Business ethics
- Grievance Management
- Ethical Business Practices
- Transparent Disclosure
- Innovation
- Governance for Sustainability





## Governance

# Stakeholder Engagement

Stakeholder Engagement facilitates us to proactively build trust in our business, identify opportunities and build relationships with our stakeholders. A systematic approach to stakeholder engagement is key to our material issues management. We develop and implement several strategies to engage with the identified stakeholder groups who have significant interests in / influence on our business.



## Our Engagement Approach

Strong, productive relationships enable us to add and share value with our stakeholders. Meaningful engagement with people and organizations that are interested in our business can help us identify new areas, where we can create more value for our stakeholders. The process also assists us in the important aspects of risk identification and mitigation.



### ASK

We begin with questions to solicit feedback. Our stakeholders have access to various platforms to reach out to us and state their concerns.

### ANSWER

Equal attention is paid on providing a constructive response. We believe that disclosing is not just about being heard, but we do so because we are answerable.

### ANALYSE

We have a robust investigation process for complaints reported via the whistle-blowing mechanism and other platforms.

### ALIGN

We work hand-in-hand with all of our stakeholders and align our goals and actions with high priority areas of the nation.

### ACT

We back our words with actions that move the needle towards promised outcomes.



Periodic engagement activities with the identified stakeholder groups at the units and Sector level are described below.

STAKEHOLDER	NATURE OF ENGAGEMENT	SIGNIFICANCE TO THE BUSINESS
<b>Suppliers &amp; Customers</b>	<ul style="list-style-type: none"> <li>● Supplier and vendor meetings</li> <li>● Customer satisfaction surveys</li> <li>● Feedback mechanism / grievance redressal</li> </ul>	<ul style="list-style-type: none"> <li>● Directly linked with the business and growth</li> <li>● Facilitators for product development</li> <li>● Vital for development of regulations and standards, market development and working processes</li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>● Various workshops, forums, meetings, and feedback sessions</li> <li>● Performance management sessions</li> <li>● Various committees at the plant level: mentor programme, event management committee, welfare committee, women's clubs etc.</li> </ul>	<ul style="list-style-type: none"> <li>● Key assets in delivering operational capabilities</li> <li>● Deliver business goals and targets</li> <li>● Building blocks of the organization</li> </ul>
<b>Civil Society / Business organizations</b>	<ul style="list-style-type: none"> <li>● Partnerships with and membership</li> <li>● Working relationships with organizations on specific projects</li> <li>● Engagement with local civil society organizations and NGOs</li> </ul>	<ul style="list-style-type: none"> <li>● Provide a critical eye to the business's operation</li> <li>● Share best practices</li> <li>● Advocacy and development of the business</li> </ul>
<b>Community</b>	<ul style="list-style-type: none"> <li>● Community group meetings</li> <li>● Panchayats</li> <li>● Public hearings</li> <li>● Grievance mechanism</li> <li>● Cultural events</li> </ul>	<ul style="list-style-type: none"> <li>● Vital to business's license to operate</li> </ul>
<b>Government</b>	<ul style="list-style-type: none"> <li>● Participation in government consultation programmes</li> <li>● Engagement with national, state, and regional government bodies at business operational level</li> </ul>	<ul style="list-style-type: none"> <li>● Provide the regulatory framework (taxation, licensing, infrastructure and economic playing field for growth) in which the business exists</li> <li>● Partners in development</li> </ul>

## Building trust through transparent disclosures

Our relationship with our stakeholders depends on the trust and respect we develop in the relationship. Trust is a core value of our business which requires us to have open dialogue


and transparency in relationships with all of our stakeholders. This is a very dynamic process and we believe that the more we engage and involve stakeholders in managing material

issues of mutual interest, the more mature our relationship becomes with our stakeholders, leading to increase in trust and respect in the relationship.


## Governance

### Building trust through transparent disclosures


8




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14



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Decent Work and Economic Growth

Responsible Consumption and Production

Life Below Water

Life on Land

Partnership for Goals

### Sustainability performance and disclosure practices

**BODAI DALDALI BAUXITE MINES CHHATTISGARH, BALCO**

**CASE STUDY**

Our Bodai Daldali Bauxite Mines at Chhattisgarh, BALCO, ranked among the top six mines from among 180 mines sites assessed by the Responsible Mining Index 2020 on sustainability practices. The mines were assessed on Environment, Health, Safety, and Social parameters covering Life-cycle Management, Community Wellbeing, Working Conditions, and Environmental Responsibility, being among the over 10 indicators amongst the ranking parameters.

Vedanta was ranked 11<sup>th</sup> among 38 companies assessed for company level sustainable practices. The companies were assessed on 6 parameters covering, Economic Development, Business Conduct, Life-cycle Management, Community Wellbeing, Working Conditions, and Environmental Responsibility, etc., from over 71 indicators. Each of these parameters were assessed and scored for Company Policy Commitments, Actions, and Effectiveness. While we are delighted with our performance, we believe we still have a huge potential to further improve in this ranking by strengthening our performance and disclosure practices.



# Customer Centric Approach

Vedanta Aluminium Business has always been customer centric in its approach. The business initiatives towards Customer engagement and satisfaction are listed below:

## I. REGULAR CUSTOMER FEEDBACK

Vedanta believes in a continuous customer feedback mechanism. Our aim is to provide quality products to the customers based on their requirement, both in terms of product specification and packing requirement.

We use the following approaches for regular customer feedback:

**Annual Customer Feedback:** Feedback is collected from all of our customers once every year through an online survey mechanism.

- **Sales force meeting:** Assigning a Product Manager or a Key Account Manager to each customer to understand their need and requirement.
- **Technical team or Logistics Team visit to Customers:** In case of any specific technical or logistics related feedback or complaints from the customer.
- **Senior management Interaction:** Periodical engagement to understand the health of the company's on-going business relationship and address any issues on priority.

## 2. GRIEVANCE MANAGEMENT PORTAL

We have developed a separate grievance management portal to keep track of and resolve the complaints / issues raised by the customer in a structured and timely manner. The portal maps each and every customer complaint to the corresponding internal stakeholders and triggers the resolution process post mapping. There is a predefined timeline within which these complaints need to be addressed. We keep our customers



appraised about the status of his / her complaint on regular basis, thereby increasing the customer satisfaction quotient.

## 3. CUSTOMER CONNECT PORTAL

We have developed a web-based customer portal called VITAL to improve customer experience. The portal provides details on pricing, product specifications, account details, customer complaints, and feedbacks, etc. We are in the process of introducing a mobile application of this portal to further increase its utility amongst the customers.

## 4. CUSTOMER TECHNICAL SUPPORT (CTS)

Our dedicated Customer Technical Support (CTS) team works to support

the technical needs of Vedanta's customers. This team works very closely with the Sales and Marketing team and is responsible for anchoring all the technical and quality requirements of our customers in terms of the existing product portfolio and for the new product development, thereby ensuring that the quality and services of Vedanta Aluminium are always best-in-class.

## 5. INNOVATION CENTRE

Innovation is core value of Vedanta and, along with technology, is a key pillar for sustainable growth. Under 'Sales and Marketing' there are three innovation centres which focus on Products, Processes, and Perception Management respectively.



## Governance

# Our Economic Performance

At Vedanta, economic sustainability is equally important to us as is environment and social sustainability. We continuously strive to improve our top line and bottom line so that we can invest for the sustainable development of the business.



Employees at control room of alumina refinery, Lanjigarh

We have a world class refinery and smelter assets strategically located in India which are well poised to capitalise on potential growth opportunities in the world's fastest growing economy, India. We take pride in efficient operation of our assets and strive to become the lowest cost converter of natural resources into metal.

We understand the importance of integrated supply-chain in sustainable growth of the business. This year we participated in and emerged as the highest bidder for the Jamkhani coal block in Sundargarh district, Odisha, in the captive coal block auction conducted by Ministry of Coal, Government of India. The coal block is in proximity of our aluminium smelter in Jharsuguda. Raw material and energy accounts for a significant chunk of

our cost of operations. The Jamkhani coal block is one of the most attractive coal blocks for our Jharsuguda plant in terms of location, annual capacity, reserves and readiness to produce.

The approved per annum capacity of the mine is 2.6 million tonnes. It has an extractable reserve of 114 million tonnes. Once operational, it will provide energy security and further strengthen our aluminium operations and performance.

This is our second coal block after the Chotia coal block in Chhattisgarh that has an annual capacity of 1 million tonne. With operationalization of the Jamkhani mines we expect our energy cost to reduce substantially. We also intend to participate in relevant forthcoming mineral resource auctions by the Government of India, with the

aim to secure raw material and energy resources that will help in realization of our vision of becoming the world's lowest cost producer of aluminium. The core purpose of our business is to give back to the society. We generate wealth by sweating our assets and then redistribute it to our stakeholders via taxes, raw materials, services purchased from suppliers and contractors, salaries to our employees, community investments, etc.

The Group publishes Tax Transparency Reports annually which provide details on wealth generation and distribution by the company. Given below is the wealth generation and distribution summary for the Aluminium and Power Sector for FY 2019-20. (For further information - [https://www.vedantalimited.com/InvestorReports/TTR%20Report%202020\\_%20VEDL.pdf](https://www.vedantalimited.com/InvestorReports/TTR%20Report%202020_%20VEDL.pdf))

PARTICULARS	FY 2019-20	FY 2018-19
ECONOMIC VALUE GENERATION FOR ALUMINIUM AND POWER SECTOR (MN\$)*		
Sales of Goods & By-Product	4,694	5,307
Interest received (if any)	36	13
Royalties Received (if any)	-	-
Loss/Profit from sales & Asset	-9	-16
Income from Investments (if any)	2	1
Other Income (Forex Gain)	17	63
<b>Total</b>	<b>4,740</b>	<b>5,368</b>
ECONOMIC VALUE DISTRIBUTION FOR ALUMINIUM AND POWER SECTOR (MN\$)*		
Suppliers (vendors, contractors etc)	3,831	4,488
Manpower (Include Direct & indirect)	203	207
Government levies (All kinds of tax & levies including royalty)	148	139
Provider of Capital (interest, dividend or any other obligation)	594	574
Community (CSR)	14	14
<b>Total</b>	<b>4,789</b>	<b>5,422</b>

According to the study 'Economic and Social Impact Analysis of Vedanta' released by the Institute for Competitiveness, Vedanta directly contributes 0.40% to India's GDP through its operations. Out of this, contribution of Vedanta Aluminium and Power Sector is 0.18%. The indirect impact of company through its supply chain network, contribution to GDP, and ability to generate employment across the value chain is as large as one percent of India's GDP. The company also impacts the economy through the remuneration of its employees, a part

of which is spent on consumption of goods and services, which further creates jobs and increases the country's GDP. This impact, known as the induced impact, is as large as 2.20% of India's GDP for which Vedanta Aluminium and Power Sector's contribution is more than 1%. (Vedanta Aluminium - Jharsuguda (0.64), BALCO (0.26), TSPL (0.14).

We will continue to increase our contribution to the Indian economy with improved efficiency, supply chain integration, cost optimization, and value generation for stakeholders.



Employees at the thermal power plant, Jharsuguda





# Environment





# Environment

Environmental Management forms a significant component of our sustainability framework and is applied to the entire lifecycle of all our operations with all requirements mapped against international standards. We have identified the material topics in context of the environment through the materiality assessment. Energy management and climate change, waste management, water management, air emissions, tailing dam / ash dyke management, and biodiversity management have been identified as material environmental issues by our stakeholders and company leadership.

Natural Resources play a critical role in a nation's progress and prosperity. The process of using these resources for economic gain may lead to environmental and social challenges. Hence, maintaining a fine balance between economic growth and environmental sustainability is crucial. At Vedanta, we adopt globally leading practices to minimize the environmental impacts of our operations. Increasing resource efficiency, reducing waste generation, minimizing land disturbance, and carrying out progressive mine closure as well as preventing pollution are some of the measures we have undertaken to minimize our environmental impact.

## Management Approach

Our Sustainable Development Framework includes a toolkit of policies, standards, and guidance notes to guide our operations in managing environmental impacts. For the environmental priorities arising from the materiality process, we have developed specific objectives and targets,

and we review our performance against each of these issues on a periodic basis. Our units develop and implement action plans to achieve the set targets. For waste management, we focus on finding new and innovative ways to reduce and recycle waste at our operations.

## OUR PERFORMANCE

Given the scale of our operations, if they are not managed as per the required standards, some of these can result in incidents that significantly impact the environment. As per our Management Standards, environmental incidents can be divided into 5 categories depending upon the severity of the impacts. Category

1 to 3 incidents are those having negligible to moderate short-term impact on a limited area / number of receptors and are of reversible in nature. These incidents are recorded at unit level for which mitigation plans are developed and implemented to prevent / minimize these incidents in future. Category 4 and 5 environment

incidents are serious environment incidents that can have a medium to long term impact on wide scale area / sensitive receptors and may take moderate to long time for recovery. This year we did not have any category 4 or 5 environment incident reported from our units in Aluminium and Power Sector.



YEAR	CATEGORY 4	CATEGORY 5
2017-18	1	0
2018-19	1	0
2019-20	0	0



We are committed to our vision of Zero Harm to environment and neighbouring communities.



## Environment

# Energy Management

For a natural resources company like Vedanta, energy constitutes a major part of input costs, which, if managed efficiently, can result in substantial bottom line improvement. We are aware of the business case and the climate impacts that energy management presents, and hence energy efficiency is imperative at our operations. This we try to achieve by implementing new technologies as well as a series of energy efficiency measures. We are committed to the cause of energy conservation and this helps us minimize our business-related climate impact.

## MANAGEMENT APPROACH

Energy management is very important for Vedanta Aluminum and Power from the perspective that it has a significant contribution to the cost and to the GHG emissions of the business.

We regularly benchmark our energy consumption with our peers in the industry and continuously work towards improving our specific energy consumption. Towards this, we not only improve our process

energy efficiencies but also evaluate and incorporate new technologies that have the potential to provide a step change improvement in energy efficiencies.

We have adopted Business Excellence models such as Six Sigma, Quality Circles, Kaizen, etc. to carry out energy conservation projects. Our operations have SCADA-based energy monitoring system wherein energy meters are

connected to one server and reports are generated automatically. Apart from this, portable flow meters and power meters have been deployed to analyze a particular load for any deviation. Our operations regularly participate in industry-wide energy conservation conferences and various competitions to understand new technologies, best practices and innovations in the field of energy conservation.

**Our smelter at Jharsuguda is the 1<sup>st</sup> Aluminium Smelter in Asia to receive ISO 50001 certificate for Energy Management System since 2013**



Night view of alumina refinery, Lanjigarh

## VEDANTA LANJIGARH WINS CII NATIONAL AWARD FOR EXCELLENCE IN ENERGY MANAGEMENT 2019

Our Alumina Refinery's greenhouse gas (GHG) emission is among the lowest in the world for a coal-fired refinery.



RAKESH MOHAN

**"The CII national award bears testimony to some of our advanced energy efficiency practices aimed at reducing Specific Energy Consumption (SEC) and cost. Vedanta is committed to uphold sustainable practices in its operation with the highest energy-efficiency standards. We believe our efforts will help us create a sustainable future for our community and environment."**

-RAKESH MOHAN, COO – Vedanta Limited, Lanjigarh

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Industry, Innovation and Infrastructure

Responsible Consumption and Production

## 100% graphitized cathode installation in potline

JHARSUGUDA

CASE STUDY

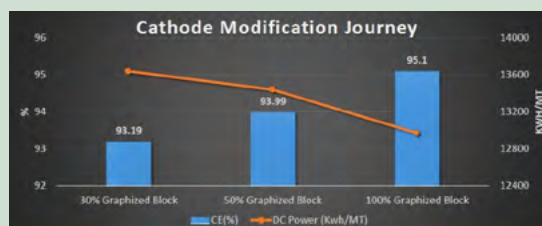
**Challenge:** Aluminium smelting is a power intensive operation. The electrolysis process used in production of aluminium consumes significant power. Our pots were initially

designed with about 50% graphitized cathodes that required high energy consumption due to relatively large voltage drop across the cathode, resulting to a power consumption of 13,600 KWH/MT of aluminium production.

**Action:** We planned to implement 100% graphitized cathode to reduce voltage drop across the cathode with graphite's low electrical resistivity. The successful implementation of 100% graphitized cathode has resulted in a significant reduction in voltage drop across the cathode and reduced overall energy consumption per ton of aluminium production. The initiative has now been replicated across our smelters.

**Outcome:** Following benefits were observed after 100% graphitized cathode use:

- Resistivity and voltage drop across cathode reduced
- Significant energy saving by reduction of specific DC energy consumption
- Energy conserved: 49.17 Million kWh/Annum



## Environment

### Energy Management

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Industry, Innovation and Infrastructure

Responsible Consumption and Production

#### Replacement of conventional filter bags

JHARSUGUDA

CASE STUDY

**Challenge:** Potline Fume Treatment Plant also works as a de-dusting unit. Earlier, cylindrical type filter bags were used for removing the alumina dust particles generated during HF removal process from fumes. The challenge was to maintain flow and pressure drop across the bags.

**Action:** We replaced cylindrical filter bags with star type filter bags. This led to increase in filtration area up to 50% and reduction in resistance across the filter bags, resulting in increase in flow of gases through the filter bags. This change created an opportunity to optimize the flow by decreasing the ID fan speed and resulted in substantial energy conservation and improvement in life of the bags, due to the reduction in pressure drop. The potential hazard of bag failures and environmental pollution also reduced substantially.

**Outcome:**

- Energy conservation per annum: 2712 mWh/Annum

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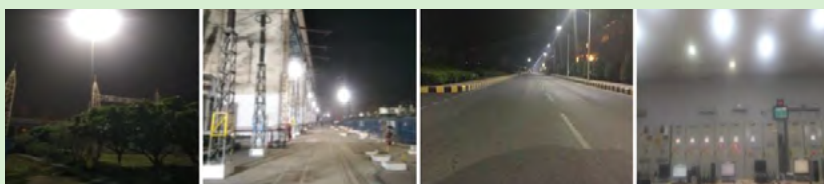
Industry, Innovation and Infrastructure

Responsible Consumption and Production

#### Mass LED conversion drive

JHARSUGUDA & LANJIGARH

CASE STUDY



**Challenge:** Illumination levels needed to be improved as per International Finance Corporation (IFC) guidelines along with reduction in energy consumption.

**Action:** We replaced the conventional light fitting with LED lights, thereby improving illumination levels while also reducing energy consumption.

**Outcome:**

- Replacement of metal halide lamps with LED lamps
- 351 MWh/Annum (Jharsuguda) and 1095 MWh/Annum (Lanjigarh) in savings
- Asset life improvement from 6 months to 5 years
- Illumination level meeting IFC standards





Employees in conversation at alumina refinery, Lanjigarh

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Industry, Innovation  
and InfrastructureResponsible Consumption  
and Production

## VFD conversion of MOL slurry transfer pump

LANJIGARH

CASE STUDY

**Challenge:** We used to operate process transfer pumps with 45 KW motor in conjunction with the manual valve arrangement. Direct On-Line (DOL) method was used to start the motor, with manual valve 100% open during the operation. With this arrangement the motor was operating at 50% of its rated capacity and the valve was left 100% open.

**Action:** Variable Frequency Drive (VFD) conversion of MOL slurry transfer pump, with frequency locked with respect to rated flow requirements.

**Outcome:** Reduction of motor power consumption.

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Industry, Innovation  
and InfrastructureResponsible Consumption  
and Production

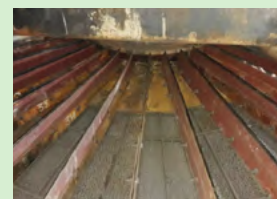
## Replacement of APH basket

JHARSUGUDA

CASE STUDY

**Challenge:** An air pre-heater (APH) is a device designed to heat air before another process (for combustion in a boiler) with the primary objective of increasing the thermal efficiency of the process. The challenge for us was to improve the specific coal consumption.

**Action:** The purpose of the air pre-heater is to recover the heat from the boiler flue gas which increases the thermal efficiency of the boiler by reducing the useful heat lost in the flue gas. Against design efficiency of 63%, the APH was running with average efficiency of 55.8% causing the Flue Gas Exit Temperature to rise by 18°. So, a replacement of APH basket was done.



**Outcome:** This led to reduction in PA and ID fan consumption



### Site initiatives to reduce specific oil consumption in calciner

LANJIGARH

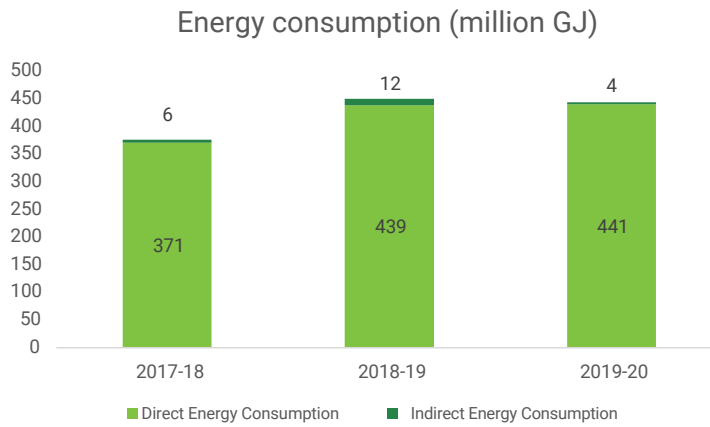
Throughout the FY 2019-20 we undertook various initiatives to bring down the oil consumption in both calciners as they are one of the largest consumers of energy in the refinery operation. Some of the initiatives that reduced energy consumption at calciners calciners, helping our alumina refinery reach specific energy of 7.22 GJ/T of hydrate in FY 2019-20 from that of 7.52 GJ/T in the previous fiscal, are as follows:

- Arrest of air ingress during annual shutdown and monthly checks for air ingress points and arresting the same to reduce external air ingress into the system
- Commissioning of Advanced Process Controller (APC) and optimization of air: fuel ratio
- Ensuring steady state operation, and improving operating hours and optimization hours of APC in both calciners
- Optimization of burner air flow and pressure to maintain proper atomization of fuel oil
- Optimization of Electrostatic Precipitator (ESP) transformer current setting as per alumina quality to reduce circulation load and parallelly ensuring dust emission in control
- Modification in flap gate adjustment in both calciners to optimize material bypass
- Revision of frequency and SOP of pan filter changeover and washing for moisture reduction, thereby reducing fuel oil consumption
- Revival of Pressure Reducing De-superheating (PRDS) system revival for moisture control in hydrate cake
- Re-commissioning of Hot Air Generator (HAG) system to increase preheating temperature, thereby reducing calciner temperature
- Commissioning of 3rd cooling tower to improve alumina cooling and allow reduction in MP bower air used for cooling in FBC, thereby reducing total system air





## ENERGY CONSUMPTION FOR ALUMINIUM AND POWER SECTOR





## Environment

# Climate Change

Climate Change is the defining issue of our time for mankind and we are at a critical moment. From shifting weather patterns to rising sea levels to frequent extreme weather events like droughts or floods, climate change threatens the entire world. The impacts of climate change are global in nature and unprecedented in scale. Tackling this concern calls for collaborations in implementation of mitigation technologies and adaptation measures that maintain ecological balance without compromising on economic growth.

## MANAGEMENT APPROACH

We remain fully supportive of the outcomes of the Paris Agreement. Our GHG reduction targets are in alignment with the Nationally Determined Contributions (NDC) of the Government of India.

Our Energy and Carbon Management Policy and Performance Standard commit our operations to adopt and maintain global best practices in carbon management and minimize Greenhouse Gas (GHG) emissions. The 'Carbon Forum', led by our TSPL unit CEO and comprising representatives

from all of our business units, has been tasked with developing and overseeing the implementation of Vedanta's climate change approach. The forum engages on climate related business risks and opportunities and management strategies, reduction in GHG emissions intensity, alignment with investor requirement, emerging regulatory risks etc.

The outcome of Carbon Forum is periodically discussed at Group-level forums like EXCO, Risk Management Committee and

Sustainability Committee, to chalk out ways to manage our carbon footprint. Executive compensation is linked to VSAP performance, which means management of our carbon footprint is also indirectly included in the compensation structure of our management. We are also in agreement with the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD). We are currently examining how to fully align our disclosure on climate management practices in-line with the TCFD framework.



## GHG IMPACT REDUCTIONS AND TARGETS

Meeting growing energy demands while limiting carbon emissions is a global challenge. We recognize that we have a social and economic responsibility, both to take action to reduce our carbon footprint and to engage constructively on climate change issues.

Vedanta committed to reduce its GHG intensity by 16% by 2020 from a 2012 baseline and we are delighted that on completion of FY 2019-20, the Aluminium Business was able to reduce its GHG intensity by 20 % and Aluminium and Power Sector was able to reduce its intensity by 18%. Vedanta plans to publish its short-term GHG goal in the coming year, and, accordingly, Aluminium and Power Sector will also have its

short term GHG intensity reduction goal published in the coming year, in addition to aspiring for substantial decarbonization of the business by 2050.

Towards this direction, this year we conducted a trial on co-firing of biomass along with coal at our power plants at Jharsuguda and BALCO. The trial was fairly successful and now we are evaluating how to develop sustainable supply chain for biomass co-firing on principle of shared value for mutual benefit of all the stakeholders involved. Further, we have developed extensive green belts around our factories to offset some of our GHG emission. For example, our TSPL unit has 700 acres of green belt developed covering 33 % of the project

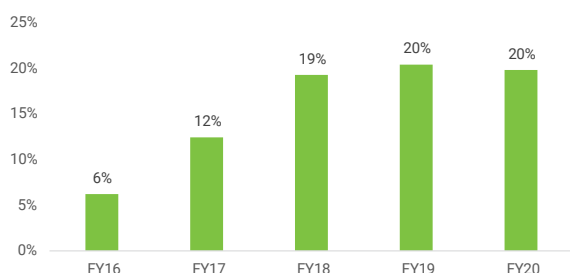
area. We are working on several energy efficiency projects to reduce our energy consumption and GHG footprint.

We are committed to increasing the share of renewables in our energy mix, which will help reduce our GHG foot print. For FY 2019-20, we purchased more than 115 million units of renewable power from bio-mass based power plant and as many Renewable Energy Certificates.

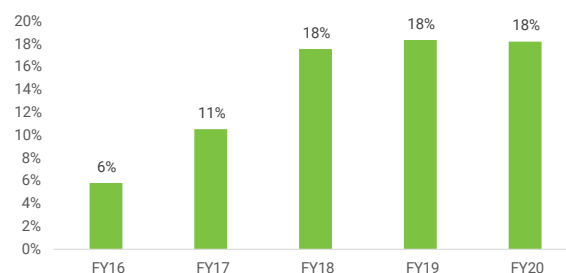
We believe that we have come a long way over the last few years in reducing our GHG intensity by 20 % and the planned projects will help us further move ahead in this direction.



Percentage reduction in GHG Emission Intensity over baseline for Aluminium Sector



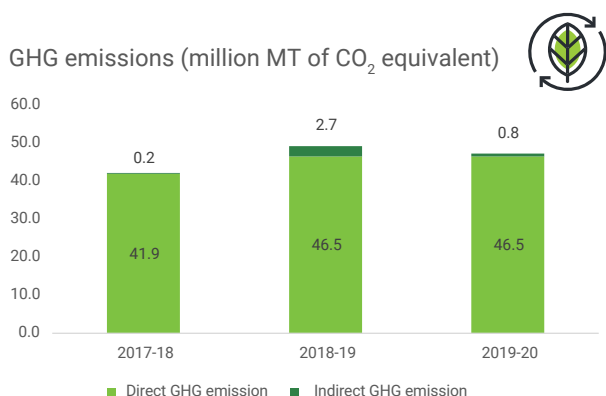
Percentage reduction in GHG Emission Intensity over baseline for Aluminium and Power Sector



## Environment

### Climate Change

## OUR GHG EMISSION PERFORMANCE



We calculate and report Greenhouse Gas (GHG) inventory i.e. Scope 1 (process emissions and other direct emissions) and Scope 2 (purchased electricity) as defined under the World Business Council for Sustainable Development (WBCSD) and World Resource Institute (WRI) GHG Protocol.

## CLIMATE RESILIENCE

Increasingly dangerous climate impacts are beginning to unravel decades of hard-won sustainable development gains. Globally, more people are suffering from malaria as warmer temperatures bring disease-carrying mosquitoes to new regions. And economic losses from disasters are at their highest. Floods, droughts, super storms, fires, and rising seas are hitting the poor and most vulnerable, the hardest. The efforts to prepare

for and manage these risks have to be both innovative and effective. It is imperative for developing countries like India to focus on adaptive measure to strengthen the climate resilient infrastructure to minimize climate impacts on their community and economy. Our business operations are working with neighbourhood communities and governments to promote climate resilience practices such as climate

resilient agriculture, disaster and emergency response plan, etc.

Vedanta Aluminium is aware of the potential impacts of extreme climate events on its infrastructure and has been evaluating climate resilience adaptation measures to minimize the impact of changing climate related extreme events on its operations.

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Affordable and Clean Energy

Industry, Innovation and Infrastructure

Climate Action

Installation of rooftop solar power panels

LANJIGARH

CASE STUDY

With a view to reducing greenhouse gas emissions and harnessing clean energy, we have installed solar power panels on rooftops at different locations in the plant i.e. on the Admin Building (74kWp) and HR Gate Office Building (26kWp). We also commissioned a rooftop solar power system of 100 kWp generation capacity at Lanjigarh, taking the total solar power generation capacity to 380 kWp.

Solar panel harness sunlight to generate electricity. They are a good source of clean energy which helps combat climate Change. This aids in the reduction of carbon footprints. This project resulted in an additional energy saving of 1,54,000 kWh.





## Flood mitigation measures

BALCO

In the month of August 2019, there was extreme rainfall event at our smelter unit, BALCO and other nearby areas in Chhattisgarh. There was more than 140 mm rainfall in a four hours span leading to a flooding situation in and around our operations at BALCO. The storm water drainage system at the operation was completely overwhelmed leading to submergence of the unit pump houses and heavy water logging at shop floors and roads, jeopardizing the entire plant operations and putting Pot Line 1 operation at major risk.



The above incident raised our doubts on the adequacy of the existing plant drainage system to deal with such extreme heavy rainfall events and the effectiveness of our monsoon management infrastructures / programmes.

In a view of the significant change in climate conditions and increase in the frequency of incessant rains in various parts of India, we decided to have a detailed study conducted covering the following aspects and implementing the required necessary measures.

- Flood risk assessment studies through hydrological analysis and hydraulic modelling, etc. for extreme rainfall event.
- Checking adequacy of existing plant drains and expanding drainage network as required.
- Developing emergency measures to manage extreme rainfall events.

Post completion of the study, we worked on de-bottlenecking the drainage system to handle extreme rainfall events in the future.

We have implemented similar flood control measures at our TSPL power plant, post a study with a premier research institute in India, wherein unit drainages have been improved. We built additional drains to avoid surface run-off entering into unit premises and developed storm water run-off storages in the plant low-lying areas to handle flash flood situations.

### CASE STUDY



# Waste Management

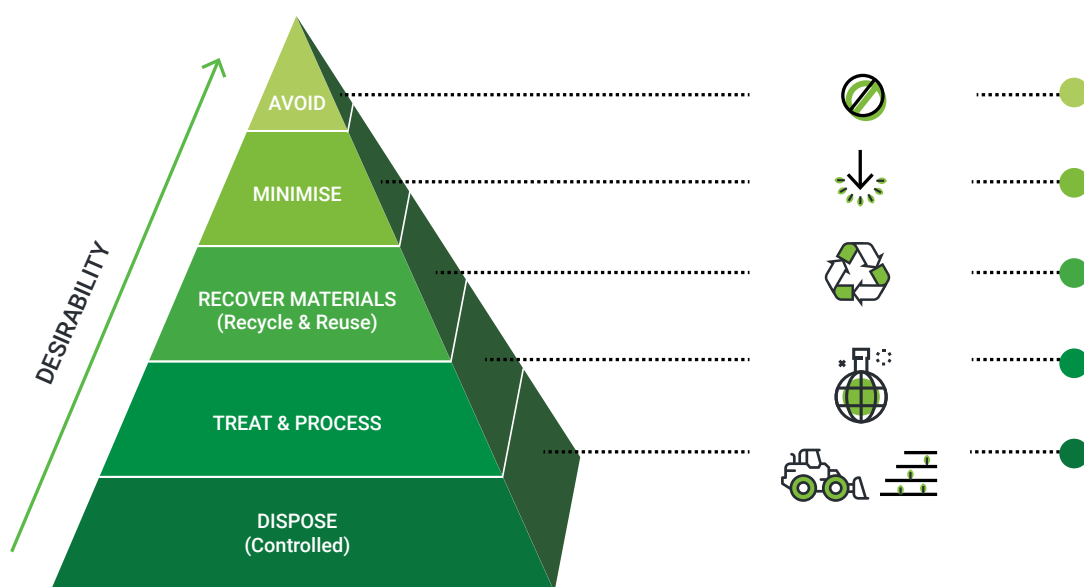
Waste management activities entail actions to manage waste from its inception to final disposal. It is of great importance as the waste generated may lead to various environmental and health concerns, if not managed properly. Our mission is to maximize resource value and minimize the environmental and health impacts of the waste generated from our operations, through proper waste management.

Waste generated from our operations are classified into hazardous and non-hazardous waste. A large volume of waste generated from our mining or smelting operations is classified as non-hazardous waste, such as mine over burdens, mine processing residues, and ash from coal-based power plants. Hazardous waste from our operations includes used / spent oil, refractory waste / spent pot lining, and residual sludge from smelters.

## MANAGEMENT APPROACH

Our operations are required to follow Vedanta's Resource Use and Waste Management Standard and supporting guidance notes while implementing waste management practices. The Standard requires us to manage the waste as per waste management hierarchy which involves reducing the waste quantitatively as well as qualitatively (reducing the toxicity), and then performing recovery and recycle (either ourselves or by selling it to authorized recyclers). The last priority in waste management is disposal of the waste in landfill or by incineration.

Hazardous waste, if not managed properly, has the potential to harm the environment and/or the health of the people. Further, low-toxic high-volume waste also has the potential to create hazard due to sheer volume of waste generated and the management required to handle it. Our operations have taken several measures to manage hazardous, low-toxic high-volume waste in an environmentally and socially responsible manner to minimize its impact on the environment and the health of the people.





## Aluminium Recovery from Dross by **RUNAYA**

JHARSUGUDA

### CREATING CIRCULAR ECONOMY SOLUTIONS FOR THE METALS & MINING INDUSTRY

The world produces ~65 million tonnes of aluminium every year. Approximately 1.5% of the total quantity is lost in the form of aluminium dross – a by-product – that contains recoverable aluminium, aluminium nitrides and oxides, spinel, dimagnesium silicate, gupeite, and sodium titanate. Aluminium dross is classified as a hazardous waste under the prevailing Indian environmental regulations due to its potential environmental and health impacts. The current practice is to responsibly dispose this waste by sending it to State authorized recyclers/re-processors who process the waste as per approved guidelines by the Central Pollution Control Board. Recyclers attempt to recover aluminium from the dross, but because they handle cold dross, the recovery is limited to ~20% metal by weight from the dross (equivalent to a recovery rate of ~10%).

The process adopted by Runaya breaks up the recovery into two stages – (i) Recovery from the hot dross, and (ii) Recovery from the cold dross. The combined effect is that one is able to recover ~40% of the metal by weight (or 90% of the metal present in the dross). This is a significant jump, resulting in improved economic viability of the process. Also given that it is processing the dross in its melted state in stage 1, there is a significant reduction in energy requirement compared to other solutions in the market. Additionally, in keeping with Vedanta's 'Zero Waste' philosophy, Runaya, which has a technological tie-up with TAHA International S.A (Luxemburg), is able to take the non-metallic portions of the residual dross and process it to produce briquettes that can be used as slag conditioner in the steel industry. The end result is that 100% of the dross can be re-utilized – through metal recovery and the creation of a value-added-product. This eliminates the amount of waste sent to secure landfills and is an environmentally safe way of utilizing a hazardous waste. It also decreases the dependence on the other raw materials used as slag conditioners in the steel industry – thereby living up to the ideals of circular manufacturing and circular economy.



**AJAY KAPUR**  
CEO Vedanta Aluminium & Power

**“Runaya’s process is a game-changer for the Aluminum Sector. Not only does it have the potential to eliminate a hazardous waste-stream, but it converts that waste into value-added products. It is a sustainable solution in the truest sense – addressing environmental, economic, and social aspects.”**

### A PARTNERSHIP ON THE BRINK OF A REVOLUTION

A circular economy is one that is restorative by design, aiming to keep products, components and materials at their highest utility and value at all times. The solution being offered by Runaya is an example of what is possible for the aluminium industry and fulfills our vision of zero waste by eliminating a hazardous waste-stream. We are excited to partner with Runaya and usher in a revolution for the resources sector in more ways than one.

CASE STUDY



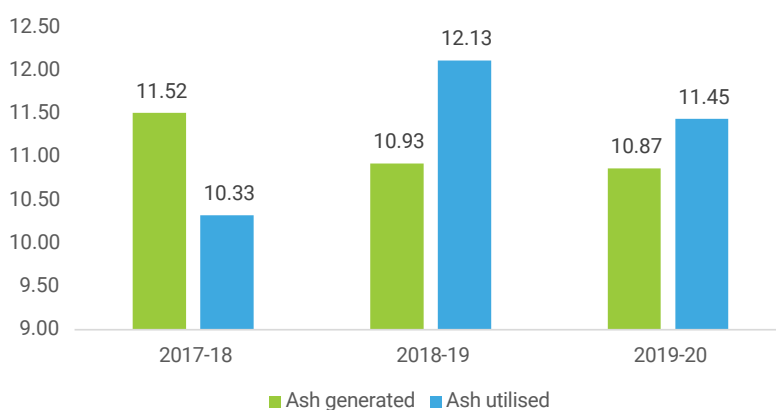
## Environment

### Waste Management

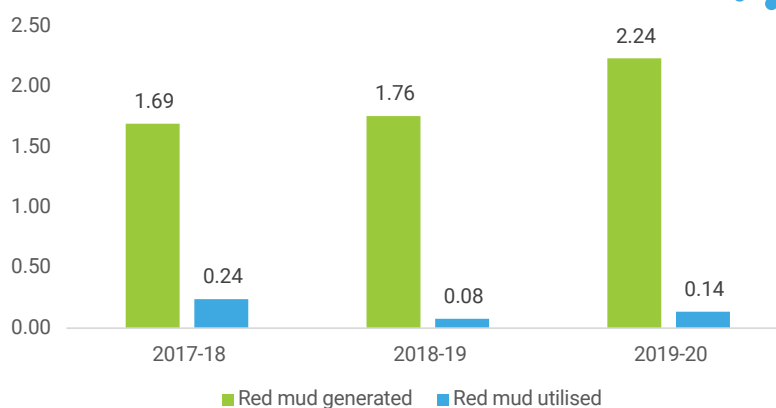
Management of ash generated from our coal-based power plants in environmentally and socially responsible manner is a material issue for our operations. Disposal of ash can have several environmental and social impacts due to land use diversion, resettlement, water source contamination, and air pollution. When the disposed ash gets dried or loose, in the absence of water or vegetation cover, fugitive dust may get generated which may pollute the air through dispersion of fine particulate ash particles in surrounding area.

All of our waste processing sites in mines or ash storage facility, we regularly sprinkle water, provide soil cover, vegetative cover/ grass turf to minimize environmental and social impacts, and undertake all necessary stringent steps to comply with environmental standards.

Ash generation and utilization (million MT)



Red mud generation and utilization (million MT)





## Ash management

BALCO

### CASE STUDY

**Challenge:** India has installed about 166 GW of Independent Power Plants for supply of commercial power and about 58 GW of the Captive Power Plants for captive use of power by industries. Ash disposal from these coal-based thermal power plants is major challenge in India. The Government of India has been promoting innovative solutions for management of ash including use of exhausted mines for backfilling by ash. However, obtaining abandoned mines and permission for backfilling the same from the mine owner is still a huge challenge as mine owners do not want to part with the abandoned mines, considering potential future mining prospects. Chotia coal mine, owned by BALCO operations, consists of two sub-blocks namely Chotia-I and Chotia-II, separated by a distance of 13 km. Mining operation at Chotia-I has been stopped since September 2016 as opencast mineable coal reserves got exhausted. Environment regulators, Government of India, had advised BALCO to utilize the mine void at Chotia mines for backfilling of ash generated from the power plant.

**Action:** Our BALCO operations proposed to backfill the mine void of Chotia-I mine with ash lying in the ash pond of the plant and approached the Director General of Mines Safety (DGMS), to obtain the permissions. Post compliance with all statutory requirements from our side, DGMS granted us the permission to dispose of 1.25 million MT of ash in Chotia-I exhausted mine pit for backfilling of ash and reclamation of mined-out areas.

**Outcome:** Accordingly, we commenced backfilling at Chotia-I Coal Mine and during FY 2019-20, disposed 0.215 million MT of ash in the exhausted mine pit. We have planned disposal of around 0.7 million MT of ash during FY2020-21. Post backfilling, once it reaches the final level, we shall undertake biological reclamation by placing topsoil, followed by compaction and plantation over the topsoil to restore the mine void. This initiative not only allows the disposal of ash in an environment friendly manner, but also restores the land-form scientifically to minimize visual and other environmental impacts of the site due to mining operations.

We are working with the Government of India to obtain other abandoned mine sites for disposal of ash from our operations and facilitate restoration of the abandoned mines in the most appropriate scientific manner.





## Environment

# Water Management

Availability of good quality water is a material issue for a natural resources company. It is a shared resource among the stakeholders and securing an adequate supply of good quality water is material to the company, the host community, the natural ecosystem, and for the biodiversity management of the area.

We are committed to minimizing our water footprint and reducing our freshwater consumption by reusing as much as water possible at our operations.

## MANAGEMENT APPROACH

Our approach is outlined in our water policy and delivered through implementation of our water management standard. We integrate water management into decision-making processes for all of our projects. This ensures that all necessary measures are in place to avoid or minimize the impacts of our projects. Each of our business units have

conducted a water-screening assessment to identify water related potential environment and social risks to business, which could vary in terms of water availability, water quality, sensitive aquatic habitats, and dependent community / stakeholder on water source from location to location.

## SOURCES OF WATER

The following are the sources of water for our business units. We have our own captive water pipeline and pumping station to supply water to each of our units.

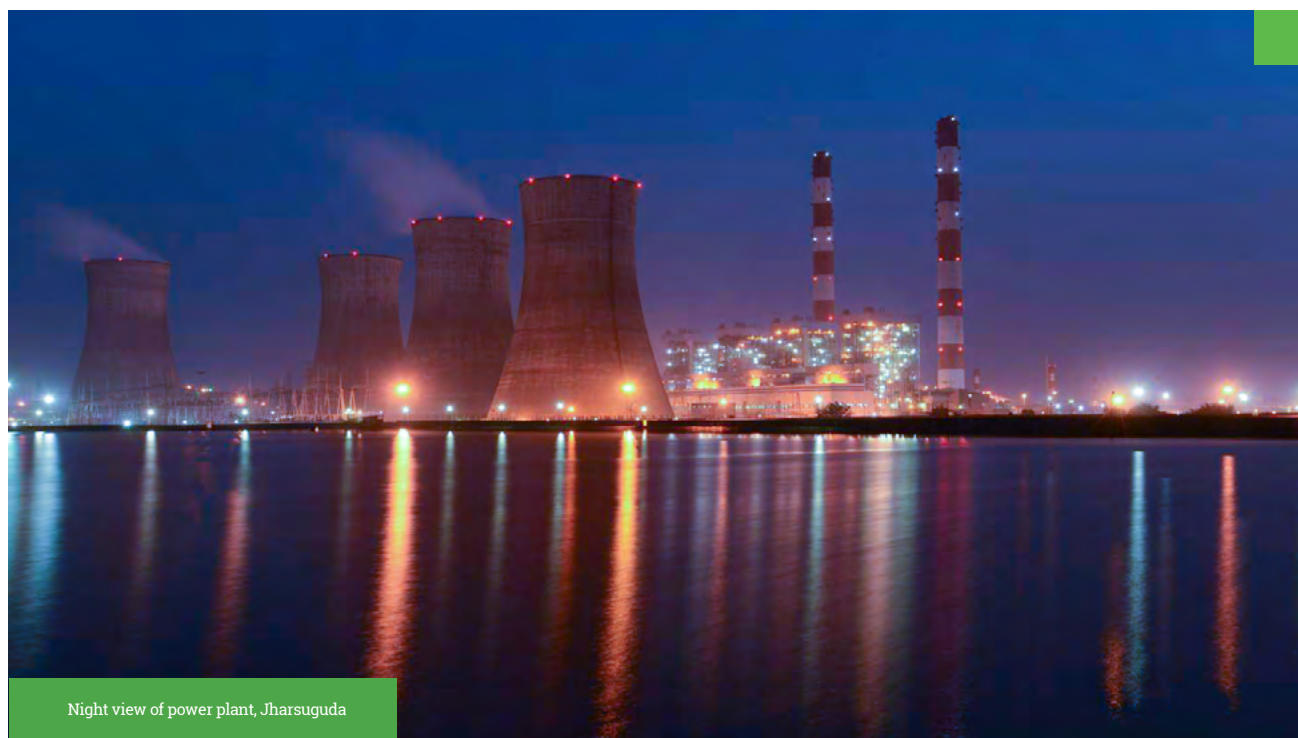
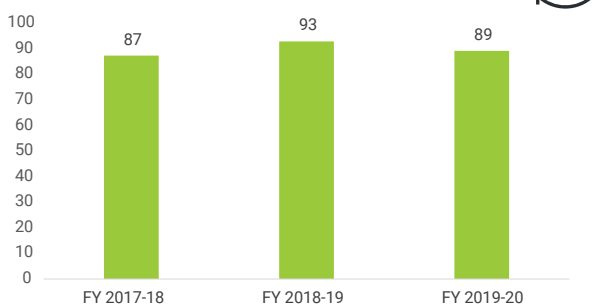
<b>BALCO</b>	<b>Hasdeo River</b>
<b>Jharsuguda</b>	<b>Hirakud Dam, Mahanadi River</b>
<b>Lanjigarh</b>	<b>Tel River</b>
<b>TSPL</b>	<b>Jaga branch of Bhaini distributaries</b>

Though, among the mentioned operations, our Punjab operation is located in a water stress area as per published Global Water Resource Database, availability of good quality water is not an issue for any of our operations, including TSPL. However, since India has one of the largest populations in the world and fresh water is a finite resource, we understand the importance of fresh water. At each of our operations we have undertaken several water conservation measures. Specific water consumption reduction is one of the important KPIs for each of our business units. Since water management infrastructure is usually poor and inadequate around our area of operations, we also support our neighbouring community to access good quality

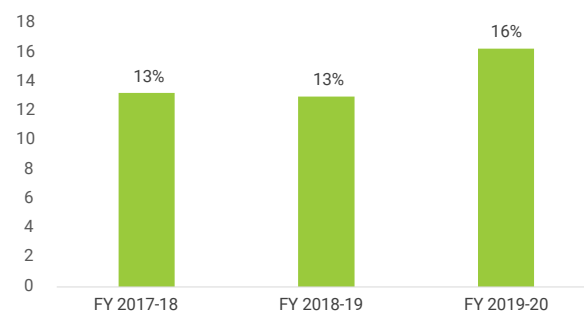
water for drinking and sanitation purpose, as required. We are involved in various water management related CSR activities that benefit the society as a part of our 'shared vision' of sustainable development. For example, we assist government bodies in providing safe drinking water and sanitation to communities in the periphery of our Jharsuguda and Lanjigarh plants, have undertaken rainwater harvesting projects at TSPL and support sustainable agriculture practices at BALCO.

We are rigorous in following our 'Zero Discharge' policy and that helps us focus on effective utilization of water and minimization of wastage.



Fresh water consumption (million m<sup>3</sup>)

Percentage of water recycled



## WATER RISK ASSESSMENT

We undertook a water risk assessment exercise for all of our business units in the Aluminium and Power Sector in the year 2017 in collaboration with an expert consulting agency, a leading provider of corporate water stewardship services, as part of a Group-level water risk assessment exercise. The water risk assessment and risk ratings were determined based on water-stress information available in global and local water resource databases and from site-specific water management information available at local level. The approach evaluated water related physical, social and regulatory business risks to the company operations. Findings from the study helped us understand prevailing water related issues around our operations.

We realized that our Punjab operation is amongst the high water-stress regions of India as per the Global Water Resource Database. The unit has implemented several mitigation measures to manage potential future water-related challenges

including implementation of zero liquid discharge and creating on-site water reservoir for contingency purpose.

Further, over the past few years our sites in Odisha and Chhattisgarh have been subjected to extreme weather, especially extreme rainfall and cyclonic events. Our BALCO and Jharsuguda sites have undertaken flood study and developed mitigation/emergency response plans to manage extreme rainfall events. These plans are under implementation and upon completion are sure to help our units comprehensively reduce flooding related water risks which are a result of extreme climatic events.

Last year our BALCO unit undertook an exercise to evaluate water reuse and recycling based on the ICMM publication – A Practical Guide to Consistent Water Reporting. The Group HSE department is evaluating implementation of the same across businesses.

## Environment

### Water Management

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Clean Water and Sanitation

Responsible Consumption and Production

#### Optimization of freshwater consumption

JHARSUGUDA

CASE STUDY

**Challenge:** To conserve water and to meet specific water consumption target at utility area.

**Action:** Our Utility Team organized several water saving campaigns and awareness sessions throughout the plant, including:

- Regular water leak audits and their corrections .
- Optimization of freshwater consumption through maximizing the consumption of water recycled through ETP RO.
- Revamping water treatment softeners to improve output quality of harnessed water.
- Periodic cleaning of reservoirs and tanks to supply clean water as per global standard.
- Online monitoring of water parameters.
- Monitoring and control of main process water pipe valve through SCADA system.

**Outcome:** We achieved Specific Water Consumption of 0.34 m<sup>3</sup>/MT against a target of 0.36 m<sup>3</sup>/MT. It also resulted in reduced energy and chemical consumptions.







## Water Management

TSPL

CASE STUDY

To manage the water efficiently as a shared resource, TSPL has installed state-of-the-art technologies and implemented various water management initiatives.

- Our TSPL plant is based on supercritical technology that is designed for lesser specific water consumption compared to sub-critical technology power plant. Apart from the supercritical technology, the plant is designed on zero liquid discharge philosophy i.e. all wastewater is reused and recycled within the plant and no water is discharged outside the plant boundary.
- We have constructed water reservoir within the plant premises to store water for contingency purposes.
- We have installed flow meters at all major locations and developed water balance. We monitor water consumption, wastewater generation, and treatment and reuse & recycle of water, on a daily basis.
- We have annual water consumption reduction targets and to that end, implement various water conservation projects.
- We have partnered with the Government of Punjab and local communities for developing rooftop rainwater harvesting structures.

Our TSPL Unit has achieved 25% reduction in Specific Water Consumption, against the design. We have deployed other contingency measures which will help the business manage any potential business related risks.





## Environment

# Biodiversity

Biodiversity is the variety and variability of life on Earth. It is imperative for businesses to not harm biodiversity due to any of their operations. At Vedanta, we are conscious that the nature of our operations could pose implications on biodiversity if they are not managed well.

Protecting biodiversity is a material concern for the metal & mining industry. As part of our Sustainable Development Framework, we are committed to protecting biodiversity. Consequently, we manage the biodiversity impact of our operations across the life cycle of our projects.

## MANAGEMENT APPROACH

Our dedicated Biodiversity Policy and Management Standard are in line with international standards and guidelines such as IFC and ICMM. Each of our operations has developed a Biodiversity Management Plan (BMP) to avoid, minimize, or compensate for the loss of the biodiversity attributes which arise due to a project or a major expansion. We endeavour to achieve No Net Loss

(NNL) of biodiversity due to any impact of our operations. We regularly create awareness on biodiversity conservation and management amongst our employees, and believe that this will go long way in helping us manage biodiversity in and around our operations. The Vedanta Sustainability Development Guidance Note helps us in proper mapping, assessment, and management of biodiversity.



Plantation drive by employees and families



Plantation at Bauxite mines

## BIODIVERSITY MANAGEMENT AT OUR CHHATTISGARH BAUXITE MINES

BALCO has two captive bauxite mines, namely Bodai Daldali Bauxite Mines (636 Ha) and Mainpat Bauxite Mines (639 Ha) having mining leases valid till 26/03/2047 and 08/07/2042 respectively. The mined-out area of Mainpat Bauxite Mines is around 395 Ha and that of Bodai Daldali Bauxite Mines is around 384 Ha. As part of progressive rehabilitation of the mine area, we have developed afforestation with various local species and various water recharging structures towards conservation and maintenance of biodiversity on the mined-out area (779 Ha).

### BEST PRACTICES

- We have planted nearly 2 million saplings of local species in the BALCO Mines (Mainpat and Bodai Daldali Bauxite Mines) towards biodiversity development.
- We have constructed eight ponds / water reservoirs for ground water recharge. It has been noted that migratory birds are now seen at the pond near Kesra village of Mainpat Bauxite Mines.
- We have built garland drains and check-dams along the mine periphery. Diversion drains are installed ahead of the mine face. All these drains create a barrier to surface runoff and avoid the risk of runoff pollution due to open cast mining especially during monsoons.

Thus, rather than affecting the biodiversity, our operations have contributed towards improving the biodiversity in the area.

### FLORA

The mine lease area of Mainpat and Bodai Daldali Bauxite Mines (BALCO) is a plateau, surrounded by forest patches in slopes. In the mining area, maximum number of species available are those that represent the class of Phanerophytes, followed by Therophytes. Hemicryptophytes (predominantly grasses and sedges) were found to be significant in this area.

Hydrophytes were present in both seasonal and perennial water bodies.

### FAUNA

Our endeavors to create local plantations and ponds / water reservoirs have been helpful in retaining the fauna of the surrounding mining area. The mining area has been identified with bird species, reptiles, amphibians, mammals and butterflies.

### STAKEHOLDER INVOLVEMENT

- We have been engaging local stakeholders for plantation throughout the mining area (core and buffer zone).
- We have also engaged local stakeholders in the construction and maintenance of ponds, water reservoirs, check-dams and stop dams.
- We engaged local stakeholders for the 'Bari Project', wherein they helped develop barren lands through plantation of fruit saplings

### IMPACT ON STAKEHOLDERS

- Our mining activities did not change the land-form significantly. The mine pit is rehabilitated concurrently and will be 100% reclaimed by concurrent backfilling at the end of the operations.
- The area is dominated by tribal population, mainly dependent on agriculture and forests for their livelihood. Due to mining activity their livelihood as well as education levels have improved.
- The quality of life of Gond and Baiga people, which includes the quality of their human settlements, demography and other socio-economic aspects, and infrastructural facilities, have also improved.
- Literacy rate has improved in the core zone of mining area.

# Air Quality and Emission Control

Clean air is fundamental to healthy human life. Air pollution is one of the biggest global environmental and health challenges. Our operations, due to their scale and because of the handling of large quantity of raw materials and wastes, have the potential to impact air quality in the local air shed.

## MANAGEMENT APPROACH

We are committed to managing and minimizing emissions from our processes and operations, including point, fugitive, and mobile sources. At each of our operations, the stacks at power plants are installed hybrid electrostatic precipitators and bag filters to minimize particulate matter emission. Our Aluminium operations have installed state-of-the-art fume treatment plants to manage fluoride emissions from the smelter operations. All of our operations use dust control measures to control dust from fugitive sources like material and waste storage areas.

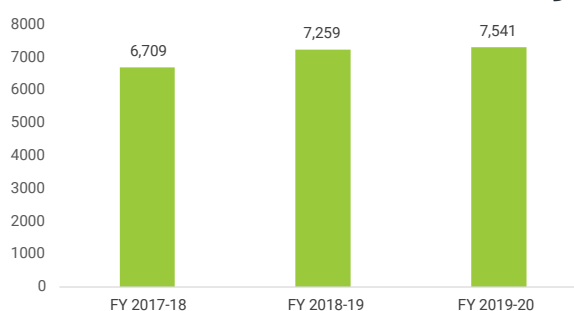
The Government of India has published revised emission norms for coal-based power plant that would require all of our operations to install Flue-Gas Desulphurization (FGD) systems to control the Sulphur Dioxide emissions from

the power plants. The timeline for compliance is varied based on the units, and all of our units have been working with industry bodies and associations to get extensions on timeline.

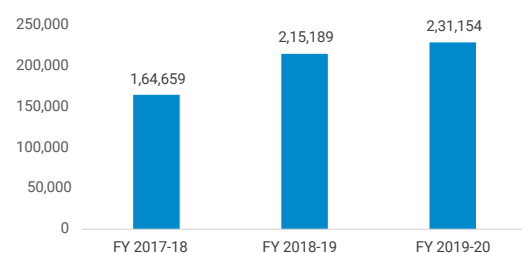
We continuously monitor the impact of our operations on the airshed quality and effectiveness of our controls. As part of our ambient air quality monitoring process, we monitor Suspended Particulate Matter (SPM), SO<sub>2</sub> and NO<sub>x</sub> at all our operations. Fluoride emissions and Polyaromatic Hydrocarbons (PAHs) emissions are monitored from our aluminium operations, whereas Particulate Matter (PM), Sulphur Dioxide (SO<sub>2</sub>) and Oxides of Nitrogen (NO<sub>x</sub>) emissions are monitored from our power plants.

## OUR PERFORMANCE

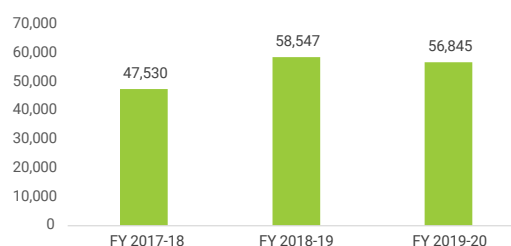
PM emissions\* (MT)



SO<sub>x</sub> emissions\* (MT)



NO<sub>x</sub> emissions\* (MT)



\*Emissions from BALCO operations not included





## Reduction of fugitive dust emissions

TSPL

CASE STUDY

**Challenge:** Fugitive dust emissions from loading of dry ash bulker from silo and ash spillage from the bulker due to design and operational issues.

**Action:** Our TSPL team worked with their business partners to come up with an improvement in design and operation of the existing system to minimize the dust emissions. The modifications carried out were as follows:

- Installation of Rotary Vane Feeder (RVF) above dry ash unloader and VFD on RVF motor for better control of flow of ash from silo.
- Installation of additional fluidizing air to ensure required vacuum and no choking in duct.
- Installed bulker level switch with minor modification & with timer circuit to stop loading once the bulker is filled to maximum level.

**Outcome:**

- Reduction in fugitive dust emission while loading of bulker.
- No ash overflow/spillage from bulker.



# Tailings Dam Management

Catastrophic events' history clearly show that the tailing dam management is the most significant environment, health and safety related business risk to the metals and mining industry. We are committed to managing tailing and ash dyke related business risk as a part of our sustainability commitment.

Tailings (or slurry) are waste materials produced after the processing of minerals from mined ore, largely of powdered rock and water. If not managed properly, tailings can impact the environment and human health, with pollution from effluent and dust emissions being potentially toxic to humans, animals and plants. Should a tailings storage facility physically fail, this harm gets multiplied. Flooding from tailings materials can damage the surrounding environment and lead to loss of human life. To eliminate the failure of tailing management and to minimize resultant environmental and health risk, we have implemented dry stacking technology of filtered tailings at our Alumina Refinery in Lanjigarh, which is known as Bauxite Residue Disposal Area (BRDA). Similar environmental and health risks also arise from storage of ash slurry in dykes.

Vedanta has implemented global leading practices in tailings dam management, appointing a global expert to assess and advise on the design, construction, and operation of all our tailings facilities, including that of

the ash dykes. The company introduced tailings dam management standards to ensure that all of our group companies follow consistent, international best practices. In addition to managing tailing dam as per standard operating procedures developed in the Operation, Maintenance, and Surveillance (OMS) manual, we have also prepared Emergency Response Preparedness Plan to handle any potential emergency situation resultant due to any unwanted material event.

The information related to our BRDA and ash dykes are fully disclosed to the Institutional Investors as part of Investor Mining And Safety Tailing Initiative and publicly available on our Group website - <https://ataglance.vedantaresources.com/news/fact-sheets>.

We have implemented best-in-class technologies at our operations in Lanjigarh to improve the dam stability and increase storage density of the dry red mud.



Implemented global leading practice in tailings dam management





## Wick drains & gabion walls to improve stability and storage density of Bauxite Residue Disposal Area

LANJIGARH

### CASE STUDY

**Challenge:** To enhance the storage capacity of Bauxite Residue Disposal Area (BRDA) and to utilize the space effectively without compromising the structural stability of the BRDA.

**Action:** Vedanta collaborated with a global expert agency to design a wick drain for evacuation of water present in the existing slurry area of Red Mud Pond so that the stability and holding capacity of the existing pond could be increased. The agency conducted Piezocone Penetration Test at the slurry areas based on which the average depth of prefabricated vertical drains was designed. The drains were added with filter media and piezometers to determine the stability of the dyke at periodical levels.

**Gabion wall:** To further strengthen the structure of BRDA we constructed a gabion wall. This will not only help us increase the stability of BRDA, but also aid in effective utilization of available space for increased storage of the bauxite residue.

The major activities for the project were laying of the foundation bed, filling prefabricated Gabion Boxes with stones, reinforcement with geogrid, reinforced fill, non-woven geo-textile as drainage / filtration media, and retained fill in accordance with the final design.

**Outcome:**

- Increase in storage density of the BRDA.
- Increased stability of the BRDA.



Wick drains & gabion walls at bauxite residue disposal area.







# People





# People

## Safety

Care being an intrinsic value of Vedanta, employee safety and well-being are of utmost importance to us. We believe in building a 'Culture of Care' and recognize that consistent efforts are required if we are to meet our commitment to zero harm.

Health and safety management is a material issue across all of our operations. We owe a duty of care to every one who works for us. Accordingly, we work to understand and respond to the health and safety risks our business faces, beginning with creating a culture of compliance based upon our Sustainability Framework and its required behaviours.

Our approach to achieving a zero-harm culture to safety and health begins with hazard identification and risk assessment. Management systems are designed to identify and remove unsafe conditions, train our people in safe practices, and ensure behaviour safety through management leadership. Our key motive is to develop a

unified culture that exemplifies our core values and nurtures safety, health and well-being, excellence, creativity, and diversity at our workplace.

We also identify high potential incidents based on the severity of the incident and investigate the potential harms which the incident could have caused. We form cross-functionality teams at our operations for investigation and evaluation of the high potential incidents. Corrective and preventive action for each of the incidents are evaluated and reviewed by senior management on a monthly basis for consequence management.

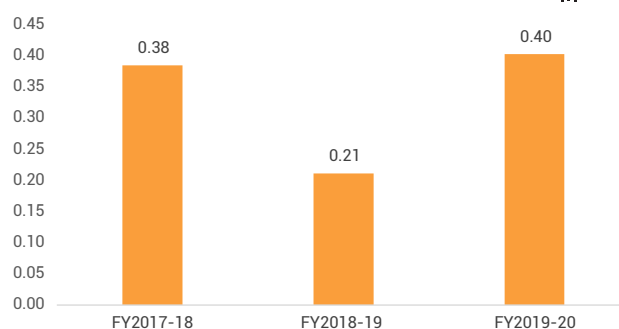
## OUR PERFORMANCE

We report with deep regret 2 fatalities during the year, one at our operations in Jharsuguda as the result of a rail accident at our Smelter Rail logistics, and the other at coal mines of BALCO. We view these incidents very seriously. The accidents were investigated thoroughly; internal and external audits were conducted to identify root cause, responsibility of associated people, and gaps in the system. Based on the findings, a few company and business partners were suspended and/or terminated. All the gaps have been addressed and lessons learned were shared across the group.

This year, we have identified 45 high potential incidents and experienced a total of 28 Lost Time Injuries at our operations with an LTIFR of 0.40. In order to enhance competencies of our executives, engineers, and supervisors of business partners, we have imparted MBRD (Making Better Risk Decision) and Safety Leadership trainings. We also conducted programmes for managing safety in high hazard work areas like confined space, vehicle and driving, and working at height, through a competent external agency

as a measure to prevent injuries and minimize potential risks going forward. To focus further on all injuries and improve our overall safety performance, we are planning to report TRIFR performance from the coming year.

LTIFR







Care being an intrinsic value of Vedanta, employee safety and well-being are of utmost importance to us





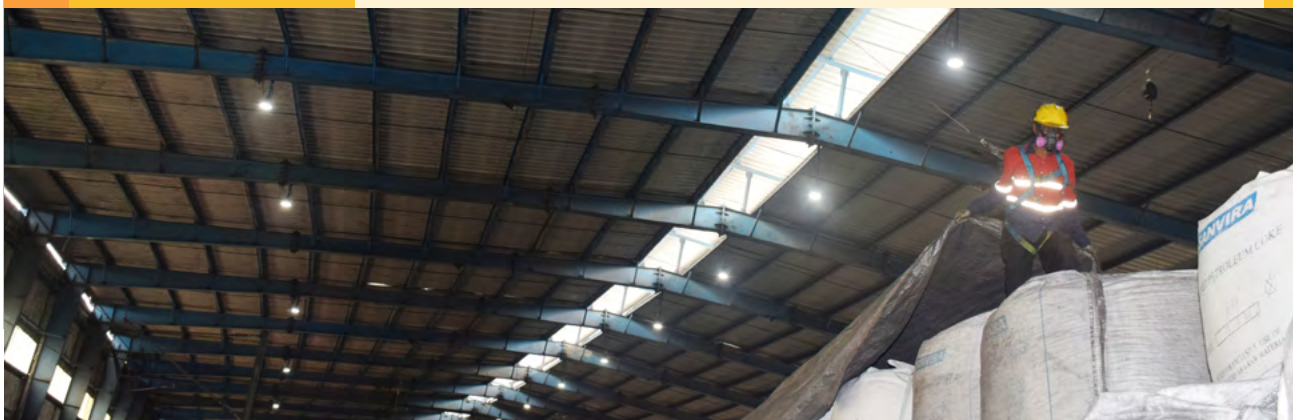
## Installation of fall protection arrangement

BALCO

### CASE STUDY

In order to comply with the 'Working at Height' safety standard at loading / unloading points, we have installed fall protection arrangements at 50 locations across BALCO. After discussions with the staff, area in-charges, HODs, and senior management, we identified the high-risk sites and implemented fall protection arrangements.

This has helped BALCO in providing safer working conditions and minimizing work at height risks for the staff, while also ensuring compliance to the Working at Height safety standard across the site. We believe that with this, we have come another step towards creating a zero harm workplace.



## Mobile safety application

TSPL

### CASE STUDY

Earlier (before June 2019) safety observations were reported via Microsoft Excel. The entire process involved multiple transactions and it was very time consuming to upload all observations along with photographs till the closure of safety observations.

Leveraging smartphone technology and availability of faster and reliable Internet data connectivity, we have digitalized the process of reporting workplace hazards by developing a Safety Application.

Now more than 390 employees of TSPL are using the Safety Application for real time tracking and reporting of safety compliance status. The application has an e-library built in, which includes our sustainability policies and standards, for real time reference while updating observations on the application. Our overall reporting and compliance to safety standards has improved significantly with introduction of the safety application.



## Establishment of fire rescue team

### JHARSUGUDA

#### CASE STUDY

We are committed in our endeavors to bolster our safety performance by mitigating workplace casualty and minimizing work related injuries.

The Safety Team at our Aluminium & Power operations in Jharsuguda has instituted a dedicated Rescue Team to save the lives of employees working on critical safety tasks like Work at Height (WAH) and Confined Space (CS). The Rescue Team is competent to identify risks related to WAH and CS, and is equipped to intervene and save lives.

The Rescue Team is equipped with a rescue van, comprising the latest rescue equipment, lifesaving gears and Rescue Kit (RPD), and different types of hauling pulleys, tripods etc. The rescue team surveys the area and prepares the rescue plan prior to the start of the work. Upon receiving an emergency call, Rescue Team swiftly moves to the spot with the van and required gear. Our Fire Service department has developed the concept of 'Rescue Comrades' to support the Rescue Team during the rescue operation. We organized a two-day workshop to develop the skill and knowledge of Rescue Comrades on the preparation of rescue plans and how to lend effective support to the Rescue Team. In view of strengthening the training of Rescue Comrades and creating a better provision of practical demonstrations of critical jobs like WAH, CS, etc., a training centre with all the required infrastructure and facilities of rescue techniques, we are additionally developing a Rescue Park.

**Impact:** Our Jharsuguda Fire Service and Rescue Team have organized 8 rescue training programmes, during FY 2019-20, with participation of 250 employees from various departments. The programme covered 2 modules - Rescue from Height and Rescue from Confined Space.







People

Safety

## KEEPING SAFETY THROUGH CAPACITY DEVELOPMENT

Safety capability development at every level is very important for achieving our objective of zero harm. Our BALCO unit has institutionalized safety capability development programme for line managers and middle and senior leadership.

### 360-degree Safety Leadership Training for Line Leaders

Last year, BALCO rolled out Safety Leadership programme to develop safety leadership and commitment among our frontline managers, shift in-charges, contractor in-charges, and front-line contractor supervisors. More than 900 leaders were developed through this training programme which covered topics like Basic Safety, Vedanta Safety Standards, Risk Assessment/ Job Safety

Analysis, Work Permit System, On-site Emergency Plan, etc.

Post training, effectiveness was evaluated through a written test. A score card system has been developed for monthly performance evaluation and reporting to the department and business unit heads.

We rolled out the internationally acclaimed safety course 'IOSH -

Managing Safely' at BALCO for middle and senior management. 92 managers have successfully completed the online training programme covering various safety topic / modules, post which they underwent online tests and an on-job safety project. A certificate of completion was provided on completion of the course.



National Road Safety week Celebration at Balco



Our approach to achieving a zero-harm culture to safety and health begins with hazard identification and risk assessment.



## Health & Well-being

The industries in which we operate pose potential hazards to human health. We believe, minimizing exposure to these hazards will help us in managing these risks.

### MANAGEMENT APPROACH

Our approach to the occupational health of our workforce is structured within: prevention, monitoring and recovery. All units are required to implement a health management system that minimizes workplace health hazards exposures to employees and contract workers as far as is reasonable. We invest in technologically advanced processes that reduce possible exposure levels, monitoring, which includes pollution control equipment and effluent treatment, and proper storage of hazardous chemicals.

We provide occupational health training to employees and contractors along with site-specific personal protective equipment (PPE) and protective clothing. We also provide a number of health and wellness programmes and support

services to the company and contract employees. BALCO has launched awareness programmes such as 'Suraksha Ki Goth' and 'Suraksha Charcha'; to sensitize employees and contract workers on occupational health related issues.

Further, during the COVID -19 pandemic, our business units have taken extra care on social distancing and personal protection issues to keep our own employees and contract employees safe. Today, most people are working from home and most meetings are being conducted virtually. The areas of operations are regularly sanitized and the movement of external people to the site have been highly restricted.

3



8



Good Health and Well-being

Decent Work and Economic Growth

### Reduction of personal exposure level

JHARSUGUDA

CASE STUDY

Our team at the Jharsuguda unit conducted quantitative risk assessment for occupational health hazards (total dust, respirable dust, coal dust, ash dust, alumina dust, carbon black dust, HF fumes, welding fumes, noise, vibration, heat stress etc). We compared the results with ACGIH OEL's and all exposure areas were categorized into Red, Yellow, and Green zones.

With risks calculated as per the ICMM guideline, we then classified them and initiated actions for all red zone areas, as per the hierarchy of control. Our team has taken actions to reduce the exposure levels to as low as is practically possible. For areas where there are no engineering controls as on date, we have initiated administrative control (job rotation and reduction in exposure time) and ensured 100% compliance towards appropriate use of personal protective equipment (PPE).

With a commitment of zero harm to people we have initiated different improvement projects to reduce the personal exposure level by means of elimination, substitution, and implementation of engineering controls to control these health related risks.





## Community Health

As part of our community health outreach, we offer many health and disease prevention and treatment programmes for families of our workforce and the communities that surround our operations. These are discussed in greater details in the social section.



Our community health outreach, Lanjigarh



Mobile health unit at Jharsuguda

## Human Rights

Every human being is entitled to basic rights and freedoms based on shared values like respect, dignity, fairness, equality, and independence. Human rights are inherent to all human beings, independent of their nationality, place of residence, sex, national or ethnic origin, religion, language, or any other status.

We believe that everyone, from government to industries to civil society, has a role to play in upholding the human rights. Many times these rights are expressed and guaranteed under law in order to promote and protect the rights and fundamental freedom of individuals or groups.

### MANAGEMENT APPROACH

We at Vedanta are committed to uphold and respect human rights. Towards the same, Vedanta has developed a Human Rights Policy which is in alignment with UNGC and UNGPs principles (United Nation's Guiding Principles on Business and Human Rights). The policy is applicable to each of its businesses across India, including the Aluminium and Power operations. This ensures that respect for human rights permeates all aspects of our business, including the supply chain.

Our operations undertake HSE & Social Risk Assessment regularly which covers the element of human rights related risks. We strive to ensure that our operations have zero harm and we respect the right to remedy in case of any significant impact of our operations.

Integration of the human rights standard throughout our supply chain remains our area of focus. We carry out supplier screening to understand their HSE & S practices and impacts. Child labour and forced labour is prohibited

at all of our sites in line with our Human Rights Policy. We respect the rights to workplace health and safety, and all operations have thriving health and safety committees with equal representation of workers to manage the health and safety related issues at the site.

At Vedanta, equal respect is given to all employees – whether employed directly or through business partners. Comprehensive systems, including grievance management processes and labour management cells, are in place at all of our locations to protect all employees' interests. Our operations uphold the right to freedom of association for which collective bargaining agreements are formed, based on transparent and fair discussions between the management and union representatives. Remuneration, allowances, working conditions, incentives and bonuses, manpower productivity, health, and safety, are part of the collective bargaining arrangement. All of the employees at BALCO are covered under the collective bargaining agreement.



We respect the rights to workplace health and safety





People from local community at Lanjigarh

## Supplier Due-Diligence

As leaders in the natural resource industry, we understand the potential human rights impacts in our supply chain. We uphold the principles of human rights in our circle of influence. Our Suppliers Code of Conduct is implemented as part of the terms and conditions of supplier contracts across the Group and all new suppliers are required to sign, endorse, and practice this code. We also have in place a Supplier & Contractor Sustainability Management Policy to implement human rights practices across the supply chain.

Both the Code and the Policy clearly communicate our expectations from our suppliers: to operate in compliance with all relevant legislations and follow our policies while executing work for or on our behalf. We continue to enhance adherence by conducting inductions, screenings, inspections, and audits. Any concerns raised by interested parties on any of our key suppliers is promptly addressed by undertaking an independent assessment. The Supplier and Contractor Technical Standard further includes a Supplier Screening Checklist to evaluate contractor compliance relating to key issues, e.g. legal compliance, HSE management, labour management, human rights and

child labour/ forced labour etc.

## Land Acquisition and Resettlement

As part of our risk screening processes during environment and social impact assessment, we cover a wide range of sustainability issues that include land acquisition, resettlement, indigenous people (vulnerable groups) among other concerns. In line with IFC sustainability standards, we have developed Vedanta's Cultural Heritage, Land Acquisition and Resettlement Standards and Guidance Note for all our operations to better understand the implementation process.

## Rights of Indigenous Peoples and Vulnerable Tribal Groups

At Vedanta, we are very aware and conscious of the fact that we operate in remote regions, often inhabited by indigenous people (IP) and vulnerable tribal groups (VTGs). We respect the culture and heritage of people around our location and the strong economic, cultural, and spiritual relationship of these people with their native environment.

In order to demonstrate our commitment to serve our indigenous

and vulnerable host communities in a responsible manner, Vedanta has developed the Cultural Heritage, Land & Resettlement Management, and Indigenous People & Vulnerable Tribal standards in alignment with international best practices, including ICMM and IFC standards. In addition, we have also developed the Group's Guidance Notes on the subject to support our technical standards. The standard was developed to enable the engagement between our project teams and these vulnerable groups in a manner that avoids negative impacts and risks to all stakeholders.

### ***The standards call upon the company to:***

- Ensure full respect for the dignity, human rights, aspirations, cultures, and natural-resource based livelihoods of the IPs;
- Avoid adverse impacts of the project on the IPs and when avoidance is unfeasible, to minimize those impacts;
- Establish and maintain an on-going relationship with the affected IPs;
- Foster good faith negotiations and informed participation of IPs when projects are located on traditional lands;
- Respect and preserve the culture, knowledge, and practices.





## People

# A Journey towards People Excellence

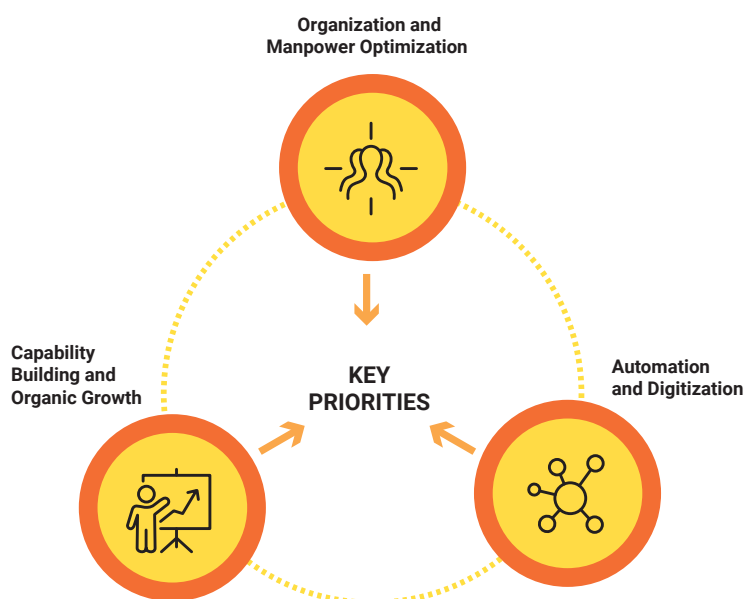
Our employees are our key assets and our growth and success are attributable to them. Our people strategy is founded on this belief and is designed to recruit, develop, and retain the talented workforce that runs our businesses.

Our strategy is to build a culture of high performance and entrepreneurial innovation while caring for and supporting everyone who works with us. To safeguard our future competitiveness, we also seek to identify and develop leadership skills, create a fair workplace free from discrimination and respect human rights above all else.

## MANAGEMENT APPROACH

Our approach is focused on ensuring that we have the right person in the right role, along with clear succession planning, with a focus on critical positions. Nurturing and retaining talent are a top priority for the Sector as securing high-potential talent is a challenge across the industry. We continue to focus on hiring more women professionals

for business roles. This is an internal priority set by management to bring in diverse skills across the Group. We also focus on recruiting from the communities that surround our operations to encourage local employment generation.



## OUR PRIORITY AND PERFORMANCE

### Right Management in Place (RMIP)

The Group believes in the philosophy of empowerment and delivering high

business performance. This requires right MIP and talent at business units to drive the business and deliver excellent results. We encourage regular reviews of Business and SBU MIP structures to ensure that we have

the right talent in the right positions. The RMIP process also ensures that we have filled up all the critical roles within our structures and any gaps in the management team are supported by strategic plans to fill vacancies.



Women employees of BALCO

## Hiring and Retention of Talent

Vedanta believes in hiring, nurturing, and retaining the right talent. Retaining trained talent and skilled manpower remote areas, where most of our operations is a material business challenge. The Company has several programmes for hiring, nurturing, and retaining the right talent and these are reviewed and updated as needed to meet with the business requirements. Further, We also give due importance to employee engagement and development programmes, so as to meaningfully engage and retain these talents at the remote places of operation. The Vedanta Leadership Programme is one such programme which focuses on development of a talent pipeline at the junior management level.

- **Vedanta Leadership Development Programme (VLDP)**  
VLDP is our flagship programme, which aims to build organizational capability through developing talent from premier management and technology institutes. It is a tailored programme which focuses on nurturing these bright young minds to act as

catalysts to steer our business to the next level of growth by implementing transformational new-age ideas. The programme includes induction sessions, cross-functional projects, significant roles, job rotation, development opportunities and the right mentoring to ensure that these individuals get an in-depth knowledge of our operations and recognize their areas of interest for a suitable role.

- **Local Employment**  
As a part of our business strategy, we promote local employment for sustainable business growth. Our aim is to find competent candidates from the local community to drive business growth and to have long-term career plans for them so as to make retention of right talent easier for the company.  
  
60% of our on-roll employees and 90% of business partner employees are from the local community. This strategy not only benefits the company but also benefits the local society.
- **Developmental Initiatives for Middle Management**

We have several programmes for the development of middle management and prepare them for taking senior management roles in the organization. Some of these programmes include the management development training programmes, coaching and mentoring with leadership programmes, opportunity to participate in leadership meetings, etc. which are listed below:

**MDP (Management Development Programmes) / Trainings:** Provides opportunities to be trained by top management institutes in the country such as IIM's.

**EXCO Coaching and mentoring:** Each EXCO member is allotted with an internal coach. The interaction takes place at least once in a quarter and the record is maintained to track the progress on learning.

**V-Connect programme for middle management:** Mentoring Programme where the senior leadership is attached with a group of 10 mentees. Monthly interactions are conducted to ensure mentoring of high potential candidates.

## People

### A Journey towards People Excellence

#### EMPLOYEE ENGAGEMENT

Our employees play an important role in the operation and functioning of our processes. We engage with our our and business partners' employees regularly on topics material to them. These include annual performance target setting, regular performance evaluation and feedback, career progression discussions, workplace health and safety interactions and feedback, management townhalls, employee family engagement programmes, women employee engagements, etc.

- **Communication and Feedback**

We believe effective communication and regular feedback plays an important part in the organizational productivity and in maintaining a healthy work

environment. The various internal channels of communication, including Chairman's workshops, town hall meetings, daily leadership update forums, HSE Leadership and Sustainability Steering Committee meetings, site-level risk sub-committees, employee engagement surveys, and the various engagement forums at site - both formal and informal - allow us to engage with and provide feedback to our employees consistently.

We have launched a 360-degree feedback for our EXCO leaders in collaboration with an external partner. We believe that this will help to fast-track the assessment and development of leaders and

we aim to extend this to cover all our professionals in due course.

- **V-Perform: One performance system for one Vedanta**

Our focus is to constantly improve digitization across all of our operations. V-Perform is a pan-Vedanta initiative to digitize the company's Performance Management System (PMS) and related processes across all Vedanta Group companies by leveraging technology. This enables functions, teams, and individuals to track performance on a regular basis, evaluate efficiency through advanced analytics, and implement proactive decisions towards achieving Vedanta's objectives.



#### DIVERSITY AND EQUAL OPPORTUNITY

Diversity and inclusion foster a more creative, innovative, and satisfied workforce which gives a competitive edge to the organization.

We believe that equality is about providing equal opportunity to everyone in the organization irrespective of gender, nationality or background, and without any discrimination because of

any of these characteristics. Diversity is about taking account of these differences between people and groups of people and placing a positive value on those differences.

- **Healthy Gender diversity ratio**

Mining and metal sector is traditionally a male-dominated sector but Vedanta is among the few global natural resources





Our job roles are gender neutral

companies that enjoy a healthy gender diversity ratio across all levels. We believe this provides us with an opportunity to evaluate business problems with different perspectives and arrive at comprehensive set of solutions to the challenges we face, making us more responsive to future risks and opportunities. We, as a group, are focused on promoting gender diversity and aim at having 30% women professionals across the group. The Aluminium & Power business is working towards this goal on similar lines. Currently our gender diversity is 12% at the Aluminium and Power Sector level whereas at unit level it is as follows: Jharsuguda - 448 (13%), BALCO- 202 (8%), Lanjigarh 122 (18%) and TSPL has 13 (19%). These women employees are working across operations such as pot-line, cast house, power generation, coal procurement, logistics, marketing, finance, HR, CSR, administration, and PR.

#### **Initiatives: 'Veeras of Vedanta'**

Women's Council is one of the initiatives taken at Lanjigarh. The objective of the Women's Council is to promote diversity and provide opportunities for individual and professional development of existing women employees.

The council meets once a quarter to review and address workplace related issues / concerns of women employees, capability development, discuss

opportunities for women employees to take up new challenges and leadership roles, etc.

**'Agnivahini'**- Our Fire Service department at Jharsuguda has established a female employees' fire fighting squad called 'Agnivahini' to create awareness and promote skills and capabilities on fire related risk management. Their responsibility is to enhance the knowledge and skill of employees to mitigate fire risks.

BALCO has created Women's Council to address women employees' issues.

We run special workshops for women employees to identify talent, develop their capability, and to prepare them to take up higher responsibilities. Preference is given to hiring women for certain positions while undertaking lateral hiring for inclusive growth of the organization.

#### ● **Talent Management and succession planning:**

One of the key result areas for the Human Resource department is to create a strong talent and succession pipeline within the Sector. The objective is to keep preparing our employees to take up higher or elevated roles. Identifying and developing talent is a major focus area for the Aluminium & Power business.

We have various processes and procedures to help us identify the best of talent across all levels.

Performance assessment happens at various timelines and individual performances are tracked by initiatives such as leadership training, assessment centres, **ACT UP programme**, etc., based on which employee are selected to take up higher responsibilities across units and the Group.

For employees who have considerably lower ratings, they are assisted by initiatives such as career progression, skill mapping, training, and preparing Individual Development Plans (IDP), where their performance and improvement is tracked from time to time. These IDP are prepared in close interaction with the employee, manager, HR personnel, and HOD, if required.

We map succession planning at 3 levels for our key / critical positions in terms of immediate, near-term, and future term readiness. We provide exposure to employees up to senior management through mentor – mentee programmes, short term group wide assignment guided by senior management, Chairman workshop, and Group EXCO, and track their performance and readiness regularly to take up higher roles as the opportunity arrives.

## People

### A Journey towards People Excellence

## REWARD AND RECOGNITIONS

Vedanta encourages participation for overall development. Leadership team is involved in recognizing both 'team' and 'individual' efforts, at all levels within the organization in a structured manner. There are various rewards and recognition practices followed at all our units

DESCRIPTION	ASSOCIATED PROCESSES AND METHODS
<b>Individual</b>	Employee of the quarter, Trainee of the quarter, Long term Achievement Award, CEO Kitty, STAR of Business, Leader's Connect, Monthly Production Incentive , ESOPs , Performance Pay Scheme
<b>Team</b>	Team of the quarter, Chairman Best Unit Award, Chairman's Sustainability Award
<b>Special Award</b>	Project based Milestone Rewards, Exemplary Performer's Special Increment, Chairman's Challenge – A discretionary Bonus Plan

### ● Employee Stock Option Scheme (ESOS)

Employee stock options are a significant component of our long-term incentives. They enable our employees to benefit from the success of the Company, encouraging high-growth performance, and reinforcing employee pride with a focus on ownership.

## WORKFORCE SNAPSHOT

BUSINESS	LOCATION	FULL TIME EMPLOYEES		CONTRACT EMPLOYEES		RETAINERS		TOTAL
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
<b>Aluminium</b>	Jharsuguda	2890	448	7087	295	8	0	<b>10728</b>
	Lanjigarh	559	112	2421	140	4	0	<b>3246</b>
	BALCO	2208	202	4680	145	31	2	<b>7268</b>
<b>Power</b>	TSPL	57	13	1088	21	0	0	<b>1179</b>
<b>TOTAL</b>		<b>5714</b>	<b>785</b>	<b>15276</b>	<b>601</b>	<b>43</b>	<b>2</b>	<b>22421</b>

## Attrition Rate and management

Considering the remote locations of some of our operations, we face tremendous challenges in retaining the talent especially young talent. Last year we faced attrition of 8.43% overall at Sector level. Unit level attrition was reported as follows: at Jharsuguda - 10%, BALCO – 5%, Lanjigarh - 10%, and TSPL – 34 %.

To control attrition amongst the GETs, retention bonus is introduced

after completion of 1.5 years in the organization. Also, a rigorous Induction process for GETs has been planned prior final allocation of the departments in order to control attrition.

## Surveys and Employee feedback

To ensure continuous improvement of our practices and processes, we conduct internal and external surveys in collaboration with third parties.

These surveys and feedback help

us build trust and engagement level with our and our business partners' employees. It further provides us with an opportunity to assess our HR practices and policies. We participate in the Great Place to Work (GPTW) survey that evaluates us on five parameters as per their model - Credibility, Respect, Fairness, Pride, and Camaraderie among our employees.

We also involve our employee in arriving at solutions to the challenges faced by the industry or the business.



Vedanta encourages participation for overall development

V-Pulse is one such initiative where cross functional teams brainstorm on various themes to come out with an effective solution for the problems faced by the organization.

## Security Training

Effective security measures ensure that people and assets of the organization are insulated from security related threats of workplace violence, thefts, or loss of property, etc. Security department collaborates with other functions across the organization to ensure that the designed objectives are met with, in the best and most cost-effective manner.

Vedanta Aluminium has developed and operationalized a detailed framework of security at the unit and Sector level. Our security operating model integrates 'layered security' with the fundamental security principles of 'deter', 'detect', 'delay', 'deny' and 'respond' to ensure value delivery across all units of the organization. The focus is more towards 'predicting' and 'preventing' inimical events rather than just concentrating on 'protecting' and 'responding' to such events.

We regularly conduct security-related risk assessment towards risk identification, risk evaluation, and risk mitigation. The outcome of risk assessments lead to further strengthening of the security controls for safeguarding our assets and preventing them from harm.

Security operations are designed to prevent and mitigate existing and evolving threats using People, Processes, and Technology. All of our critical assets / plant processing areas are secured using layers of security and multiple controls. Access controls restrict people and material to the assets and areas on need basis. Dedicated resources like Quick Reaction Teams and patrolling officers have been deployed along with drones and surveillance cameras. Alarms are coordinated from the security control rooms.

Every security professional undergoes formal training / refresher training for undertaking security functions / operations. The training programme covers class room training, online courses, peer study groups, case study discussions, learning from incidents, specific project steering, security

certification including the topic of Security and Human Rights.

## Grievance Management

We are committed to providing congenial and hassle-free work environment to all employees. In line with making the work environment more employee friendly and to address day-to-day concerns in a structured way, we have an online SBU HR Helpdesk for all employees.

All the concerns / grievances / clarifications related to HR, Admin, Finance and IT are raised through this portal. The Portal is managed by the SBU HR function of respective SBU. Employee concerns / queries are addressed in timely manner or further escalated if not addressed in a stipulated time. The status of the pending grievances is also discussed in the Grievance Committee meetings and appropriate actions are taken.

The digital platform provides defined process for generation, escalation, resolution and tracking of queries / issues / complains / grievances in a timely manner.



## People

### A Journey towards People Excellence

5



8



Gender Equality

Decent Work and  
Economic Growth

#### Promoting leaders from within

##### CASE STUDY

We believe that talent is our key driver and a critical resource for competitive advantage to deliver business results. Growth workshop are one of our processes for identification of emerging leaders.

This opportunity provides these young professionals to demonstrate their passion, competency and aptitude to take up additional responsibilities / new roles and provide them with them an opportunity for recognition, growth, and accelerated career development.

This year we conducted four- function-based workshops across different Enabling and Operation functions and identified 36 talents for taking up enhanced role & responsibilities. Certain criteria were kept in mind in order to shortlist candidates for the workshop, the most vital of these being their last three years' performance ratings. Gender diversity was a key element which was maintained at min 20% (depending on the shortlist) in every workshop. We have conducted an all-women workshop where the total number of participants were 15, out of which we had identified 10 women professionals for enhanced / elevated roles and responsibilities. We also now encourage inter-business movements (BALCO, Jharsuguda, TSPL and Lanjigarh) as a results of the workshop deliberations.





We focus on creating an enabling environment to support employees pursuing personal and professional excellence.



## People

## Digital Initiatives

Digitization and innovation are important for continuous improvement of our business. This helps us achieve the full potential of our assets and move faster on the path of business excellence.

During the year, we inaugurated an Innovation Centre at our Jharsuguda site which would be used for designing innovative solutions to resolve complex business

challenges. The Innovation Centre provides a platform to our young and talented workforce for putting forward fresh, innovative, and disruptive ideas. Besides facilitating emergence of new ideas to improve our performance in operations, marketing, HR, commercial, HSE, and community relations, the centre provides avenues for benchmarking ourselves with the best in the business by leveraging inter-industry and industry-academia collaboration.



Glimpses of Innovation Centre, Jharsuguda





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12



Industry, Innovation  
and Infrastructure

Responsible consumption  
and production

## Coal control tower

### OPTIMIZATION OF IN-PLANT TURNAROUND TIME

#### CASE STUDY

At our Jharsuguda unit, initially, the in-plant turnaround time for vehicular movement to transport coal was more than 12 hours. This led to various challenges such as maintaining safety and security compliance, potential coal pilferage, low inventory coverage, and import of power. For sequence-based scheduling of truck movement, we have installed GPS to track their movement. On the other hand, we have set-up radio frequency identification (RFID) for tracking of turnaround time. With an auto-alerts system and live centralized dashboard, we have successfully reduced the turnaround time by 25% thus increasing coal materialization, reduction in freight cost, and maintenance of upstream discipline in plant asset utilization for coal handling.

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Industry, Innovation  
and Infrastructure

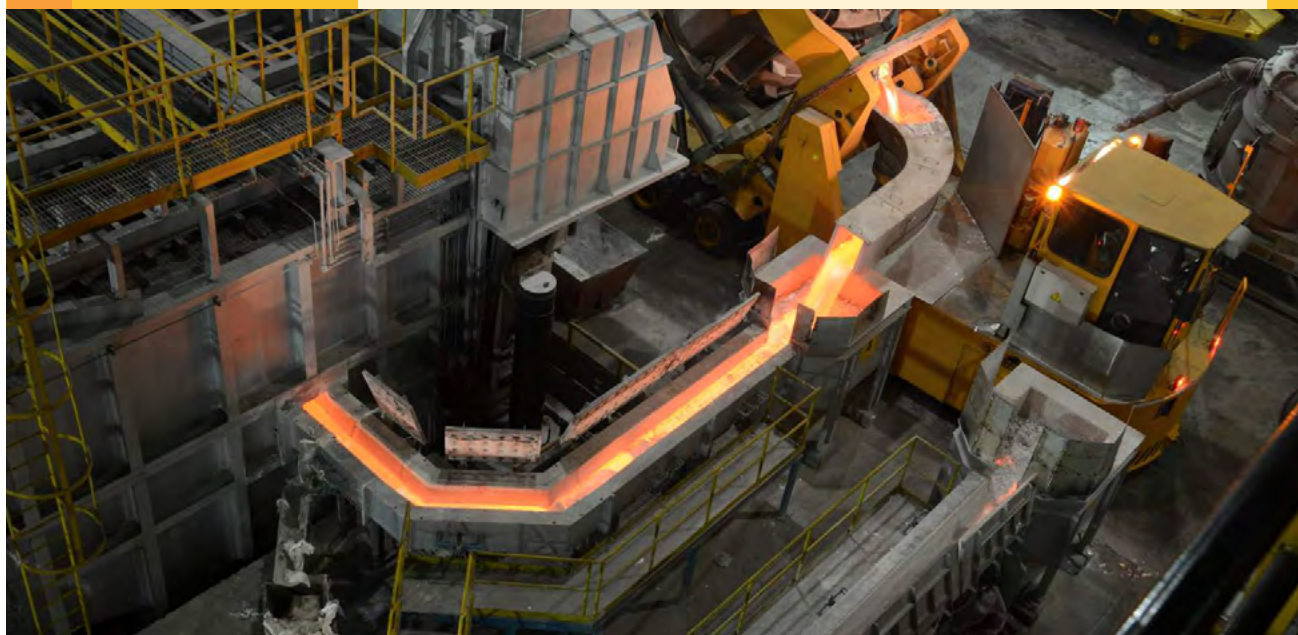
Responsible consumption  
and production

## Digital smelter solution

### JHARSUGUDA

#### CASE STUDY

Aluminium smelting is a power intensive process, with power consisting about 30% of production cost. Hence, current or power efficiency is the most important operational performance parameter. Further, any temperature and process parameter variation in the pot due to excess power consumption will result in excess consumption of AlF<sub>3</sub>. To address these concerns, we have entered into agreement with one of the world's leaders in Artificial Intelligence technology to convert the smelter pots into smart pots. The smart pots shall provide early warnings and predictions and produce heat map visualization. These pots when operational will not only have the potential to reduce specific power consumption by 1%, improve current efficiency, and reduce the specific AlF<sub>3</sub> consumption by 1Kg/MT of aluminium but also make pot operations much safer and reliable.





Social







# Social

Social sustainability can be defined as specifying and managing both positive and negative impacts of systems, processes, and activities of an organization on people and social life. The topics that social sustainability concept include, but are not limited to, are Environment, Health, Safety Impact Management, Labour Practices, Community Development and Wellbeing, Human Rights, etc.

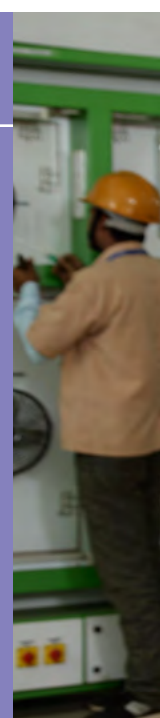
## MANAGEMENT APPROACH

Our operations are in faraway, remote areas, with significant economic and social inequality among the stakeholders. It is imperative for us to run sustainable community investment programmes to minimize these inequalities, thereby minimizing potential social risk to our business. At Vedanta, we believe in creating 'shared value' through a structured and collaborative approach with our stakeholders, which includes our host community and governments, employees, and broader society. This is done not only via the economic value distribution through our supply-chain, but also through the community investment programmes that we implement in consultation with our host communities and host governments. We do this by helping communities identify their priorities through participatory needs assessment programmes and then work closely with them for effective implementation and

monitoring of developmental initiatives that arise out of these need assessment programs, to achieve the desired objectives.

We have seven distinct focus areas in our community programmes: health, education, sustainable livelihoods, women empowerment, community asset creation, bio investment and integrated village development. These areas have been chosen due to their relevance with regards to the developmental agendas in the regions where we operate. We aspire to align our operations with the UN Sustainable Development Goals and recognize that business, sustainable development, and other affirmative actions towards ending inequalities must go hand-in-hand. Our teams at all business units incorporate a variety of projects under the above-mentioned thematic areas.

1	4	17	No Poverty	Quality Education	Partnership for Goals
<h3>Vedanta skill school</h3> <p>KORBA AND KAWARDHA</p> <p>CASE STUDY</p>			<p>BALCO established the Vedanta Skill School in the year 2010 at Korba in partnership with IL &amp; FS Education to upgrade the technical skills of youth and make them employable. The training programmes are free of cost and include accommodation facility for the students enrolled. Apart from the technical skills, life skills and basic computer skills are also provided as a part of the curriculum. Till date, more than 7,800 youth have been trained and are working in different parts of the country.</p> <p>With success of the skill development school at Korba, in 2016, BALCO established a Skill School at Kharoda, Kawardha to impart vocational skills to rural youth and link them with assured employment avenues. Rural youths residing in and around mines and project affected villages are admitted for 40 days free boarding and lodging training at Kharoda. Once the course is complete, BALCO organizes a placement drive for them. The skill school programme is a small step towards generating employment beyond the mining related jobs. Last year, 96 youths were trained in industrial stitching trade and 48 of them got placed in various states across the country.</p>		



## Dhokra project

LANJIGARH

CASE STUDY

The project Dhokra Art started at Village Kankeri in 2018 with an effort to create additional livelihood opportunities for the rural folk engaged in the agriculture activity for their livelihood. The villagers already had the knowledge and required skills of Dhokra Art. Vedanta reached out to the villagers of Kankeri and helped them polish their skills though intensive training for about four months, providing market linkages, and latest techniques and ideas. Through this project, Vedanta is not only helping revive a traditional artform, we are also helping them hone their skills to a professional level, which would enable them to present their work at national level and earn a stable livelihood. To aid them, we supported the artisans with new tools necessary of artwork and ensured no dearth in the supply of essential raw materials like beeswax and brass.

As efforts started bearing fruits, we moved to the next strategy – help the artisan community create a raw material bank that would enable them to work seamlessly; open a Self Help Group bank account to provide adequate financial support; assist each of the 35 households to open bank accounts where they can keep their hard-earned money and earn an interest on their deposit; organize an artisan's card in collaboration with the Government of Odisha that would give the artisans of Kankeri village public recognition and also access to government-held exhibitions to participate, demonstrate and commercialise their works. This has substantially increased the household income in the village.

### “Now I own what once was a dream!”

Butra Kansari, 38, long aspired to purchase a motorcycle since the time he saw one in Kerala where he worked as a wage labourer. Nobody in his native village ever owned a motorcycle. A year back, it would have been impossible for the people of Kankeri village, a non-descript habitat situated in the remote parts of Kalahandi district in Odisha, which is Butra's home, to even dream of owning one. But today, Butra actually owns one that he recently bought with the money he earned as a Dhokra artisan. He is the first person in the village to own a motorcycle. And Vedanta believes that this is just the first of the many more to come.



1



2



No Poverty

Zero Hunger

## Jeevika Samridhhi

JHARSUGUDA

### CASE STUDY

Despite ongoing urbanization, 66% of the India's population is located in rural areas and agriculture plays a significant role in their livelihood. At Jharsuguda, we launched project Jeevika Samridhhi, a farm-based livelihood project, in 2017 with the objective to secure economic prosperity among neighbouring villages in Jharsuguda with land and water management and sustainable agriculture practices.

The project has been implemented in two phases. In the first phase of the project, we introduced advanced agricultural technologies to 111 farmers of Siriapali village. Looking at the financial impact of Phase I on the farming households, the project was replicated in two more villages - Gudigaon and Keldamal, and covers 250 farmers across the three villages. Before starting the projects, community consultation and socio-economic baseline survey was conducted

Among these 250 farmers, Dilip Dhurua hails from a marginal section of the society. Under Jeevika Samridhhi, he was supported with tomato seeds for a 20-de area. He has also been given power sprayer and Natural Pest Management (NPM) kits to protect his crops from pests. Before joining this project, he did not know anything about Package of Practices (PoP) and seed management.



NPM Kit in the field



Dilip Dhurua with his wife in tomato field



Farmer's product in market







## Vedanta Hospital

LANJIGARH

CASE STUDY

The Vedanta Hospital provides high-quality health and medical services to the Lanjigarh region. Established in the year 2010, the hospital provides medical services in area of Paediatrics, Medicine, Orthopaedic, Dentistry, Pulmonology, ENT, Ophthalmology etc. to communities hailing from one of the remotest regions in the country. Vedanta Hospital aims to continue fulfilling the company's commitment to providing excellent medical care to the communities through advanced medical technologies and services.

The medical services provided by the hospital for the year April'19- Jan'20 are:

- Number of multi-specialty health camps – **10**
- Patient footfall – **4374**
- Number of cataract camp beneficiaries who had undergone surgeries – **157**
- Total villages covered – **59**
- Total patients addressed – **14085**



## Malaria control drive

LANJIGARH

CASE STUDY

Our Lanjigarh operations are located in a malaria prone area. We support the State Government in conducting the Malaria Control Drive every year. The programme is aimed at educating individuals and communities to protect themselves from malaria through grassroots level campaigns, and in the process save valuable lives. We have conducted special malaria drives in villages and schools during the monsoon season with interesting activities such as street plays, drawing competitions, etc. We carried out malaria screening for hundreds of school children and conducted sanitation drives in villages to prevent water logging. During such programmes, we also sensitized the community on services provided by the Vedanta Hospital and the nearby government hospital, so that the people of the community are able to arrive at the right place during times of need.

The malaria drive was organized in:

- 59 villages of 6 Gram Panchayats of Lanjigarh Block
- 15 Primary Upper Primary Schools (PUPS), Upper Primary Schools (UPS), SC – ST Development Schools (SSD) within 6 Gram Panchayats of Lanjigarh Block





## Mobile Health Unit (MHU)

LANJIGARH

### CASE STUDY

Our Mobile Health Units act as key enablers in facilitating community's access to doorstep primary healthcare services, particularly to the vulnerable people living in rural, remote, and underserved areas. At Lanjigarh, our MHU serves more than a thousand residents of the local communities, with its dedicated team of a doctor, a pharmacist, an ANM and an attendant.

#### MHU Programme Highlights:

- Conducting more than 50 visits and addressing more than 1,200 patients every month in the villages.
- Conducting one Multi-specialty Mega Health Camp per month with an average footfall of 400 patients per camp.
- Every year conducting six Cataract Surgery Camps in association with Mahanadi Netra Chikitsalaya of Govt. of Odisha during winter season for senior citizens.
- Conducting ante-natal check-ups of pregnant women under PMSMA Programme (Pradhan Mantri Surakshit Matritva Abhiyan).

As a result of the Vedanta Hospital and our intensive community outreach activities, the cases of malarial death have drastically reduced, and patients now rely more on modern medical practices instead of approaching quacks.



Mobile Health Unit run by our operations at Odisha



## Project Shiksha

### LANJIGARH

Education is empowerment in the true sense and Vedanta is committed to bringing qualitative and quantitative improvement in local education to ensure that every child goes to school and completes his or her formal education. From supporting Anganwadi Centres in 2008 to a nationwide programme on model Anganwadi—Nandghar, this is a small glimpse of Vedanta's passion on the issue of eradicating malnutrition and improving child education. We partner with the Government of Odisha to ensure inclusive and holistic development of every child.

#### CHILD CARE CENTRES

The Child Care Centres (CCCs), under the Vedanta Lanjigarh CSR intervention are intended to provide pre-schooling facilities and support in the form of childcare, nutrition, and education to children in the age group of 2 years to 6 years. The project focuses holistic development of the children including: Personality Development, Art and Craft, Physical Development, Language, and Social Development.



#### Programme Highlights:

- Holistic development of children
- Complementary value-based education
- 100% enrolment to formal education; 100% health check-ups, de-worming, and immunization; provision of breakfast and lunch on daily basis



#### SHIKSHA SAMBAL

The successful completion of the secondary board examination – matriculation exam – a steppingstone for students to prepare themselves for their professional careers. The project aims to develop interest for studies in students through creative methods

of learning and excel in the matriculation examination, and to pursue higher education. This project employs competent teachers to clarify doubts of the students, strengthen foundation, build competency and confidence among students through a series of classes. The Shiksha Sambal project is entering its third year of implementation. Currently we are catering to seven schools in the core areas where we work.

#### Programme Highlights:

- Through this programme, Vedanta enables vulnerable people to climb up the ladder of education.
- 83.51% of the students are from Scheduled Tribe / Schedule Caste background and 15.22% of students are from Other Backward Class



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Quality Education

Gender Equality

## Project Kodo Kutki

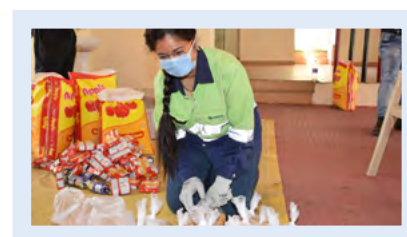
BALCO

CASE STUDY

Kodo Kutki is a lesser-known staple food of Chhattisgarh. During a stakeholder meeting with CSR team of our BALCO unit, local women informed about the problems of poor supply chain and inadequate market demand of Kodo and Kutki. Following these inputs, our CSR team looked at the possibilities for increasing the shelf life and selling potential of Kodo Kutki. We developed a partnership model was developed between the SHG women, local NGOs, and BALCO, focusing on the improvement of the Kodo Kutki supply chain at three points - procurement, processing, and marketing.

We involved the village Gram Panchayat team in conceptualizing and implementing the programme. Currently, the procurement and processing of Kodo Kutki is completely carried out by SHG women, the NGO is involved only in the marketing process. In the coming years, the women will both own and operate the value chain, including the Kodo Kutki marketing and sales. There is an increase in the profit made by the women from this small intervention and we are looking at enhancing these benefits in the coming years.





## SUPPORT PROVIDED BY BUSINESS UNITS TO FIGHT COVID -19 PANDEMIC

Vedanta has always remained at the forefront when it comes to serving our people, the society, and the nation. Not only did we work round the clock to provide a safe and healthy environment for our employees and local citizenry, but we also lent extensive support to help the peripheral communities sustain through the nationwide lock-down, and the disruption caused by the pandemic to their lives and livelihoods. Some of our initiatives to combat COVID-19 include:

- The Vedanta Group has contributed more than US\$ 13.3 million to the Prime Minister CARE fund and constituted a corpus worth US\$ 13.2 million aimed at providing relief measures to communities at large across the nation.
- Nearly 0.2 million reusable masks have been distributed to local community and local administration in Odisha, Chhattisgarh, and Punjab
- These masks are stitched by women's SHGs affiliated with the CSR arms of the four companies.
- More than 40,500 soap bars and 4,500 sanitizers were distributed to the local community and the local administration.
- Vedanta Ltd., Lanjigarh has given 60,000 surgical gloves, 25,000 surgical masks, surgical gowns, and 6,000 bottles of sanitizers to the COVID hospital in Bhawani Patna, Odisha.
- Vedanta Ltd., Jharsuguda supported a COVID Hospital catering to 0.5 million people of Jharsuguda with the infrastructure required to make it operational. This includes 10 ventilators, 3,000 Corona Kits, 2 sets of oxygen concentrator, 5 nebulizers, 3,000 N95 & triple-layer masks each, 6,000 surgical caps, 2,000 surgical gowns, 2,000 aprons, many other equipment and medical gear, alcohol-based sanitizers and medicines, beds and mattresses, and other infrastructure required for the operation of the said hospital.
- Provided nearly 2,200 dry ration kits containing essential staples to daily wage earners, slum dwellers, and marginal communities in Jharsuguda, Korba, and Mansa.
- In Lanjigarh, over 1,100 workers are being provided with daily meals along with other essentials.
- Mobile Health Units of Vedanta created awareness about COVID-19 prevention and social-distancing in more than 380 villages in Jharsuguda, Lanjigarh, and Korba.
- Vedanta Ltd., Lanjigarh's 20-bedded hospital is in a state of preparedness to support the district administration. The hospital continues to serve about 7,000 patients per month from the community. A 24x7 telephonic helpline has been set up by Vedanta hospital to address any queries or concerns on COVID-19 from the community.
- We carried out fumigation and disinfection at various public spaces like marketplaces, public service offices, etc. in Jharsuguda and Lanjigarh, reaching out to over 0.5 million people in the process.
- TSPL donated more than US\$ 0.3 million to Punjab CM's relief fund.





# Annexures



# Assurance Statement



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## **Independent Limited Assurance Statement to Vedanta Aluminium and Power Business on their Sustainability Report for FY 2019-20**

### **To the Management of Vedanta Aluminium and Power Business**

#### **Introduction**

We ('KPMG Assurance and Consulting Services LLP', or 'KPMG') have been engaged by Vedanta Aluminium and Power, a business vertical of Vedanta Limited ('the Business' or 'Vedanta Business') for the purpose of providing an independent assurance on its Sustainability Report for FY 2019-20 ('the Report'). The Report is prepared by the Business based on Global Reporting Initiative (GRI) Standards 'in-accordance – core' option for sustainability reporting.

The development of Report, its content, identification of key material topics and related impacts, engaging with stakeholders is the sole responsibility of the management of Vedanta Business. KPMG's responsibility is to provide limited assurance on the Report content as described in the scope, boundary and limitations for assurance.

#### **Reporting Criteria**

Vedanta Business applies its sustainability performance reporting criteria based on Sustainability Reporting Standards of Global Reporting Initiative (GRI Standards) including the Mining and Metals Sector Disclosures, United Nations Global Compact (UNGC) principles and Sustainable Development Goals (SDG) frameworks for the Business as detailed in the 'Scope, Boundary and Limitations for assurance'.

#### **Assurance Standards**

We conducted our assurance in accordance with limited assurance requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagement (ISAE) 3000 (revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information. Under this standard, we have reviewed the information presented in the report against the characteristics of relevance, completeness, reliability, neutrality and understandability.

Limited assurance consists primarily of enquiries and analytical procedures. The procedures performed in a limited assurance engagement vary in nature and timing and are less in extent than for a reasonable assurance engagement.

#### **Scope, Boundary and Limitations for Assurance**

The Assurance has been provided for selected sustainability performance disclosures presented by Vedanta Business in its Report. The reporting boundary included data and information for the period 01 April 2019 to 31 March 2020 for India, based on Global Reporting Initiative's (GRI) Standards in accordance Core option. Our Scope of assurance included verification of the sample data and information on selected material topics reported at the following units/locations:

<ul style="list-style-type: none"><li>• Jharsuguda Smelter &amp; Power Plants, Odisha</li><li>• Talwandi Sabo Power Limited (TSPL), Punjab</li></ul>	<ul style="list-style-type: none"><li>• BALCO (Korba Smelter &amp; Power Plants, Chhattisgarh)</li></ul>
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#### **Scope Limitations for Assurance:**

The assurance scope excludes:

- Data and information outside the defined reporting period and boundary;
- The Business's financial performance;
- The Business's compliance to legal obligations/disclosures;

KPMG Assurance and Consulting Services LLP, an Indian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity

KPMG (Registered) (a partnership firm with Registration No. BA-62445) converted into KPMG Assurance and Consulting Services LLP (a Limited Liability Partnership with LLP Registration No. AAT-0367), with effect from July 23, 2020

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- The Business's statements that describe expression of opinion, belief, aspiration, expectation, aim or future intention and assertions related to Intellectual Property Rights;
- Aspects of the report other than those mentioned in the scope of assurance and
- Strategy and other related linkages mentioned in the report

The Universal and Topic Specific Standard Disclosures subject to assurance were as follows:

Universal Standard Disclosures	Topic Specific Standard Disclosures
<ul style="list-style-type: none"> <li>• General Disclosures               <ul style="list-style-type: none"> <li>○ Organizational Profile (102-7, 102-8)</li> <li>○ Strategy (102-14)</li> <li>○ Ethics and Integrity (102-16)</li> <li>○ Governance (102-18)</li> <li>○ Stakeholder Engagement (102-40, 102-42 to 102-44)</li> <li>○ Reporting Practice (102-45 to 102-47, 102-49 to 102-56)</li> </ul> </li> <li>• Management Approach               <ul style="list-style-type: none"> <li>○ Disclosure on Management Approach (103-1)<sup>1</sup></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Environment               <ul style="list-style-type: none"> <li>• Energy (302-1, 302-3)</li> <li>• Water (303-1, 303-3)</li> <li>• Biodiversity (304-1)</li> <li>• Emissions (305-1, 305-2, 305-7)</li> <li>• Effluents and Waste (306-1, 306-2, MM3)</li> </ul> </li> <li>• Social               <ul style="list-style-type: none"> <li>• Employment (401-1, 401-2, 401-3)</li> <li>• Occupational Health and Safety (403-2)</li> <li>• Training and Education (404-1)</li> <li>• Diversity and Equal Opportunity (405-1)</li> <li>• Non-Discrimination (406-1)</li> <li>• Local Communities (413-1)</li> </ul> </li> </ul>

### Assurance Procedures

Our assurance processes involve performing procedures to obtain evidence about the reliability of specified sustainability disclosures. The nature, timing and extent of procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the selected sustainability disclosures whether due to fraud or error. In responding to the assessed risks, we have considered internal controls relevant to the preparation of the Report in order to design assurance procedures that are appropriate in the circumstances.

Our limited assurance procedures also included:

- Assessing that the report is prepared in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI Standards – in accordance “Core” option).
- Reviewing the Report to ensure that there is no misrepresentation of disclosures as per scope of assurance and our findings.
- Reviewing the materiality and stakeholder engagement framework deployed at Vedanta Business.
- Understanding the appropriateness of various assumptions used for estimation of data by Vedanta Business.
- Assessing the systems used for data collection and reporting of the Universal Disclosures and Topic Specific Disclosures of material topics as listed in the assurance scope above.
- Verifying systems and procedures used for quantification, collation and analysis of sustainability performance disclosures included in the Report.
- Holding remote discussion with senior executives at the selected plant locations and at the corporate office to understand the risks and opportunities from a sustainability perspective including the strategy that Vedanta Business has adopted to address the same.
- Assessing data reliability and accuracy.

<sup>1</sup> Disclosures on Management Approach were verified for select topic specific disclosures as per the given table



# Assurance Statement



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- Review of select key performance data for the duration from 1st April 2019 to 31st March 2020 was carried out remotely through virtual interactions and screen sharing tools.

Appropriate documentary evidences were obtained to support our conclusions on the information and data reviewed. Where such documentary evidences could not be collected due to sensitive nature of the information, our team reviewed the same with Vedanta Business representatives through virtual interactions.

## Conclusions

We have reviewed selected non-financial disclosures in the Sustainability Report of Vedanta Aluminium and Power Business for the reporting period from 01st April 2019 to 31st March 2020. Based on our limited review and procedures performed, nothing has come to our attention that causes us not to believe that, the sustainability data and information as per the scope of assurance mentioned above, presented in the Report is appropriately stated, in material aspects and in line with the reporting principles of the GRI Standards.

Data representation and calculation related errors were observed but the same were resolved during the assurance process. We have provided our observations and areas for improvement to the Business in a separate management letter. These, do not, however, affect our conclusions regarding the Report.

## Independence

The assurance was conducted by a multidisciplinary team including professionals with suitable skills and experience in auditing as per requirements of ISAE 3000 standards.

Our work was performed in compliance with the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) be independent of the assurance client, in relation to the scope of this assurance engagement. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality and professional behavior. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies ISQC 1 and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

## Responsibilities

Vedanta Business is responsible for developing the Report contents. The Business is also responsible for identification of material sustainability topics, establishing and maintaining appropriate performance management and internal control systems and derivation of performance data reported. This statement is made solely to the Management of Vedanta Aluminium and Power Business in accordance with the terms of our engagement and as per scope of assurance. Our work has been undertaken so that we might state to the Business those matters for which we have been engaged to state in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Business for our work, or for the conclusions expressed in this independent assurance statement. The assurance engagement is based on the assumption that the data and information provided to us are complete and true. We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this assurance statement. Our assurance statement is released to Vedanta Aluminium and Power Business on the basis that it shall not be copied, referred to or disclosed, in whole or in part, without our prior written consent. By reading this assurance statement, stakeholders acknowledge and agree to the limitations and disclaimers mentioned above.

**Santhosh Jayaram**

Partner

KPMG Assurance and Consulting Services LLP

11 March 2021

KPMG Assurance and Consulting Services LLP, an Indian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity

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Creating opportunities  
and transforming lives  
with Aluminium,  
the green  
'Metal of the Future'.





## FROM GRI Standards Index

GRI STANDARD	DISCLOSURE	RESPONSE
<b>GRI 101: Foundation 2016 [GRI 101 does not include any disclosures]</b>		
<b>General Disclosures</b>		
<b>ORGANIZATIONAL PROFILE</b>		
GRI 102- General Disclosures 2016	102-1: Name of the Organization	<b>Aluminium and Power, Vedanta Resources Limited</b>
	102-2: Activities, brands, products, and services	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 14-17 (Overview)
	102-3: Location of headquarters.	<b>Vedanta Sustainability Report 2019-20:</b> Back Cover Floor 3, Scope Complex, Core 6, Lodhi Road, New Delhi, 110003
	102-4: Location of operations	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 14-16 (Our Operations and Assets)
	102-5: Ownership and legal form.	
	102-6: Markets served.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Page 6 (Our Business), Pages 14-16 (Our Operations and Assets), Page 17 (Our Product – Aluminium – The Metal of Future)
	102-7: Scale of the organization	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 14-16 (Overview), Page 17 (Our Product, Our Assets), Pages 36-37 (Our Economic performance)
	102-8: Information on employees and other workers.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 78-84 (A Journey Towards People Excellence)
	102-9: Supply chain.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Page 6 (Our Business), Pages 14-16 (Our Operations and Assets)
	102-10: Significant changes to the organization and its supply chain.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 14-16 (Our operations and Assets)  Vedanta has acquired Jamkhani coal block in Sundargarh district, Odisha. It has an approved mining capacity of 2.6 million tonnes with the total extractable reserves of 114 million tonnes.
	102-11: Precautionary principle or approach.	Vedanta, Aluminium and Power seeks to ensure that all of our operations follow a stringent application of environmental and social principles. All of our businesses undergo an Environmental and Social Impact Assessment before beginning operations. Any findings from the ESIA are considered and a mitigation plan developed.
	102-12: External initiatives.	Vedanta, Aluminium and Power aligns itself with the following external charters & principles: UN Global Compact, UN Sustainable Development Goals, ICMM, IFC Performance Standards, GHG Greenhouse Gas Protocol
	102-13: Memberships of associations	Vedanta, Aluminium and Power is a member of various industry associations in the countries where it operates (Eg: Indian Aluminium Association, India Power Association, FICCI, Confederation of India Industry).



GRI STANDARD	DISCLOSURE	RESPONSE
<b>STRATEGY</b>		
GRI 102- General Disclosures 2016	102-14: Statement from senior decision-maker	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 10-11 (From the Chairman's Desk), Pages 12-13 (CEO's Corner)
<b>ETHICS &amp; INTEGRITY</b>		
GRI 102- General Disclosures 2016	102-16: Values, principles, standards, and norms of behaviour	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Page 22 (Core Values)
<b>GOVERNANCE</b>		
GRI 102- General Disclosures 2016	102-18: Governance Structure	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 22-33 (Governance)
<b>STAKEHOLDER ENGAGEMENT</b>		
GRI 102- General Disclosures 2016	102-40: List of stakeholder groups	<b>Vedanta Resources Limited Annual Report 2019-20:</b> Pages 32-33 (Stakeholder Engagement)
	102-41: Collective bargaining agreements	<b>Vedanta Sustainability Report 2019-20:</b> Page 76 (Human Rights)
	102-42: Identifying and selecting stakeholders	<b>Vedanta Resources Limited Annual Report 2019-20:</b> Pages 32-33 (Stakeholder Engagement)
	102-43: Approach to stakeholder engagement	<b>Vedanta Resources Limited Annual Report 2019-20:</b> Pages 32-33 (Stakeholder Engagement)
	102-44: Key topics & concerns raised	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 30-31 (Material Topics)
<b>REPORTING PRACTICE</b>		
GRI 102- General Disclosures 2016	102-45: Entities included in the consolidated financial statements	<b>Vedanta Resources Limited Annual Report 2019-20:</b> Pages 310-313 (Note 4: Segment Information)
	102-46: Defining report content and topic boundaries.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Page 14 (Our Operations and Assets)
	102-47: List of material topics.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Page 31 (Material Topics)
	102-48: Restatements of information	We have restated the energy intensity for TSPL for the FY 2018-19
	102-49: Changes in reporting	This is the first report for Aluminium and Power Sector, Vedanta
	102-50: Reporting period	The reporting period for this report is FY2019-20.
	102-51: Date of most recent report	NA
	102-52: Reporting cycle	We intend to publish this annually going forward.
	102-53: Contact point for questions regarding the report.	<i>Questions can be directed to: <a href="mailto:aluminiumsustainability@vedanta.co.in">aluminiumsustainability@vedanta.co.in</a></i>
	102-54: Claims of reporting in accordance with the GRI Standards.	<b>Vedanta Sustainability Report 2019-20:</b> Table of Contents, Page 109 (About this report)
	102-55: GRI Content Index	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 104-118 (GRI Content Index)
	102-56: External Assurance	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 100-103 (Assurance Statement)

GRI STANDARD	DISCLOSURE	RESPONSE		
ECONOMIC PERFORMANCE				
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 36-37 (Our Economic Performance)		
GRI 201: Economic Performance 2016	201-1: Direct economic value generated and distributed.	Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 36-37 (Our Economic Performance) Data for FY 2017-18 is not available since this is the first report at Sector level.		
		Economic Value Generated and Distributed (in US\$ million)	FY-2019-20	FY-2018-19
		Economic value generated	4,739.87	5,367.96
		Economic value distributed	4,789.06	5,421.87
		a) Operating Costs	3,830.55	4,488.07
		b) Employee wages and benefits	203.01	207.24
		c) Payment to providers of capital	593.68	573.74
		d) Payment to government	148.25	138.58
		e) Community investments (including donation)-	13.57	14.25
	Economic value retained (Calculated as Economic value generated less economic value distributed)	-49.19	-53.91	
	201-3: Defined benefit plan obligations and other retirement plans.	Not reported		
201-4: Financial assistance received from government.	Not reported			
MARKET PRESENCE				
GRI 103: Management Approach 2016 GRI 202: Market Presence 2016	202-1: Ratios of standard entry level wage by gender compared to local minimum wage.	At all our significant locations, we ensure that the ratios of entry level wages meet or exceed the legal requirements and complies with all applicable laws. With regards to gender, the ratio is 1:1 and we don't discriminate in any way in terms of standard entry level wages		
	202-2: Proportion of senior management hired from local community.	Not Reported		
INDIRECT ECONOMIC IMPACTS				
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 36 (Our Economic Performance)		
GRI 203: Indirect Economic Impacts 2016	203-1: Infrastructure investments and services supported.	Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 36-37 (Our Economic Performance)		
ANTI-CORRUPTION				
GRI 103: Management Approach 2016				
GRI 205: Anti-Corruption 2016	205-1: Operations assessed for risks related to corruption	100% of our operations are assessed for risks related to corruption. The assessments are conducted by the Management Assurance Services (MAS) team. More details can be found at: Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 24 (Code of business conduct and Ethics)		
	205-2: Communication and training about anti-corruption policies and procedures	Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 24 (Code of business conduct and Ethics)		
	205-3: Confirmed incidents of corruption and action taken	Open Complaints on April 1st 2019	0	
		Number of whistle-blower cases opened in 2019-20	31	
		Number of whistle-blower cases upheld and found correct in 2019-20	11	
		Number of whistle-blower cases closed in 2019-20	29	
		Open Complaints on March 31st 2020	2	

ANTI-COMPETITIVE BEHAVIOUR		
GRI 103: Management Approach 2016		<p><b>From of Code of Business Conduct and Ethics:</b></p> <p>Vedanta, Aluminium and Power is committed to free and open competition in the marketplace. Employees should avoid actions that would be contrary to laws governing competitive practices in the marketplace, including federal and state anti-trust laws. Such actions include misappropriation and/or misuse of a competitor's confidential information or making false statements about the competitor's business and business practices. The Group and its employees shall under no circumstances engage in any anti-competitive practices such as illegal fixing of prices, sharing of markets or other actions which prevent, restrict or distort competition in violation of applicable anti-trust laws.</p>
GRI 206: Anti-Competitive Behaviour 2016	206-1: Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices.	No legal action.

## Category: Environment

GRI STANDARD	DISCLOSURE	RESPONSE				
ENERGY						
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 42, 48 (Energy Management and Climate Change)				
GRI 302: Energy 2016	302-1: Energy consumption within the organization	Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 42-47 (Energy Management)				
		Unit wise breakup of total energy consumption (GJ) within organization is as below:				
		Business	Total Energy (GJ)			
				FY2019-20	FY2018-19	FY2017-18
		Aluminium	BALCO	12,32,81,733	11,99,00,115	11,10,67,802
			Lanjigarh	1,96,52,633	1,14,80,520	1,33,38,462
			Jharsuguda	21,76,94,627	21,44,71,480	17,23,68,704
		Power Business	TSPL	8,37,34,040	10,00,99,326	8,02,33,837
		Total		44,43,63,032	45,05,21,677	37,70,08,805
	302-3: Energy Intensity	Specific Energy Consumption (GJ/Unit of Production Output)				
		Business Sector	Company Name	FY2019-20	FY2018-19	FY2017-18
		Aluminium	BALCO	53.02	52.45	52.90
	Lanjigarh		7.22	7.53	8.15	
	Jharsuguda		53.29	53.09	54.18	
		Power Business	TSPL	9.45	9.41	9.38
			Jhasuguda IPP	9.98	8.14	10.36
			BALCO IPP	9.56	10.22	
		*The energy intensity for TSPL for the FY 2018-19 has been restated since there was a typographical error in reporting the same in Vedanta Sustainability report 2018-19				
	302-4: Reduction of energy consumption	Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 47 (Energy Management) There has been a reduction of 61,58,644 GJ in energy consumption. This is due to reduction in production of in Aluminium as well as Power.				



WATER								
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 56-59 (Water Management)						
GRI 303: Water 2016	303-1: Water withdrawal by source	During the reporting period, we withdrew over 94.3 million cubic meters of water. The water was almost sourced entirely from surface water. The total water withdrawal has decreased in comparison to FY2018-19, when we withdrew 97.8 million cubic meters of water.						
			FY 2019-20		FY2018-19		FY2017-18	
		Unit	Ground Water (m3)	Surface Water (m3)	Ground Water (m3)	Surface Water (m3)	Ground Water (m3)	Surface Water (m3)
		BALCO	0	2,85,89,920	59,940	2,85,81,100	59,195	2,23,50,133
		Lanjigarh	0	42,38,925	0	45,05,208	0	48,98,459
		Jharsuguda	0	4,33,96,753	0	4,37,79,803	0	2,51,86,439
		TSPL	0	1,80,55,400	0	2,09,28,422	0	1,68,51,408
		Total	0	9,42,80,998	59,940	9,77,94,533	59,195	6,92,86,439
	303-2: Water sources significantly affected by withdrawal of water.	At all of our locations, we carefully monitor our water withdrawals and usage and where feasible, make efforts to recharge the water sources.						
	303-3: Water recycled and reused.	Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 56-59 (Water Management)  Aluminium and Power, Vedanta has recycled 15.75% of water in FY 20.						
BIODIVERSITY								
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 60 (Biodiversity)						
GRI 304: Biodiversity 2016	304-1: Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	The following sites are located adjacent to areas of high biodiversity value or protected areas:						
		Business Unit	Site	Location		Area of Biodiversity Value		
		Aluminium	Vedanta Lanjigarh	Lanjigarh, India		Niyamgiri, Khambesi and nine other reserve forest areas		
	304-3: Habitats protected or restored	Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 60-61 (Biodiversity)						
	304-4: IUCN Red List species and national conservation list species with habitats in areas affected by operations.	IUCN Classification			India			
		Critically Endangered			0			
		Endangered			7			
		Vulnerable			9			
		Near Threatened			4			
		Least Concern			42			
	MM2: The number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place.	Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 60-61 (Biodiversity).						

EMISSIONS				
GRI 103: Management Approach 2016		<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 42, 48, 62 (Energy Management and Climate Change, Air quality and Emissions Control)		
GRI 305: Emissions 2016	305-1: Direct (Scope 1) GHG emissions.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 49-50 (GHG Emissions Performance) Our business-wise Scope I emissions are:		
		Scope I Emission (tCO <sub>2</sub> e)		
		Business		FY2019-20    FY2018-19    FY 2017-18
		Aluminium	BALCO	9,988,944    99,24,011    98,49,944
			Jharsuguda	22,889,717    2,18,01,821    1,98,27,752
			Lanjigarh	1,786,097    14,40,950    12,11,348
		Power business	TSPL	8,045,375    96,19,321    77,02,388
			BALCO IPP	3,006,835    27,17,357    22,78,365
			Jharsuguda IPP	752,210    10,05,508    10,73,710
		Total		46,469,178    4,65,08,968    4,19,43,507
	305-2: Energy indirect (Scope 2) GHG emissions	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 49-50 (GHG Emissions Performance) Our business-wise Scope II emissions are:		
		Scope II Emission (tCO <sub>2</sub> e)		
		Business		2019-20    FY2018-19    FY 2017-18
		Aluminium	BALCO	0    27,308    1,55,993
			Jharsuguda	8,02,664    26,24,891    76,404
			Lanjigarh	1,593    2,929    4,627
		Power Business	TSPL	2,775    505    6,640
			BALCO IPP	0    0    0
			Jharsuguda IPP	0    0    0
		Total		8,07,031    26,55,634    2,43,664
	305-4: GHG emissions intensity	FY2019-20		
		Business	Scope 1 + Scope 2 GHG Emissions (TCO <sub>2</sub> e)	Revenue (US\$ mn)    GHG Intensity (TCO <sub>2</sub> e/US\$ mn)
		Aluminium	3,54,69,015	3,743    9,474
		Power	1,18,07,195	826    14,295
		Total*	4,72,42,103	
		FY2018-19		
		Business	Scope 1 + Scope 2 GHG Emissions (TCO <sub>2</sub> e)	Revenue (US\$ mn)    GHG Intensity (TCO <sub>2</sub> e/US\$ mn)
		Aluminium	3,58,21,911	4,183    8,564
		Power	1,33,42,962	934    14,286
		Total*	4,91,64,601	

		FY2017-18			
		<b>Business</b>	<b>Scope 1 + Scope 2 GHG Emissions (TCO2e)</b>	<b>Revenue (US\$ mn)</b>	<b>GHG Intensity (TCO2e/US\$ mn)</b>
		Aluminium	3,34,04,433	3,588	9,310
		Power	89,03,117	877	10,152
		<b>Total*</b>	<b>4,21,87,171</b>		
	305-5: Reduction of GHG emissions	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 48-50 (Climate Change)			
		There has been a reduction of 18,88,392 tCO2e in GHG emission. This is due to reduction in production of in Aluminium as well as Power.			
	305-7: NOX, SOX, and other significant air emissions.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 62-63 (Air Quality and Emissions Control)			
		FY2019-20 (in MT)			
		<b>Business</b>	<b>PM Emissions</b>	<b>SOx Emissions</b>	<b>NOx Emissions</b>
		BALCO*	0	0	0
		Jharsuguda	4,794	1,39,973	33,241
		Lanjigarh	337	9,751	3,163
		TSPL	2,410	81,430	20,442
		<b>Total</b>	<b>7,541</b>	<b>2,31,154</b>	<b>56,845</b>
		FY2018-19 (in MT)			
		<b>Business</b>	<b>PM Emissions</b>	<b>SOx Emissions</b>	<b>NOx Emissions</b>
		BALCO*	0	0	0
		Jharsuguda	4,270	1,20,293	28,408
		Lanjigarh	431	6,773	2,829
		TSPL	2,558	84,747	27,310
		<b>Total</b>	<b>7,259</b>	<b>2,11,813</b>	<b>58,547</b>
		FY2017-18 (in MT)			
		<b>Business</b>	<b>PM Emissions</b>	<b>SOx Emissions</b>	<b>NOx Emissions</b>
		BALCO*	374	0	0
		Jharsuguda	3,319	92,208	21,109
		Lanjigarh	420	3,413	795
		TSPL	2,596	69,038	25,626
		<b>Total</b>	<b>6,709</b>	<b>1,64,659</b>	<b>47,530</b>



EFFLUENTS AND WASTE				
GRI 103: Management Approach 2016		<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 52, 64 (Waste & Tailings Management)		
GRI 306: Effluents and Waste 2016	306-1: Water discharge by quality and destination.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20</b>		
		Our operating philosophy is of 'zero discharge,' where the generated wastewater is treated and completely recycled back into process areas.		
		In addition to these initiatives, effluent and sewage treatment plants are installed at many locations for reusing water at primary locations. Wastewater discharge complies with applicable regulatory limits and, at all sites waste water is treated in effluent treatment plants. Metals are precipitated by addition of lime and flocculants with the use of sediment ponds. Wastewater Discharged:		
		<b>Business</b>	<b>FY2019-20 (m3)</b>	<b>FY2018-19 (m3)</b>
		BALCO	0	0
		Jharsuguda	1,05,304	1,17,142
		Lanjigarh	0	0
		TSPL	0	0
		<b>Total</b>	<b>1,05,304</b>	<b>1,17,142</b>
	306-2: Waste by type and disposal method.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 52-55 (Management)		
		<b>FY2019-20</b>		
		<b>Business</b>	<b>Hazardous Waste (MT)</b>	
			<b>Generated</b>	<b>Recycled</b>
		BALCO*	11,777	9,731
		Jharsuguda	2,74,639	1,79,511
		Lanjigarh	76	429
		TSPL	47	60
		<b>Total</b>	<b>2,86,539</b>	<b>1,89,730</b>
		<b>FY2018-19</b>		
		<b>Business</b>	<b>Hazardous Waste (MT)</b>	
			<b>Generated</b>	<b>Recycled</b>
		BALCO*	7,004	2,628
		Jharsuguda	2,81,327	1,74,749
		Lanjigarh	362	20
		TSPL	95	66
		<b>Total</b>	<b>2,88,788</b>	<b>1,77,463</b>
		<b>FY2017-18</b>		
		<b>Business</b>	<b>Hazardous Waste (MT)</b>	
			<b>Generated</b>	<b>Recycled</b>
		BALCO*	28,70,128	28,93,120
		Jharsuguda	58,28,529	62,28,232
		Lanjigarh	25,46,014	4,61,662
		TSPL	18,68,384	20,07,973
		<b>Total</b>	<b>1,31,13,055</b>	<b>1,15,90,988</b>

		FY2017-18				
		Business	Hazardous Waste (MT)		Non-Hazardous Waste (MT)	
			Generated	Recycled	Generated	Recycled
		BALCO*	8,673	0	31,50,306	18,87,875
		Jharsuguda	2,32,067	1,19,792	59,80,690	66,28,047
		Lanjigarh	662	2,238	19,62,940	5,09,361
		TSPL	59	43	21,23,474	15,46,836
		Total	2,41,460	1,22,073	1,32,17,410	1,05,72,119
		*4 significant hazardous wastes are reported for BALCO namely Spent pot lining, Aluminium dross, Biomedical waste and used lead acid batteries				
	MM3: Total amounts of overburden, rock, tailings, and sludge's and their associated risks.		Unit	FY2019-20	FY2018-19	FY2017-18
		Overburden	MT	1,44,22,341	35,85,046	21,39,030
		Tailings	Non-Hazardous waste also includes the tailing			
		Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 64-65 (Tailing Dam Management)				
		For more details please refer to: Vedanta's commitments to Sustainable Tailings management at - <a href="https://ata-glance.vedantaresources.com/news/fact-sheets">https://ata-glance.vedantaresources.com/news/fact-sheets</a>				
SUPPLIER ENVIRONMENTAL ASSESSMENT						
GRI 103: Management Approach 2016		At each of our businesses, the vendor on-boarding process requires vendor disclosure of their HSE & Sustainability systems. In addition, project specific requirement may require additional screening of vendors for the environmental management systems.				
GRI 308: Supplier Environmental Assessment 2016	308-1: New suppliers that were screen using environmental criteria	All new suppliers undergo Sustainability screening checklist and scoring system before getting registered with us.				

## Category: Social

GRI STANDARD	DISCLOSURE	RESPONSE			
EMPLOYMENT					
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 78 (Journey Towards People Excellence)			
GRI-401: Employment 2016	401-1: New employee hires and employee turnover	% of Total full-time employees			
			2019-20	2018-19	2017-18
		Employee turnover including retirements and including VRS	10.56%	11.41%	-
		Total Attrition (Refers to Employee initiated separation)	8.43%	8.91%	-
		Data for FY 2017-18 is not available since this is the first report at Sector level.			

	Employee Turnover & Attrition by Region (FY2019-20)						
			BALCO	VL Jhar	VL Lanj	TSPL	Total
	Employee turnover including retirements and including VRS	Number	229	332	66	25	652
		Rate	10%	10%	10%	41%	10.56%
	Total Attrition (Refers to Employee initiated separation)	Male	214	283	50	18	565
		Female	34	58	18	11	121
	Total		5,61,178	3,69,241	1,89,41,585	1,78,19,220	
	New Hires Joined in FY 2019-20						
	Gender	Region	Age	VL Lanj	VL Jhar	BALCO	TSPL
				India			
	Male	Local	Below 30 Yrs	5	21	3	1
			31-50 Yrs	0	5	-	2
			Above 50	0	1	-	0
		Non Local	Below 30 Yrs	28	111	36	6
			31-50 Yrs	2	13	3	4
			Above 50	0	3	-	1
Female	Local	Below 30 Yrs	3	5	-	2	
		31-50 Yrs	0	0	-	0	
		Above 50	0	0	-	0	
	Non Local	Below 30 Yrs	15	57	15	5	
		31-50 Yrs	0	2	-	1	
		Above 50	0	0	-	0	
401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees	We provide an array of benefits to our employees that are not provided to temporary or part time employees. The benefits include: life-insurance scheme, health-insurance scheme, disability coverage, parental leave, retirement benefits and management grades are covered under stock options scheme of Vedanta.						
401-3: Parental leave	In our policy of parental leave, maternity leave is for 26 weeks, adoption leave for 12 weeks and paternity leave for 1 week. For managing both personal and professional priorities for returning mothers, we provide the option to continue in the same role or move to another job profile.						



			Male	Female		
		Number of employees who have taken parental leave in FY 2018-19	202	27		
		Number of employees who were in continuous service for the next 12 months after returning from parental leave	192	25		
		Retention* %	95.05%	92.59%		
EMPLOYMENT						
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 76 (Human Rights)				
GRI 402: Labor/ Management Changes 2016	402-1: Minimum notice periods regarding operational changes	Mechanism to bring awareness to all employees on any significant operational change like restructuring, mergers, acquisitions, expansions etc. is in place. Notice period(s) regarding significant operational changes is indicated in collective bargaining agreements and certified standing order of respective entities. For our operations it is minimum 21 days.				
	G4-MM4: Number of strikes and lock-outs exceeding one week's duration, by country.	All incidents pertaining to social aspects are categorized - negligible (category 1), minor (category 2), moderate (category 3), serious (category 4) and disastrous (category 5) and captured on a monthly basis.				
OCCUPATIONAL HEALTH AND SAFETY						
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 68, 74 (Safety, Health and Well-being)				
GRI 403: Occupational Health & Safety	403-1: Workers representation in formal joint management-worker health and safety committees.	100% of total workforce represented in formal joint management –worker health and safety committee. All units are having safety committee, having representation from the management and unionized workers, which covers entire workforce working at site. The total workforce varies significantly based on the operations and are generally specified in collective contractual agreements. The committee meets on regular basis to advice on occupational health and safety improvement. In case of operations without a worker union, the principle contractor along with sub-contractors is invited to the monthly meetings to discuss specific HSE issues.				
	403-2: Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work related fatalities.	Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 68-73 (Safety Performance)  All definitions as per ICMM guidelines				
			FY 2019-20	FY 2018-19	FY 2017-18	
		Employees	Total Injuries	7	10	8
			Injury Rates (Total Recordable Injury FR)	0.42	0.58	0.50
			Lost Day Rate	17.04	33.84	31.73
			Work-Related Fatalities	0	0	0
		Contract Workers + Third Party	Total Injuries	54	37	40
			Injury Rates (Total Recordable Injury FR)	1.01	0.69	0.91
			Lost Day Rate	29.22	18.23	23.78
			Work-Related Fatalities	2	1	1
	403-3: Health and safety topics covered in formal agreements with trade unions	Health and safety topics are covered in the formal agreements with trade union. It is clearly stated in the agreement that the workmen / Recognized Union / Federation will support in all the measures / initiatives to be taken by the Company for improving production / productivity, work culture, quality & safety.  Beside this, certified Standing Orders of units also cover these topics.				

TRAINING AND EDUCATION							
GRI 103: Management Approach 2016		Aluminium and Power, Vedanta Sustainability Report 2019-20: Page 72 (Keeping Safety Through Capacity Development), Page 78 (Journey Towards People Excellence)					
GRI 404: Training and Education 2016	404-1: Average hours of training per year per employee.		Male		Female		
		Total Training Hours - Full-time Employees (FTE)	1,14,394		34,867		
		Average Training Hours for FTEs	20		44		
		Total Training Hours - Contract Employees	76,960		3,912		
		Average Training Hours for Contract Employees	5		7		
	404-2: Programmes for upgrading employee skills and transition assistance programmes.	In line with our philosophy, continuous learning & capability building is imperative for an organization to grow. To cater to this need, our business entities provide training on technical skill building. We also conduct structured programmes to assist employees for smooth transitioning from work to retirement. Some of the programmes are on Computer Literacy programmes, wealth management, tradesman skill building programmes, certificates and diploma courses, retirement workshops & employee assistance programmes.					
404-3: Percentage of employees receiving regular performance and career development reviews.	100% of our employees receive regular performance reviews.						
DIVERSITY AND EQUAL OPPORTUNITY							
GRI 103: Management Approach 2016							
GRI 405: Diversity and Equal Opportunity 2016	405-1: Diversity of governance bodies and employees.	Composition of Governance bodies					
		List different type of Board	Age group		Gender		
			Less than 30 years	Between 30-50 years	Above 50 Years	Male	Female
		Board of Directors	0%	25%	75%	75%	25%
		Employees				88%	12%
	405-2: Ratio of basic salary and remuneration of women to men.	We are an equal opportunity employer. Across Vedanta Group we recruit both men & women on equal salary ratio. Our remuneration is linked to performance of the individual, business entity and overall group.					
NON-DISCRIMINATION							
GRI 103: Management Approach 2016							
GRI 406: Non-discrimination	406-1: Incidents of discrimination and corrective actions taken	Vedanta is an equal opportunity employer and does not discriminate based on race, religion, caste, gender, age, disability, HIV/AIDS status, and any other characteristic.					
		We see sexual harassment at the workplace as one form of discriminatory behaviour. We have formal procedures for mediating cases of sexual harassment brought to the committee. The committee includes external members on the panel to ensure independence and provide balance.					
		Sexual Harassment cases FY2019-20					
		Number of sexual harassment cases opened			9		
		Number of sexual harassment cases upheld and found correct			9		
		Number of sexual harassment cases closed			9		

FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING		
GRI 103: Management Approach 2016		<b>Vedanta's Human Rights Policy recognizes the right to associate freely and to collective bargaining.</b>
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1: Incidents of discrimination and corrective actions taken	<p><b>Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 76-77 (Human Rights)</b></p> <p>We have collective bargaining agreements with our workmen at BALCO operations. The agreements are negotiated and agreed by both management and union representatives. The agreements include clauses relating to remuneration, allowances, working conditions, incentives and bonuses, health and safety, manpower productivity. All the significant policy and operational changes affecting the unionized employees are intimated to them through union representatives. Our units at BALCO have recognized unions while other locations have adequate systems and processes for employee development, appraisal, remuneration and grievance redressal.</p> <p>Similarly, our significant suppliers are generally the big &amp; well reputed industry organizations like Coal India, SAIL and L&amp;T etc. with whom we engage directly for the bulk of material for further processing or as raw material. All these organizations have the collective bargaining and other labour union mechanisms.</p>
CHILD LABOUR		
GRI 103: Management Approach 2016		Vedanta's Human Rights Policy states that the company has zero tolerance for child labour – directly or through contracted labour.
GRI 408: Child Labour 2016	408-1: Operations and suppliers at significant risk for incidents of child labor.	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 76-77 (Human Rights)</b>
FORCED OR COMPULSORY LABOUR		
GRI 103: Management Approach 2016		Vedanta's Human Rights Policy states that the company has zero tolerance for forced or compulsory labour – directly or through contracted labour.
GRI 409: Forced or Compulsory Labour 2016	409-1: Operations and suppliers at significant risk for incidents of forced or compulsory labour	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 76-77 (Human Rights)</b>
SECURITY PRACTICES		
GRI 103: Management Approach 2016		
GRI 410: Security Practices 2016	410-1: Security personnel trained in human rights policies or procedures	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 83 (Security Training)</b>
RIGHTS OF INDIGENOUS PEOPLES		
GRI 103: Management Approach 2016		<b>Aluminium and Power, Vedanta Sustainability Report 2019-20: Pages 76-77</b>
GRI 411: Rights of Indigenous Peoples	411-1: Incidents of violations involving rights of indigenous peoples	There were no violations involving the rights of indigenous peoples during the reporting year.
	G4-MM5: Total number of operations taking place in or adjacent to Indigenous Peoples' territories, and number and percentage of operations or sites where there are formal agreements with Indigenous Peoples' communities.	None of our operating mines are operating in or adjacent to indigenous people territory.



	G4-MM6: Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples.	No significant disputes relating to land use, customary rights of local communities and indigenous peoples were brought to our notice during the reporting year.
	G4-MM7: The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous Peoples, and the outcomes.	No significant disputes relating to land use, customary rights of local communities and indigenous peoples were brought to our notice during the reporting year.
<b>HUMAN RIGHTS ASSESSMENT</b>		
GRI 103: Management Approach 2016 GRI 412: Human Rights Assessment 2016	412-1: Operations that have been subject to human rights reviews or impact assessments.	Each year, all of our operational sites undergo the Vedanta Sustainability Assurance Programme (VSAP) audit. This audit is conducted by an external 3rd party overseen by our Management Assurance Services (MAS) team. As part of the audit, sites are evaluated on their human rights management related to supplier and vendor management.
	412-2: Employee training on human rights policies or procedures	<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 76-77, 83
	412-3: Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	<p>Through our Human Rights policy – which has been implemented across all businesses of the Sector - Vedanta is committed to ensuring that the processes that it has in place, and continues to develop, follow the UN Guiding Principles.</p> <p>By conducting ESIs in compliance with applicable legal requirements and Vedanta Sustainability Framework, human rights considerations are taken into account for all new projects, including the obligation to undertake a human rights screening process in all merger and acquisition activities.</p>
<b>LOCAL COMMUNITIES</b>		
GRI 103: Management Approach 2016		<b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Page 90 (Social)
GRI 413: Local Communities 2016	413-1: Operations with local community engagement, impact assessments, and development programmes	<p><b>Aluminium and Power, Vedanta Sustainability Report 2019-20:</b> Pages 90-97</p> <p>All of our operations have on-going local community engagements. These engagements are driving by a structured stakeholder engagement plan for all of the mapped stakeholders.</p> <p>In this fiscal year, we completed the process of conducting a needs and impact assessment for all of our CSR projects.</p> <p>Prior to starting operations, all of our sites conduct an Environmental Impact Assessment and Social Impact Assessment. These assessments are updated in case the sites undergo significant expansion programmes.</p> <p>Public disclosure is a mandated part of the EIAs and SIAs.</p>
<b>SUPPLIER SOCIAL ASSESSMENT</b>		
GRI 103: Management Approach 2016		Vedanta's Supplier Code of Conduct (SCOC) serves at the guiding document for all our interactions with suppliers and vendors. It is mandatory for all our suppliers to abide by the Code. The SCOC covers aspects related to: Labour & human rights, Health, Safety, Environment & Sustainability, Ethics & business integrity, Intellectual property, and Prohibition on insider trading.

GRI 414: Supplier Social Assessment	414-1: New suppliers that were screened using social criteria.	
<b>PUBLIC POLICY</b>		
GRI 103: Management Approach 2016		Vedanta's Code of Business Conduct and Ethics is the guiding document on our interactions with the government and political parties.
GRI 415: Public Policy 2016	415-1: Political Contributions	It is the Board's policy that Vedanta will not, under any circumstances, make donations or contributions to political organizations. Subsidiaries in India may make political donations or contributions as this is customary in India and permitted under local legislation. Any political donations made by the four unit of Aluminium and Power Sector, will be disclosed in the Sector's Annual Report and Accounts.
<b>ARTISANAL AND SMALL-SCALE MINING</b>		
G4 – 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.	No such reported case
<b>RESETTLEMENT</b>		
G4 – MM9	Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process.	
<b>MATERIAL ASPECT : CLOSURE PLANNING</b>		
G4 – MM10	Number and percentage of operations with the closure plans.	As a part of statutory clearance all our mines operations have a closure plan.





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