



# Partners for the Future

The future will only be bright if humanity can address environmental concerns and alleviate socio-economic inequity. Mining has historically been a large contributor to the economic development of nations. Not only is it one of the first industry to set foot in areas devoid of economic activity, it is also foundational to several industries including energy, construction, chemical, pharmaceutical, automotive, electronics, aerospace, ceramics, cosmetics, detergents, glass, metals, paints, paper, plastics, and fertiliser.

At Vedanta, we see ourselves as an engine of inclusive growth that operates at scale, and ushers in prosperity for a large section of the society. In FY 2019, we generated an economic value of US\$ 15,033 million, of which only US\$ 740 million was retained by the company. The remaining was distributed to our employees, investors, communities and governments, in the form of wages, dividends, interest payments, community investments and taxes. We invested over US\$ 45 million in community support and CSR programmes.

Along with bridging the socio-economic gap, we at Vedanta, are constantly working on reducing our environmental footprint by reducing the quantum of inputs required to produce a unit of metal/mineral. Towards this goal, we continue to maintain an unrelenting focus on reducing energy intensity, enhancing conversion efficiencies, and pushing the envelope on responsible management of tailings and emissions.

For any mining company to be successful in the 21st century, a focus on the principles of sustainable development is essential. This shift in mining and operational practices will yield new opportunities in the emerging green economy, while mitigation the industry's impact of the environment and society.

At Vedanta, we are exited to be part of (and in some regions-lead) this transition to a new way of doing business. We are confident that this will allow us to create a tomorrow that is better than today.

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# A B O U T T H I S R E P O R T

Welcome to our 11<sup>th</sup> Sustainable Development Report, which has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option.

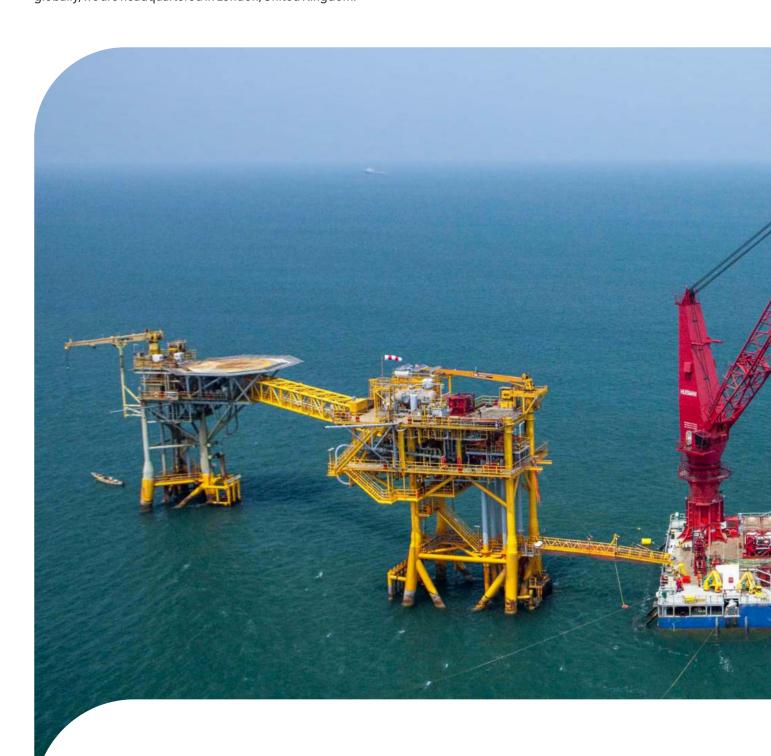
It is mapped to the United Nations Global Compact (UNGC) and aligns to Sustainable Development Goals (SDGs). It reports our approach and disclosure towards triple bottom line principles - people, planet and profit over FY 2019. See page 86 for more information about our reporting.

Visit our online Sustainable
Development Report 2018-19 at
http://sd.vedantaresources.com/

http://sd.vedantaresources.com/ SustainableDevelopment2018-19/

# **OVERVIEW**

**VEDANTA AT A GLANCE** | Vedanta Resources Limited (Vedanta) is a diversified global natural resources company. The Group produces aluminium, copper, zinc, lead, silver, iron ore, oil & gas and commercial energy. Vedanta has operations in India, Zambia, Namibia, South Africa, Ireland and Australia. One of the largest producers of these natural resources globally, we are headquartered in London, United Kingdom.





billion

contribution to national exchequers



billion

net revenue



million lives improved through

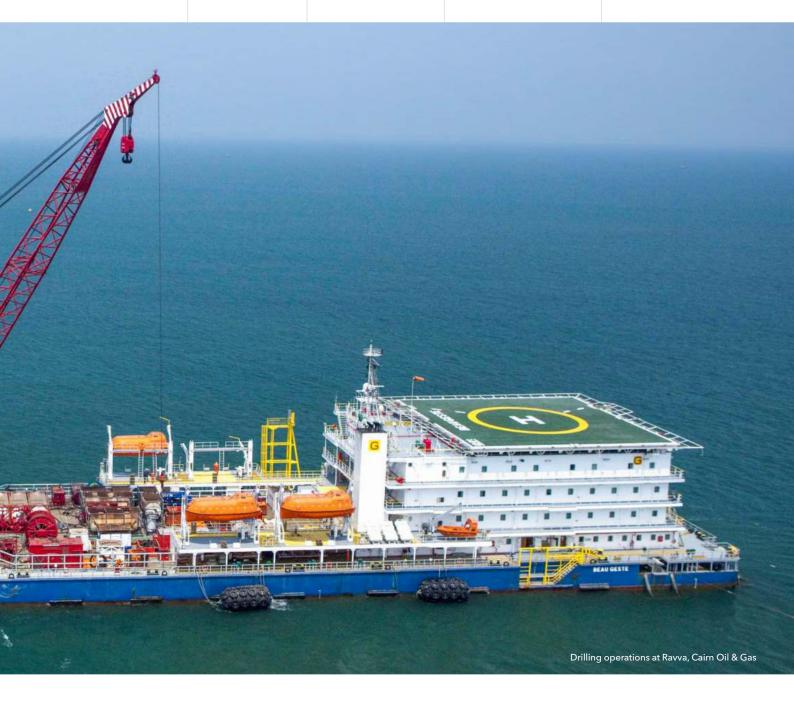
community projects



88,979
engaged
employees and
contractors



**Hindustan Zinc** ranked top of mining industry by Dow Jones for environmental performance





# I Our Core Purpose

Our goal is to create long-term value for all our stakeholders through research, discovery, acquisition, sustainable development and utilisation of diversified natural resources.

For accomplishing that, we empower our people to drive excellence and innovation. We demonstrate world-class standards of governance, safety, sustainability and social responsibility.

# Our Core Values

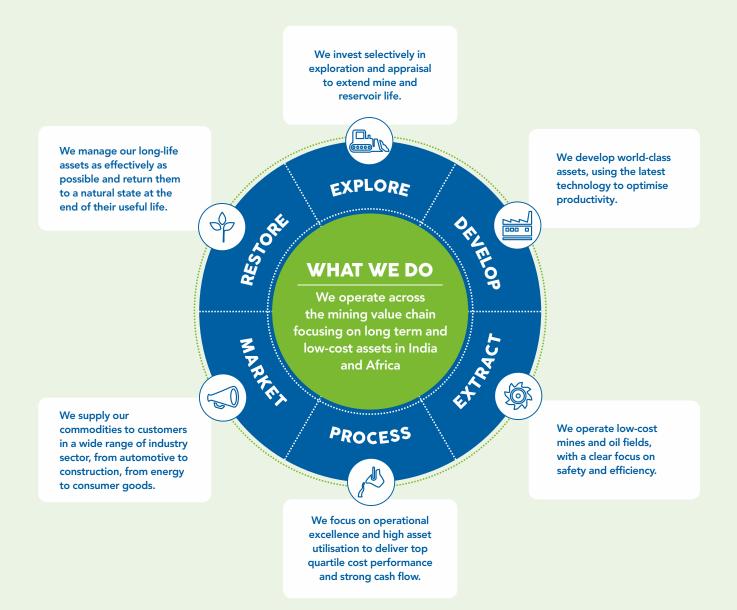
Our core values help us achieve our purpose. Our values bind us and build our culture. They are at the heart of everything we do and achieve. At Vedanta, we understand the importance of working together in a team as we pursue growth and sustainable development. The values, which guide us at Vedanta are:

- Trust Entrepreneurship
- Innovation Excellence
- Integrity Care
- Respect

# I Our Value Chain

Vedanta Resources supplies natural resources that help the world grow. We have a portfolio of top-notch, low-cost, scalable assets that consistently generate strong profitability with robust cash flows, contributing to industry-leading market shares across our core divisions.

We have undertaken several Greenfield and Brownfield expansion projects throughout the world, successfully completed capital expansions involving complex technologies and large investments, in record time and at significantly lower costs. **Our value chain consists of:** 



# Our Facilities

Spread across geographies, our facilities are focussed on all-round operational excellence to achieve benchmark performance across our business by debottlenecking our assets, adopting technology and digitalisation, strengthening people-practices, enhancing vendor and customer bases, optimising the spend base and improving realisations.







## **Zinc-Lead-Silver**

- Debari smelter
- Chanderiya smelters
- Rampura-Agucha mine
- Rajpura Dariba mine & smelters and Sindesar Khurd mine
- Zawar mine
- Skorpion mine, Namibia
- Gamsberg Zinc Mine, South Arfica
- Black Mountain mine. South Africa
- Lisheen mine, Ireland\*

# Oil & Gas

- Rajasthan block
- Ravva (PKGM-1) block
- Cambay (CB/052) block
- South Africa block
- KG-OSN-2009/3 block
- PR-OSN-2004/1 block

### **Iron Ore**

- Iron ore operations Goa
- Iron ore operations Karnataka
- Iron ore projects Liberia

### Copper

- Silvassa refinery
- Tuticorin smelter
- Mt Lyell mine, Australia\*\*
- Konkola Copper Mines, Zambia

### **Power**

- MEL power plant
- SEL
- Talwandi Sabo power plant

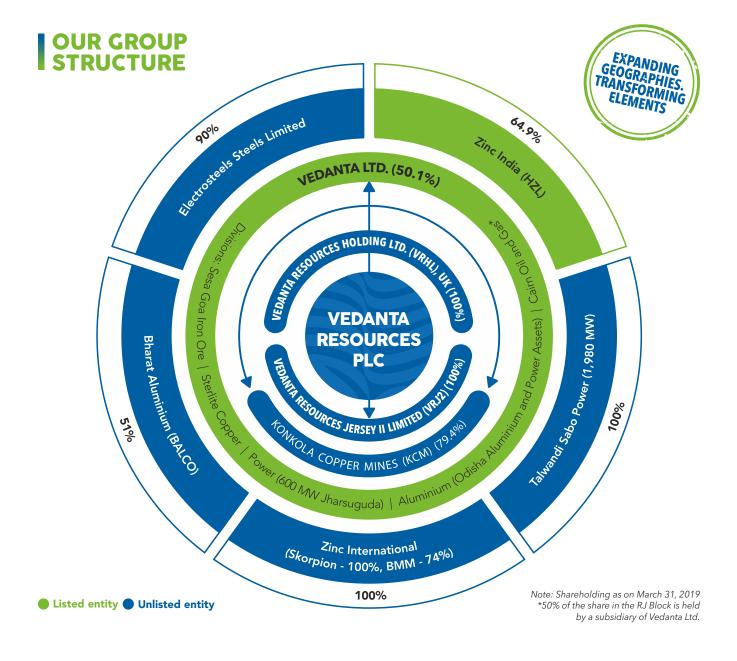
### Steel

• Electrosteel Steels Ltd., Jharkhand

### **Aluminium**

- Lanjigarh alumina refinery
- Jharsuguda smelters & power plants
- Korba smelters & power plants





# Our Products - Integral Components of Modern Life

The next time you grab your cell phone, take a second to marvel at its incredible construction. While it may look like any other high-tech gadget, it is made up of an array of materials.

The main constituents are a variety of metals, with the most common being aluminium alloys, lightweight materials commonly found in the phone case. Lithium cobalt oxide and carbon graphite are used to make the batteries. Elements like gold, copper and silver are used in the wiring of the phone. Platinum and tungsten are used in the circuitry.





WHETHER IT IS A MOBILE PHONE OR A CAR, YOU CANNOT IMAGINE A LIFE WITHOUT METALS. VEDANTA IS ONE OF THE LARGEST GLOBAL PRODUCERS OF BASE METALS AND AND OUR PRODUCTS ARE THE FOUNDATIONAL ELEMENTS OF MODERN SOCIETY.

### LET US CONSIDER EACH OF OUR PRODUCTS INDIVIDUALLY.

# ZINC



**79%** market share in India



Production in FY 2019:

696 kt India





148 kt International locations

### **Application Areas**

Automobile | Rubber | Construction Shipbuilding | Pharmaceutical | Paint

# **LEAD**



World's largest

integrated zinc-lead producer



Production in FY 2019:

198 kt

### **Application Areas**

Automobile | Glass | Aerospace Shipbuilding | Transportation | Paint

# **SILVER**



Production in FY 2019:

**679** ton



9<sup>th</sup> largest silver producer in the world

## **Application Areas**

Jewellery | Electrical | Solar
Telecommunication | Pharmaceutical

# IRON ORE AND STEEL



One of the largest iron ore miners in India

Production in FY2019:



1.2 mn tonnes Steel

686 kt Pig Iron

### **Application Areas**

Automobile | Locomotive | Shipping Building & Construction | Engineering

# OIL & GAS



Contributes over 25% of India's annual production



India's largest

private sector crude oil producer



Production in FY2019:

189 kboepd

# **Application Areas**

Transportation | Energy | Chemical Textile | Plastic | Fertiliser | Pesticide Paint | Dye

# **ALUMINIUM**





2.3
MTPA total capacity

### **Application Areas**

Transportation | Building & Construction Electronic | Aerospace

# **POWER**



One of the **largest** private sector power generators in India



Leading producers of wind power in India



**9GW** of power generation capacity

# **Application Areas**

Energy (captive as well as commercial)

# **COPPER**



> 28% market share in India



Amongst the **most efficient**custom copper smelters globally

### **Application Areas**

Electric Power Transmission Renewable Energy



# FROM THE CHAIRMAN'S DESK

As a global diversified metals and mining company, we produce the essential materials upon which our world is built - and in doing so, our work drives human progress.

TODAY, FROM
SMARTPHONES MADE
WITH ALUMINIUM TO
COPPER PIPES THAT
PROVIDE CLEAN WATER
TO HOMES, AND FROM
SKYSCRAPERS TO CARS,
YOU CAN SEE VEDANTA
AROUND YOU, EVERY DAY,
EVERYWHERE.

We are proud of the economic contribution we make across communities and generations. From rural communities in Odisha to mining towns in South Africa, with our partners, customers and suppliers, Vedanta provides jobs, investment and business opportunities that help each of these communities become stronger and more resilient.

Sustainability is a key value-creation lever at Vedanta. Alongside robust financials, and delivering repeated and meaningful returns for our shareholders, we also set ourselves exacting standards and benchmarks regarding our environment and social performance. I am proud of the progress that the company has made to improve internal systems to manage environmental and social performance, empower our employees - especially women in the workplace, and give back to society.

While I am enthused about the company's performance in FY 2019, I am pained by the loss of 14 of our workmen.

Vedanta remains committed to ensuring a 'zero harm' workplace, and the tragic loss of life only reinforces our resolve to continually improve our systems and our management practices. During the year, I have asked our senior leadership team to commit to raising the profile of visible, felt leadership on the shop-floor and ensure that our entire workforce returns home safely to their families for the duration of their service with our company. Just as I expect more from our management to deliver safe performance, I also call upon all our long-term business partners to take measurable actions to make our collective workplace safer for our employees and contract workers.

# **Transforming Lives**

Giving back to society has been central to our work.

THIS YEAR, VEDANTA
INVESTED OVER US\$ 45
MILLION IN COMMUNITY
PROGRAMMES, DIRECTLY
TOUCHING THE LIVES OF
3.1 MILLION PEOPLE
ACROSS 1,201 VILLAGES.

The year witnessed the inauguration of our 500th 'Nand Ghar' - community resource centres especially created for women and their children, providing everything from nutritious meals and healthcare to safe play areas and e-learning resources. We plan to set up a network of 4,000+ Nand Ghars across India and have budgeted an investment of US\$ 115 million towards the program.

Meanwhile, our outreach team comprising 110+ dedicated community development professionals, who represent Vedanta in the communities and become valued local points of contact, helped to deliver

**HEALTH SERVICES TO** MORE THAN 1.6 MILLION PATIENTS; PROVIDED SANITATION AND CLEAN, SAFE DRINKING WATER TO OVER 350,000 PEOPLE; REACHED **NEARLY 40,000 WOMEN** THROUGH DEDICATED **SELF-HELP GROUPS: AND GUIDED COUNTLESS** MORE PEOPLE THROUGH **YOUTH SKILLS** PROGRAMMES, SPORTS **COACHING AND** SUSTAINABLE FARMING.

# Building Prosperous Societies

In FY 2019, Vedanta contributed nearly US\$ 6.2 billion to the public exchequer of the six countries in which we operate.

WE ALSO PROVIDED HIGH QUALITY EMPLOYMENT TO 88,000+ PEOPLE DIRECTLY AND THROUGH OUR CONTRACT PARTNERS. Vedanta has the potential to transform local and national economies, but we must only do so in a sustainable manner - where our impact on the environment is minimal and all sections of society are positively engaged with our projects and operations. The mining industry has come a long way in terms of technology and management practices to allow for us to make this a reality. With our vision of "Zero Harm, Zero Waste, Zero Discharge", we are fully invested to realize this goal.

The metals and mining industry has helped transform society - given that the building block of the modern economy find their source in our mines, smelters, and refineries. As the world looks to solve the new challenges of the 21<sup>st</sup> century - climate change, eradicating poverty, gender equity - this industry will continue to provide solutions that help create a sustainable planet.

At Vedanta, we are look forward to leading the charge in the nations where we operate. I want to thank the 88,000+ people who make up the Vedanta family and who, during this year, have innovated, created new records, and scaled up our output with everincreasing efficiency. Vedanta sits at the heart of the world's fastest-growing economy, and the outlook for our products, both domestically and globally, remains positive. In every aspect of our business, I see a company inspired and focussed on the opportunities ahead of us. I am excited to use our abundant human and natural resources to delivering on this promise.

ANIL AGARWAL
Chairman



# CEO'S MESSAGE

Sustainability is engrained in every activity we do across our businesses; we work towards a better environmental outcome in the areas we operate, we invest in our host communities, we have successfully reduced our carbon intensity and aim to increase dependency on renewable energy sources. Most importantly, safety of our people remains at the forefront and at the heart of our sustainability strategy. We are a Company with a strong track record of achievements, coupled with an equally strong sense of selflessness. One where it is regarded as a duty and a privilege to give back more than what is taken, to work towards a bigger purpose and collectively share the fruits of our success.

FY 2019 was a solid year operationally for Vedanta. While what we achieve is important, so is how we achieve it. In this context, I am deeply saddened by the tragic loss of 14 precious lives and the irreplaceable loss this has caused their families, friends and colleagues. One life lost is one too many. These unfortunate accidents are a stark reminder that we must do better to ensure our people return home safely at the end of each day, every day, every year in our journey of zero harm.

# Safety - Our First Value

During the year, our leaders conducted safety engagements across businesses with a record number of employees and contractors. We are determined to bring about a clear and measurable improvement in our safety record, and we are ramping up a range of actions to achieve this. These include strengthening compliance and accountability, instilling a strong culture of care, and ensuring transparent reporting of incidents, near-misses and high impact potential incidents.

For FY 2019-20, we are enhancing the safety scorecard with three focus areas - visible & felt leadership, supervision of safety critical tasks and better management of business partners. With these measures in place, we expect to see improved safety performance through FY 2019-20 and in the following years.

# Our Commitment -Safe, Responsible and Sustainable Mining

We produce elements that are essential to human progress; as the world moves forward, demand for such resources increases and so does the demand for ecofriendly and green methods of mining.

We must mine more, but we must also mine better. Our 'Zero Harm, Zero Discharge, Zero Waste' framework focusses the whole of Vedanta on reducing its environmental footprint and ensuring that we keep our workforce and the adjoining communities free from harm. I'm happy to share that in FY 2019, we made steady progress in achieving many of our sustainability targets.

We recorded a 14.5% reduction in our Greenhouse Gas (GHG) emissions intensity, against our stated 2020 goal of 16% reduction with regards to 2012 as the baseline. Our total water consumption dropped to 278 million m³ in FY 2019 as compared to 280 million m³ last year. During the reporting period, we commissioned 22 MW of solar power projects at Hindustan Zinc and we now generate 1,635 million units of green energy, which includes solar and hydro.

IN THE REPORTING YEAR, WE RECYCLED 92% OF OUR HIGH-VOLUME AND LOW-TOXICITY WASTE IN SUSTAINABLE APPLICATIONS.

At Hindustan Zinc, we have been converting the jarosite by-product into non-hazardous waste. In FY2020 we are commissioning 'Fumer' technology to prevent that waste being produced in the first place. Also, instead of storing tailings in land-hungry surface pits, we have found a way to turn them into paste and use them for backfilling of underground voids.

HZL has also converted the old jarosite pond at Debari smelter, the old tailings dam at Dariba mine, and the waste dump at Rampura Agucha to double up as solar farms.

38 MW OF SOLAR POWER HAS BEEN INSTALLED IN THESE LOCATIONS, SAVING A LAND FOOTPRINT OF NEARLY 190 ACRES.

Vedanta continues to review and enhance our existing tailings dam management practices. In the last 24 months, we have undertaken a detailed survey of each of these facilities, determined areas of improvement, and initiated steps to ensure that these structures continue to retain their integrity as we ramp up our production activities. We have also developed a tailings dam management standard in accordance with international guidelines, and we independently review businesses' adherence. The management and future expansion of all tailings impoundment facilities is being overseen by independent qualified experts.

At our Copper business in Tuticorin, where we operate one of the world's most environmentally compliant smelter, we are deeply saddened by the loss of 13 lives during the protests that took place some 6 km away, early last year. Our thoughts and prayers go out to their loved ones.

There are many lessons to be learned from the incidents at Tuticorin and we have taken several steps to rebuild trust among the local communities. From extensive stakeholder dialogue to investing US\$ 15 million on community development projects, we continue to be a responsible corporate citizen. The plant closure has impacted the livelihoods of more than 24,000 people directly or indirectly employed by/due to the plant's activities. We continue to pursue legal avenues to seek permission to restart the plant and hope for an equitable resolution as soon as possible. Sterlite met 33% of India's demand for copper and the closure has resulted in a shortfall that can only be met by increasing imports.

GLOBALLY, VEDANTA
CONTRIBUTED US\$ 6.2
BILLION TO NATIONAL
EXCHEQUERS, SPENT OVER
US\$ 45 MILLION ON CSR
ACTIVITIES AND REMAINS
A SIGNIFICANT DRIVER OF
LOCAL AND NATIONAL
ECONOMIES.

We are pleased to report that our operations across the business won numerous accolades. Some of these include

 being awarded the first place globally, by Dow Jones Sustainability Index on environmental compliance (Hindustan Zinc), British Safety Council's Sword of Honour being conferred upon Cairn's RGT operations, and Aon Hewitt's Best Employer Award for commitment to engagement given to our Jharsuguda operations.

While, this report gives a detailed overview of our sustainability performance in FY 2019, Vedanta's commitment to safe, responsible and green mining started long ago. We are consistently working to deliver better results with greater levels of safety; an ever-gentler impact on our environment; and even greater inroads into delivering healthcare, education, skills and quality of life in our communities.

Together with our Chairman, the Board, our colleagues and business partners, I thank all our stakeholders for their continued support and look forward to delivering another year of sustainable growth.



# **Vedanta's Sustainability Context**



Sustainability topics continue to take centre-stage in the metals & mining industry. Companies need to periodically reassess their business model and ensure they address those issues that pose a risk to business or where new opportunities may emerge.

Vedanta's risk committee evaluates key business risks and aids the leadership team in deliberating on mitigative actions. In addition, every three years, we conduct an exhaustive materiality assessment to understand stakeholder expectations from the Company. Our last assessment was conducted in FY 2015-16 with a follow-up assessment conducted a year later.

The materiality assessment process is in line with Global Reporting Initiative (GRI) standards. The materiality matrix is reviewed and ratified by both the Executive Committee (ExCO) and the Sustainability Committee.

As of this writing, we are in the process of revising our materiality matrix.

# Materiality Matrix

Critical importance	High importance	Average importance	Low importance	
Policies and actions to restrict unethical business practices	Leadership development and talent management	Public policy and advocacy		
Rights of indigenous peoples and human rights	Disclosure on slavery and human trafficking - UK's Modern Slavery Act	Diversity and equal opportunity		
Employee health, safety and well-being	Transparency in reporting on revenue and production figures	Broader economic benefit to host country		
Community engagement and development initiatives	Labour rights and industrial relations			
Ethics and integrity - compliance to Code of Conduct	Community health and safety		Local hiring and content	
	Energy management and climate change	Responsible Supply Chain		
Environmental management (water management, waste management, air emissions and quality control,	Mine and site closure plans	— Management		
biodiversity management, environmental incidents management)	Employee retention			
	Tax transparency and reporting			

During the year, we continued our efforts to improve our systems and their performance in all the key issues identified in the materiality matrix using the principles laid out in the Vedanta Sustainability Framework.

### EXTERNAL AND INTERNAL DEVELOPMENTS HAVE DRAWN MANAGEMENT ATTENTION ON THE FOLLOWING TOPICS:



The disaster at Valeand the partial collapse of a tailings dam wall at our operations in FY 2017-18 has led to the development of a strong tailings dam management standard in alignment with ICMM recommendations and overseen by independant, global experts.

Read more: Environment [Page 25]

SAFETY OF OUR WORKFORCE



Fatalities in our workplace increased for the second year in a row and this has led to an introspection of our management practices and a determination to live up to our vision of 'Zero Harm'.

### Read more: Our People [Page 47]

As our business becomes more complex we need Right Management in Place. Additionally, the Company remains committed to ensuring that we increase the gender diversity across the workforce at all management levels. Significant work has been undertaken to achieve this goal.

# Read more: Our People [Page 55]

Closure of our Sterlite
Copper plant and a
persistent negative
perception among our
stakeholders about our
business practices has
resulted in the Company
embarking on a journey to
significantly improve our
social performance and
regain stakeholder trust.

Read more: Creating Value for Society [Page 65]



RETAINING OUR SOCIAL LICENSE TO OPERATE



# Roadmap & Progress

 $Our \, sustainability \, roadmap \, sets \, out \, our \, targets \, and \, performance \, during \, the \, year \, on \, the \, key \, material \, issues.$ 

OBJECTIVES AND TARGETS FY 2019	STATUS	PERFORMANCE	TARGET FY 2020
THE SAFETY OF OUR WORKFORG	E		
Zero fatal accidents and an LTIFR of 0.30	•	14 fatalities; 0.47 LTIFR	Zero fatal accidents and an LTIFR of 0.30
Achieve a score >75% in six safety performance standards	•	Average score achieved was 61%	Achieve score >75% in ten safety performance standards
ENVIRONMENTAL MANAGEMENT			
Achieve 2 million GJ in energy savings	•	1.6 million GJ saved	Achieve energy savings of 1.95 million GJ
Achieve water saving of 4 million m <sup>3</sup>	•	3 million m³saved	Achieve water savings of 3.5 million m <sup>3</sup>
Achieve fly ash utilisation of 75%	•	110%* reutilised	Achieve fly-ash utilisation of 80%
Continue our reduction in GHG intensity and formalise our target	•	14.5% reduction	Reduce our GHG emissions intensity by 16% from a 2012 baseline by 2020
Develop our capability and strengthen tailings management practices across the Group	•	Audits completed; recommendations under consideration	Third-party review of tailings/ash dyke management system and development of site- specific improvement plan (India operations)
RETAINING OUR SOCIAL LICENSE	TO OPE	RATE	
Complete the baseline and social impact assessments in all businesses	•	Completed	Ensure alignment of all BU plans with issues identified during baseline surveys
250 Nand Ghars to be constructed in FY 2019, and planning for additional 1,000 to be completed	•	358 Nand Ghars constructed. Planning for additional 1,287 completed	1,200 Nand Ghars to be constructed in FY 2020.
Develop a standard policy on employee engagement for the Group		Under progress	Roll-out of employee engagement platform across the Group
			A standard on-line community grievance record/redressal software (NIVARAN) across the Group
PEOPLE AND DIVERSITY			
Continue to focus on Code of Conduct training for all professional employees, including new hires	•	100% of new employees trained; existing employees are given online training annually	Continue to focus on Code of Conduct training for all professional employees including new hires
Achieve 33% female representation at Vedanta Board-level by 2020		Work in progress - 12.5% of the Vedanta Board is female	Achieve 33% female representation at Vedanta Board-level by 2020
			Diversity 5% improvement in our campus female hiring programme
Focus on anchoring and engagement of high-potential employees through our flagship programme V-Connect	•	Initiative is directly anchored by the business leadership team through their respective HR teams. It is ensured that our professional population is anchored by senior leaders across the BUs.	
Focus on Right Management in Place in each SBU	•	There are 41 SBUs in place, each is led by SBU president. SBU management-in-place is regularly reviewed by Group Chairman and Group ExCo.	Ensuring Right ExCo & succession for each business



# **Sustainable Development Journey**

Ensuring long-term growth for all stakeholders has been the cornerstone of our sustainability journey. We have embraced sustainability as a comprehensive, integrated business practice that involves collaboration, innovation, and a course of action. On the sustainability roadmap, we keep achieving our goals and formulating new ones, while continuously progressing towards lasting growth.



# Businesses started embedding Vedanta Sustainable Development Framework

training and implementation of policies and standards

**External Review Concluded** (URS - Scott Wilson) all recommendations successfully closed

Sustainability linked with remuneration Sustainable development KPIs linked to executive remuneration

Vedanta Sustainability Assurance Programme (VSAP) into its second year of implementation supported by external auditors



# VSAP into its fifth year of implementation

VSAP material priorities identified for FY 2016-17 - occupational health and safety, resource use and management, stakeholder engagement, and supplier and contract management

# Social Impact Assessment Studies completed for nearly all our businesses. The

major social impact assessment studies were done at Cairn Oil and Gas business

Advancing accountability employee health, safety and well-being identified as a material issue, was a key priority for the Company



### Rolling out of Vedanta Sustainability Framework continues - introduction of safety performance standards, formal safety risk assessment, industrial hygiene baseline assessment and safety leadership coaching

VSAP into its third year of implementation revised as per the material priorities, supported by external auditors

Environment & social review of VSAP started external review

Revisiting our Community Need Assessment Studies - aligning all community projects with updated studies



### Strong focus on safety

Alignment across businesses on a collective carbon strategy

Launching a systematic, Group-wide programme to monitor and maintain tailings dams in line with global best practices

Consolidating efforts to drive effective implementation of the provisions of the Modern Slavery Act across our businesses

Re-evaluating our social performance standards in order to enhance our Social License to Operate



### Environment & social review of VSAP continued external review

VSAP into its fourth year of implementation - revised as per the material priorities with more emphasis and focus on safety by inclusion of safety performance standards, supported by external auditors

**Advancing safety -** by developing safety performance standards and incorporating executive remuneration

Social Impact Assessment Studies - HZL & Cairn India aligning all community projects with updated studies



Strategy to increase leadership engagement on workplace safety

Work begun on upgrading tailings dam facilities and management practices

Work begun to improve social license to operate - perception surveys, materiality assessment, social performance review, FPIC requirements review

# 15

# GOVERNANCE

Good corporate governance - essential for protecting shareholder value as well as delivering sustainable growth - underpins the delivery of our strategic objectives. Our governance philosophy emanates from our values of Trust, Entrepreneurship, Innovation, Excellence, Integrity, Respect and Care.





VSF is integral to the core business



**590** man-days of sustainability assurance audits (VSAP)





25,000+ hours of training on Code of Conduct



# Sustainability Governance Structure at Vedanta

Our values















# I Composition of the board

Our Board complies with the UK listing requirement according to which, at least half of the Board, excluding the Chairman, should comprise independent Non-executive Directors. As of March 31, 2019, our Board consists of the Executive Chairman, the Deputy Executive Chairman, the CEO and five independent Non-Executive Directors. The average tenure of our Board is 7.2 years

**AGE GROUP** 

**GENDER** 

Less than 30 years 0

Male 7

Between 30-50 years

Female 1

Above 50 years 7



The Board provides strategic perspective and fulfils its mandate to deliver sustainable growth with the help of:

### **Board committees**

Strong policy frameworks, which includes the Code of Business Conduct & Ethics and the Vedanta Sustainability Framework

Competent management teams

Monitoring protocols (including VSAP)





Appointed in Nov 2004



Mr. Srinivasan Venkatakrishnan **Chief Executive Office** Appointed in Aug 2018



Non-Executive Director Appointed in Aug 2012







Independent Non-Executive Director Appointed in Jul 2016





**BY OVERSEEING** THE CONDUCT OF **BUSINESS WITH STRICT ADHERENCE** TO ETHICS AND RESPONSIBILITY, THE STRUCTURE **ENHANCES THE PROSPERITY AND LONG-TERM VIABILITY** OF THE COMPANY.

### D 0 R N A A D

# SUSTAINABILITY COMMITTEE

Chaired by Independent non-executive Director. Ms. Katya Zotova

The Committee oversees the Group's management of sustainability matters including HSE performance, engagement with host communities, human rights and other related matters

# REMUNERATION COMMITTEE

Chaired by Independent non-executive Director. Mr. Geoffrey Green

The Committee reviews and recommends to the Board the executive remuneration policy and determines the remuneration packages of each of the Executive **Directors** 

# AUDIT COMMITTEE

Chaired by Independent non-executive Director. Mr. Ravi Rajagopal

The Committee oversees the Group's financial reporting, the efficacy of the internal control and risk management framework and scrutinises the work of the internal and external auditors.

# NOMINATIONS COMMITTEE

Chaired by Chairman Mr. Anil Agarwal

The Committee reviews the size, structure and composition of the Board and its Committees to ensure the appropriate balance of skills, experience, diversity and independence are present; and leads the Board appointment process.

**EXECUTIVE** COMMITTEE

Chaired by CEO, Mr. Srinivasan Venkatakrishnan

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.

## SUSTAINABLE DEVELOPMENT TEAM











Review of Sustainable Development Team and Segment Business Committee

(Monthly Operational Reviews / Business Management Group Meetings)

# **Management for the Long-term**

Sustainability is a long-term paradigm. Our Code of Business Conduct & Ethics, Vedanta Sustainability Framework, VSAP, management systems, organisational structures, processes, policies and people form part of our internal control systems, which govern how we conduct business and manage associated opportunities and risks, in the present and in future.

Executive compensation structures are critical in incentivising the management teams to manage for the long-term. The Long Term incentive for our CEO is aligned to the Relative-Total Shareholder Return (R-TSR) of Vedanta Limited, (The major operating arm of Vedanta Resources). This metric not only ensures that the shareholders return is one of the prime agenda items in the CEOs priority list, but also compares the return to a set of Global and Indian comparators so that we strive to be in the Top quartile positioning amongst those comparators.

In addition to R-TSR, the other performance measure for the Long Term Incentive plan for the CEO is Sustained EBITDA of the company over the three financial years' spanning in the vesting period. This allows our management to place the long-term agenda on the table and ensure that sustainability principles are part of the decision-making criteria.

# I Risk Governance Framework



The 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. Any weaknesses identified by the review are addressed by enhanced procedures to strengthen the relevant controls and these are in turn reviewed at regular intervals.

The Audit Committee is in turn supported by the Group-level Risk Management Committee (GRMC), which assists them in evaluating the design and operating effectiveness of the risk mitigation programme and the control systems. The Group has a consistently applied methodology for identifying risks at the individual business level for existing operations and for ongoing projects.

The Group's Board-level Sustainability Committee is tasked with setting the organisation's sustainability agenda. It evaluates emerging sustainability risks and after careful evaluation, informs the Group-level Risk Management Committee if there are risks that pose organisational risks.

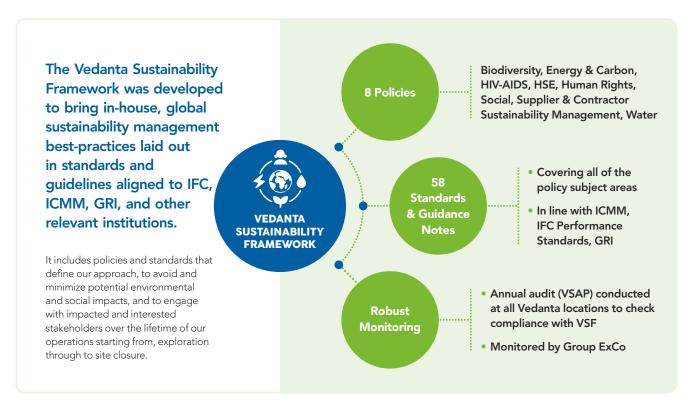
Key sustainability risks that are part of the corporate risk register include:

Health | Safety | Environment | Climate Change | Managing relationship with stakeholders | Tailings dam stability.

# Our Sustainability Management Approach

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

# Vedanta Sustainability Framework (VSF)



All of our businesses are expected to adopt these policies and standards so that their business practices are in alignment with Vedanta's sustainable development philosophy.

# 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 Framework. The assurance model has different modules, which cover elements related to environment, health, safety, community and human rights. The assurance system works on the premise of tracking corrective and preventive action by each of our businesses and commissioning periodic formal audits by external experts.

VSAP HAS BEEN
INSTRUMENTAL IN
HELPING US EMBED
SUSTAINABLE
DEVELOPMENT INTO
EVERY ACTIVITY
ACROSS ALL OUR
BUSINESS UNITS.



Conducted by an independent, third-party auditor, 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 gap-filling actions, which are periodically reviewed, evaluated and documented. The successes and failures are identified and highlighted, and cross learning opportunities are created. Nearly 100% of our asset locations are covered in this activity.

# Code of Business Conduct and Ethics

Ethics and integrity are material issues for both, our management team and 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. It is applicable across the organisational hierarchy, irrespective of the location of operation.

Our reporting requirements in the UK cover various governance aspects such as:

- Human rights
- Insider training
- Political contributions

- Conflicts of interests
- Confidentiality
- Fraud, bribery and corruption

THE CBCE COMPLIES
WITH THE UK BRIBERY
ACT 2010 AND IS
ALIGNED WITH THE
UK MODERN SLAVERY
ACT 2015.

# **■ Implementation of CBCE**

The implementation of 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 currently communicates our commitment to a 'policy against retaliation', and commitment to maintaining confidentiality, in case of a company employee.

Open Complaints on April 1st 2018	11
Number of whistle-blower cases opened in FY 2019	67
Number of whistle-blower cases upheld and found correct in FY 2019	20
Number of whistle-blower cases closed in FY 2019	73
Open Complaints on March 31st 2019	5

# **Business Units**



All business units are periodically reviewed for risks related to corruption and bribery. The Audit Committee, comprising four Non-Executive Directors, assists the Board in maintaining and monitoring the integrity of the Group's financial statements, assessing the effectiveness of the Group's risk management system and internal controls, and the independence and objectivity of the external auditor.

# **Employees**



Employees are expected to report even minute violations, which are then addressed and resolved promptly after an impartial internal or external investigation. Mandatory training is provided for new recruits and refresher workshops on anti-corruption policies & procedures are conducted for relevant employees to ensure that all employees are well-versed with our Code.

# **Supply Chain**



Our Suppliers' Code of Conduct communicates our requirement for our suppliers to operate in compliance with all relevant legislation, align to our policies while executing work for, or on behalf of Vedanta or on our sites, and adopt ethical good practices. Vedanta also encourages suppliers to adopt principles and practices comparable to our own, including the supplier code of conduct, supplier and contractor management policies and supplier screening checklist.

AS PART OF OUR COMMITMENT TO CONTINUAL IMPROVEMENT, AND GOING BEYOND LEGAL COMPLIANCE, WE ARE CURRENTLY WORKING ON ROLLING OUT AN E-LEARNING MODULE FOR THE CBCE ACROSS THE GROUP AND ISSUANCE OF POST-TRAINING E-CERTIFICATES. THIS YEAR, WE PROVIDED MORE THAN **25,000 HOURS OF TRAINING ON CODE OF CONDUCT,** WHICH INCLUDED HUMAN RIGHTS-RELATED ASPECTS.

# **Transparency**



Transparency leads to trust and trust in turn leads to a better relationship with all our stakeholders. At Vedanta, trust is one of the core values. We actively foster a culture of transparency in our interactions and encourage an open dialogue, which ensures mutual trust and respect.

Transparency is also a key element in reporting. It helps the investors, shareholders and other stakeholders take informed decisions about our operations and other details. We bring out our annual reports and annual sustainability reports, consistently issue press releases, investor presentations and interviews, and publish articles on a regular basis to inform and assist all our stakeholders.



OUR REPORTING IS TRANSPARENT, CREDIBLE AND RIGOROUS. IT COVERS THE FULL SCOPE OF OUR OPERATIONS, COMPLIES WITH ALL FINANCIAL AND REPORTING REGULATIONS IN UK. ALL OUR REPORTS ARE EXTERNALLY VERIFIED.

# Letter from the Sustainability Committee



We continue focusing our safety and sustainability efforts on direct leadership involvement and capability building in the areas that require improved safety performance and proactive risk management. Given our strong reliance on business partners, over the next fiscal year, we will put special emphasis on the ways we engage with our contractors and manage their safety standards and performance.

**Katya Zotova**Chairperson, Sustainability Committee

### Dear Stakeholder,

Our focus remains on our philosophy of zero harm, zero waste and zero discharge and we continued to make progress on these during the year. However, we are grieved to report 14 fatalities that occurred across our businesses in the last financial year. Each loss of life is a tragedy, not just for the families of the deceased but also for the company. Their occurrence led to much soul-searching by our senior leadership, by the Sustainability Committee and by the Board. Our Executive Committee has taken the role of monitoring implementation of key issues - directly addressing safety leadership, implementation of standards and risk management. Active monitoring of safety has become the norm at our monthly ExCo and quarterly Sustainability Committee meetings.



In addition to the newly introduced safety standards last year, we have also raised the expectation from our management team - requiring visible and felt leadership on the shop-floor to ensure that unsafe acts are rooted out before causing negative impacts. We will continue to increase our efforts this year with a particular emphasis on leadership's role and capability in managing safety in work teams and ability to identify and correct the safety hazards present in each task. A strong part of this focus will be on the engagement and

management of business partners (or contractors) who are over-represented on our safety statistics.



We have continued to improve in aspects related to social performance and this has been seen positively in several areas.

We have undertaken significant stakeholder engagement programs at the Tuticorin smelter to regain the trust of the local community. Our initial assessment is that we have made some positive headway, but we are cognizant that much work remains until we fully regain our social license to operate. The case for the plant reopening remains in courts and we are hopeful of a favourable decision in Fv2020

During the year we completed a review of how the principles of FPIC can be applied in our future business expansion activities and have also undertaken perception surveys to understand the gaps that we need to bridge in order to effectively engage with our local stakeholders.



We made significant progress on tailings dam management and have improved management systems across all our operations. The Group ExCo and the Board have been kept informed of the key risks that remain and the actions being taken to mitigate their impact. We continue to work with a third-party expert to ensure that our management practices and future expansion plans adhere to global best practices.

The Committee regularly reviewed and will continue to review progress on significant sustainability issues for the group.



I thank Mr. Kuldeep Kaura for his valuable contribution to the Committee and am happy to invite Mr Srinivasan Venkatkrishnan to be part of the committee.

# Membership and Attendance

The Sustainability Committee comprises five Directors and it met on 4 occasions during the year.

Katya Zotova <sup>#</sup>	4/4	100%
Ravi Rajagopal <sup>#</sup>	4/4	100%
Sunil Duggal*#	3/3	100%
Srinivasan Venkatkrishnan*#	2/2	100%
Deshnee Naidoo*#	3/3	100%
Kuldeep Kaura*	2/2	100%
Kishore Kumar*	1/1	100%

\*Member for only part of the year. The number represents the attendance record for the Sustainability Committee meetings conducted during their tenure on the Board Committee.

#current members

# Sustainability Committee activities during the year

# **Sustainability Framework**



- Review of the Sustainability Committee performance and Terms or Reference.
- Review and approve annual HSE & sustainability targets
- Periodical review of HSE programs and performance.
- Review VSAP score and VSF implementation for the group
- Review sustainability issues significant to group and stakeholders.

# **Health & Safety**



- Review the Group safety incidents and performance.
- Oversee the implementation of corrective actions for fatal incidents
- Review progress on implementation of the Safety Performance standards

# **Environment**



- Review outcomes of the third-party tailing dam assessments, corrective actions and implementation plans.
- Review the Group resource conservation targets and achievements
- Review progress on KCM's environmental projects.

# Community Relations and Stakeholder Engagement

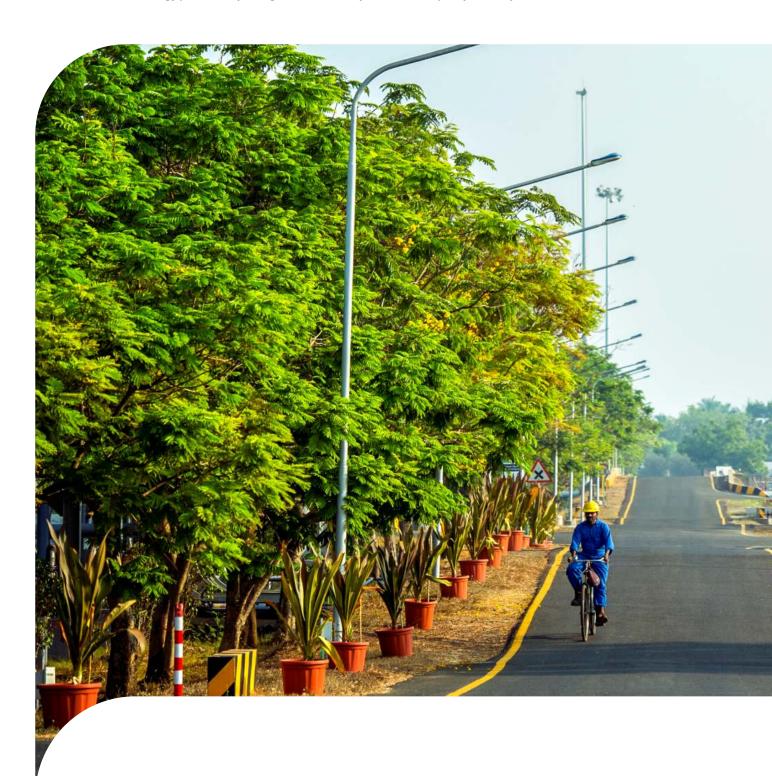


- Review our stakeholder engagement strategy.
- Commissioned independent review of gaps between FPIC and related government regulation in India



# ENVIRONMENT

As one of the primary activities to source raw ores - the building blocks of modern society - mining is an essential activity to sustain life as it exists today. But the operations are not easy, and generally come with environmental costs. At Vedanta, we aim to transition to sustainable mining practices that avoids or mitigates these environmental impacts. We are focussed on embracing disruptive, transformative practices and investing in technologies to optimise water consumption, reduce emissions, enhance energy productivity, safeguard biodiversity, maintain air quality and recycle waste.





**Achieved** reduction in GHG intensity against the target of 16% by 2020 (baseline year: 2012)



of green energy generated



solar power projects commissioned



high-volume low-effect wastes such as fly ash, slag and jarosite



Independent audit of Vedanta's **Tailings** Management
Facilities by
industry experts
Golder Associates



# Management Approach



We are committed to reduce the environmental footprint through a systematic and process-oriented approach. This includes addressing legacy issues at sites that have previously had a negative impact on the environment, retrofitting older assets with new technology and ensuring new operations are as efficient as possible by design.

Our Vedanta Sustainability Framework comprises comprehensive policies, standards and guidance notes to rigorously manage environmental impacts. For the environmental priorities arising from the materiality process, we have developed specific objectives and targets, and review performance against these issues on a periodic basis.

ALL OUR OPERATIONAL SITES ARE ISO 14001 CERTIFIED. THE ISO 14001 ACCREDITATION HELPS US TO REGULARLY REVIEW THE ENVIRONMENTAL MANAGEMENT SYSTEM, WITH PROGRAMMES IN PLACE TO MITIGATE THE IDENTIFIED ENVIRONMENTAL IMPACTS OF OUR PROCESSES.

### THE MATERIAL ISSUES THAT MARK OUR ENVIRONMENTAL PERFORMANCE ARE:











# **Energy Management and Climate Change**

# Managing our Climate Change Impacts

As a large consumer of fossil-fuel based power, Vedanta recognises the climate-related risks associated with our business activities. We understand the implications of our energy consumption, both in terms of its cost to the climate as well as cost to the operations and are committed to meet our energy demands, while limiting our carbon emissions. We remain fully supportive of the outcomes of the Paris Agreement and have taken on carbon reduction targets in alignment with the Nationally Determined Contributions (NDC) of the Government of India.



### **■** Governance Structure

Our Energy and Carbon Management Policy and Performance Standard commit our operations to adopt and maintain global best practices in carbon and energy management, and minimise greenhouse gas (GHG) emissions. The 'Carbon Forum' led by the Chief Operating Officers of our businesses, has been tasked with developing and overseeing the implementation of Vedanta's carbon mitigation approach.

Included in the forum's work are discussions related to approving Vedanta's carbon management strategy, long-term greenhouse gas (GHG) emissions intensity reduction targets, alignment with investor requirements, emerging regulatory risks and carbon pricing. The carbon forum also informs the Group ExCo, Risk Management Committee and the Board Sustainability Committee on 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.

We are also in agreement with the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD). We are currently examining the best way forward on refining our carbon management and disclosure practices to be in alignment with the framework.

# Climate-related Risks and Opportunities

Vedanta's global presence exposes the company to regulatory changes aimed at limiting or reducing GHG emissions. These changes could potentially impact the company's operations with increased costs for fossil fuels, levies for emissions in excess of certain permitted levels, and increased administrative costs for monitoring and reporting. Further, increasing regulation of greenhouse gas emissions, including the progressive introduction of carbon emissions trading mechanisms and tighter emission reduction targets, is likely to raise costs and reduce demand growth. However, as of this

writing, we do not anticipate any regulatory risks in India since the withdrawal of the clean energy cess in 2017.

We also anticipate physical risks related to extreme weather events and changes in the availability of water due to climate change. We have conducted a water risk assessment to evaluate the risks at 25 of our locations.

In terms of climate-related business opportunities, the company expects to benefit from an increase in demand for copper, zinc and silver, as the global renewable energy and electric vehicle industry expands.

Vedanta has not yet undertaken climate scenario planning and stress-testing of the company's projects based on internal carbon prices. There is an intention to introduce internal carbon prices in the near future. Given the challenges related to Vedanta's diverse business operations, which have different emission intensities, the company is in the process of reviewing whether to apply carbon price at a group or operations level.



# **■ Targets & Strategies**

Vedanta's businesses range from mining operations (surface and underground), smelting and refining units, hydrocarbon exploration and drilling, product manufacturing, and power generation. A significant portion of our operations are in regions where fossil-fuel based power forms the baseload of the energy grid. Additionally, due to the large and consistent requirement for power, many of our captive power plants use coal-based thermal technologies. Given the nature and location of our businesses, switching to large-scale renewable energies has not been possible due to the current financial and technical limitations of the technologies. As a result, much of our GHG emissions reduction programmes remain focussed on improving the energy efficiency of our operations.

THE COMPANY HAS ALIGNED ITSELF WITH THE NATIONALLY DETERMINED CONTRIBUTIONS (NDC) OF THE GOVERNMENT OF INDIA AND HAS COMMITTED TO REDUCE ITS OUR GHG INTENSITY BY 16% BY 2020 FROM A 2012 BASELINE. AS OF 31<sup>ST</sup> MARCH 2019, WE HAVE REDUCED OUR GHG EMISSIONS INTENSITY BY 14.5%.

Given the diverse nature of our businesses, we are also deliberating if Science Based Targets (SBT) should be adopted for the entire group, or if each of our businesses should commit to their own SBTs. Our Zinc India business has already committed to SBTs and plans to reduce its scope 1 and scope 2 emissions by 14% by 2026 from a 2016 baseline. It has also committed to reduce its scope 3 emissions by 20% by 2026 from a 2016 baseline.

# I GHG Emissions Performance

### GHG EMISSIONS in million tCO2e

	Scope 1 (direct)	Scope 2 (indirect)	Total
FY 2019	55.12	3.51	58.63
FY 2018	51.1	1.2	52.3
FY 2017	51.8	1.4	53.2

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.

We have seen a steady increase in our GHG emissions as we have ramped up our business. With the Gamsberg operations coming online, we saw a 12.3% increase in energy consumption.



### CASE STUDY

# CAIRN'S ONGOING JOURNEY TOWARDS ZERO FLARING

### CHALLENGE

Diesel generators have been the traditional way to power remote satellite oil & gas wells. Given the marginal quantity of hydrocarbons produced, remoteness of the sites, and the relatively short lifespan of the these wells, it has been financially unfeasible to set-up a permanent power infrastructure at these locations. As a result, the associated gas that is present alongside the primary hydrocarbon and is a by-product of the extraction process, is burnt-off in gas flares. Flaring of gas contributes to climate change and impacts the environment through emissions of CO<sub>2</sub>, black carbon and other pollutants. It also wastes a valuable energy resource that could be captured for power generation.

### ACTION

The 'Zero Routine Flaring by 2030' initiative by World Bank, has called upon oil & gas companies to eliminate flaring from their operations. In line with the global best practices towards elimination of GHG emissions, Cairn Oil and Gas has adopted various GHG eliminating technologies like Zero Technical Flaring during milling operation and Gas-based Engine Generators (GEGs) in remote satellite fields, to meet the captive power requirement, which results in the reduction of flaring volume vis-a-vis the utilisation of hydrocarbons.

The associated gas is eventually burnt, with the ultimate effect of producing CO<sub>2</sub> emissions by the oxidation of the carbon content of

the fuel. However, electric power is advantageously generated, and with respect to the reference case in which the gas is flared, the amount of avoided  $\mathrm{CO}_2$  emissions can be evaluated as the virtual quantity that would be emitted for the generation of the same amount of electricity by means of the traditional power conversion technology.

GEGs have been installed in Cairn's Satellite fields, that will help reduce nearly 4,900 tCO $_2$ e/year. Proposals for installing additional GEGs are being considered, which can potentially reduce GHG emissions by  $\sim$ 6,000 tCO $_2$ e/year.

### OUTCOME



Generation of electricity combined with the simultaneous disposal of a wasteful gas



Use of by-product of the crude oil production process instead of diesel fuel, along with elimination of fuel transportation over long distances or coal-based electricity sourcing



Independent, on-site power supply for remote sites



High profitability with overall efficiency of up to 90%, in the case of combined heat and power





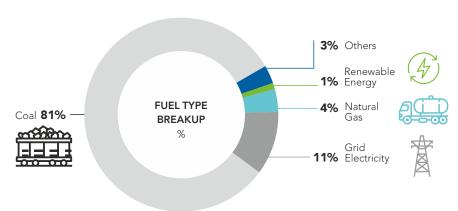
# **I** Energy Consumption

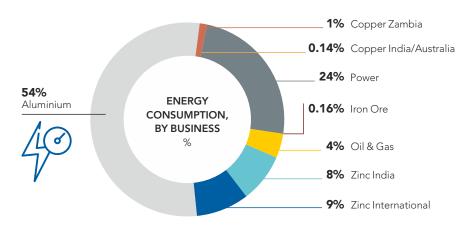
Vedanta meets nearly 90% of its energy requirement from its captive power plants (CPP). Coal and natural gas are the dominant fuels for our CPPs and the company makes significant effort to ensure that we optimise our energy efficiency. In FY 2019, we were able to conserve 1.6 million GJ of energy, against a target of 2 million GJ.

# The savings result from multiple types of projects, which include:

- Switch to efficient motor technologies
- Installation of LED light fixtures
- · Better load-balancing of pump operations
- · Improvements in boiler efficiencies
- Increased frequency of maintenance activities
- Modifications of the cathode in our smelter potline
- · Improving potline efficiencies

Nearly 90% of our efficiency gains have come from process efficiency improvements (including improvements in potline efficiencies) and better load balancing.







# **ENERGY CONSUMPTION** in million GJ

	Direct		Indirect	Total
FY 2018-19	485			58 553
FY 2017-18	425	21		446
FY 2016-17	413	5		428

We have seen a steady increase in our energy consumption as we have ramped up our business. With the Gamsberg operations coming online, we saw a 24% increase in energy consumption.

## CASE STUDY

# ALTERING THE PROCESS FOR HIGHER EFFICIENCY

### CHALLENGE

The smelting process required to produce aluminium from alumina is done in a pot, which is a continuous process that cannot be stopped and started at will. In smelter 1 at our Jharsuguda plant, there are 600 pots in the pot room, which draw DC power from the rectifier for the electrolysis process. The challenge was to improve the efficiency of the rectifier to reduce energy consumption.

## ACTION

An analysis revealed that maintenance activities can improve the efficiency of the rectifier. Using the six-sigma methodology, root causes for the inefficiencies were identified in the existing process. These included heat exchanger cleaning of rectifier units, demineralised (DM) water flow circulation optimisation, and cooler slot optimisation among others. An example of the steps taken is presented in the action plan review matrix below:

Action	Before	After
Cleaning the heat exchanger	Temperature of demineralised water was 42 degrees	Temperature of demineralised water reduced to 39 degrees
Transformer valve operation	No unification code	Identified standard unification slots

## ОИТСОМЕ

The operational and process improvements in the form of scheduled calibrations, changing nuts and bolts during overhaul, dismantling electrolysis plates, eliminating idling of motors and pumps, and other interventions led to the following savings:







# I Green Energy

We are diversifying our energy portfolio to include renewable energy, which will help us reduce our carbon footprint. In FY 2019, we generated 1,635 million units of green power, which includes energy generated by solar and hydro projects. 97% of our renewable energy is sourced from hydro power.



# Solar

Hindustan Zinc commissioned a 22 MW solar power project this year, taking the total to 38 MW for its captive use.

All the solar power projects have been installed on waste land/dump yard at Dariba mine, Debari Zinc smelter and Agucha mine, reducing our land use. The green power generated from our solar installations have reduced our carbon footprint by nearly 66,000 tCO<sub>2</sub>e per annum. Vedanta is planning to further enhance its solar energy footprint in the coming year.

### Wind

As part of our commercial renewable energy installations, the Company has installed 274 MW of wind farms in five states across India. These projects are registered under the CDM programme by United Nations Framework Convention on Climate Change (UNFCCC) as well as the Verified Carbon Standard programme by VERRA, and the Gold Standard, which is the most rigorous certification standard globally for carbon offset projects. All the energy generated is sold to the respective state DISCOMs and does not form a part of Vedanta's energy mix.

## **■ Waste Heat Recovery**

**34.4 MW of power capacity is generated through waste heat recovery** from roasters and steam turbo generators out of which 9.4 MW Waste Heat Recovery Boiler project is registered under the Clean Development Mechanism (CDM).

### PROJECTS IN PIPELINE

30 MW solar power project at Dariba

1<sub>MW</sub>

floating solar power project at Gosunda captive dam near Chanderiya for utilisation of available water surfaces 3<sub>MW</sub>

rooftop solar power project (0.75 MW already commissioned)



## **Waste & Tailings Management**



Responsible management of waste is the cornerstone of any sustainable operation. The safe and responsible management of hazardous, non-hazardous, and high-volume low-toxicity wastes is a key concern for our businesses.

At Vedanta, the hazardous wastes include used/spent oil, waste refractories, spent pot lining and residual sludge from smelters, while the non-hazardous (high-volume, low-toxicity) wastes we generate include fly ash (from captive and merchant power plants), red mud (aluminium refinery waste), jarofix (from zinc smelting), slag, lime grit (process residues from smelters and aluminium refineries) and phosphogypsum (phosphoric acid plant).

The Resource Use and Waste Management Technical Standard, and supporting guidance notes are part of the Vedanta Sustainability Framework. We follow the principle of first reducing the waste, quantitatively as well as qualitatively (reducing the toxicity), and then performing the recovery and recycle (either ourselves or sold to authorised recyclers). The last priority is disposal in landfill or by incineration, using authorised, licenced and secured landfills.



## IN FY 2019, WE RECYCLED 92% OF THE HIGH-VOLUME LOW-TOXICITY WASTES SUCH AS FLY ASH, SLAG AND JAROSITE.

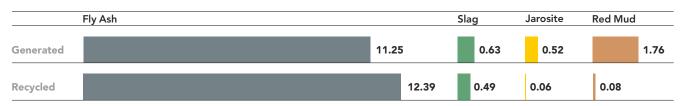
This year, we worked extensively on tailings dam management. When minerals and metals are extracted from the mined ore, the remaining substance, which consists of powdered rocks and water, is considered as tailings waste. If this waste is not treated and managed efficiently, it can have a significant negative impact on the environment and health of the neighbouring community.

We apply stringent steps to comply with all local environmental standards, ensuring that the water contained in this waste is treated and made safe before it can be discharged into local drainage systems. We worked with independent industry experts - Golder Associates - to audit our tailings management system and advice us the safe design, construction and operation of all our tailings facilities.

At Hindustan Zinc, instead of disposing of tailings in land-hungry surface pits, we have found a way to turn them into paste and use them for backfilling of empty underground voids.

### WASTE PERFORMANCE DASHBOARD | Waste Generation & Recycle Snapshot

## $\textbf{High-Volume Low-Toxicity Waste Recycling} \ \text{in million MT}$





### CASE STUDY

## TURNING WASTE INTO SUBSTITUTE RAW MATERIALS

HZL, RAJASTHAN

#### CHALLENGE

Jarosite and Jarofix waste are generated from hydro-metallurgical process at the Dariba, Debari and Chanderiya Lead Zinc Smelters. High generation of these waste occupies a large land parcel, which leads to environmental concerns.

### ACTION

Based on studies conducted by various government organisations, Jarosite and Jarofix have been determined to be commercially viable for usage in cement industry and road construction. In FY 2019, over 13,000 MT of Jarosite was used in the cement industry while over 70,000 MT of Jarosite and Jarofix were used in road construction projects.

Similarly, we have partnered with reputable R&D organisations and corporates to use slag in cement and highway construction. This has received approvals by Bureau of Indian Standards and the Indian Road Congress.

#### OUTCOME









IN FY 2019, OVER 300,000 MT OF SLAG WAS USED IN CEMENT MANUFACTURING AND ROAD CONSTRUCTION. THIS FREED UP SEVERAL HECTARES OF LAND FOR ALTERNATIVE USES, REPLACED VIRGIN RED OCHRE AND LIMESTONE AND REDUCED CO<sub>2</sub> EMISSIONS.

## Tailings Dam Management

Tailings dams and ash ponds are integral to Vedanta's mining operations. However, they can cause significant damage to the environment and to the neighbouring communities if they are breached.

Effective management of tailings dams is part of our sustainability commitment

## ZERO HARM, ZERO WASTE & ZERO DISCHARGE



Vedanta oversees 17 active and one closed tailings management facilities (TMFs). Our principle concern is to ensure the safety of the people who live downstream from our dams. To improve the management of our tailings dams and ash ponds, we have taken some significant measures over the last 18 months.

Starting with an independent assessment of the dam structures, last year we brought on-board, global experts Golder Associates, to review the integrity of our dam structures and the associated management practices. The task has been completed at all our dam locations and the recommendations have been analysed for implementation.

IN ADDITION, THE COMPANY ALSO INTRODUCED TAILINGS DAM MANAGEMENT STANDARDS TO ENSURE THAT ALL OUR GROUP COMPANIES FOLLOW CONSISTENT, INTERNATIONAL BEST PRACTICES. LEARNINGS FROM THE REVIEW WERE ALSO SUPPLEMENTED BY MEASURES TAKEN TO PREPARE THE DAMS FOR THE MONSOON SEASON, WHICH COULD SEE OVERFLOW CONDITIONS ARISE IN CASE OF HEAVY RAINFALL.

## Critical aspects of Vedanta's TMF Standards

- Site selection must be based on a comprehensive environmental and social impact assessment, economics, and public health and safety risk over the life cycle of the tailing facility as per Good International Industry Practice
- Dam break analysis must be conducted based on the advice of the designer/consultant to quantify the TMF-related risks if the TMF is located upstream or close to communities or sensitive environmental areas
- Design must be based on best available technology, to minimise the environmental, social, and economic risks, at an optimal total cost of ownership over the life cycle of the operation.

## Key initiatives that were taken to improve oversight of our dam facilities include:

- Daily/weekly checks (as required)
- · Revision of the risk matrix
- · Introduction of surveillance systems
- Conducting liquefaction analysis
- · Improved training for all key personnel and detailed documentation
- Quarterly review of dam-state by senior management
- Emphasis on safe closure planning for all tailing/dyke facilities

We follow a structured approach for the management of our tailings dam facilities, which will minimise the risk of a future dam breach. While we have done good amount of work, we will continue to work for the safety of the people and the planet.

In FY 2019, Golder undertook a comprehensive review of Vedanta's TMFs, and noted numerous instances of good practice at various locations. Some of the key findings of Golder Associates include:

#### **RAMPURA AGUCHA**



- · Instrumentation (piezometers and embankment settlement monuments) installed
- · Completed addition of more discharge locations (now seven and will add two more)

management - construction of

external return water pond



· Overall good construction quality, and upgrading of tailings slurry transport and discharge lines, plus starting to install piezometers (and one inclinometer) with automated data collection and web-based monitorina

#### TALWANDI SABO POWER LTD.

- · Good monitoring documentation, adequate freeboard and with the inter-pond divider berm, a good plan for ash management and utilisation.
- · Good ash utilisation plan and practice
- Installation of embankment piezometers and settlement monuments

### **LANJIGARH**



- · Remedial embankment buttressing continuing
- Adequate freeboard in the West Red Mud Pond (water storage pond that decants to the Process Water Lake)

## **JHARSUGUDA**



- · Excellent documentation, quality remedial construction, and overall ash management. Lagoon 3, with multiple deposition points from perimeter slurry line
- · Successful rehabilitation and raising of Pond 1 are testimony to the Jharsuguda Ash Team's efforts in stabilising Lagoon 1 and developing capacity for future ash storage

### **BALCO KORBA**



 Improvement over November 2017 site visit - remedial design plans under construction and the embankments are being dewatered successfully



TMF MANAGEMENT HAS BEEN IMPROVED SIGNIFICANTLY, SPECIFICALLY WITH A FOCUS ON **EMBANKMENT STABILITY.** TMF COMMITTEES HAVE **PROVEN TO BE A KEY** SUCCESS FACTOR IN THE **IMPLEMENTATION OF THE** VEDANTA TMF STANDARD.

**Golder Associates** January 2019

#### CASE STUDY

## MAKING OF A WORLD-CLASS TAILINGS MANAGEMENT FACILITY

**GAMSBERG** 

#### CHALLENGE

The Gambsberg facility has been developed in the ecologically sensitive Succulent Karoo Biome, a designated biodiversity 'hotspot' and one of 36 'biodiversity hotspots' in the world. This adds to our responsibility to be more careful in managing the tailings.

### ACTION

Given the sensitive environment in which Gamsberg operates, various potential impacts of the TMF were given serious consideration. Especially important was protecting the groundwater. Gamsberg's has the largest high-density polyethylene (HDPE)-lined TMF in South Africa with a capacity of 3.55 MT of tailings a year.

The TMF is fully lined with a 1.5 mm HDPE liner to prevent any polluted water from reaching natural sources; and a continuous impermeable rock armour was constructed on the outside slope of the TMF to prevent clean rainwater run-off being contaminated with tailings. This also helps in minimising the wind dispersion of the tailings.

In line with our overall digitisation drive at Gamsberg, several measures were implemented for monitoring the TMF:

- temperature probes underneath the liner to measure if the tailings become heat-generative; and
- wireless vibrating wire piezometers, delivering real-time water level data. Trigger levels were built in to give warning if the phreatic surface (the level below which the ground is completely saturated with water) rises above limits.

Several best practices relating to design overview, location selection, geo-membrane selection, geotechnical/hydrogeology investigations, deposition method: cyclone vs spigot, stormwater management, environmental management, stability analysis, digitalisation, closure planning and documentation were implemented right at the design stage of this project.



### OUTCOME

THIS HAS HELPED ENSURE THAT THE TMF IS STATE-OF-ART AND BUILT KEEPING IN MIND SAFETY AND ENVIRONMENTAL PROTECTION CONSIDERATIONS.



## **Water Management**



Water is a shared resource. While access to a steady water supply is critical for mining and smelting operations, it is an equally critical requirement for our host communities and the natural ecosystem and biodiversity of the area. The shared nature of this resource calls for all stakeholders to use it responsibly and Vedanta has taken several measures to reduce our consumption of water.

Our Group water policy administered through our water management standard is in place and our approach is to keep it as a core factor while making decisions, either for a new project or an existing one. Water-screening assessment to identify sensitive water resources, aquatic habitats and any known or suspected water resource constraints in proximity to each operation, is a must and has been conducted by all our businesses.

It ensures that our operations have built-in measures to evade, curtail, or where required, compensate its effect on water in their respective regions.

CII NATIONAL AWARD FOR EXCELLENCE IN WATER MANAGEMENT UNDER THE 'WATER MANAGEMENT WITHIN THE FENCE' CATEGORY AWARDED TO CAPTIVE POWER PLANT - ZAWAR & DARIBA SMELTING COMPLEX.



## I Water Risk Assessment

Last year, we had undertaken a water risk assessment exercise at 25 of our most significant business locations. This determined water risk based on water-stress information available in global and public databases, and in site-specific measurements. The approach evaluated physical, social/regulatory, economic and business risks related to water. In addition to understanding the water risk at each of these locations, our goal was to standardise our water risk assessment approach for Group companies.

Findings from the study made us understand that some of our operations in the high water-stress regions of India (Rajasthan, Punjab, Tamil Nadu) had a greater risk of shortages over a period than our businesses in other locations. This is because of the competitive pressures for water usage in those regions. Each of our businesses has begun to put in place appropriate mitigation measures to counter these risks.

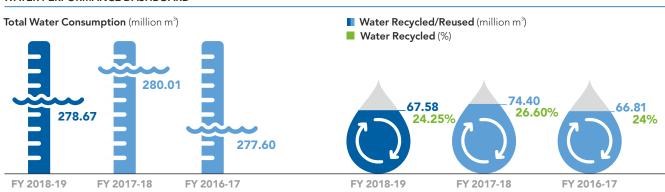
#### For instance,

- Sindesar Khurd Mines (SKM) has undertaken pond deepening in surrounding villages of Rajpura Dariba Complex (RDC), which will help increase the rainwater recharge for use in agriculture, drinking and other purposes
- Rampura Agucha Mines in Rajasthan and Nchanga mines in Zambia have initiated a project to recycle and reuse water from the tailings dam in their milling operations. This has resulted in a reduction of freshwater use by nearly a million cubic meters at each location
- Hindustan Zinc has entered into a Public-Private Partnership to install and treat 20,000 m³/day of municipal wastewater from the city of Udaipur. The water will be used for operations at Rajpura Dariba Complex and will replace a significant portion of the unit's freshwater.
- TSPL has taken several initiatives to fix water leaks, saving nearly 0.3 million cubic meters of water during the course of the year.
- The thermal power plant at Jharsuguda has augmented the capacity of its ETP, resulting in an additional 0.4 million cubic meters of water becoming available for use within the plant.

## COLLECTIVELY, WE HAVE SAVED OR PRESERVED OVER 3 MILLION m<sup>3</sup> OF WATER IN THE FISCAL YEAR, AGAINST OUR TARGET OF CONSERVING 4 MILLION m<sup>3</sup>.

To further support the better management of water, we have released a guidance note on water management allowing a uniform implementation of the performance standards.

#### WATER PERFORMANCE DASHBOARD







## Reusing Process Water for Cooling Hindustan Zinc, Rajasthan

We reduced the usage of 674 m³ freshwater annually by reusing the process water (2 m³ per day) from the Triple Distilled Water Unit (TDWU), which used to get drained earlier. TDWU is installed at the Central R&D Laboratory (CRDL) to provide distilled water for the analytical laboratory.

The process water used for cooling in TDWU resulted in drained outlet water, which is now being collected, and then pumped to an overhead water storage tank from where it is supplied to washing areas. Thus, freshwater used for washing in the analytical laboratory has been reduced.





## The road to improved water management | KCM

The Konkola mines of KCM have a 70-year legacy of discharging high-TDS water into the local river. The practice, which existed before KCM became part of the Vedanta group has been a sore point with local communities and has been a cause for environmental concern.

In 2017, KCM implemented a water management program to permanently bring the operations to zero water and zero tailings discharge. This program is supported by specialist consultants and has regulatory approval from the Zambia Environmental Management Agency (ZEMA). The program is being implemented under the guidance of local communities.



The program to address environmental concerns and bring KCM to a zero-discharge site includes:

- A Tailings Dam Water Recycling Project to recycle water back to the plant
- De-silting works at the Pollution Control Dam (PCD)
- De-silting works of other streams
- Installation of a catchment pond immediately downstream of the Tailings Leach Plant
- Installation of online monitoring equipment for discharge control
- Following remediation, a review and Environmental Impact Assessment of off-site areas to consider further remediation options
- Installation of solar powered community water boreholes including a water reticulation piping network for local communities to ensure a continuous supply of drinking water

As of FY 2019, progress has been made on several of these subprojects and we are confident that we will have a zero-discharge plant in the near future.

## **Air Quality and Emissions Control**



Clean air is essential for the health and well-being of everyone on the planet. At Vedanta, we are committed to manage and minimize emissions to air from the point, fugitive and mobile sources, as well as from process activities associated with combustion and materials storage.

We closely monitor the extent of any impact that our operations have on air quality and the effects and implications that this may have on employees, the communities local to our operations, and the broader environment. We are committed to using processes and technology that minimises any particulate release.

As part of our ambient air quality monitoring process, we monitor Suspended Particulate Matter (SPM), SOx and NOx. We also keep in check lead emissions in our zinc operations, fluoride emissions in our copper and aluminium operations, and Polycyclic Aromatic Hydrocarbons (PAHs) in our aluminium operations as per our Environmental Management Standard.

## ZINC INDIA HAS MADE A TRANSITION FROM OPEN CAST TO FULLY UNDERGROUND MINE REDUCING THE AIR EMISSIONS.



#### STACK EMISSIONS DASHBOARD in MT

Particulate Matter	10,106	8,837	11,056
SOx	243,474	191,751	178,324
NOx	67,413	56,853	44,935
	FY 2018-19	FY 2017-18	FY 2016-17





## **Biodiversity Management**

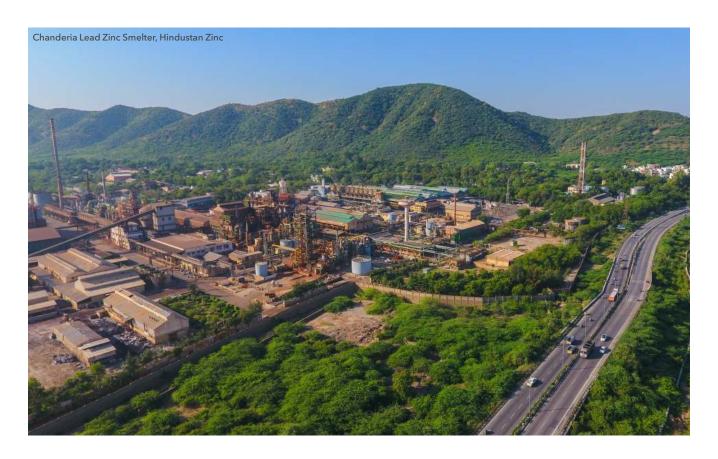


Biodiversity loss is an environmental risk because it is important to the security of common resources such as water, soil, and air quality. Critical human systems such as food supply and human health are impacted if societies suffer irreversible, large-scale biodiversity loss. As a result, it is a significant threat to long-term economic sustainability.

At Vedanta, biodiversity management has been made integral in all our projects across all three stages - the design phase, the operational phase and the post-closure phase. We strive to prevent any adverse impacts on biodiversity as a result of our operations. We manage and use land across the project life cycle in a way that ensures biodiversity conservation needs are integrated with the needs of the business.

WE HAVE A DEDICATED 'BIODIVERSITY POLICY AND MANAGEMENT STANDARD' IN LINE WITH INTERNATIONAL STANDARDS AND GUIDELINES OF INTERNATIONAL FINANCE CORPORATION (IFC).

It advises how disruption is to be avoided, minimised and compensated for, from project scoping to site closure and beyond. Our businesses seek consultation from domain experts in identifying biodiversity-related business risk and its management. This is an integral part of our commitment to sustainable development.



We also follow the International Council on Mining and Metals mitigation hierarchy - an internationally recognised approach designed to help limit, as far as possible, the impacts of development projects on biodiversity and ecosystem services.

Vedanta conducts environmental and social impact assessments for new projects or major expansions to understand the presence of critical biodiversity attributes before starting work. Sites that may have a significant impact on the biodiversity of an area must develop biodiversity management plans (BMPs) to mitigate that impact.

AS OF FY 2019, 100% OF OUR SITES HAVE RE-EVALUATED THEIR BMPS AND ARE IN THE PROCESS OF DEVELOPING PLANS TO MITIGATE THEIR IMPACTS.

#### CASE STUDY

## OPERATING IN A UNIQUELY FRAGILE BIOME

VEDANTA ZINC INTERNATIONAL, GAMSBERG

#### CHALLENGE

The Succulent Karoo Biome, where Vedanta Zinc International's (VZI) Gamsberg operations are located, is unique, even for a country such as South Africa, which is renowned for its floral diversity. Among the 36 global biodiversity hotspots, the biome is home to at least 6,000 species of plants that have evolved over millennia to survive the desert's aridity, many of them rare and, until our environmentalists began their documentation of the biodiversity of the region, some of which had been previously unrecorded.

#### ACTION

A central objective during the construction of the Gamsberg operations was to ensure that we do not damage the fragile site and build in a manner that allows for the area to be restored completely when mining ends.

VZI's environmental specialists worked closely with a wide range of experts, including those from the International Union for Conservation of Nature (IUCN) to design and implement a process to ensure the site's necessary protection, preservation and ultimate restoration.

We followed the mitigation hierarchy to:

- Avoid Found alternate locations for the waste pits, processing facilities, and access roads
- Minimize Fenced and demarcated sensitive areas, used HDPE lining in the tailings storage facility, and made provision to segregate waste rocks according to their leachability characteristics
- Remedy Translocated

   77,000

  plants to be used in the concurrent rehabilitation of the area
- Offset Identified ~40,000 hectares of land with similar topographical features to be used as an offset area to realize the No Net Loss objective of the project; this will be monitored by IUCN



### ОИТСОМЕ

## SOME 80,000 PLANTS AND 360,000 SEEDS WERE COLLECTED AND MOVED TO THE SPECIALISED FACILITIES OF THE KAROO DESERT NATIONAL BOTANICAL GARDEN.

The objective was that, once the mining ends and the area's surface is restored, these seeds can be replanted with the endemic species that were removed from the site, saved and protected. Areas that are particularly sensitive have been fenced off, while operations have been designed to limit and minimise any direct effects on the entire region. 15,000 hectares of land secured to undertake offset exercise.

Preserve, protect, restore and rehabilitate are the pillars, which should guide the environmental planning of any mining project - none more so than in the environmentally sensitive and fragile Northern Cape.



#### CASE STUDY

## GREENING THE DESERT AND SEQUESTERING CARBON

CAIRN OIL & GAS

### CHALLENGE

Cairn's RJ-ON-90/1 block situated in the Thar Desert is characterised among other things by extremes of temperature, low rainfall and sparse, drought-resistant vegetation. The challenge was to develop and maintain a green belt in the desert region.

### ACTION

To combat the vagaries of the desert climate, Cairn's greenbelt programme built its foundation on endemic farming knowledge and used the opportunity to develop the programme as a means of alternative livelihood generation activity for the local community. This approach resulted in the nurturing and regular maintenance of the saplings, ensuring a high survival rate.

Our efforts have resulted in more than

200,000
trees being planted over 210 hectares

Developed plantation having carbon sequestration potential of ~23,156

Cairn has also taken initiative for sand dune stabilisation in and around its facility with the help of planting local plant species.

Greenbelt and sand-dune stabilization at MPT, Cairn Oil & Gas

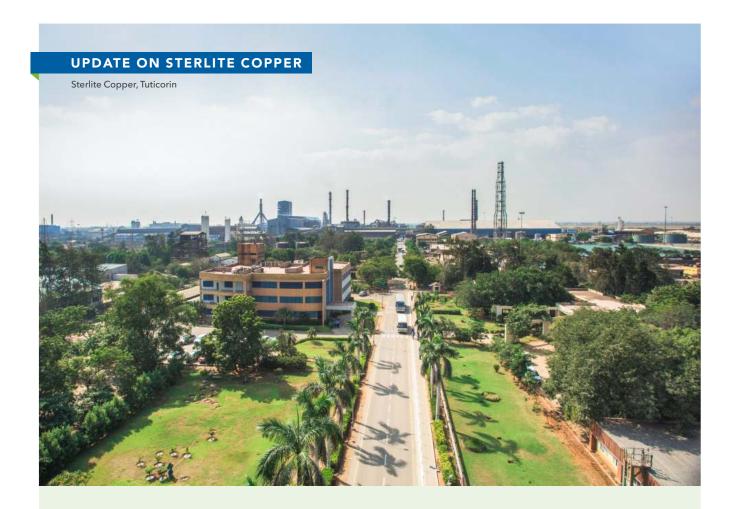


In the reporting period, we undertook a third-party assessment of the carbon stock of the plantations in the Rajasthan block. The assessment was conducted through extensive field surveys and spatial analysis in accordance with IPCC's Good Practice Guidance (GPG) for Land Use, Land-Use Change and Forestry (LULUCF). These guidelines are also adopted by the Forest Survey of India.

#### OUTCOME

In the assessment, the living portion of forest biomass carbon i.e. Above Ground Biomass (AGB) & Below Ground Biomass (BGB) and Soil organic matter has been included for Carbon stock assessment.

THE STUDY CONFIRMS THE CARBON SEQUESTRATION POTENTIAL OF CAIRN DEVELOPED PLANTATION IS ~23,156 TON OF CO<sub>2</sub>, WHICH IS CALCULATED BASED ON THE TOTAL CARBON STOCK STORED.



It was with great sorrow that we witnessed the tragic incidents around the protest at Tuticorin on 22 May 2018, in which 13 people were killed by police during a demonstration.

Protests were launched in early 2018 around the expansion of the plant, which would almost double capacity, and had been underway since December 2017. All required permissions had been received.

The company had received grievances from the local community around road and water issues. These were in the process of being addressed. The protestors made allegations concerning the environmental practices of the existing plant, which the company believes to be unfounded. The Supreme Court outcomes of the legal process confirm this.

Since the tragic events of May 2018 the company has intensified its efforts to engage with all stakeholders. The company has been working with the relevant authorities to ensure the safety of our employees, facilities and the surrounding communities.

This has taken a number of forms, including increased stakeholder engagement as well as training on issues such as human rights, security, emergency preparedness and crowd control.

We are currently awaiting the outcomes from legal processes that are underway through the State Courts to re-open this plant.

Comprehensive CSR and stakeholder outreach programmes continue.

### **Key Facts about Sterlite Copper:**

- Over \$74.5 million have been spent on measures that mitigate our environmental impact
- Pollution reduction & monitoring technologies include: Flue-gas desulphurisation units with bag filters, RO plants, Evaporators, Tail gas scrubbers, 3+2 stage converters, piezometric borewells, fence-line monitoring

- The plant has implemented zero liquid discharge since inception; all effluents are treated and recycled back into operations
- When operational, nearly 100% of  $SO_2$  was utilized to manufacture sulphuric acid.
- Sterlite's air emissions were monitored 24 hours a day through a CARE air monitoring station
- The cancer incidence rate at Tuticorin is much lower than the state average; no scientific evidence to back the allegations of health impacts from the plant
- Vedanta has continued to retain our full-time employees; more than 70% of the workforce is local and belongs to the state of Tamil Nadu

# **OUR PEOPLE**

The credit for Vedanta becoming one of the largest, diversified metals and mining companies in the world rests on the shoulders of our employees and business partners. As a Company, we have always prided ourselves on the way our employees take on tough challenges, and deliver. We have always displayed a result-oriented bent towards any task undertaken and have endeavoured to continuously expand the capacity of our workforce to align with business strategy. Safe, productive, and dynamic - that is how we would like to see our 88,000+ diverse workforce who are spread across multiple countries.





**1.53**million manhours of HSE training given to employees



23% of the new employees are women



<6% attrition rate 10% turnover rate



## **Management Approach**



Our key approach is to develop a unified culture that exemplifies our core values and nurtures safety, health and well-being, excellence, creativity and diversity. Our workforce propels our progress and it is our responsibility to keep them motivated. We achieve that by providing career growth and leadership opportunities across all levels, with an emphasis on promoting gender diversity across roles.

WE CONSTANTLY EVOLVE AT ALL PHASES OF THE TALENT MANAGEMENT CYCLE, FROM RECRUITMENT TO DEVELOPMENT, AND ENGAGEMENT TO RETENTION. THROUGH DIGITISATION AND USER-FRIENDLY TECHNOLOGY, WE CONTINUOUSLY UPGRADE AND INTRODUCE BEST-IN-CLASS PEOPLE PRACTICES.

#### THE MATERIAL ISSUES THAT MARK OUR PEOPLE PERFORMANCE ARE:





## Safety, Health and Well-Being Building a Culture of Care



## Safety Performance

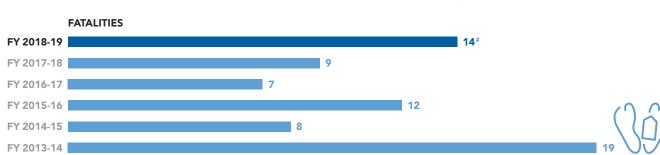
FY 2019 was a difficult year for the Group. We lost 14 colleagues in work-related accidents and we send our condolences to their families. This is the second year in a row when we have seen a rising trend in fatal accidents in the workplace. Nearly 70% of the fatalities occurred in risk areas covered by our safety standards.

This is a matter of significant concern for us, and the management has redoubled efforts that we had instituted in the previous year. While we have taken steps to further strengthen our monitoring of all critical risk areas, we recognise that additional efforts are required if we are to meet our commitment of 'zero harm'. Details on those efforts can be found below in the section 'Building a Culture of Care'.











## CAIRN OIL & GAS WAS BESTOWED WITH THE BRITISH SAFETY COUNCIL'S 5-STAR RATING.



## I Policies and Standards

A workplace that protects workers from harm and promotes worker health and well-being will enhance employee satisfaction, raise productivity, and ensure we attract and retain the best talent. With a comprehensive Group-level HSE policy, we seek to embed health and safety as a value across our operations.

This policy is supported by several management and technical standards that guide our workforce into implementing safe operations.

The Vedanta Sustainability Framework (VSF) puts significant emphasis on Safety & Occupational Health, and every member of the workforce is educated and encouraged to embrace safety wholeheartedly. The following standards support our HSE policy: Machinery guarding, Lock-out-tagout, Electrical isolation, Confined space entry, Work-at-height, Fleet management, Molten metals handling, Ground control, Cranes & scaffolding, and Pit, stockpile and waste dump stability.

OUR SAFETY STANDARDS PORTFOLIO HAS GRADUALLY EXPANDED TO INCORPORATE ADDITIONAL CRITICAL RISKS IDENTIFIED AS A RESULT OF OUR INCIDENT INVESTIGATIONS. TODAY, OUR BUSINESSES ADHERE TO TEN SAFETY STANDARDS DESIGNED TO PREVENT FATALITIES IN THE WORKPLACE.

## Training and Awareness Building

Over the last 24 months, we have made considerable efforts to ensure that our entire workforce has the correct training, so that their actions result in a safe workplace. The training includes programmes to help employees make better risk decisions, understand our safety standards, and share learnings and best practices across the organisation. Safety & Occupational Health is a mandatory module in our induction and refresher training programme.



OVER THE LAST YEAR, WE HAVE IMPARTED OVER

**1.46** MILLION
HOURS OF SAFETY TRAINING
TO OUR EMPLOYEES,
CONTRACT WORKERS AND

**BUSINESS PARTNERS.** 

**95%** OF THE HOURS WERE DEDICATED TO TRAINING OUR CONTRACT WORKERS AND BUSINESS PARTNERS.

## Monitoring, Evaluation and Leadership Accountability

Over the last five years, we have developed a robust methodology to monitor our efforts to improve safety performance. Our monitoring framework is well-established and encompasses checks across all levels of organisational hierarchy - from the shop-floor to the boardroom.

Job risk assessments, permit-to-work checks, toolbox talks, and weekly status checks are conducted at the asset and Business Unit level to ensure that safe work practices and learnings from previous incidents are being applied consistently. At the Group level, an extensive review of safety performance forms the opening discussion of the monthly Group ExCo review session.

The Group Risk Committee meeting has also identified HSE as a key risk area for the organisation and mitigative actions are evaluated by the Committee. The final review of our safety management systems takes place at the quarterly Board and Sustainability Committee meetings. Additionally, each asset undergoes an extensive audit conducted by an independent third party under the Vedanta Sustainability Assurance Program.

OUR BOARD LEVEL SUSTAINABILITY COMMITTEE, CHAIRED BY AN INDEPENDENT NON-EXECUTIVE, DIRECTOR OF THE BOARD, AND OUR EXECUTIVE COMMITTEE, CHAIRED BY OUR CEO, REGULARLY REVIEW OUR SAFETY PERFORMANCE AND SHARE RECOMMENDATIONS. BUSINESS CEOS AND HSE HEADS ARE ANSWERABLE FOR THEIR UNITS' SAFETY PERFORMANCE AT ALL GROUP-LEVEL BOARD AND EXCO MEETINGS.





## I Building a Culture of Care

We believe that safe workplaces are as much about having the right standards and engineering controls in place, as they are about ensuring that inattentive and uncontrolled high-risk personal behaviours are eliminated. Historically, much of our efforts have focussed on ensuring that we get the engineering and managerial controls in place. To help bridge the gap between management controls and personal behaviour, Vedanta has decided to adopt a culture of care, where each person on the shop-floor takes personal responsibility for the safe behaviours of their peers and their own actions. In this 'Culture of Care', the primary intent of every leader on every job is to keep people safe from harm.

Our leadership team has put their roles and responsibilities under a microscope and identified three key KPIs for safety as a competency metric that we will be focussing on, to enhance our safety performance. Each KPI will carry significant weight as part of our annual performance assessment.



### Visible and Felt Leadership

Leaders and support personnel to spend quality time in the field performing safety interactions and workplace hazard reviews. Each Strategic Business Unit (SBU) will set requirements using the guideline: SBU leaders through to front line leaders - 25%, and safety personnel - 80%



## Manage Safety Critical Tasks

Safety Critical Tasks are identified wherein a fatality has or could reasonably occur, and the critical controls and competencies are documented in SOPs and implemented every time



### Business Partners

Long-term business partners are treated as employees for a safety point-of-view, including competency assessment for Safety Critical Tasks. Short-term and project business partner safety is managed through the selection and deployment of suitable supervisors

In addition, we have appointed 'zone-wise' managers who are accountable for the overall safety of their areas. We have mandated that the managers should be chosen from inside the business; people who staff the shop-floor on a daily basis.

WE ARE COMMITTED TO STEM AND REVERSE THIS TREND, THROUGH VISIBLE FELT LEADERSHIP; VALIDATING THE EFFECTIVENESS OF CRITICAL RISK CONTROLS; AND BETTER ENGAGEMENT AND MANAGEMENT OF OUR BUSINESS PARTNERS.



## Project Chetna - Raising Safety Consciousness to Raise Safety Standards

The only way to improve the future is to learn from the past. With this in mind, we studied and analysed past incidents where we had witnessed lapses in safety. Our analysis revealed that these incidents could have been avoided if workers had been more aware about their surroundings and practiced safe behaviours.

BALCO launched 'Project Chetna' (Project Awareness) to coach, assist, and train the workforce in recognising warning signals, remaining focussed on the task, and applying known and safe 'last step' behaviours that can help prevent accidents.

The initiative has made it easier for the workforce to understand safe actions and behaviours



THE PROGRAMME HAS TRAINED OVER

1,600 EMPLOYEES

1,100 CONTRACT WORKERS

## CASE STUDY

## **DAILY 'VISUAL MANAGEMENT'**

## MAKING ISSUES VISIBLE

At the Lanjigarh refinery, the team has adopted a concept from the automotive industry. They now have a visual management system, with the idea of making key business processes visible.

This approach helps management teams to identify any bottlenecks that need to be resolved and eliminated in order to run a successful and safe refinery. A key part of this approach is to resolve problems and barriers in a structured manner.



#### All sections in the plant area are assigned boards that detail



Safety measures required



Focus areas for safety interactions



Places where housekeeping inspections will occur



High-risk tasks for the day and their corresponding control measures

The boards also cover all the actions being undertaken during the day, with a specific focus of identifying any unplanned activities and/or risks in the operational area that may impact the refinery. They also flag any maintenance activities that may need to be performed over the next 24 hours.

The final assessment involves identifying risks that the section may generate due to its activities at the 'one-week-out' stage, enabling advance planning to mitigate those risks.

This approach has allowed the plant managers to systematically identify and address risks to the plant and eliminate safety hazards.

The approach underlines the overall philosophy of the Group when it comes to running safe operations. While our safety performance standards outline the expectations and help set out guidelines to prepare standard operating procedures, it is practices such as these that are helping businesses implement safe working conditions.

Additional practices such as Visible Felt Leadership, improving the management of safety critical tasks, and increasing awareness, training, and accountability of our business partners will help the Group to deliver on its commitment of 'zero harm'.



## Industrial Hygiene Programme | Jharsuguda

At Vedanta Jharsuguda, we initiated a hazard identification and health risk assessment process. As part of the continual improvement of work areas, we completed our baseline exposure survey in 2017. The programme covered all occupational health hazards such as air borne contaminants, noise, vibration, heat stress and ergonomics. It made us aware of the degree of control we had over the hazards, and whether the maximum exposures were under the established Occupational Exposure Limits (OELs).

After the baseline study, the entire site was divided into three zones. Red Zone - where exposure is above OEL, Yellow Zone - where exposure is more than 50% of OEL, and Green Zone - where exposure is below OEL. During FY 2019, we focussed on the Red Zone areas and targeted 10% reduction of exposure by implementing engineering control measures, process changes and automation. In addition to this, we also reduced the duration of exposure to decrease the level of impact.



## Leadership Development, Talent Management and Employee Retention

In its third decade of operations, Vedanta continues to have aggressive growth and expansion plans. Over the last four years alone, we have averaged an annual spend of nearly USD 1 billion a year on capital expansion projects. These spends exclude the amount of money invested in plant upgradation and other efficiency activities. While monetary inflows drive these growth activities, it is the investment in our human capital that has seen us realise year-on-year growth of our operations.

People are at the heart of everything we do. We create an enabling environment to support them in pursuing their goals. We have incorporated several programmes that nurture internal talent and bring into our fold, global experts, who can drive this expansion in a safe and productive manner.



## I Hiring & Retaining the Right People

Mining great talent is key to the mining industry. Innovation, technology and ever-evolving mining landscape are having its an impact on the kind of people required. At Vedanta, we are abreast of the changes and focus on hiring employees for the future. Some of our recruitment practices include:

## Right Management in Place (RMIP)

To re-emphasise the Group's philosophy of empowering the SBUs, we have reviewed our existing Business and SBU structures, and followed a rigorous assessment process to ensure that we have the right talent in the right positions. The RMIP process also ensures that we have filled all the critical roles within our structures and any gaps in the management team are supported by strategic plans to fill vacancies.

Our approach to recruitment is focussed on hiring diverse, high-quality talent. We operate our businesses with global best practices and are benchmarked to global standards. Therefore, where needed, we also hire expats and specialists with global experience to manage such operations.

## ■ Vedanta Leadership Development Programme (VLDP)

VLDP is our flagship programme, which aims to build organisational capability through developing talent from premier management and technology institutes. It is a tailored programme, which focusses 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 in significant roles, job rotation, development opportunities, and the right mentoring to ensure these individuals get an in-depth knowledge of our operations and recognise their areas of interest for a suitable role. In FY2019, 55 VLDPs were on-boarded across our organisation.

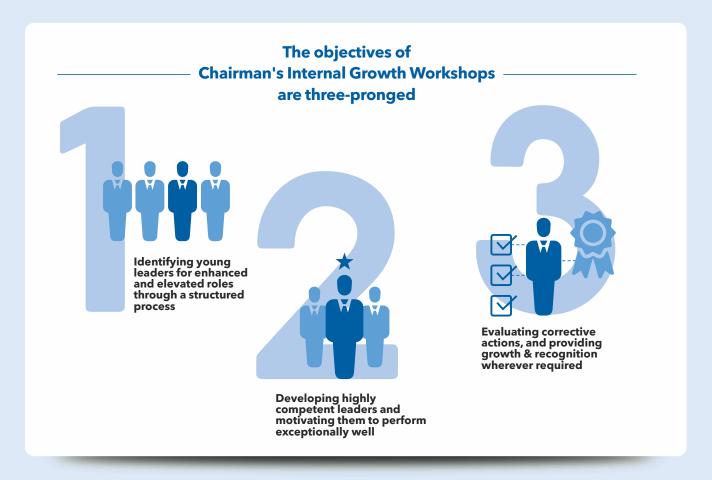
#### CASE STUDY

## PROMOTING 'LEADERS FROM WITHIN'

CHAIRMAN'S INTERNAL GROWTH WORKSHOPS

We have always aimed to be an organisation headed by 'Leaders from Within'. Recognising internal talent and promoting them to leadership roles has been a driving factor in our rapid growth. Aligned with this philosophy, the Group conducts 'Chairman's Internal Growth Workshops' to identify potential candidates across the Group.

These workshops have resulted in the identification of 600+ cross-functional high potential new leaders in the Group's businesses to date, who have taken up significantly enhanced roles and responsibilities.



Our Internal Growth Workshops have also enabled us to reduce our lateral hiring significantly for critical roles across the Group in past two years.

THROUGH THIS INITIATIVE WE HAVE CONDUCTED 120+ WORKSHOPS ACROSS KEY VERTICALS, SECTORS AND FUNCTIONS AND MET WITH

2,500 HIGH QUALITY PROFESSIONALS. THE SELECTED LEADERS HAVE BEEN IN KEY INITIATIVES / COUNCILS / EXCOS / HIGH IMPACT PROJECTS, ACROSS THE GROUP.

Diversity being one of our key focus areas, we have 25% women executives in this bench strength of new leaders, which is amongst the industry best. This is a young pool with average age of below 35 years and attrition less than 1%, who are driving strategic initiatives across the Group.

We recently conducted a study in liaison with an External Consulting Partner and it was found that more than 85% of these leaders are satisfied with the higher responsibility, exposure, support and motivation they are being provided, post taking up their new and elevated roles.

### CASE STUDY

## STICKING TOGETHER THROUGH TOUGH TIMES

The last 12-18 months have seen two of our units at Iron Ore Business, Goa and Sterlite Copper, Tuticorin - encounter a period of uncertainty because of extended closure of their operations. While we are actively working to restart these units, we realise the toll such closures can take on our workforce and their families. Our employees are the most valuable assets of our company and we have taken several steps to ensure that they are productively occupied.

At Sterlite Copper, we have used the closure as an opportunity for our full-time employees to have meaningful engagements with the local stakeholders. More than 500 employees have become a part of 10 stakeholder engagement teams whose task is to open channels of communication with stakeholder groups, understand their concerns, and access how the company's practices can be improved to better address their concerns.



THESE TEAMS, ON BEHALF OF THE COMPANY, ARE WORKING TO STRENGTHEN TRUST AMONG OUR STAKEHOLDERS WITH A COMMITMENT TO DEVELOP SOCIAL INFRASTRUCTURE PROJECTS IN THE NEIGHBORING COMMUNITY - SUCH AS BUILDING A SMART SCHOOL, LAUNCHING YOUTH DEVELOPMENT SCHEMES, BUILDING A WORLD-CLASS HOSPITAL, BUILDING A DESALINATION PLANT TO ADDRESS WATER-SHORTAGE IN THE REGION AND TO PROVIDE CLEAN DRINKING WATER TO THE COMMUNITIES LIVING AROUND OUR PLANT.

A team of employees has also been engaged in planning activities under multiple projects related to operational of the unit (including for health, safety and environment). These activities have allowed several of our junior employees to be a part of discussions and projects that they may not have the opportunity to participate in during the usual course of operations.

At our Iron Ore Business in Goa, many employees have been redeployed to other parts of the business at Iron Ore Karnataka and the Value-Added-Business. Several employees continue to be engaged in plant upkeep and maintenance activities - especially to ensure that the conditions do not deteriorate and become unsafe either for people, the environment or adjoining communities.

In addition to the steps taken to keep our employees engaged, timely, relevant and periodic communication with all our employees has resulted in our people retaining their trust with the organisation. We are hopeful to a restart of operations at both locations and look forward to a fully-productive workforce achieving their true potential.

## Workforce Snapshot



ъ.	Location	Full-time Employees		Contract Employees		Retainers		
Business		Male	Female	Male	Female	Male	Female	TOTAL
Aluminium	India	6,002	785	17,569	588	60	3	25,007
Copper	Australia	18	1	4	1	0	0	24
	India	903	126	1,029	20	5	1	2,084
	Zambia	5,476	664	5,272	692	58	65	12,227
Iron Ore & Steel	India	4,608	167	8,079	85	13	2	12,954
Oil & Gas	India	1,280	269	11,222	76	278	14	13,139
Power	India	72	17	1,345	37	2	0	1,473
Zinc,	India	3,798	373	13,351	116	25	3	17,666
Lead &	Namibia	504	79	149	895	4	5	1,636
Silver	South Africa	760	151	1,151	126	36	18	2,242
Others*	India	74	81	326	21	11	1	514
	UK	3	3	0	0	2	5	13
	TOTAL	23,498	2,716	59,348	2,806	494	117	88,979

 $<sup>\</sup>mbox{^{*}}$  Includes the port business and corporate office locations

## **I** Employee Training

Developing leaders from within has multiple advantages. For the employees, it ensures growth with stability. For the organisation, it facilitates a talent pipeline with the same imbibed culture. At Vedanta, we nurture and groom talent through a gamut of development programmes that include training, job rotations, additional projects and responsibilities, and mentoring programmes.

			man-hours
	Male	Female	
Full-time Employees (FTE)	338,537	47,573	
Average Training Hours for FTEs	14.41	17.52	
Contract Employees	551,667 (male + female)		
Average Training Hours for Contract Employees	8.87 (male + female)		





## I Communication & Feedback

People love to work for organisations that value their contributions, listen to their viewpoints and engage them meaningfully. At Vedanta, we endeavour to create an inclusive culture that rewards good performance, creates interactive platforms and generates good vibes.

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.

#### ■ 360° Feedback

At Vedanta, we promote growth and nurturing of our internal talent pool by encouraging internal dialogue between senior leaders and their young mentees and peers. For this reason, we have launched 360° feedback with 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. In FY2019, 100% of our leadership team were covered as part of this programme.

ATTRITION RATE FY 2019

5.86%





#### ■ V-Perform: One Performance System for One Vedanta

Our focus is to constantly improve the level of automation in all our operations. V-Perform is a pan-Vedanta initiative to standardise the 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.

To enhance our safety performance in the workplace and strengthen our existing Safety Management System, a safety competency assessment process was completed mid-year by all employees.

## Employee Stock Option Scheme (ESOS)

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

The scheme was launched after obtaining statutory approvals, including shareholders' approval in 2016. In 2018, 35% of the workforce participated in this scheme with a focus on our young and senior leaders, employees driving strategic projects and high-impact task force members. This scheme is applicable only for employees of Vedanta Limited.

WE FOSTER A
CULTURE OF SAFETY
AND SUSTAINABILITY
TO ACHIEVE OUR
ULTIMATE VISION OF
'ZERO HARM, ZERO
WASTE & ZERO
DISCHARGE'.



## A Holistic Approach to Better Contract Worker Management | Lanjigarh

A unique aspect of being the only operator in remote locations is that it gives the company an opportunity to undertake several nitiatives that improve the lives of our workforce. The Lanjigarh team has taken the lead in building-out these programmes, which are starting to yield results for the organisation. These include:

- A regular accommodation check of our contract workforce to ensure that their living conditions meet our stringent requirements. This quarterly exercise is jointly conducted by the HR, HSE and Commercial team, and is an important component of our contractor management programme.
- Behavioural training of unskilled workers; helping them understand the intricacies of team-work, work-ethics, and timeliness among other soft-skills. This activity-based learning programme has resulted in a decline in work stoppages and is conducted in collaboration with the contractor company. It supplements the existing induction programme.
- Rights-based induction training for contract workers, which highlights the importance of our safety protocols, familiarises them with Vedanta's values, policies and compliance regime. Most importantly, it introduces the workers to their labour rights and the grievance mechanisms in place to resolve their complaints and issues.
- A new programme Prevention of Sexual Harassment training for contract female and male workers; conducted by the legal department in the local language will help them seek recourse in case of instances of sexual harassment.

## **Diversity and Equal Opportunity**



We believe that equality is about ensuring everybody, irrespective of gender, nationality or any other background, has an equal opportunity and is not treated differently or discriminated against because 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.



DIVERSITY AND EQUAL OPPORTUNITY ENCOURAGE DIFFERENT IDEAS, INSPIRE CREATIVITY AND DRIVE INNOVATION. ADDED WITH CULTURAL SENSITIVITY, INSIGHT AND LOCAL KNOWLEDGE, THEY MAKE A BUSINESS MORE COMPETITIVE AND PROFITABLE.



## Women in Workforce

There is a direct correlation between greater gender diversity and higher productivity. We understand the importance of women in our workforce and have put in place several policies and procedures to increase female representation at work.



23%
OF NEW EMPLOYEES
ARE WOMEN

10.36%
WOMEN IN OUR
TOTAL WORKFORCE

12.5% WOMEN IN OUR BOARD

WE HAVE SET OURSELVES A TARGET TO REACH OVER 33% WOMEN AT SENIOR LEVELS BY 2020 AND AIM TO ACHIEVE 20% DIVERSITY AMONGST OUR EMPLOYEES.

Some of our women-oriented initiatives include:

## Tarang

This programme aims to improve the gender diversity in leadership roles through a structured intervention in our Iron Ore Business for women professionals across functions including Geology, Civil, Mining, Maintenance, Finance and others.

The individual development plans for the participants have been charted out based on psychometric assessment and career development plans, and further focus would be on building competencies in financial acumen, strategic thinking and leadership.

## **■ Progressive Policies**

Our parental leave policy includes 26 weeks of maternity leave, 12 weeks of adoption leave and 1 week of paternity leave. For returning mothers, we also provide the option to move into another job profile or continue with the same role, to manage both professional and personal priorities.

This liberal and flexible approach has enhanced productivity and retention, especially among our women employees. These policies increase their motivation and engagement, which then spreads across the workforce.

	Male	Female
Number of employees who have taken parental leave in FY2018	646	164
Number of employees who were in continuous service for the next 12 months after returning from parental leave	486	131
Retention* %	75.23%	79.87%

<sup>\*</sup>Retention % is calculated based on the number of employees who returned and were in continuous service for the next 12 months / number of people who went on parental leave.

#### **■ Women Across the Board**

Mining is traditionally a male-dominated sector, but Vedanta is among a few global natural resources companies that enjoy a healthy gender diversity ratio across all levels. With varied perspectives, women are providing a different set of solutions for the challenges we face, making us more responsive to future risks and opportunities.

Currently, we have one woman on our Board, which is something we are actively seeking to

change. Among our two principal listed subsidiaries in India, Vedanta Limited has two female directors representing 25% of the Board, and Hindustan Zinc Limited has three female directors representing 43% of the Board.

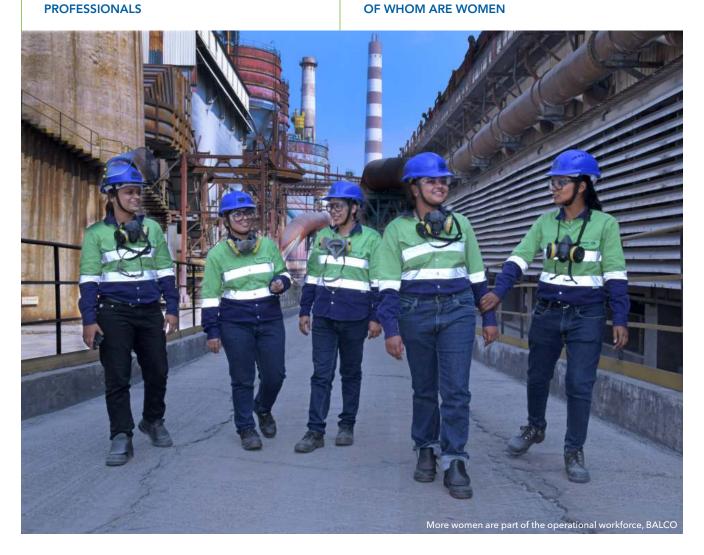
At the senior management level, we have 6.4% women on the Group Executive Committee. We have 14% female representation in aggregate on the executive committees of our businesses and 16.6% female representation on the subsidiary business unit executive committees.

We have placed internal recruitment targets to ensure equal gender representation. We continually focus on improving gender diversity across the group, across grades and management levels.

**29**OF OUR TOP LEADERSHIP POSITIONS ARE BEING HELD BY WOMEN

OVER 650 INDIVIDUALS WERE IDENTIFIED AT VEDANTA AS HIGH POTENTIAL,

25%



EVERY WOMAN IN THE WORKFORCE HAS CONTRIBUTED TO THE GROWTH OF OUR COMPANY AND WE ARE PROUD TO HAVE ARGUABLY, THE HIGHEST NUMBER OF WOMEN IN SENIOR MANAGEMENT BENCHMARKED AGAINST PEERS.

Anil Agarwal Chairman, Vedanta Resources



# SOCIETY

Retaining the trust of our host communities is central to our ability to do business. In many instances, we are the primary economic driver where we operate. This places us in a unique position to significantly impact the lives of local communities, whether as employers and business partners or through our community development interventions. We take this responsibly seriously and endeavor to fulfil our role in a manner that upholds the dignity of all our stakeholders and allows us to live up to our values.





us\$ **6.2** 

billion contributed to the exchequer



**US\$ 45** 

million spent on social investments and CSR activities



million lives improved through community projects







## **Management Approach**



We transcend beyond mere compliance, and seed real change by delving into developmental interventions. By creating long term value for host communities and countries, we are able to build trust while earning our social license to operate.

With a finger on the pulse of our communities, through our stakeholder engagement processes, that include baseline studies and needs assessments, we identify areas that would benefit from our interventions. We often work in tandem with community organisations and local government bodies to help develop strategies and carry out programmes.

We call this our 4Ps Model (Public-Private-People-Partnership), and it has helped us develop ambitious, long-term initiatives such as the Nandghar programme. To ensure the true success and longevity of a programme, we develop clear mandates for each initiative, so that it can eventually be handed over to the communities to manage on their own. This way they will be self-sufficient even after the closure of our business operations.

CAIRN OIL AND GAS WON THE CII-ITC SUSTAINABILITY AWARD AS COMMENDATION FOR SIGNIFICANT ACHIEVEMENT OF CSR ACTIVITIES.





We also rely on the Vedanta Sustainability Framework and its associated standards and policies. In areas with indigenous populations, we are committed to following the principles of Free, Prior, Informed Consent (FPIC). With its genesis in the UN Declarations of Rights of Indigenous Peoples, it has been adopted as a best practice by the IFC and ICMM.

Our CSR Council, led by a senior business leader, and including CSR Heads and CSR Executives from all business units, meets every month and reviews the performance, spends and outcome of CSR programmes across units. Governed by our inhouse CSR Policy and Sustainability Framework, the Council is responsible for governance, synergy and cross-learning across the Group CSR efforts.

The Board CSR Committee comprised of senior Independent Directors, apart from providing strategic direction for CSR activities, also approves its plans and budgets, and reviews progress of the initiatives.

#### THE MATERIAL ISSUES THAT MARKS OUR VALUE TO SOCIETY PERFORMANCE ARE:













## **Human Rights**



With most of our operations in developing nations, human rights are in the 'critical importance' of our materiality matrix. An integral part of Vedanta's core value of Respect, it is a crucial parameter in making key business decisions and acts as a guideline on issues pertaining to labour rights and industrial relations.

Our human rights policy is aligned to the 'United Nations Guiding Principles on Business and Human Rights' and includes strict prohibition on the use of child or forced labour - either directly or through contract vendors.

WE ADHERE TO ALL HUMAN RIGHTS REGULATIONS, IN LETTER AND SPIRIT, ENSURING THE PROTECTION OF FUNDAMENTAL RIGHTS OF ALL DIRECT AND INDIRECT EMPLOYEES AS WELL AS THOSE WHO ARE IN OUR CIRCLE OF INFLUENCE.

100%

OF OUR NEW HIRES RECEIVED

CODE OF CONDUCT

AND HUMAN RIGHTS TRAINING

93%
OF OUR SECURITY PERSONNEL UNDERWENT
HUMAN RIGHTS TRAINING



## Local Communities

The nature of our industry necessitates our presence in remote corners and diverse geographies. While operating in multiple locations and multicultural communities, we always respect the local people and their culture.



We have developed standards in alignment with international practices including ICMM guidelines and IFC standards to conserve and nurture the native heritage. We strictly abide by these well-articulated and communicated standards namely Cultural and Heritage Standard, Land & Resettlement Management Standard, Indigenous People and Vulnerable Tribal Groups Standard.

IN FY 2019, WE RECEIVED 240 FORMAL GRIEVANCES FROM LOCAL COMMUNITIES, OUT OF WHICH WE HAD RESOLVED/ CLOSED 223 GRIEVANCES AS OF 31<sup>ST</sup> MARCH 2019.

## I Direct and Indirect Workforce

At Vedanta, there is no differentiation in terms of respect, either for a direct or indirect employee. They all are a part of one, big Vedanta family and human rights of each of them are respected. Comprehensive systems, which include employee grievance processes, collective bargaining and contract labour management cells are in place at all our locations to protect their interests and partner in their progress.



## **■ Collective Bargaining**

The right to freedom of association is endorsed at all our operations. The 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 arrangement.

On average, 43% of our full-time employees at BALCO, HZL, KCM, Iron Ore Business, and Zinc International are covered by collective bargaining agreements.

### Supplier Diligence

As leaders in the natural resource industry, 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 legislation and follow our policies while executing work for or on our behalf.

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.

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.



#### Ensuring Right Age for The Right Job

The presence of child and forced / compulsory labour is a non-negotiable offence at Vedanta - be it direct or through a contractor. We strictly enforce this policy at all our operations. Further, we carry out periodic inspections of our remote mine locations and require proof of age for all contract workers. At some locations, we also use a fool-proof radiological age identification process to assess child labour violations.



## **Rights of Indigenous Peoples**



Earning the license to operate in local communities entails respecting their norms, culture and heritage. Illustrating our commitment to serve our host communities in a responsible manner, our Cultural Heritage, Land & Resettlement Management, and Indigenous People & Vulnerable Tribal Groups Standards, have been developed in alignment with international good practices, including ICMM and IFC standards, and are implemented across our businesses.



# Indigenous Peoples and Vulnerable Tribal Groups (IPs/ VTGs)

At Vedanta, we are very aware and conscious of the fact that we operate in remote regions, often inhabited by IPs and VTGs. Keeping this in mind, we have always made it a priority to respect and protect their rights.

Using the Vedanta Sustainability Framework, the Group's standards and guidance note on the subject was rolled out to support the implementation of our related technical standard. 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 for all stakeholders, especially the indigenous peoples and vulnerable tribes.

We have made special provisions for minorities and marginalised groups. To safeguard their rights and engage in a meaningful dialogue with them, we follow the principle of Good Faith Negotiation (GFN), Informed Consultation and Participation (ICP) and/or Free, Prior, Informed Consent (FPIC).

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 of IPs

## Land Acquisition and Resettlement

As part of our Risk Screening processes, we cover a wide range of sustainability issues that include land acquisition, resettlement, indigenous people (vulnerable groups), among other concerns.

This has led us to develop Vedanta's Cultural Heritage Land Acquisition and Resettlement Standards that includes a Guidance Note for all our operations to better understand the implementation process. We undertook no resettlement activities in FY 2019.

IN THE HISTORY OF OUR OPERATIONS, WE HAVE NEVER ENFORCED ANY INVOLUNTARY RESETTLEMENT ON ANY LOCAL COMMUNITY.

# **Local Hiring**

Our comprehensive engagement strategy with the communities includes creating opportunities for employment and local hiring, including senior management positions, and using the services of local vendors, while implementing focussed CSR and community development activities.

Collectively, these actions allow us to create a positive social impact leading to economic progress of the region.

Gainful employment in our business (directly or indirectly) is a key expectation from the populations of our host communities. We recruit employees from the local population, especially in operations that are in remote areas. Also, a significant percentage of our employees are recruited from the country in which our operations are located, creating jobs and boosting the local economy.

In FY 2019, most of the individuals hired at our operations were local to the business. These individuals bring in socio-cultural sensibilities in their management approach that helps the business thrive. Further, it also creates a direct economic and skills-based impact in the communities where we operate, which is crucial to our social license to operate.

#### Local new hires, across regions:















# **Community Engagement and Development**

As a diversified natural resources company, transforming elements is our core business but just as important is the impact our business can have in transforming lives.

While business goals are linked to higher economic growth, we believe it should never be at the cost of our host communities and the environment. Since our operations take us to some of the most remote regions of the world, we are in the unique position to engage with local communities at the grassroots level.

In alignment with the company's larger goal of creating long-term value for all stakeholders including our communities, we are able to develop comprehensive engagement and development strategies that highlight opportunities that can best benefit all involved. These strategies include



LISTENING TO THE **NEIGHBOURHOOD** COMMUNITY



HIRING **LOCALLY** 



**USING NEARBY VENDORS AND** THEIR SERVICES

**EXTRACTION, WE ARE ALSO ENGAGED** IN THE TRULY IMPORTANT SUSTAINABILITY WORK ACROSS THE **BOARD, THAT IS DESIGNED TO IMPROVE** IN A TANGIBLE WAY THE LIVES OF THE PEOPLE. PARTICULARLY WOMEN AND CHILDREN IN THE COMMUNITIES THAT HOST OUR OPERATIONS.

Srinivasan Venkatakrishnan CEO, Vedanta Resources

**BEYOND THE BUSINESS OF** 



#### IMPLEMENTING FOCUSSED CSR AND **COMMUNITY DEVELOPMENT ACTIVITIES**

All these actions enable us to create a positive social impact wherever we operate.



All our community development programs are governed by the Vedanta CSR Policy, and Corporate Technical Standards that are part of the Vedanta Sustainability Framework. Further, in order to benefit from diverse perspectives, and in keeping with a culture of collective leadership, Vedanta has formed a CSR Council. The council is led by a senior business leader comprises of CSR Heads & CSR executives from the different Business Units. The council is responsible for governance, synergy and cross-learning across the Group CSR efforts. It meets every month and reviews the performance, spends and outcome of CSR programmes for all Business Units. The council is instrumental in implementing improvement projects to create a seamless enabling eco-system for Business Units to carry out best-in-class community development programmes.



In FY 2019. Vedanta spent

on social investments and CSR activities. This is 15% more than the previous year's US\$ 39 million.

This money is spent across

villages, benefitting

million people.

nearly

project, BALCO



# Signature Programmes



Our flagship Nandghar programme, which has seen phenomenal growth and success since its inception, is a child and maternal health initiative designed to support the Indian Government's Child Development Services (ICDS).

At Nandghar, the traditional Anganwadi or rural childcare centre is reimagined as a state-ofthe-art, mother and child community hub, that not only provides crucial aid in the early stages of child's growth, but also provides women with a platform to learn new skills.

Our ambitious venture equips the Nandghars with rooftop solar panels for 24x7 electricity supply, water purifiers and clean lavatories, while addressing the nutritional and education needs of young children. With their hands free during the Nandghar hours, the mothers are given the opportunity to get trained in special skills that could aid in their economic upliftment.

IN FY 2019, WE OPERATIONALIZED OUR 500<sup>™</sup> NANDGHAR. WE FAR SURPASSED OUR GOAL OF CONSTRUCTING 250 NANDGHARS IN FY2019 -**BUILDING 358 AND TAKING THE TOTAL TO 502 OPERATIONAL CENTRES ACROSS THE STATES OF** RAJASTHAN, UTTAR PRADESH, AND MADHYA PRADESH.

This has directly impacted over 17,000 children benefitting from the preschool programme, while over 11,000 of them enjoy nutritious meals daily. Powering on, we intend to open as many as

**Nandghars** 

throughout the country which, alongside our Khushi initiative, will impact millions of children and women.





There is a great disparity in the quality and coverage of medical treatment in India. The majority of rural population lack basic primary healthcare and given that most of our operations are also in rural areas, enabling rural communities access to affordable and quality healthcare is important for us.

BALCO established the Vedanta Medical Research Foundation (VMRF), a completely voluntary, non-profit organisation invested in preventing, controlling and eradicating cancer and related illnesses. The state-of-the-art, tertiary care oncology facility in Naya Raipur, is VMRF's first flagship initiative and has some of the finest doctors, nurses, technicians and support staff.

Armed to perform highly complex and precise surgeries, the BALCO Medical Center is fitted with world class equipment including PET CT, SPECT CT, CT Scanners, MRI, a complete nuclear medical department and more, as well as operation theatres, ICU facilities, blood bank, pharmacy, kitchen and cafeteria. The hospital has also been designed keeping in mind the comfort and special needs of oncology patients, with private wards and bright & cheery facilities for children.



THE SUPER-SPECIALTY HOSPITAL HAS SO FAR SERVED OVER 4,000 PATIENTS, WITH MORE THAN 230 RADIATION THERAPIES, 250 SURGERIES AND OVER 1,000 CHEMOTHERAPIES PERFORMED. WE ESTIMATE THAT OVER THE NEXT TEN YEARS THE HOSPITAL WILL TREAT MORE THAN 500,000 PATIENTS.



At Vedanta, we believe sports is a great catalyst for building character while also benefitting one's health. In special cases, sports can also become a lucrative source of income. With that in mind, we actively promote and associate ourselves with spotting and training talented individuals in sports, especially football.

HZL'S FOOTBALL ACADEMY TRAINS NEARLY 2,000 CHILDREN IN THE 64 WORLD-CLASS, ZINC FOOTBALL SCHOOLS THEY HAVE ESTABLISHED, WHILE SESA FOOTBALL ACADEMY, GOA HAS 4 CENTRES THAT TRAIN 500 CHILDREN ON A WEEKLY BASIS.

Not only do these centres promote football, helping it reach the masses and build a culture for the sport, but they have also identified several skilled, young footballers helping them reach excellence through the state-of-the-art infrastructure. Standing testament to this are the seven footballers from SFA making it to the Indian National Team, while eight play in the elite, Indian Super League.

Adding another feather to our cap is the second edition of the 'Vedanta Women's Football League', which saw the participation of 160 female footballers, providing them with a platform to showcase their immense talents.



#### OUR COMMUNITY ENGAGEMENT AND DEVELOPMENT INITIATIVES PRIMARILY FALL UNDER THE FOLLOWING FOCUS AREAS:



CHILDREN'S WELL-BEING AND EDUCATION

**KEY FEATURES** 

More than

**50** initiatives across our group companies

Nearly

135,000

children benefit from these programs

#### **Types of interventions**

- Anganwadis and child-care centres
- Public school infrastructure support (including sanitation)
- Scholarships Teacher training
- Digital classrooms & Computer aided learning centers
   Libraries
- Vedanta-run Schools
- Exam preparation counselling
- Career counselling Science Fairs



#### **HEALTHCARE**

#### KEY FEATURES

More than

35 initiatives across our group companies

Nearly

# 1.6 million

people benefit from these programs

- Support to Primary Health Centres
- HIV/AIDS awareness programs
- Health camps Mobile Health Vans
- Specialist doctor support
- Nutrition programs
- Vedanta-run hospitals
- Health awareness drives



# DRINKING WATER & SANITATION

**KEY FEATURES** 

More than

25 initiatives
across our group companies

Nearly

350,000

people benefit from these programs

- Provision of drinking water
- Construction of toilets
- RO plant setup
- Digging of borewells
- Handpump repair/installation
- Sanitation drives





## WOMEN'S EMPOWERMENT

#### **KEY FEATURES**

More than

# 10 initiatives across our group companies

More than

35,000

women benefit from these programs

More than

2,400 shgs 120+ microenterprises

#### **Types of interventions**

- Self Help Groups
- Women's co-operatives
- Micro-enterprises



# COMMUNITY INFRASTRUCTURE

#### **KEY FEATURES**

More than

25 initiatives across our group companies

More than

200,000

persons and 3,000+ families benefit from these programs

- Tube-wells/Open-wells/Borewells
- Check-dams Roads Parks
- Public education infrastructure
- Community centres Health centres
- Village walls & gates
- Renovation of sports complexes
- Temples Irrigation channels
- Drains Bus stands Street lights
- Ponds Public CCTV installations



#### **SKILLING YOUTH**

**KEY FEATURES** 

More than

12 initiatives
across our group companies

More than

4,000 youth trained

#### Types of interventions

- Sewing centres
- Vocational training centres
- Technical & computer literacy programs
- Traditional crafts and painting training



#### AGRICULTURE & ANIMAL HUSBANDRY

**KEY FEATURES** 

More than

30 initiatives
across our group companies

More than

30,000
farmers benefitted

- Climate change adaptation
- Wadi-based agriculture
- Water-shed rejuvenation
- Agriculture-based natural resource management
- Dairy & Livestock development
- Farmer training Self Help Groups
- Co-operatives Veterinary care
- Irrigation channel maintenance



#### **SPORTS & CULTURE**

#### **KEY FEATURES**

More than

# **20** initiatives

across our group companies

More than

enthusiasts benefitted

#### **Types of interventions**

- Rural sports
- Sponsorship for: para-athletes
- Marathons Sports tournaments
- Music festivals
- Football and archery training academies



# ENVIRONMENTAL PROTECTION & RESTORATION

#### **KEY FEATURES**

More than

# 100,000 saplings planted and

under maintenance

- Sapling plantation & greenbelt management
- Water conservation structures
- Pond desilting

#### CASE STUDY

# CLEAN DRINKING WATER FOR COMMUNITIES

ксм

#### CHALLENGE

Water quality has been a lingering issue in the Chingola region. Most of the people in rural parts of Chingola get their drinking water from unprotected wells, which no longer carry potable water. This causes health issues like diarrhoea especially among the children.

#### **ACTION**

KCM has implemented a project aimed at bringing clean water to more than 8,000 inhabitants in five peri-urban areas of Chingola to support national efforts of maintaining high health standards in communities. The water facilities comprise of boreholes, purification plants and 21 water distribution points aimed at alleviating problems of water in the areas and improving sanitation and hygiene. The water from the facilities meets World Health Organisation (WHO) standards and has been certified fit for drinking by the Zambia Bureau of Standards (ZABS). The project is modelled on shared use of water facilities and the company has partnered with the government in this for promoting community development.



#### OUTCOME

Positive impacts that result from the availability of clean drinking water are immediately evident in the local healthcare facilities. The nurse in charge of Kalilo Health Centre says that there is a inundation of people seeking health services, especially pregnant women. In her words,

"WOMEN WERE NOT COMING TO GIVE BIRTH HERE BECAUSE OF THE REQUIREMENT TO BRING WITH THEM CLEAN WATER. BUT SUDDENLY WE HAVE SEEN NUMBERS INCREASE FROM SEVEN WOMEN TO AN AVERAGE OF 27 IN A MONTH. ALL THIS IS ATTRIBUTED TO THE AVAILABILITY OF THE CLEAN WATER PROVIDED BY KCM. THE WATER BOREHOLE HAS HAD AN OVERWHELMINGLY POSITIVE IMPACT ON OUR OPERATIONS AT THE CLINIC."

The water facility has also been extended to a local school in Shimulala area. This has helped the students to access water within the school premises and has improved pupil retention especially girl students.

Not only has the project been of tremendous benefit to the communities, but it has also helped build trust between the company and the local community, significantly improving our social license to operate.





#### **Keeping Traditions Alive | Lanjigarh**

Lanjigarh, Odisha is home to the tribal art forms of Saura and Dhokra.

AS PART OF OUR MANY INITIATIVES TO ENGAGE WITH OUR HOST COMMUNITIES AND HELP CONTRIBUTE TO THE BETTERMENT OF THEIR LIVES, OUR TEAM FOCUSSED ON NURTURING THE TALENTS OF TRIBAL ARTISANS WITH THE AIM TO MAINSTREAM THEIR ARTWORK IN TODAY'S WORLD.

Thus, the Aajeevika Initiative by Vedanta was born. As a part of the process we were able to organise exhibitions, while also arranging credentials for the artisans to be able to exhibit their work at various other exhibitions, folk art fairs and marketplaces.

This has gradually helped them gain confidence and believe that earning a livelihood, or aajeevika, through their art is possible.

A direct, positive consequence of this is evident in the number of families that had migrated in search of employment, have returned to

carry forward their community's artistic legacy, giving them dignity that they could have lost for a job as a migrant.

Bolstered by the success of our endeavours, we have also established a Tribal Painting Training Academy, equipped with tools and facilities to train young girls from the community to harness their skills and earn a livelihood through their talent. As part of the mainstreaming process, the initiative also seeks to support the girls by giving them the right exposure to various marketing platforms that reach national and international customers.

BY REVIVING THESE TRADITIONAL AND SOON TO BE LOST ART FORMS, WE HAVE ENABLED MANY LOCAL ARTISANS AND BUDDING FEMALE ARTISTS TO EXPLORE THEIR INHERENT SKILLS AND CHANNELISE THEM TO DEVELOP A SOURCE OF SUSTENANCE.

Rakesh Mohan COO, Vedanta Limited, Lanjigarh

# **Broader Economic Benefit to Host Country**

Our operations are primarily located in the developing economies of India and Africa, and we strongly believe that we have an important role to play in developing our host communities and countries, enabling them to partake in the value we create.

With a business model of growth, constant value creation, and improved operations, our vision is focussed towards building the wealth of our shareholders in a sustainable manner while minimising the effect of our operations on the environment and maximising the benefits for the local communities.

WE HAVE TRIFURCATED OUR APPROACH TO VALUE CREATION:



ADD VALUE TO THE
COUNTRIES' EXCHEQUER BY
UNLOCKING THEIR NATURAL
RESOURCES AND PAYING
TAXES & ROYALTIES FOR
OUR OPERATIONS

ENHANCE VALUE TO OUR
ASSETS BY INNOVATIVE
AND ADVANCED
PROCESSES THAT HELP US
BE MORE PRODUCTIVE
AND COMPETITIVE



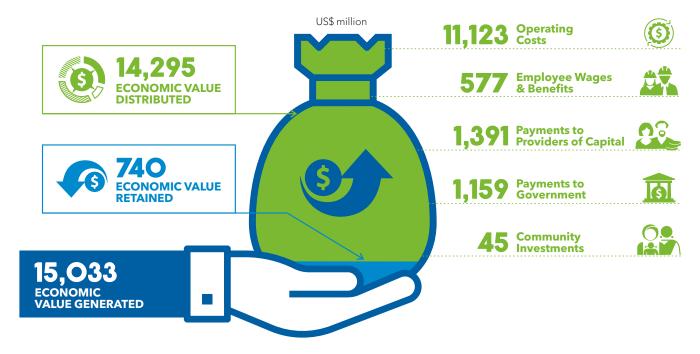
SEED VALUE ACROSS THE WORKFORCE AND THE COMMUNITY THROUGH EXTENSIVE TRAINING, AND LONG-TERM PROJECTS AND PROGRAMMES THAT ACCELERATE DEVELOPMENT AND ENSURE EQUITABLE GROWTH

THE COMMODITIES THAT WE PRODUCE AND THE ENERGY THAT WE GENERATE CONSTITUTE THE BUILDING BLOCKS OF THE MODERN WORLD. HOWEVER, THE VALUE WE CREATE IS NOT LIMITED TO THESE OUTPUTS BUT EXTENDS ACROSS SOCIETY IN A MEANINGFUL AND EFFECTIVE MANNER.

## Economic Value Generated and Distributed

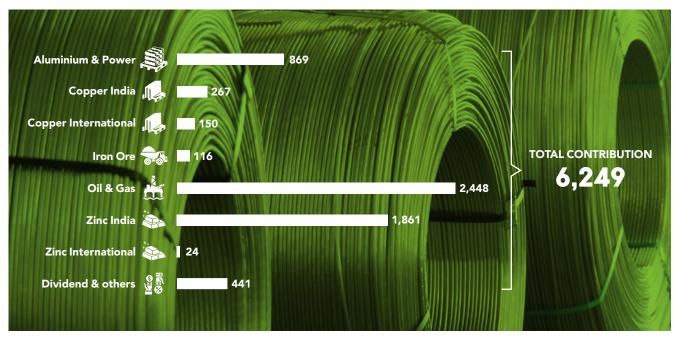
We are committed to giving back to the stakeholders who play a vital role in powering our growth. Reducing the social and economic divide by adding value to the economy, distributing wealth, creating direct and indirect employment, contributing to the exchequer, investing in employees and empowering the local community through our community development initiatives are all key elements of our sustainability framework.

Further, our operations also help to provide the products these communities need to further their development, for example, through infrastructure and housing.



# I Other Indicators of Economic Performance

Business-wise breakup of exchequer contribution (US\$ millions)





# Responsible Supply Chain Management



Supply chains are critical links that connect an organisation's inputs to its outputs. At Vedanta, we have an established Supplier Code of Conduct, Supplier and Contractor Management Policies and Supplier Screening Checklists that encourage business partners and suppliers to adopt principles and practices comparable to our own.

A significant portion of our newly enrolled suppliers are evaluated for social criteria before they are on-boarded. These criteria include and evaluation of their: employment, labour, occupational health and safety, training and education, diversity and equal opportunity, non-discrimination, freedom of association, prevention of child, forced and slave labour, security, and other human rights practices.

The nature of our industry stipulates our presence in remote areas, where we support local suppliers to boost local economy and mitigate carbon footprint. We engage with them to help them understand their role and responsibility towards the environment, safety, and human rights. We also support them to match up to international standards on all key aspects.

# I UK's Modern Slavery Act 2015 (MSA)

One of our 'high importance' material issues is our 'Disclosure on Slavery and Human Trafficking'. We work in accordance with the UK's Modern Slavery Act 2015 and have updated our Supplier Code of Conduct & Contract Conditions, and our Code of Business Conduct & Ethics to ensure the prevention of modern slavery and human trafficking in our operations and supply chain.

WE HAVE ALSO INTRODUCED THE MSA FRAMEWORK AT ALL OUR BUSINESS UNITS. UNDER THIS FRAMEWORK, WE HAVE A SYSTEM IN PLACE FOR TRAINING OF VENDORS/SUPPLIERS, DUE-DILIGENCE AND SELF-DECLARATION. WE PERIODICALLY UNDERTAKE INTERNAL AS WELL AS EXTERNAL AUDITS, TO ENSURE RIGOROUS ADHERENCE TO THE FRAMEWORK BY ALL BUSINESS UNITS.



Implementation of the compliance framework for MSA rests with the commercial teams at each BU. They have been given the responsibility to ensure that all our vendors meet the stringent requirements of the Act. Our businesses continued to cascade adherence to the act across the supply chain.

# **Awards and Accolades**





Our group companies received more than 100 awards in the sustainability, HSE, CSR and HR categories.

We present a few select awards below:

## Sustainability Development & CSR



#### **Bharat Aluminium Company Ltd.**

Won ET 2 good 4 good awarded by ET and KPMG

Won **Leaders Award** - Mega Large Business, Metals sector at the Frost & Sullivan and TERI Sustainability 4.0 Awards



#### Cairn Oil & Gas

Won Skoch Bronze Award - Order of Merit

Won **CII-ITC Sustainability Award** as commendation for significant achievement of CSR activities

Won FICCI CSR Award for WASH



#### **Hindustan Zinc Limited**

Ranked 5<sup>th</sup> globally in Metals & Mining category and 1<sup>st</sup> globally in Environmental Dimensions for Metals & Mining industry by Dow Jones Sustainability Index

Won Sustainable Business of the Year Award & Sustainability Disclosure Leadership Award, awarded by World Sustainability Congress

Won 'Corporate Excellence Outstanding Accomplishment', Corporate Social Responsibility - 'Commendation for Significant Achievement' award from CII

Dariba Smelting Complex won **Excellence Award - Environment Management** from CII

Awarded Index Constituent of Emerging Index 2018 by FTSE

Recognised as the **Best Organisation working for empowering persons with disabilities** by Government of Rajasthan, Ministry of Social Justice & Empowerment

**Inducted into Hall of Fame** by ET Now for various community development initiatives and best practices

Won Significant Achievement Award in CSR awarded by CII

Awarded Skoch Order of Merit for Khushi Anganwadi programme



#### Vedanta Aluminium Ltd. Jharsuguda

Won **Gold Award in Metal and Mining category** at the  $6^{th}$  Annual Greentech Award for outstanding CSR achievements









#### **Environment**

#### Cairn Oil & Gas

Won Most Innovative Project - Climate Change & Mitigation; Natural Gas Recovery - Zero flaring during frac well milling operation awarded by CII (Greenco Summit)

Won CII Environmental Best Practices Award for zero technical flaring during milling operation

Won **Skoch Award** - Order of Merit for zero flaring during milling operation

#### **Hindustan Zinc Limited**

Chanderiya Smelting Complex won Gold Award, awarded by SEEM National Energy Management Awards

Won Innovative Environmental Project awarded by CII (Greenco Summit)

Dariba Smelting Complex won CII-ITC Excellence Award -**Environment Management** 

Rampura Agucha received Project Development Innovation of the Year for 22 MW Agucha solar project at the 9th annual edition of Re-Assets India conference

#### Vedanta Aluminium Ltd. Jharsuguda

Received SEEM National Energy Management award and recognised for energy efficiency by SEEM India; CPP 1215 MW received Silver in Industries and Facilities category

Won Energy Efficient Unit award by CII

Won India Green Manufacturing Challenge award in Silver category, awarded by International Research Institute for Manufacturing

#### **Human Resources**



#### Vedanta Aluminium Ltd. Jharsuguda

Won Best Employer Award for Commitment to Engagement at AON Best Employers Indian 2018 Learning Conference and Award ceremony

Won the CII award in Employee Relations and Employee Engagement, Management of Change and Excellence (1st runner-up), and Performance Management, Training and Development (2<sup>nd</sup> runner-up)

Won the National Best Employer Brands 2018 for path-breaking HR practices and exemplary use of marketing communication at the at the 13th Employer Branding Awards

#### Health & Safety



#### **Bharat Aluminium Company Ltd.**

Won CII Chhattisgarh SHE Awards for excellence in Safety, Health & Environment



#### Cairn Oil & Gas

Rajasthan Gas Operations received Sword of Honour from **British Safety Council** 

MBA and RJ Gas received British Safety Council five-star certification

Received 5S Certification for RGT from Quality Circle Forum of India

Won Platinum Award at 7th FICCI Safety Systems Excellence Award under Mining sector, large scale category

Won 1<sup>st</sup> prize in First Aid and Firefighting competition at 32<sup>nd</sup> Mines Safety Week awarded by DGMS

Received CII SR four-star rating for HSE excellence

Received 55 Workplace Management Award for Viramgam and Radhanpur Terminal by QCI

#### Hindustan Zinc Limited

Chanderiya Lead and Zinc Smelter won safety excellence award at Frost & Sullivan TERI Sustainability 4.0 Awards

#### Vedanta Aluminium Ltd. Jharsuguda

Won award for Longest Accident Free Period from Hon'ble Minister of Labour, ESI and Energy, Government of Odisha

Bagged 37 gold awards and 100 silver awards at the 26th Chapter Convention of Quality Concepts, Rourkela

Two teams from CPP 1215 MW awarded gold in LQC and Kaizen category at the 43<sup>rd</sup> International Convention on Quality Control Circles, Singapore

Won 12 awards in Par Excellence and 14 awards in Excellence categories at the 32<sup>nd</sup> National Convention on Quality Concepts

Received International JUSE Certification in 5S from Union of Japanese scientists and engineers at the 32<sup>nd</sup> NCQC

# **About this Report**



This is our 11<sup>th</sup> Sustainable Development Report and along with our Annual Report provides an overview of our approach and our achievements in FY 2019, outlining our actions over the past year to achieve our mission to be a world-class diversified natural resource company.

# I Reporting Scope and Boundary

Covering the financial year 2019, the report is structured around the material issues identified in the materiality matrix and divided under Governance, Environment, Our People and Creating Value for Society.

All group subsidiary companies have been reported in full as though they were 100% wholly owned as we recognise the level of control and sphere of influence the Group has over these operations.

The aspect boundaries and content of this Sustainable Development Report have been defined using reporting principles prescribed in the GRI Sustainability Reporting Standards (GRI Standards) of the Global Reporting Initiative. We followed the approach described in GRI implementation manual for designing the report content. The material aspects that have been covered in the report are clearly brought out in the materiality matrix. In the report, the DMA (Disclosure on Management Approach) describes the Company's approach to the subjects relevant to it and the indicators provide details on performance on the specific subjects.

We have restated the following numbers:

- 201-1 (FY2017 numbers): Economic Value Generated, Economic Value Distributed (Operating Costs, Employee Wages and Benefits, Payments to providers of Capital, Payments to Government), Economic Value Retained
- 302-1 (FY2018 numbers): Zinc India, Total Energy
- 303-1 (FY2018 numbers): Deducting Port Business numbers from Iron Ore Business and reporting it separately,
- 306-2 (FY2018 numbers): Non-Hazardous Waste (Generated) Zinc India, Non-Hazardous Waste (Generated) Total, Non-Hazardous Waste (Recycled) Total
- OG5 (FY2018, FY2017 numbers): Produced water reinjected

No significant changes in terms of acquisition and physical boundaries from the previous reporting periods in the scope and aspect boundaries.

The report is also mapped to the United Nations Global Compact (UNGC) and United Nations Sustainable Development Goals (UN SDGs). It reports our approach and disclosure towards triple bottom line principles - people, planet and profit over the financial year 2019.

## I GRI Standards Content and Disclosure Document

The GRI Standards detailed content index and Vedanta GRI Standards Disclosure Document FY 2019 includes additional indicators including the Mining and Metal and Oil and Gas supplements.

# **I** Assurance and Disclosure

Assurance of this report was carried out by KPMG under 'limited assurance' services in accordance with the ISAE 3000. There is an internal approval system in the Company for appointment of external assurance provider for the sustainability report.

# **External Indices**



# I United Nations Global Compact

We continue to uphold the ten principles of the UNGC. Our Sustainable Development report communicates our progress in implementing the ten principles, and below we have mapped the principles against our various sustainability aspects and specific report sections.

Aspect	UNGC Principle	Report Reference	Page No.
Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights	Human Rights	65,66
	Principle 2: Make sure that they are not complicit in human rights abuses	Human Rights	65-69
Labour Rights	Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	Human Rights	68
Child and	Principle 4: The elimination of all forms of forced and compulsory labour	Human Rights	68
Forced Labour	Principle 5: The effective abolition of child labour	Human Rights	68
	Principle 6: The elimination of discrimination in respect of employment and occupation	Employees	99
Environment	Principle 7: Business should support a precautionary approach to environmental challenges	Environment	90
	Principle 8: Undertake initiatives to promote greater environmental sustainability	Environment	25-45
	Principle 9: Encourage the development and diffusion of environmentally friendly technologies	Environment	30,32,33,35,38
Anti- Corruption	Principle 10: Business should work against corruption in all its forms, including extortion and bribery	Governance	21

# I United Nations Sustainable Development Goals (UN SDGs)

In September 2015, the UN member states agreed on a set of 17 Sustainable Development Goals (SDGs), to end poverty, fight inequality and injustice, and tackle climate change by 2030. Given below is our SDG priority list which states our endeavours that align with the said goals.

SDGs		Corresponding Sections	Page No.
SDG1	Poverty	Community Engagement and Development	77,78
SDG2	Hunger	Community Engagement and Development	72,78
SDG3	Good Health and Well-being	Safety, Health and Well-being Community Engagement and Development	55 73,75
SDG4	Quality Education	Community Engagement and Development	72,75,78
SDG5	Gender Equality	Employee, Community	
SDG6	Clean Water and Sanitation	Community Engagement and Development	76
SDG7	Affordable and Clean Energy	Green Energy	33
SDG8	Decent Work and Economic Growth	Our People	47-62
SDG9	Industry, Innovation and Infrastructure	Executive Statements	7-10
SDG10	Diversity and Equal Opportunity	Employees	60-62
SDG12	Responsible Consumption and Production	Environment	25-46
SDG13	Climate Action	Environment	28-36
SDG15	Life on Land	Biodiversity Management	43-45
SDG16	Peace, Justice and Strong Institutions	Governance Our People	21, 18 60
SDG17	Partnership for the Goals	Limited role for corporate entities (Annual Report Fy2019)	

# **Assurance Statement**





#### **KPMG** (Registered)

Building No. 10, 4th Floor, Tower-C DLF Cyber City, Phase-II, Gurugram - 122 002 (India) Tel.: +91 124 307 9000 Fax: +91 124 336 9001 www.kpmg.com/in

# INDEPENDENT LIMITED ASSURANCE STATEMENT TO VEDANTA RESOURCES LIMITED ON THEIR CORPORATE SUSTAINABILITY REPORT FOR FY 2018-19

#### To the management of Vedanta Resources Limited

KPMG in India (KPMG) was engaged by Vedanta Resources Limited ('the Company' or 'Vedanta') to provide an independent assurance on its Sustainability Report for FY 2018-19 ('the Report'). The Report is prepared by the Company 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 the Company. KPMG's responsibility is to provide limited assurance on the Report content as described in the scope of assurance.

#### REPORTING CRITERIA

Vedanta applies its sustainability performance reporting criteria based on Sustainability Reporting Standards of Global Reporting Initiative (GRI Standards) including the Mining and Metals and Oil & Gas Sector Disclosures, National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business (NVG) framed by the Ministry of Corporate Affairs (MCA), Government of India, United Nations Global Compact (UNGC) principles, International Council on Mining and Metals (ICMM) and Sustainable Development Goal frameworks for the Company as detailed in the 'Scope, Boundary and Limitations'.

#### **ASSURANCE STANDARDS USED**

We conducted limited assurance in accordance with the 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.

#### SCOPE, BOUNDARY AND LIMITATIONS OF ASSURANCE

The Assurance has been provided for selected sustainability performance disclosures presented by Vedanta in its Report. The reporting boundary included data and information for the period 01 April 2018 to 31 March 2019 for India and Global operations, 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 and Corporate offices in Gurgaon and Idaiour:

- Vedanta Limited (Jharsuguda Smelter & Power Plants, Odisha)
- Vedanta Limited (Sterlite Copper Ltd., Silvassa)
- Vedanta Limited (Sesa Goa Iron Ore, Amona, Goa)
- Konkola Copper Mines plc,(Konkola + Nchanga) Zambia
- Vedanta Limited (Cairn Oil & Gas Mangala Bhagyam, Aishwariya Field, Rajasthan)
- Hindustan Zinc Limited (Chanderiva Lead and Zinc Smelters, Rajasthan)
- **Hindustan Zinc Limited** (Debari Zinc Smelter, Rajasthan)
- Hindustan Zinc Limited (Pantnagar Metal Plant, Uttarakhand)
- **Hindustan Zinc Limited** (Rampura Agucha Mines, Rajasthan)
- Hindustan Zinc Limited (Zawar Mines and Power Plant, Rajasthan)
- Vedanta Limited (Corporate Office, Gurgaon, Haryana)

- BALCO (Korba Smelter & Power Plants, Chhattisgarh)
- Vedanta Limited (Vedanta Aluminium, Lanjigarh, Odisha)
- TSPL (Talwandi Sabo Power Plant, Mansa, Punjab)
- Vedanta Zinc International (Black Mountain Mining, South Africa)
- Vedanta Limited (Cairn Oil & Gas Suvali, Gujarat)
- **Hindustan Zinc Limited** (Dariba Smelting Complex, Rajasthan)
- Hindustan Zinc Limited (Kayad Mines, Rajasthan)
- Hindustan Zinc Limited (Rajpura Dariba Mines, Rajasthan)
- Hindustan Zinc Limited (Sindesar Khurd Mines, Rajasthan)
- Hindustan Zinc Limited (Corporate Office, Udaipur, Rajasthan)

The assurance scope excludes:

• Data and information outside the defined reporting period and boundary; • The Company's financial performance; • The Company's compliance to legal obligations/disclosures; • The Company's statements that describe expression of opinion, belief, aspiration, expectation, aim or future intention and assertions related to Intellectual Property Rights; and • Aspects of the report other than those mentioned below

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

#### **Universal Standard Disclosures**

General Disclosures • Organizational Profile (102-7 to 102-11) • Strategy (102-14) • Ethics and Integrity (102-16) • Governance (102-18)

• Stakeholder Engagement (102-40 to 102-44) • Reporting Practice (102-45 to 102-56)

Management Approach • Disclosure on Management Approach (103-1)

 $<sup>^{1}</sup> Disclosures on \textit{ManagementApproach were verified for select topic specific disclosures as per the given table}$ 



#### **Topic Specific Standard Disclosures**

Environment • Energy (302-1, 302-3, 302-4, OG3) • Water (303-1, 303-3) • Biodiversity (304-1)

• Emissions (305-1, 305-2, 305-4, 305-7) • Effluents and Waste (306-1, 306-2, OG5, OG7, Mm3)

Social • Employment (401-1, 401-2, 401-3) • Occupational Health and Safety (403-2) • Training and Education (404-1, 404-2, 404-3)

• Diversity and Equal Opportunity (405-1) • Non Discrimination (406-1) • Local Communities (413-1)

#### METHODOLOGY ADOPTED FOR ASSURANCE

Our assurance processes involve performing procedures to obtain evidence about the reliability of specified performance information. 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 making those risk assessments, we have considered internal controls relevant to the preparation of the Report in order to design assurance procedures that are appropriate in the circumstances.

We have obtained sample evidence, information and explanations that were considered necessary in relation to the assurance scope and have arrived at conclusions mentioned below. Our work included a range of evidence-gathering procedures which 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.
- Understanding the appropriateness of various assumptions used for estimation of data by Vedanta.
- 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 discussion with senior executives at the plant locations and at the corporate office to understand the risks and opportunities from a sustainability perspective including the strategy that Vedanta has adopted to address the same.
- · Assessing data reliability and accuracy.
- · Verifying select key performance data through site visits to operational locations and corporate office for:
  - Testing reliability and accuracy of data on a sample basis.
  - Assessing stakeholder engagement process through interactions with relevant internal stakeholders and review of related documentation.
  - Limited review of the materiality assessment process.
  - Reviewing the processes deployed for collection, compilation and reporting of sustainability performance disclosures at corporate and plant level.

Appropriate documentary evidence was obtained on a sample basis to support our conclusions on the information and data verified. Where such documentary evidence could not be collected due to sensitive nature of the information, our team verified the same at Vedanta's premises.

#### CONCLUSIONS

We have reviewed the Sustainability Report of Vedanta. Based on our limited review and procedures performed in line with scope, boundary and limitations of assurance, nothing has come to our attention that causes us not to believe that the sustainability data and information presented in the Report is fairly represented in line with the identified material topics and is in accordance with the sustainability reporting standards of the Global Reporting Initiative (GRI Standards).

We have provided our observations and areas for improvement to the company 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 verifying environmental, social and economic information in line with the requirements of ISAE 3000 (Revised) standard. 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, including not being involved in writing the Report. 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 is responsible for developing the Report contents. The Company 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 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 Vedanta 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 Vedanta for our work, for this Report, 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 is 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. By reading this assurance statement, stakeholders acknowledge and agree to the limitations and disclaimers mentioned above.

Santhosh Jayaram

Partner

KPMG 1st August, 2019

# **GRI Standards Index**



GRI Standard	Disclosure	Response
	016 [GRI 101 does not include any disclosures]	<u> </u>
General Disclosures		
Organisational Profile		
GRI 102- General Disclosures 2016	102-1: Name of the Organisation	Vedanta Resources Limited
	102-2: Activities, brands, products, and services	Vedanta Sustainability Report 2018-19: Pages 01-06 (Overview)
	102-3: Location of headquarters	Vedanta Sustainability Report 2018-19: Back Cover
	102-4: Location of operations	Australia, India (Andhra Pradesh, Chhattisgarh, Goa, Gujarat, Jharkhand, Karnataka, Odisha, Rajasthan, Tamil Nadu), Namibia, South Africa, Zambia
	102-5: Ownership and legal form	Vedanta Resources Limited Annual Report 2018-19: Page 248 (39. List of subsidiaries), Page 253 (40. Ultimate Controlling Party)
	102-6: Markets served	Vedanta Sustainability Report 2018-19: Page 01-06 (Overview)
	102-7: Scale of the organisation	Vedanta Sustainability Report 2018-19: Page 01 (Overview), Page 06 (Our Products), Page 58 (Workforce Snapshot), Page 82 (Economic Value Generated and Distributed), Page 82 (Other Indicators of Economic Performance)
	102-8: Information on employees and other workers	Vedanta Sustainability Report 2018-19: Page 58 (Workforce Snapshot)
	102-9: Supply chain	Vedanta Sustainability Report 2018-19: Page 03
		Vedanta's supply chain spans all five areas of the metals & mining business - exploration, asset development, extraction, processing, and value addition. Given the nature of our business, our supply chain consists of vendors who provide us with the workforce who help us operate our extractive and processing businesses as well as operators who supply us with high-end technologies that help us conduct our operations in the most efficient, responsible, and cost effective manner possible.
		We are also committed to ensuring that we encourage local vendors become part of our supply chain so that the presence of our businesses benefits the local economies and communities.
	102-10: Significant changes to the	Vedanta Limited acquired a 90% stake in Electrosteel Steels Limited in June 2018.
	organisation and its supply chain	In August 2018, Vedanta Limited was awarded 41 hydrocarbon blocks out of 55 blocks auctioned under the open acreage licensing policy (OALP) by Government of India (GOI). The blocks awarded to Vedanta Limited comprise of 33 onshore and 8 offshore blocks.
	102-11: Precautionary principle or approach	Vedanta 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. We have also committed to ensuring that we receive the Free, Prior, Informed Consent of all communities from where we source our ores.
	102- 12: External initiatives	Vedanta aligns itself with the following external charters & principles: UN Global Compact, UN Sustainable Development Goals, ICMM, IOGP, IFC Performance Standards, GHG Greenhouse Gas Protocol.
	102- 13: Memberships of associations	Vedanta is a member of various industry associations in the countries where it operates (Eg: Confederation of India Industry)
Strategy		
GRI 102- General	102-14: Statement from senior decision-	Vedanta Sustainability Report 2018-19: Page 07 (From the Chairman's Desk), Page 09 (CEO's Message)
Disclosures 2016	maker	
Ethics & Integrity		
GRI 102- General Disclosures 2016	102-16: Values, principles, standards, and norms of behaviour	Vedanta Sustainability Report 2018-19: Page 03 (Our Core Values)
GRI 102- General Disclosures 2016	102-18: Governance Structure	Vedanta Sustainability Report 2018-19: Page 17-18 (Sustainability Governance Structure at Vedanta)
Stakeholder Engagemei	nt	
GRI 102- General	102-40: List of stakeholder groups	Vedanta Resources Limited Annual Report 2018-19: Page 47 (Stakeholder Engagement)
Disclosures 2016	102-41: Collective bargaining agreements	Vedanta Sustainability Report 2018-19: Page 68 (Collective Bargaining)
	102-42: Identifying and selecting stakeholders	Vedanta Resources Limited Annual Report 2018-19: Page 47 (Stakeholder Engagement)
	102-43: Approach to stakeholder engagement	Vedanta Resources Limited Annual Report 2018-19: Page 47 (Stakeholder Engagement)
Danaukina Durakina	102-44: Key topics & concerns raised	Vedanta Resources Limited Annual Report 2018-19: Page 48-49 (Stakeholder Engagement)
Reporting Practice GRI 102- General Disclosures 2016	102-45: Entities included in the consolidated financial statements	Vedanta Resources Limited Annual Report 2018-19: Page 195 (Note 4: Segment Information)
2.3010301103 2010	102-46: Defining report content and topic boundaries	Vedanta Sustainability Report 2018-19: Page 86 (About this report)
	102-47: List of material topics	Vedanta Sustainability Report 2018-19: Page 11-12 (Materiality)
	102-48: Restatements of information	Vedanta Sustainability Report 2018-19: Page 86 (About this report)
	102-49: Changes in reporting	Vedanta Sustainability Report 2018-19: Page 86 (About this report)

GRI Standard	Disclosure	Response
	102-50: Reporting period	The reporting period for this report is FY 2018-19
	102-51: Date of most recent report	Vedanta's previous sustainability report was released in October 2018
	102-52: Reporting cycle	Annual
	102-53: Contact point for questions regarding the report	Questions can be directed to: sustainability@vedanta.co.in
	102-54: Claims of reporting in accordance with the GRI Standards	Vedanta Sustainability Report 2018-19: Table of Contents, Page 86 (About this report)
	102-55: GRI Content Index	Vedanta Sustainability Report 2018-19: Page 90 (GRI Standards Index)
	102-56: External Assurance	Vedanta Sustainability Report 2018-19: Page 88 (Assurance Statement)

# **Specific Standard Disclosures**

# **Category: Economic**

GRI Standard	Disclosure	Response							
ECONOMIC PERFORMA	ANCE	•							
GRI 103: Management Approach 2016		Vedanta Sustainability Report 2018-19: Pages 81							
	201-1: Direct economic value generated and distributed	Vedanta Sustainability Report 2018-19: Page 82 (Economic Value Generated and Distributed)							
		Economic Value Generated and Distributed (in US\$ million)	FY 2018-19	FY 2017-18	FY 2016-17				
		Economic value generated	15,033.02	15,092.14	15,027.00				
		Economic value distributed	14,294.76	14,566.30	14,548.00				
		a) Operating Costs	11,122.76	11,309.80	11,489.00				
		b) Employee wages and benefits	577.00	630.70	540.00				
		c) Payment to providers of capital	1391.00	1,582.60	1,476.00				
		d) Payment to government	1,159	1,004.45	1,004.00				
		e) Community investments (including donation)	45.00	38.75	17.63				
GRI 201: Economic Performance 2016		Economic value retained (Calculated as Economic value generated less economic value distributed)	738.26	525.84	479.44				
		Coverage of the organisation's defined benefit plan obligations (US\$ million)	FY 2018-19	FY 2017-18	FY 2016-17				
	204.2 B.C. 11 C. 1 11	Defined contribution pension scheme costs	17.00	16.40	22.00				
	201-3: Defined benefit plan obligations and other retirement plans	Defined benefit pension scheme costs	27.00	37.10	21.00				
	and other retirement plans	Share based payment charge	21.00	23.00	16.00				
		Total	65.00	76.50	59.00				
		1000	33.33	70.00	33.00				
	201-4: Financial assistance received		FY 2018-19	FY 2017-18	FY 2016-17				
	from government	Financial assistance received from government (US\$ million)	116.00	157.50	204.80				
MARKET PRESENCE									
GRI 103: Management Approach 2016		Vedanta Sustainability Report 2018-19: Page 3-6							
GRI 202: Market	202-1: Ratios of standard entry level	At all our significant locations, we ensure that the ratios of	entry level was	ges meets or ex	ceeds the				
Presence 2016	wage by gender compared to local	legal requirements and complies with all applicable laws. W	,	-					
	minimum wage	we don't discriminate in any way in terms of standard entry	y level wages.						
	202-2: Proportion of senior management hired from local community	Vedanta Sustainability Report 2018-19: Page 70 (Local Hiring)							
INDIRECT ECONOMIC	IMPACTS								
GRI 103: Management		Vedanta Sustainability Report 2018-19: Page 71 (Commun	ity Engagemen	t & Developme	ent)				
Approach 2016			,	•					
GRI 203: Indirect	203-1: Infrastructure investments and	Vedanta Sustainability Report 2018-19: Page 72 (Nandgha	r) Page 73 (He	althcare throug	th hospitals)				
Economic Impacts	services supported	Page 76 (Drinking Water & Sanitation), Page 77 (Communit			sii iiospitaisį,				
2016 ANTI-CORRUPTION		,, ,	,						
GRI 103: Management		Vedanta Sustainability Report 2018-19: Page 21 (Code of E	Rusiness Condu	ect and Ethics)					
Approach 2016				ict and Etines)					
CDI 205. An:	205 1. Operations as	Vedanta Resources Limited Annual Report 2018-19: Page							
GRI 205: Anti- Corruption 2016	205-1: Operations assessed for risks related to corruption	100% of our operations are assessed for risks related to count the Management Assurance Services (MAS) team. More de	•		conducted by				
		Vedanta Resources Limited Annual Report 2018-19: Pages	137, 139						
	205-2: Communication and training about anti-corruption policies and procedures	Vedanta Sustainability Report 2018-19: Page 21 (Code of business conduct and ethics)							

GRI Standard	Disclosure	Response					
				l			
	205-3: Confirmed incidents of corruption	Open Complaints on April 1st 2018	11				
	and action taken	Number of whistle-blower cases opened in 2019	67				
	Number of whistle-blower cases upheld and found correct in 2019	20					
		Number of whistle-blower cases closed in 2019	73				
		Open Complaints on March 31st 2019	5				
ANTI-COMPETITIVE BE	HAVIOUR						
GRI 103: Management Approach 2016		From of Code of Business Conduct and Ethics:  Vedanta 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 busines 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.					
GRI 206: Anti- Competitive Behaviour	206-1: Legal actions for anti-competitive behaviour, anti-trust, and monopoly	No legal action.					

MATERIAL ASPE	CT: OIL RESERVES
OG1	Volume and type of
	estimated proved reserves
	and production

	Proved & Probabl	e Reserves	Proved & Probable Reserves (develope			
	Oil (mmstb)	Gas (bscf)	Oil (mmstb)	Gas (bscf)		
Reserves as of 1st April 2017	112	48	100	15		
Additions/revision during the year	28	12	13	21		
Production during the year	(42)	(8)	(42)	(8)		
Reserves as of 31 <sup>st</sup> March 2018	98	52	71	28		
Additions/revision during the year	259	224	149	113		
Production during the year	(42)	(12)	(42)	(12)		
Reserves as of 31 <sup>st</sup> March 2019	315	264	178	129		

# **Category: Environment**

GRI Standard	Disclosure	Response									
ENERGY		· ·									
GRI 103:		Vedanta Sustainability F	Report 2018-19: Pa	ige 27 (Manag	gement Approa	ch)					
Management											
Approach 2016			(edanta Sustainability Report 2018-19: Page 31 (Energy Consumption)								
GRI 302: Energy	302-1: Energy	Vedanta Sustainability F	Report 2018-19: Pa	ige 31 (Energy	/ Consumption)						
2016	consumption within the organisation	Unit wise breekup of test				is as balauu					
	the organisation	Business		nergy consumption (GJ) within organisation is as below: otal Energy (GJ)							
		business	FY 2018-19	•	017-18	FY 2016-17					
		Aluminium	311,669,948 <sup>+</sup>		939,598	177,781,326					
		Copper Australia	87,985	92,95		76,263					
		Copper Australia Copper India	715,028"		7,254	4,074,534					
		- ' '									
		Copper Zambia	7,113,943		3,295	6,972,026					
		Iron Ore Business	891,674"			1,774,212					
		Oil and Gas Business	23,692,722		58,552	19,624,038					
		Port Business	42,132			26,952					
		Power Business	110,565,128		118,692	170,302,121					
		Zinc India	47,091,020		57,692	44,356,047					
		Zinc International	51,918,842	3,060	0,086	3,016,401					
		Total	553,788,422	443,6	521,113	428,003,920					
		+ Increase due to ramp u # Decrease due to the sh * Increase in total energ	nut-down of our op y consumption is d	erations in Tu ue to the add	iticorin and min lition and ramp-	ies in Goa	s in Gamsberg				
	302-3: Energy Intensity	Specific Energy Consump	otion (GJ/Unit of P	roduction Out	tput)						
		Business Sector	Compar	ny Name	FY 2018-19	FY 2017-18	FY 2016-17				
			BALCO		52.45	52.90	57.04				
		Aluminium	Lanjigarh		7.5	8.15	7.87				
			Jharsuguda		52.46	54.18	53.9				
		Copper Australia	CMT		-	-	-				
			Sterlite Cop	per"	-	8.33	8.35				
		Copper India	Sterlite IPP	и	-	11.57	12.11				
		Copper Zambia	KCM		40.18	36.06	28.71				

GRI Standard	Disclosure	Response									
								1			
		Business Sec			Y 2018-19	FY 2017-18	FY 2016-17				
		Iron Ore Business	SSL Iron -		1.00	0.88	0.84				
		Oil and Gas	Cairn Indi	a	2.19	1.87	2.13				
		Port Business	VGCB		0.01	0.01	0.01				
			MALCO*		-	-	-				
		Power Business	TSPL		7.34	9.38	8.71				
			Jhasuguda		8.14	10.36	7.05				
			BALCO IP	Р	10.22			* 1/01	co, Lisheen are		
			Lisheen*		-	-	0.39	1	o, Lisheen are operational		
		Zinc International	BMM		0.43	0.35	17.62		lite Copper's		
			Gamsberg		79	-	27.97	1	Iter and power		
			HZL - Min		0.26	0.29	-	plan	t in Tuticorin was		
		Zinc India	HZL - Sme	elter	16.86	17.05	0.41	clos	ed for the entire		
			Skorpion		34.23	29.31	-	repo	rting period		
	302-4: Reduction of	Vedanta Sustainabili	ity Report 2018-19: P	age 31 (Energy C	onsumption)						
	energy consumption										
	OG2: Total amount	Nil									
	invested in Renewable										
	Energy										
	OG3: Total amount of	During FY2019, total	renewable energy ge	enerated at Cairn	Oil & Gas was	/02,047 KWH (	2,527 GJ)				
	renewable energy										
WATER	generated by source										
GRI 103:		Vodanta Sustainahili	ity Report 2018-19: P	Page 39 (Water M	anagement)						
Management		veuanta JustamaDili	, nepoli 2010-13: P	age 33 (water IVI	unugennent)						
Approach 2016											
GRI 303: Water	303-1: Water	During the reporting	period, we withdrew	over 353 million	cubic meters of	of water. The wa	ater was source	d from:	51.3%		
2016	withdrawal by source		% - surface water, 1.8								
	,	0.0017% - rain-water	harvesting. The total	l water withdrawa	al has increase	d in comparisor	n to FY2018-19	, when \	ve		
		withdrew 342 million cubic meters of water.									
			FY 201	18-19		Y 2017-18		FY 20	16-17		
			Ground Water	Surface Water	Ground Wat	er Surface W	ater Ground	Water	Surface Water		
		Business	(m³)	(m³)	(m³)	(m³)	(m³)		(m³)		
		Aluminium	59,940	51,359,992	59,1	95 28,097	,056	59,200	50,719,645		
		Copper India	12,250	107,345	14,7	56 1,313	,793	L5,484	3,807,720		
		Copper Australia	4,073,032	2,499,008	4,015,8	68 3,425	,614 3,35	52,162	3,139,927		
		Copper Zambia	160,440,472	36,607,651	158,468,5	04 38,083	,904 153,54	18,896	40,246,679		
		Iron Ore Business	253,539	3,395,598	259,1	20 3,136	,324 34	11,946	2,638,065		
		Oil and Gas Busines	is 10,612,957	-	11,563,7	32	- 12,53	37,279	-		
		Power Business	-	46,498,898		- 41,563	,995 63	31,457	38,644,650		
		Port Business	_	2,557			,935	_	-		
		Zinc India	2,876,756	19,664,380	3,681,0			39,487	16,684,509		
		Zinc International	2,717,883	2,817,135	2,002,2			54,266	4,339,589		
		Total	181,046,829	162,952,564							
		Total	181,040,829	102,952,504	180,064,5	05 141,036	,104 1/5,14	+0,1//	160,220,784		
	303-2: Water sources	In about three location	ons, our water withdr	rawals are greater	than or equal	to 5% of the w	ater bodv's anr	ual ave	rage		
	significantly affected by	volume. However, no	one of these withdray	vals can be consid	lered sensitive	as it does not t	hreaten the bid	diversit	y of		
	withdrawal of water	the area. At all of our	r locations, we carefu	lly monitor our w	ater withdraw	als and usage a	nd where feasil	ole, mak	ie		
		efforts to recharge th	ne water sources.								
	303-3: Water recycled		ity Report 2018-19: P								
	and reused	Vedanta has historica	ally reported water re	cycling rates base	ed on our total	water consump	otion volumes.	This am	ounts to 24.25%		
		of water recycled.									
		However, as per GRI	requirements, the re	cvcle rate of wate	r is to be take	n on water with	drawal volume	s. The c	orresponding		
			19.16% in FY2019 (F								
		,	1-								
BIODIVERSITY	T										
GRI 103:		Vedanta Sustainabili	ity Report 2018-19: F	Page 43 (Biodivers	ity Manageme	ent)					
Management											
Approach 2016	2011 0	TI 6 II 1 11	1 . 1 . 2		p						
GRI 304:	304-1: Operational sites	The following sites at	re located adjacent to	areas of high bio	ogiversity value	or protected a	reas:				
Biodiversity 2016	owned, leased, managed in, or adjacent	<b>Business Unit</b>	Site	Location		Area of Biodive	ersity Value				
	to, protected areas and	Aluminium	Vedanta Lanjigarh	Lanjigarh, Ir				her rese	erve forest areas		
	areas of high	Zinc International	Skorpan Zinc	Rosh Pinah,		Sperrgebiet Na					
	biodiversity value		Black Mountain Min			Succulent Karo		lotspot			
	outside protected areas		acnountain iviiii	Juliabelg,		_ accarcing Nation	- Diodiversity I	Sispor			
	· .										
	304-3: Habitats	Vedanta Sustainabil	ity Report 2018-19: P	Page 43-45 (Biodiv	ersity Manage	ement)			<del></del>		
	protected or restored										

<b>GRI Standard</b>	Disclosure	Response								
	304-4: IUCN Red List	IUCN Classification	Africa	Asia	Australia					
	species and national	Critically Endangered	0	Asia 3	0					
	conservation list species	Endangered	5	21	8					
	with habitats in areas	Vulnerable	8	31	7					
	affected by operations	Near Threatened	4	16	0					
		Least Concern	184	251	NA					
	MM2: The number and percentage of total sites identified as requiring	Vedanta Sustainability I	Report 2	2018-19	9: Page 43 (E	iodiversity Manage	ment)			
	biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place									
	OG4: Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored	All sites in our Oil & Gas	busines	S						
EMISSIONS		Madauta Containability	) A	010.10	N. D 20	12 /5				
GRI 103: Management Approach 2016		Vedanta Sustainability I Air quality and Emission	•		: Pages 28,	12 (Energy Managei	ment and Climate Ch	ange,		
GRI 305: Emissions 2016	305-1: Direct (Scope 1) GHG emissions	Vedanta Sustainability I	Report 2	2018-19	: Page 29 (0	HG Emissions Perfo	ormance)			
		Our business-wise Scope	e I emiss	ions ar	e:					
						Scope I Er	mission (tCO <sub>2</sub> e)			
		Business			FY 201	8-19	FY 2017-18	FY 2016-17		
		Aluminium			33,166	,782	33,167,409	24,808,807		
		Copper India & Australi	а		30	,571	624,738	148,078		
		Copper Zambia			155	,840	150,306	153,127		
		Iron Ore Business			1,951		1,837,129	1,982,484		
		Oil & Gas Business			1,658	,183	1,550,610	1,465,348		
		Port Business				376	0	0		
		Power Business			13,342	,185	8,894,216	18,996,251		
		Zinc India			4,668		4,830,185	4,288,645		
		Zinc International				,548	87,919	54,168		
		Total			55,120	,276	51,142,511	51,896,908		
	305-2: Energy indirect (Scope 2) GHG emissions	Vedanta Sustainability I Our business-wise Scope				HG Emissions Perfo	ormance)			
					Scope	II Emission (tCO,e)				
		Business		FY	2018-19	FY 2017-18	FY 2016-17			
		Aluminium			,655,128	237,024	52,542	_		
		Copper India						-		
		& Australia			48,600	87,591	515,274			
		Copper Zambia			4,683	4,780	4,613			
		Iron Ore Business			265	18,428	18,986			
		Oil & Gas Business			118,000	84,980	70,827			
		Port Business			6,248	11,641	4,922			
		Power Business			777	8,901	6,736			
		Zinc India			168,248	154,564	114,211			
		Zinc International			508,921	594,167	644,554			
		Total		3	,510,870	1,202,076	1,432,665			
		Our Australia and Zambi	a operat	tion pu	rchased elec	tricity from hydro e	mission with low GH	IG emission factor.		
	•	*								



GRI Standard	Disclosure	Response											
	305-4: GHG emissions			FY 2018-19	,		EV 2017 1	0		EV 2016-17			
	intensity									F Y 2016-1	FY 2016-17		
		Business	Scope 1 + Scope 2 GHG Emissions (tCO <sub>2</sub> e)	Revenue (US\$ mn)	GHG Intensity	Scope 1 + Scope 2 GHG Emissions (tCO <sub>2</sub> e)	Revenue (US\$ mn)	GHG Intensity	Scope 1 - Scope 2 GHG Emission: (tCO <sub>2</sub> e)	Revenue			
		Aluminium	35,821,911	4,183	8,564	33,404,433	3,588	9,310	24,861,348	3 2,040	12,187		
		Copper India & Australia	75,171		52	712,329	3,833	186	663,353				
		Copper Zambia	160,523	1,085	148	155,086	1,283	121	157,740	) 874	180		
		Iron Ore Business	1,951,523	416	4,619	1,855,557	487	3,810	2,001,470	615	3,252		
		Oil & Gas Business	1,776,183	1,892	939	1,635,590	1,480	1,105	1,536,175	1,223	1,256		
		Port Business	6,624	37	179	11,641	(92)	(127)	4,922	2 (59	(83)		
		Power Business	13,342,962	934	14,286	8,903,117	877	10,152	19,002,987	7 836	22,734		
		Zinc India	4,836,781	2,955	1,637	4,984,749	3,369	1,480	4,402,856	2,525	1,744		
		Zinc International	655,469	392	1,672	682,086	535	1,275	698,722	332	2,102		
		Total	58,631,147*	13,431	4,365	52,344,587	15,360	3,480	53,329,573	11,520	4,629		
		*This number does	not include G	UC omissio	ns from Els	etractaal Sta	als Limitad						
			not include d	ing ellissio	IIS IIOIII EIE	ctrosteer ste	eis Liiiiteu.	•					
	305-5: Reduction of GHG emissions	Not Reported											
						10. 1 =							
	305-7: NO <sub>x</sub> , SO <sub>x</sub> , and other significant air	Vedanta Sustainabi											
	emissions			018-19 (in N			017-18 (in			016-17 (in I	•		
		Business	PM Emissions	SOx Emissions	NOx Emissions	PM Fmissions	SOx Fmissions	NOx Fmissions	PM Emissions	SOx Emissions	NOx Emissions		
		Aluminium	2,850	56,031	17,547	2,733	35,144	12,406	2,344	40,104	10,273		
		Copper India & Australia	19	6	2	-	773	-	7	902	-		
		Copper Zambia	1,235	1,238	135	417	2,018	104	1,760	3,984	125		
		Iron Ore Business	426	112	88	255	20	20	957	242	206		
		Oil & Gas Business	-	-	-	-	-	-	-	-	-		
		Port Business	-	-	-	-	-	-	-	-	-		
		Power Business	4,421	155,782	41,000	4,387	131,579	37,526	5,101	113,838	28,003		
		Zinc India	1,155	30,235	8,641	1,039	22,112	6,798	887	19,255	6,328		
		Zinc International	-	70	-	-	105	-	-	-	-		
		Total	10,106	243,474	67,413	8,837	191,751	56,854	11,056	178,324	44,935		
EFFLUENTS AND	WASTE												
GRI 103: Management Approach 2016		Vedanta Sustainabi	lity Report 20	<b>)18-19:</b> Page	e 34 (Waste	& Tailings N	lanagemen	t)					
GRI 306:	306-1: Water discharge	Vedanta Sustainabi	lity Report 20	)18-19:									
Effluents and Waste 2016	by quality and destination	Our operating philo	osophy is of 'z	ero discharg		-			ed and compl	etely recycle	ed back into		
		In addition to these primary locations.	e initiatives, e	ffluent and	sewage tre	atment plant	s are install	ed at many					
		effluent treatment		-									
		Waste Water Disch			23		4 2		21	7			
		Business		FY 2018-19		FY 2017-1		FY 20	016-17 (m³)				
		Aluminium			,142		10,497		414,826	+			
		Copper India & Australia		4,073	,032	4,2	08,027		3,379,344				
		Copper Zambia		146,285	159	1 <u>4</u> 7 ∩	94,781	1	.48,568,472	1			
		Iron Ore Business			,054		80,939		113,556	+			
		Oil & Gas Business		1,925			09,356		750,258	1			
		Port Business		1,525	25	1,0	7		7.50,256	1			
						,		94,700	1				
		Power Rusiness			- 1								
		Power Business Zinc India			-		-			+			
		Zinc India		67	-		72 551		-				
				67 152,635	,227		72,551 <b>76,157</b>	1	894 . <b>53,322,050</b>	- - -			

GRI Standard	Disclosure	Response													
	306-2: Waste by type	Vedanta Sustain	ability Re	port 201	<b>8-19:</b> Pa	ge 34 (Was	te and Tai	ings Ma	nagement	)					
	and disposal method		,	•		5 (				,					
			FY 2018-19						017-18				016-17		
		Business				azardous te (MT)	Hazardous Waste (MT) d Generated Recycled		Non-Hazardous Waste (MT)		Hazar Waste		Non-Hazardous Waste (MT)		
			Generated Recycled									Waste (MT) Generated Recycled			
		Aluminium	288,847	177,397				-		•		146,704	7,973,313		
		Copper India	73	66							71,732	_	1,771,050		
		& Australia							, ,	,,	, ,	.,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	
		Copper Zambia	4,011	3,391	268,05	0	- 11	-	297,656	503,880	1,662	386	231,009	-	
		Iron Ore Business	31	-	268,04	8 336,77	0 1	-	240,721	282,313	2,913	-	247,066	221,307	
		Oil & Gas Business	15,133	11,207		-	- 5,164	5,916	-	-	1,747	90	-	-	
		Power Business	117	66	5,379,20	8 6,218,58	36	3	5,531,056	5,260,133	90	67	5,525,581	2,832,176	
		Zinc India	74,016	38,248	932,39	404,96	71,712	42,022	1,085,397	413,669	63,318	24,911	820,028	87,502	
		Zinc International	150	66		-	- 705	91	-	-	359	9	-	-	
		Total	382,378	230,441	14,162,81	4 13,101,54	402,933	244,498	16,668,205	13,679,859	318,456	198,066	16,568,047	8,156,516	
	MM3: Total amounts of		Un	it	FY 2018	-19	FY 2017-1	8	FY 2016-1	7					
	overburden, rock, tailings, and sludge's	Overburden	M.	Г	42,253,6		.12,770,22		03,115,85						
	and their associated	Tailings	M.	Г	30,691,9		29,490,39		27,979,34						
	risks	Waste Rocks	M.	Г	27,730,3	316	29,626,32	9	15,566,95	8					
		The decrease in t	the Overb	urden is	due to a	decrease	n activitie	at our l	Black Mou	ntain and	Skorpian .	Zinc loca	itions.		
	OG5: Volume and														
	disposal of formation or					Y 2018-19	FY 201		FY 2016-						
	produced water	Total Produced				6,721,753	<del>-</del>		30,236,3						
		Produced Wate	r Re-injec	ted	KL 3	4,933,829	28,544,	747*   2	25,790, 01	0*					
		* Restatement: For FY2017-18 & FY2018-19 the volume of produced water re-injected has changed from 37,807,548													
			and 35,139,091 respectively. The change is due to double-accounting of reinjection volume associated with the Bhagyam & Aishwariya fields.												
		briagyam & Alsm	wariya ile	us.											
	OG6: Volume of flared and vented hydrocarbon				Unit	FY 2018-1	FY 20	17-18	FY 2016-	17					
		Volume of Flared Hydrocarbon SCM 95,346,945 70,786,868 78.6 million													
	nyar ocurbon	Volume of Vent	Volume of Vented Hydrocarbon SCM 783,948						922,253 1.06 million						
	OG7: Amount of drilling	Total amount of drill mud generated is 9,405 MT this includes WBM & SOBM. The figure represented													
	waste (drill mud and	quantity of drillin	-			) IVI 1 (1113 I	ilcidaes vv	DIVI & S	JDIVI. THE	liguic rep	resented				
	cuttings) and strategies for treatment and				Unit	Diana	aal Matha		ΓV	2018-19	FV	2017-1	0		
		Category Water Based Mud Drill Cuttings				Disposal Method Used as subgrade mat					FI	1,99			
	disposal					for construction		certai			1,550				
		Synthetic Oil Based Mud Drilling Waste			MT S	ecure Lan				11,207			0		
									11,207		U				
	1														
PRODUCT AND	SERVICES														
PRODUCT AND	SERVICES G4 – OG8: Benzene,	Not applicable													
PRODUCT AND	G4 – OG8: Benzene, lead and sulphur	Not applicable													
	G4 – OG8: Benzene, lead and sulphur content in fuels														
SUPPLIER ENVII	G4 – OG8: Benzene, lead and sulphur	I													
SUPPLIER ENVII GRI 103:	G4 – OG8: Benzene, lead and sulphur content in fuels	At each of our bu													
SUPPLIER ENVII	G4 – OG8: Benzene, lead and sulphur content in fuels	I													
SUPPLIER ENVII GRI 103: Management	G4 – OG8: Benzene, lead and sulphur content in fuels	At each of our bu	specific r	equirem	ent may	require ad	ditional sc	reening	of vendors	for the er	vironmer	ntal man	agement s		
SUPPLIER ENVII GRI 103: Management Approach 2016 GRI 308: Supplier	G4 – OG8: Benzene, lead and sulphur content in fuels  RONMENTAL ASSESSMENT  308-1: New suppliers that were screened using	At each of our buaddition, project	specific r	equirem	ent may	require ad	ditional sc	reening	of vendors	for the er	vironmer	ntal man	agement s		
SUPPLIER ENVII GRI 103: Management Approach 2016 GRI 308:	G4 – OG8: Benzene, lead and sulphur content in fuels RONMENTAL ASSESSMENT 308-1: New suppliers	At each of our buaddition, project	specific r	equirem	ent may	require ad	ditional sc	reening	of vendors	for the er	vironmer	ntal man	agement s		

# 97

# **Category Social**

93 - 1, 22 - 2	- 6 1,26
93 - 1, 22 - 2	- 6 - 1,26 - 230
93 - 1, 22 - 2	- 6 - 1,26 - 230
93 - 1,	- 1,26
22 - 2	- 230
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2 -	- 5
	- 2
52 - 4	406
7 -	- 37
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	2 - 2 - 52 - 7

GRI Standard	Disclosure	Response									
			% of Total full time employees								
				FY 2018-19 FY 2017-18 FY 2016-17							
			including								
		retirements and incl	uding VRS	10.16% 5.86%	8.749		8.40%				
		Employee initiated Separation)		3.80%	5.339	/0	5.34%				
				Employee	Turnover	& Attriti	on by Regio	on (FY	2018-19)		
				Australia	Zambia	Namibia	South A	frica	India		
		Employee turnover including	Number	3	386	58	82		2,116		
		retirements and including VRS	Rate	16%	6%	10%	9%		11%		
		Total Attrition	Male	17%	3%	5%	3%		5%		
		(Refers to Employee initiated	Female	0%	3%	13%	5%		11%		
		Separation)	remale	0%	3/0	15%	370		1170		
	401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees	include: life-insurance management grades	We provide an array of benefits to our employees that are not provided to temporary or part time employees. The benef 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	Vedanta Sustainabilit	ty Report 2018	<b>-19:</b> Page 61 (Pr	ogressive	Policies)					
	EMENT RELATIONS										
GRI 103: Management Approach 2016											
GRI 402: Labour/ 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, acquisit 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 example in India it is minimum 21 days, Zambia Minimu Notice Period is One Year; Namibia Three Months and South Africa One Month.									
	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 serious (category 4) and disastrous (category 5) and captured on a monthly basis.									
	HEALTH AND SAFETY	Moderate Control with December 2010 10. December									
RI 103: lanagement pproach 2016		Vedanta Sustainability Report 2018-19: Page 50 (Safety, Health and Well-being)									
iRI 403:	403-1: Workers	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 cowworkforce working at site. The total workforce vary 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 invite monthly meetings to discuss specific HSE issues.									
Occupational Health & Safety	representation in formal joint management- worker health and safety committees										
	403-2: Type of injury and rates of injury,	Vedanta Sustainability Report 2018-19: Page 50 (Safety Performance) All definitions as per ICMM guidelines									
	occupational diseases, lost days, and						FY 201	l8-19	FY 2017-18		
	absenteeism, and total		tal Injuries iury Rates (Tota	al Recordable In	iury FR1		1.14		53 1.01		
	number of work related fatalities		st Day Rate	a. Necordable III	wiy i i\]		20.61		14.68		
		W	ork-Related Fa	talities			2		2		
			tal Injuries	al Pocordable III	iun/ ED1		224 1.26		191 1.23		
			st Day Rate	al Recordable In	ury FK)		1.26		1.23		
		· —	ork-Related Fa	talities			12		7		
	403-3: Health and safety topics covered in formal agreements with trade unions	Health and safety top workmen / Recognize improving production Beside this, certified S	d Union / Fed / productivity	eration will supp , work culture, q	oort in all t uality & sa	the measi afety.			,		
	<u> </u>	Beside this, certified Standing Orders of units also cover these topics.									

GRI Standard	Disclosure	Response								
TRAINING AND E										
GRI 103:		Vedanta Sustainahility	Report 2018	R-19: Page 58	R (Employee	Training)				
Management		Vedanta Sustainability Report 2018-19: Page 58 (Employee Training)								
Approach 2016										
GRI 404: Training	404-1: Average hours of	Vedanta Sustainability Report 2018-19: Page 58 (Employee Training)								
and Education	training per year per	vedanta sastamasmey	neport zoze	, 13. 1 age 30	(Linployee					
2016	employee									
2010	404-2: Programs for	In line with our philoso	nhy continu	ous learning	& canahility	huilding is i	mnorativo f	or an organisation to grow. To cater to this		
	upgrading employee			-		-	•	luct structured programs to assist employees		
	skills and transition			-		-		mputer Literacy, wealth management,		
	assistance programs							rkshops & employee assistance programs.		
						-	Territerite wor	KSHOPS & CHIPTOYEE assistance programs.		
	404-3: Percentage of	100% of our employees	receive regi	ular perform	ance review	S.				
	employees receiving									
	regular performance									
	and career development									
DIVERSITY AND E	reviews									
	QUAL OPPORTUNITY	Vedanta Sustainability Report 2018-19: Page 61 (Diversity and Inclusion)								
GRI 103:		Vedanta Sustainability	Report 2018	<b>3-19:</b> Page 61	. (Diversity a	na inclusion	)			
Management										
Approach 2016	405.4 B: ': 6									
GRI 405:	405-1: Diversity of	Composition of C	manaa Badi							
Diversity and	governance bodies and employees.	Composition of Gover	mance Bodie							
Equal Opportunity	cilipioyees.	List different type of		Age group		Gen	der			
2016		Board	Locathon	Between	Above FO					
2010			Less than	30-50	Above 50	Male	Female			
			30 years	years	Years					
		Board of Directors	0%	12.5%	87.5%	87.5%	12.5%			
		Employees		_		89.64%	10.36%			
		Linployees				03.0470	10.50/0			
	405-2: Ratio of basic	We are an equal enner	unity omnlo	vor Across V	lodanta Gro	in we recrui	t hath man	& women on equal salary ratio. Our		
	salary and remuneration	remuneration is linked		•		•				
	of women to men.	Territarieration is linked	to periorina	ice of the in	aividuai, bus	iness criticy	and overan	group.		
NON-DISCRIMINA	1									
GRI 103:										
Management										
Approach 2016										
GRI 406: Non-	406-1: Incidents of	Vedanta is an equal opp	ortunity em	plover and d	oes not disc	riminate bas	sed on race	, religion, caste, gender, age, disability,		
discrimination	discrimination and	HIV/AIDS status, and a						,		
	corrective actions taken	,	,							
		We see sexual harassm	ent at the wo	orkplace as o	ne form of o	liscriminato	ry behaviou	ır. We have formal procedures for mediating		
		cases of sexual harassm	ent brought	to a commit	tee. The con	nmittee incl	udes extern	al members on the panel to ensure		
		independence and prov	ide balance.							
				ent cases FY	2018-19		_			
		Number of sexual hara			16 1	1				
		Number of sexual harassment cases upheld and found correct 11								
		Number of sexual hara	assment case	es closed		1	5			
FREEDOM OF ASS	SOCIATION AND COLLECT	IVE BARGAINING								
GRI 103:		Vedanta's Human Right	s Policy reco	gnises the ri	ght to associ	ate freely ar	nd to collec	tive bargaining.		
Management										
Approach 2016										
GRI 407:	407-1: Operations and	Vedanta Sustainability	Report 2018	<b>3-19:</b> Page 68	(Collective	Bargaining)				
Freedom of	suppliers in which the	We have collective hard	aining agree	ments with	our workme	nat H7IR4	LCO. KCM	Sesa and Zinc International Operations.		
Association and	right to exercise							entatives. The agreements include clauses		
Collective	freedom of association	-	-		_			health and safety, manpower productivity.		
Bargaining 2016	and collective	-						s are intimated to them through union		
	bargaining may be	, ,		0	0			ve recognized unions while other locations		
	violated or at significant	·						neration and grievance redressal.		
	risk	nave adequate systems	and process	ics for empre	ryce develop	ппспі, аррі	aisai, iciiiai	icration and gricvanice redicasai.		
		Similarly our significant	suppliers an	e generally t	he big & wel	I reputed in	dustry orga	nizations like Coal India, SAIL and L&T with		
whom we engage directly for the bulk of material for further processing or as collective bargaining and other labor union mechanisms.						or as law II	interior. All triese organizations have trie			
		concenive pargaining an	a other labo	. amon met	111111111111111111111111111111111111111					
CHILD LABOUR	1	T.								
GRI 103:		_	s Policy state	es that the co	mpany has	zero toleran	ce for child	labour - directly or through contracted		
Management		labour.								
Approach 2016	100.1.0	W 1 . 0 . 1 . 1		140.0	\ /F					
GRI 408: Child	408-1: Operations and	Vedanta Sustainability	keport 2018	<b>5-19:</b> Page 68	(Ensuring r	gnt age for	ne right jo	יוס		
Labour 2016	suppliers at significant risk for incidents									
	of child labour									

GRI Standard	Disclosure	Response
FORCED OR COM	PULSORY 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	Vedanta Sustainability Report 2018-19: Page 68 (Supplier Diligence)
SECURITY PRACTI		
GRI 103:		
Management Approach 2016	410.1. Carrelle	Videota Carte Instiller Danas 2010 10: Dana CC (University District)
GRI 410: Security Practices 2016	410-1: Security personnel trained in human rights policies or procedures	Vedanta Sustainability Report 2018-19: Page 66 (Human Rights)
RIGHTS OF INDIG	ENOUS PEOPLES	
GRI 103: Management Approach 2016		Vedanta Sustainability Report 2018-19: Page 69 (Rights of Indigenous Peoples)
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-OG9: Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place.	None of our operating mines for the oil & gas business are operating in or adjacent to indigenous people territory.
GRI 411: Rights of Indigenous Peoples	G4-MM6: Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples. G4-MM7: The extent to which grievance mechanisms were used to resolve disputes relating to land use,	No significant disputes relating to land use, customary rights of local communities and indigenous peoples was brought to our notice during the reporting year.  No significant disputes relating to land use, customary rights of local communities and indigenous peoples was brought to our notice during the reporting year.
	customary rights of local communities and Indigenous Peoples, and the outcomes.	
	G4-OG10: Number and description of significant disputes with local communities and indigenous peoples.	None
HUMAN RIGHTS A	ASSESSMENT	
GRI 103: Management Approach 2016		Vedanta Sustainability Report 2018-19: Page 66 (Human Rights)  Vedanta's Human Rights policy is the guiding document for our human rights practices.
GRI 412: Human Rights Assessment 2016	412-1: Operations that have been subject to human rights reviews or impact assessments. 412-2: Employee training on human rights	Each year, all of our operational sites undergo the Vedanta Sustainability Assurance Program (VSAP) audit. This audit is conducted by an external 3 <sup>rd</sup> 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.  Vedanta Sustainability Report 2018-19: Page 66 (Human Rights)
	policies or procedures	

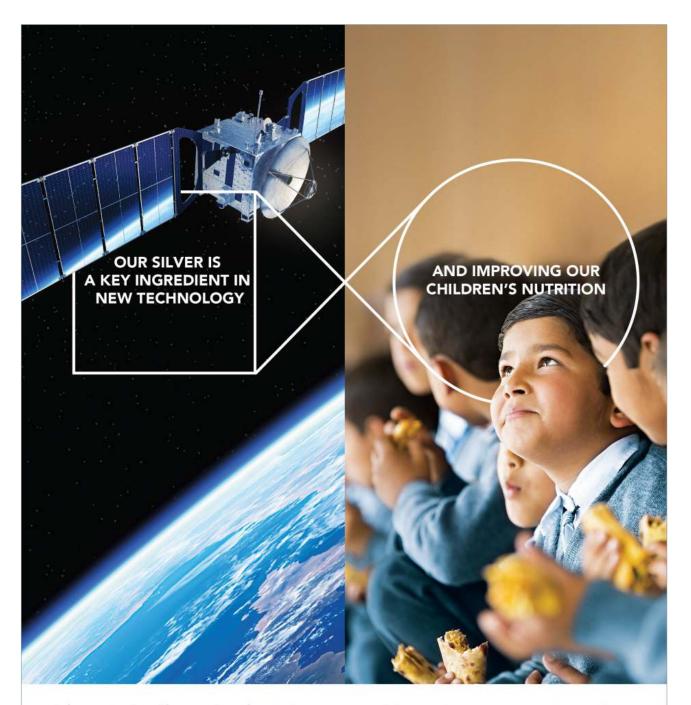
CDI Stondard	Disalaguna	Parana								
GRI Standard	Disclosure	Response								
GRI 412: Human	412-3: Significant	Through our Human Rights policy - which has been implemented across all Group businesses - Vedanta is committed to								
Rights	investment agreements	ensuring that the processes that it has in place, and continues to develop, follow the UN Guiding Principles.								
Assessment 2016	and contracts that	chairing that the processes that this in place, and continues to develop, follow the off dataing timespies.								
71556551116111 2010										
	include	By conducting ESIAs in compliance with applicable legal requirements and Vedanta Sustainability Framework, human rights								
	human rights clauses or	considerations are taken into account for all new projects, including the obligation to undertake a human rights screening								
	that underwent human	process in all merger and acquisition activities.								
	rights screening	F								
LOCAL COMMUN	ITIES									
	11123	W. L. C. C. L. L. L. C.								
GRI 103:		Vedanta Sustainability Report 2018-19: Page 71 (Community Engagement and Development)								
Management										
Approach 2016										
GRI 413: Local	413-1: Operations with	Vedanta Sustainability Report 2018-19: Pages 71-81								
Communities	local community									
2016	engagement, impact	All of any apparations have an axing level community apparaments. These apparaments are deliving by a structured statishing								
2010	assessments, and	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.								
	development programs									
		In this fiscal year, we completed the process of conducting a needs and impact assessment for all of our CSR projects.								
		Prior to starting operations, all of our sites conduct an Environmental Impact Assessment and Social Impact Assessment.								
		assessments are updated in case the sites undergo significant expansion programs.								
		assessments are aparted in case the sites and go significant expansion programs.								
		Dublic disclosure is a mandated part of the CIAs and CIAs								
		Public disclosure is a mandated part of the EIAs and SIAs.								
CHIDDLIED COCKE	ACCECCNATAIT									
SUPPLIER SOCIAL	. ADDEDDIVIEN I									
GRI 103:		Vedanta's Supplier Code of Conduct (SCOC) serves at the guiding document for all our interactions with suppliers and vendors.								
Management		It is mandatory for all our suppliers to abide by the Code. The SCOC covers aspects related to: Labour & human rights, Health,								
Approach 2016		Safety, Environment & Sustainability, Ethics & business integrity, Intellectual property, and Prohibition on insider trading.								
GRI 414: Supplier	414-1: New suppliers	Vedanta Sustainability Report 2018-19: Page 83 (Responsible Supply Chain Management)								
Social	that were screened									
Assessment	using social criteria.									
	using social criteria.									
PUBLIC POLICY										
GRI 103:		Vedanta's Code of Business Conduct and Ethics is the guiding document on our interactions with the government and political								
Management		parties.								
Approach 2016										
GRI 415: Public	415-1: Political	It is the Board's policy that neither Vedanta nor any of its subsidiary companies outside India may, under any circumstances,								
Policy 2016	Contributions	make donations or contributions to political organisations. Subsidiaries in India may make political donations or contributions								
Folicy 2010	Contributions									
		as this is customary in India and permitted under local legislation. In exceptional circumstances, if political donations or								
		contributions are deemed necessary in the United Kingdom and European Union for legitimate business reasons, they will not								
		be made without the approval of the Board and shareholders at a general meeting. Any political donations made in India will								
		be disclosed in the Company's Annual Report and Accounts. The Company's subsidiary, Vedanta Limited purchased electoral								
		bonds valued at US\$ 10million during the financial year ended 31 March 2019 (2018: Nil).								
ARTISANAL AND	SMALL-SCALE MINING									
G4 – MM8	Number (and									
	percentage) of company									
	operating sites where									
	artisanal and small-scale									
	mining (ASM) takes									
	place on, or adjacent to,	We do not track this information.								
	the site; the associated									
	risks and the actions									
	taken to manage and									
	mitigate these risks.									
G4 – MM9	Sites where									
04 - IVIIVI9										
	resettlements took									
	place, the number of	Nil								
	households resettled in									
	each, and how their									
	livelihoods were									
	affected in the process.									
MATERIAL ASPEC	T: CLOSURE PLANNING									
G4 – MM10	Number and percentage									
2. /////10	of operations with the	As a part of statutory clearance all our mines operations have a closure plan.								
	· ·	ris a part of statutory dicarance an our mines operations have a closure plan.								
64 06::	closure plans.									
G4 – OG11	Numbers of sites that	No site has been decommissioned or are in the process of decommissioning in the oil & gas business.								
	have been									
	decommissioned and									
	sites those are in the									
	process of being									
	decommissioned.									
PROCESS SAFETY										
		There were total 7 incident of Tier 1 (2) and Tier 2 (4) are seen affect, went to an art of its formal in the second of the seco								
G4 – OG13	Number of process	There were total 7 incident of Tier 1 (3) and Tier 2 (4) process safety events reported in financial year								
	safety events, by	Process Safety Tier								
	business activity.									
		Tier 1 0 1 3								
		Tier 2 3 2 4								
		Total   3   3   7								

#### WE VALUE YOUR FEEDBACK

Email: sustainability@vedanta.co.in

sd. ved antare sources. com/Sustainable Development 2018-19/feedback

# **NOTES**



Pledging 75% of wealth to social good. As the largest producer of silver in India, we supply essential material for new technologies from electric vehicles to biotechnology. That finances nutrition programs for children at our Nand Ghar locations across the country. Which is transforming India by promising a healthier future to the generation that will bring us new innovations. www.vedantalimited.com

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#### **GET IN TOUCH**

We value your feedback and welcome comments on this report or any aspect of our approach to sustainability reporting. sustainability@vedanta.co.in



View our online SD Report sd.vedantaresources.com/ SustainableDevelopment2018-19/



View our online Annual Report http://www.vedantaresources.com/ investor-relations/results-andreports/annual-interimreports.aspx