



# EMBEDDING SUSTAINABILITY



Vedanta Resources plc  
Sustainable Development  
Report 2012-13

## Introduction

**Our vision is to be a world-class diversified resources company providing superior returns to our shareholders. Delivering high-quality assets and low-cost operations, with sustainable development, underpins all our activities. Our Group values – centred on Entrepreneurship, Growth, Excellence, Trust and Sustainability – provide the foundations for our vision.**

This is our fifth Sustainable Development Report and coincides with the publication of our Annual Report. Combined, these two documents provide an overview of our approach and our achievements in 2012-13, outlining our actions over the past year to achieve our mission to be a world-class diversified natural resource company.

In this year's Sustainable Development Report, we have used the Global Reporting Initiative (GRI) G3.1 guidelines and the GRI G3.1 supplement on Metal and Mining Industries and Oil & Gas. In addition, the report aligns with and responds to the 10 principles of the United Nations Global Compact and Millennium Development Goals. We report to the highest A+ GRI application level. The detailed GRI G3.1 Content Index (including the Mining and Metal and the Oil & Gas Supplement) reference sheet and data sheet is available at [www.sustainability.vedantaresources.com](http://www.sustainability.vedantaresources.com).

All Vedanta Group subsidiary companies have been reported as though they were 100% wholly-owned as we recognise the level of control and sphere of influence the Group has over these operations. For the first time, the report includes data from Cairn India, which was acquired in the third quarter of the 2011-12 financial year.

## Quick find

We hope that this report provides an insight into the progress that the business is making and its performance against the sustainability targets and objectives that have been set across the strategic pillars.

### Responsible Stewardship p22



### Building Strong Relationships p56



### Adding and Sharing Value p68



This year, we have developed our approach to reporting further, including expanding the areas of materiality and stakeholder engagement, to best reflect our thinking and the direction of the business

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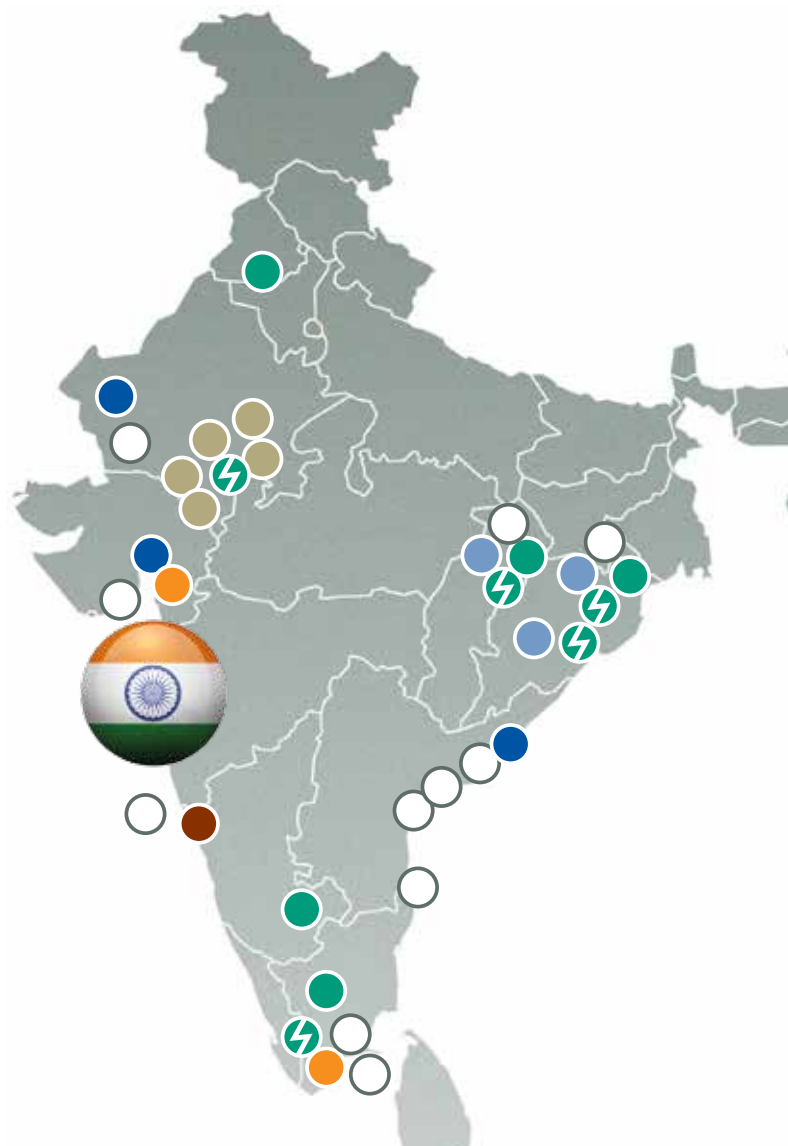
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## OUR FOOTPRINT

Vedanta is a FTSE 100 diversified natural resources group committed to sustainable development, supporting local communities and contributing to the economies of the areas where we operate.

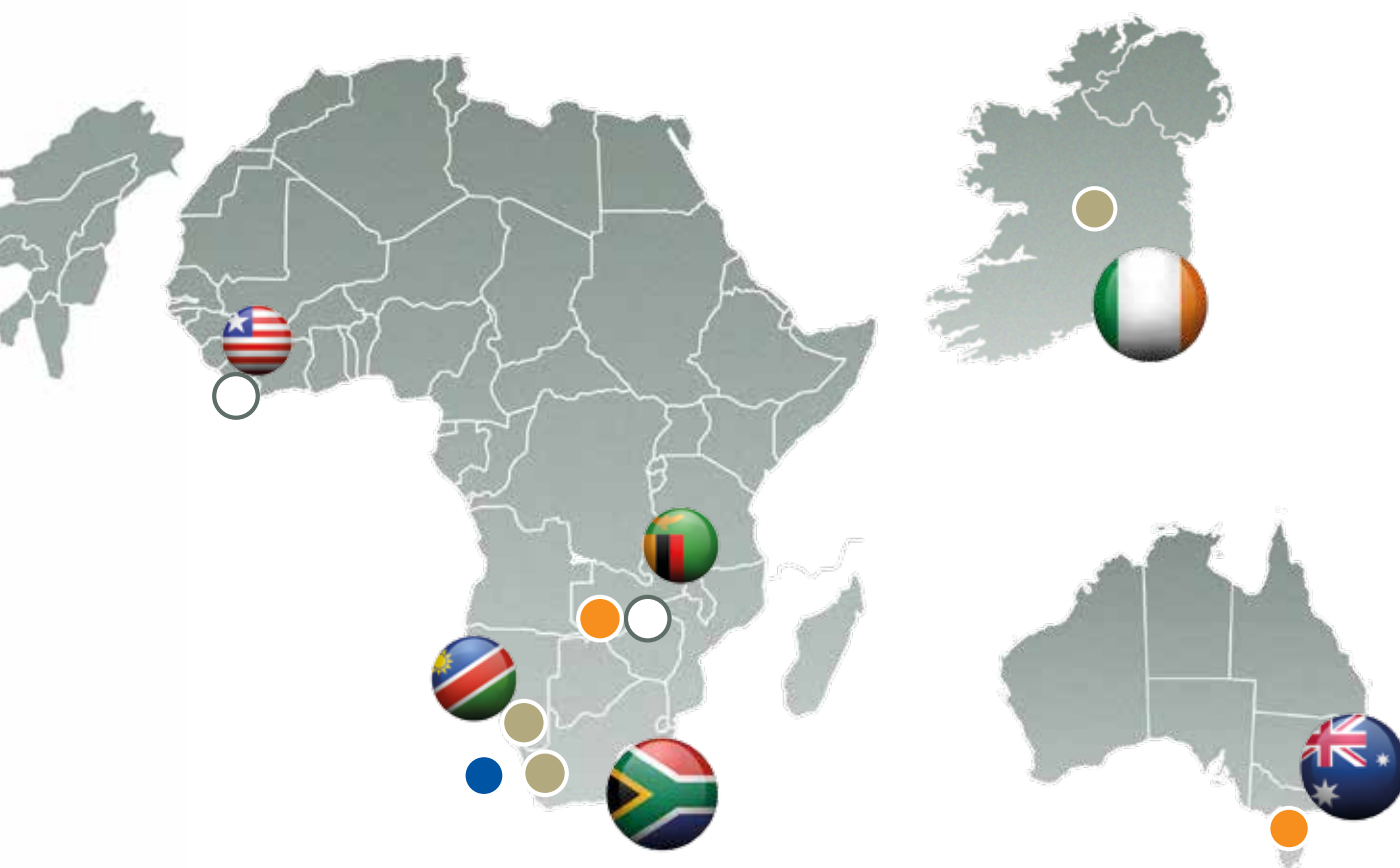
### Key to operations

	Zinc/Lead/Silver
	Oil & Gas
	Iron Ore
	Copper
	Aluminium
	Power
	Captive power plant
	Projects under development



	Zinc/Lead/Silver	Oil & Gas	Iron Ore
<b>Description</b>	We are the world's largest integrated zinc-lead producer and one of the leading silver producers globally.	Cairn India is the fastest growing Asian E&P company (winning the Platts Top 250 Energy Company Awards 2012) and ranks among the top 20 independent E&P companies globally.	We are India's largest privately-owned producer of iron ore. We are also developing an Iron ore project in Liberia.
<b>Market share</b>	We are the leading supplier of zinc in India, with an 80% market share. We are also the country's leading supplier of lead and silver.	We contribute to over 25% of India's current domestic crude production.	We were the largest iron ore exporter in India in FY 2012.
<b>Location</b>	India, Ireland, Namibia, South Africa	India, Sri Lanka, South Africa	India, Liberia
<b>Revenue (US\$ million)</b>	3,061	3,223	442
<b>EBITDA (US\$ million)</b>	1,460	2,440	84
<b>Production volumes</b>	<ul style="list-style-type: none"> <li>▶ Zinc – 1,030kt</li> <li>▶ Lead – 197kt</li> <li>▶ Silver – 13.1moz</li> </ul>	205 mboe	3.1MT
<b>Total no. of employees including contract workforce*</b>	23,506	1,491	6,011
<b>Total no. of fatalities</b>	7	0	1
<b>High category environmental incidents</b>	3	0	1





Copper	Aluminium	Power	
Our Zambia operations have one of the highest-grade large copper mines in the world. In India, we operate a large custom copper smelter considered to be one of the most efficient smelters in the world. We also operate a copper mine in Australia.	We are the largest aluminium producer in India, with smelters, refinery, captive power plants and mines. These are large high-quality assets strategically located in the midst of the coal and bauxite belt, incorporating the latest technology.	We are one of the largest independent power producers and one of the largest wind power producers in India.	Description
We are the leading supplier of copper in India, with a 40% market share.	We are the leading supplier of aluminium in India, with over 30% market share.	Our generation capacity is 5% of India's generating capacity.	Market share
Australia, India, Zambia	India	India	Location
5,734	1,921	576	Revenue (US\$ million)
476	214	215	EBITDA (US\$ million)
<ul style="list-style-type: none"> <li>▶ Copper (Integrated) – 186kt</li> <li>▶ Copper (Custom) – 383kt</li> </ul>	774kt	8,888 million units sold	Production volumes
24,504	23,506	2,621	Total no. of employees including contract workforce*
3	7	2	Total no. of fatalities
1	0	1	High category environmental incidents

\* These figures are as at 31 March 2013

## OUR OPERATIONS IN CONTEXT

Our strategy is to deliver growth, long-term value and sustainable development through a diversified portfolio of high-quality, long-life, low-cost natural resource assets. This portfolio is primarily in copper, zinc, lead, silver, aluminium, iron ore and energy generation. In addition, we have added oil and gas assets through the acquisition of a controlling stake in Cairn India.

Our priorities include delivering industry-leading production growth across the portfolio, continuing to add reserves and resources to drive long-term value, and completing the simplification of our corporate structure. These priorities are framed within the context that the business must be sustainable and, accordingly, we embed sustainable development into all aspects of what we do, on our journey of continuous improvement.

Our operations are located in the high-growth markets of India, Sri Lanka, Zambia, Namibia, South Africa and Liberia. While the majority of the Group's assets and operations are in India and Africa, we also have a presence in Ireland and Australia.

### Beyond our operations

The extractive industry is one of the key contributors to modern society as, without raw materials, the lifestyle that so many of us enjoy today would not be possible. The resources we bring to market have a myriad of uses, creating the basic building blocks of society: iron ore is used in the construction of transport networks and building infrastructure; copper is used to connect people through telecommunications and in lifesaving medical devices, and aluminium is used across a myriad of products, including protecting foodstuffs from spoiling, and helping to reduce fuel emissions as a lightweight material for automobiles. In addition, we generate electricity that lights millions of people's lives and our crude oil is an essential component of thousands of secondary products.

Our presence facilitates, through the contributions we make to the exchequer, the vital role of governments to deliver appropriate infrastructure and valuable services to their societies. We are amongst the largest contributors to the exchequer in India and are the largest contributor in

Zambia. In 2012-13, we contributed a total of US\$5.3 billion across the world.

Our operations also make a valuable contribution to the social and economic development of the communities in which we operate. This includes directly and indirectly employing close to 90,000 people and further indirectly enabling employment for an estimated 500,000 or more. We are also amongst the largest employers in several states in India, the largest private sector employer in Zambia, and provide community programmes that benefit approximately 3.7 million people.

The scale of our operations also makes us a major economic contributor through the flow-on effect of our activities. By sourcing products and services locally, we generate significant economic activity and promote the development of local skills. This is particularly relevant as the majority of our operations are in the developing world and we are committed to enabling the sustainable development of these societies.

The Group's sustainability policies and standards in areas such as health and safety, environmental management, community relations and governance are consistently used across all our operations, regardless of their geographic location.

### Journey of continual growth

Since listing in 2004, our EBITDA (earnings before interest, taxation, depreciation and amortisation) experienced an almost 15-fold increase from US\$323 million in FY 2004 to US\$4.9 billion in FY 2013. We have also successfully diversified from a base metals company producing zinc, lead, aluminium and copper in FY 2004, into now also working in bulks (iron ore), power and oil and gas. Aligned with this growth, we are working systematically to develop and augment our sustainability practices – evolving from adherence to local regulations and standards to embracing international best practice, including the IFC Performance Standards, the ICMM Guidelines and the UN Global Compact among others. Our business model is based on growth, value creation and continuous improvement, and we apply this model rigorously in the execution of the Vedanta Sustainability Framework.

We contributed a total of

**US\$5.3 billion**  
across the world to the  
exchequer

Strong performance in  
the current challenging  
environment driven by  
a diversified portfolio  
of world-class, low-cost,  
long-life assets

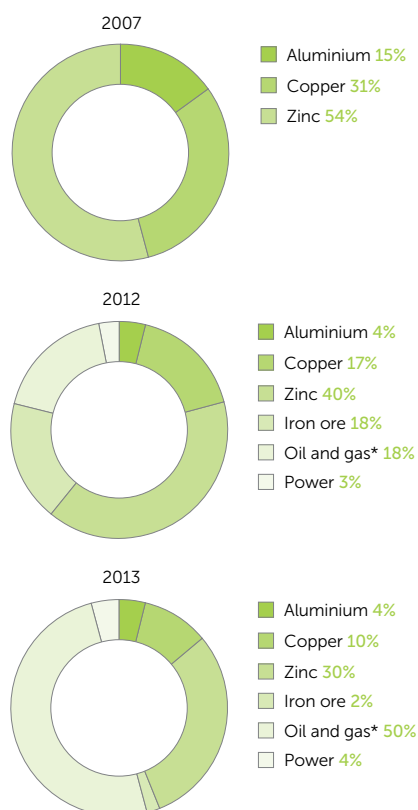
Revenue up by 7% to

**US\$15.0 billion**

Final dividend of

**37 US cents**  
per share

## Continued growth and diversification



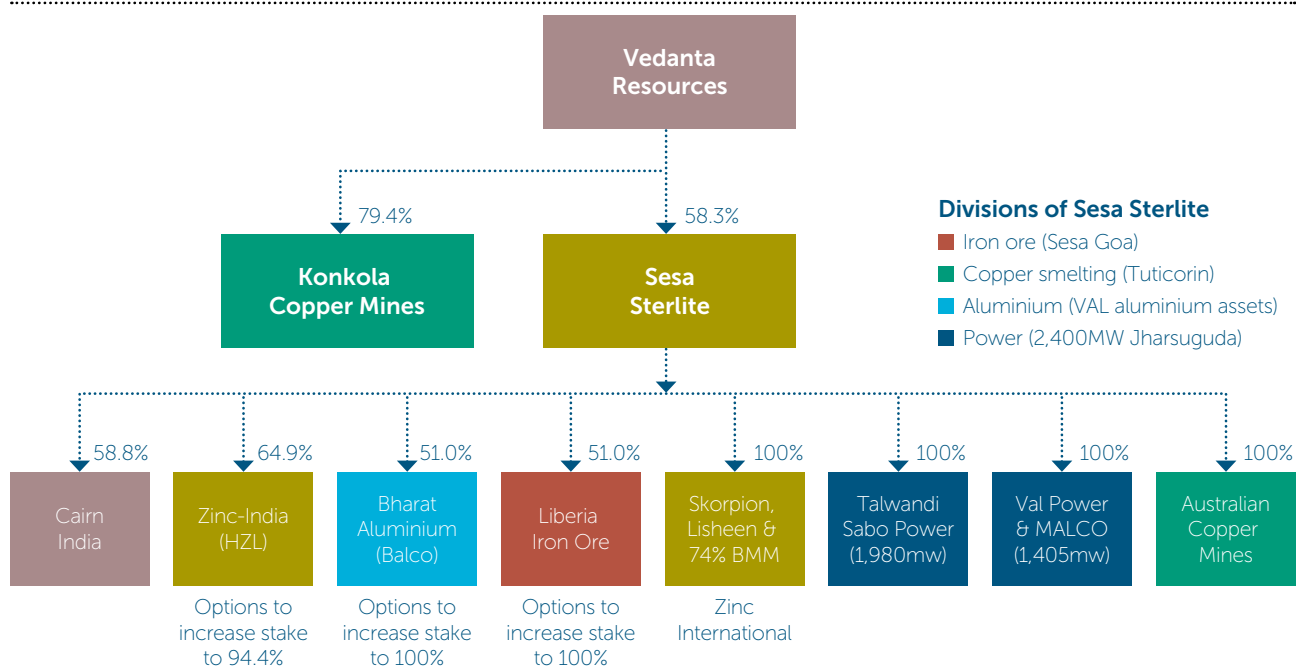
\* Numbers post completion of Cairn acquisition on 8 December 2011

## Simplifying Group structure

In line with our stated strategy to unlock value for shareholders, in February 2012 we announced a consolidation and simplification of the Group structure. As part of this, Sesa Goa and Sterlite will merge to form a new company to be called Sesa Sterlite Ltd. Additionally, Vedanta Resources' stake in Vedanta Aluminium and Cairn India will move to Sesa Sterlite and MALCO will also merge into this entity. Sesa Sterlite will be one of the world's largest diversified natural resources companies, with exposure to base metals, bulk commodities and oil and gas. We have already received approval for completing the transaction from the High Court of Bombay (at Goa) and the order from the High Court of Madras is now awaited.

This consolidation will remove cross-holdings within the Group, create a more efficient capital structure by better aligning assets and liabilities, enhance visibility of earnings and cash flows, and generate capital, tax and operational synergies. This has a direct bearing on our relationships with lenders and shareholders: as we mitigate financial risks we support and strengthen our relationships with these key stakeholders.

## Proposed Group structure



# INVALUABLE UNDERSTANDING OF HOW TO MAKE A POSITIVE CONTRIBUTION

## Working in India

Founded in India, our business has grown in parallel with India's emergence as an economic superpower with a significant global presence. We are the market leader in many key commodities in the country, and with economic growth forecast to recover to 6% in 2013, Vedanta remains uniquely positioned as a domestic supplier.

While we now work in many countries, by virtue of our long and extensive presence in India our sustainable business practices have been in place for many years, and we welcome the Indian Government's recently introduced National Voluntary Guidelines on Social, Environmental & Economic Responsibilities of Business Principles. These include obligations on business to respect the environment, promote the well-being of employees and to respect the interests of all stakeholders, particularly the disadvantaged and vulnerable. The Guidelines complement the work we are already undertaking across the Group.

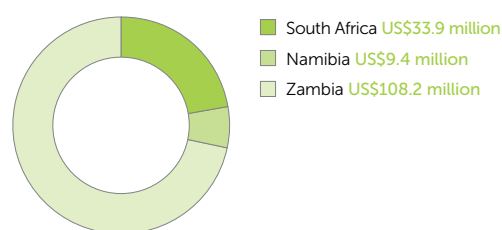
Our contribution to India's development has been significant – we produce more than 25% of India's domestic crude oil, and have therefore enhanced energy security through reducing import dependency and saving India's foreign exchange. As a nation rich in mineral wealth, we also play a major part in developing the opportunities inherent in India's natural resources. In addition, the products and services we secure from contractors and suppliers help create vibrant, regional economies and our significant workforce requirement plays a role in nurturing the talent that is available in such a diverse and large population. Our community development programme takes our contribution from our operations into the community and has a significant reach, contributing to the socio-economic development of the nation.

Our operations in India have given us an invaluable understanding of how to make a positive contribution to a developing country. We are able to take this experience to our operations in other countries, particularly in Africa, the other major region of our operations.

## Working in Africa

Our Konkola Copper Mines (KCM) operations in Zambia, BMM in South Africa, Skorpion Zinc in Namibia and our recent acquisitions in Liberia are examples of the long-term commitment that we have to the region. Since 2005, we have invested over US\$4 billion in our African operations, with our presence making a significant contribution to local and regional economies. By making long-term financial investments supported by strong, collaborative relationships, we ensure our presence for the foreseeable future. This benefits both our business and our host communities while also preserving and enhancing our social licence to operate.

In regions where there is emerging domestic demand, we play a significant role in the development of internal markets, generating revenue through both contributing to their exports earning foreign exchange and our contributions to the exchequer. In 2012-13, our exports from South Africa, Namibia and Zambia resulted in combined revenue payments of US\$151.5 million for these Governments, as illustrated below:



In addition to revenue generation, Vedanta subsidiaries promote economic activity through direct and indirect employment, and we are proud to be the largest private employer in Zambia. We also make a broader contribution through developing and promoting effective collaborations and programmes between business, governments and civil society organisations. These programmes are centred on understanding and meeting the needs of local communities whilst also developing local markets and the necessary structures to enable this engagement and collaboration. For example, our partnership with the Zambia



Extractive Industries Transparency Initiative (ZEITI) and the Government of Zambia continues to expand and enhance ZEITI's capabilities in data management and IT skills, bringing greater transparency and accountability. We also partnered with the Government of Zambia to improve railway infrastructure, enabling a more effective transport network, assisting local people and improving access to export markets.

#### **Working in the rest of the world**

We have a limited, but important, presence in Australia and Ireland. These sites contribute to the local communities in which they operate by providing employment, developing infrastructure and engaging with local community groups and organisations.

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**By making long-term financial investments supported by strong collaborative relationships, we ensure our presence for the foreseeable future. This benefits both our business and our host communities while also preserving and enhancing our social licence to operate**

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Our operations are located in remote areas & developing countries – like the Black Mountain mine in the North Cape province of South Africa

## Overview: Chairman's introduction



We manage our business responsibly  
in order to be sustainable

Anil Agarwal  
Chairman

# EMBEDDING OUR SUSTAINABILITY FRAMEWORK

Sustainability is a core element of our guiding strategy and supports our growth as a diversified natural resources company. In this report, we discuss how we manage our business responsibly. This includes the activities we undertake across our operations to ensure the health and safety of our people, how we make valuable economic and social contributions to the communities and regions where we operate and how we manage our environmental footprint.

Our active engagement and deep understanding of the countries, communities and environments where we operate, combined with our Tier 1 assets, form the foundation of our business strategy and position our Group to create diverse value for our shareholders and other stakeholders.

### Embedding sustainability

As we grow our business, it is important that we have a consistent and systematic approach to running our operations. Last year we introduced our Vedanta Sustainability Framework and this year we have focused on embedding and implementing it. This has meant working to train and develop our employees and contractors and to roll out the framework's supporting processes and standards. This report illustrates these efforts, achievements against set targets and our future aspirations. We understand that our commitment to corporate sustainability requires constant monitoring and diligence and our framework also gives us the tools to achieve this.

I have consulted closely with our CEOs to ensure that the implementation of the Vedanta Sustainability Framework is a core aspect of their business. Supported by the business CEOs and the corporate team, the Sustainability Committee has worked relentlessly to drive our sustainability agenda.

### Priority areas


Three years ago I made a personal commitment to five priority areas. They provide a clear path to successful and sustainable growth and how we can add value to our shareholders and other stakeholders. Below, I have outlined the progress we have made against each of these priorities over the past year:

#### 1. Embed sustainable development into every aspect of what we do

Significant progress has been made to embed sustainable development into our business operations, including training 8,000 employees on the Vedanta Sustainability Framework. Particularly important has been the introduction of an assurance and site audit process – the Vedanta Sustainability Assurance Programme, or VSAP – which measures the effectiveness of our Sustainability Framework at the operational level.

#### 2. Improve our health and safety performance for a safer, more secure and healthier environment

The safety of all the people who work with Vedanta remains a major priority and I am encouraged that our key safety metrics show



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**As we grow our business,  
it is important that we  
have a consistent and  
systematic approach  
to running our operations**

improvements. I do however regret to report a number of fatalities this year, particularly as a result of one key incident that took the lives of five of our colleagues. It is clear that much more needs to be done to achieve zero fatalities, and our entire company is committed to reaching this target.

We are working to embed a zero tolerance culture for health and safety breaches and in the Responsible Stewardship section of this report we detail a number of programmes we have implemented to achieve this.

### **3. Make targeted contributions to local communities**

We continued to partner with a large range of organisations to identify and meet community needs in the areas in which we operate. For example, in India we partner with the District Rural Development Agency to provide basic amenities and infrastructure, while in South Africa we partnered with the Northern Cape Department of Health to provide cataract screening and surgery.

Contributing to communities remains a strategic priority and forms a central part of gaining and maintaining the trust of all those who host our operations.

### **4. Continue to manage and minimise our impact on air, water and land**

This year, we maintained our focus on how we manage our impact on air, water and land use and this has resulted in a decline in water resource usage. Although we have achieved

success in meeting many of our past goals, we are now setting escalating benchmarks as we enter a new phase of our sustainability journey.

### **5. Maintain an active dialogue with our stakeholders**

Stakeholder engagement is an ongoing process and; to add additional rigour, this year we undertook a focused materiality assessment to understand stakeholders' expectations of us as a global business. We describe the activities we have undertaken to achieve this in this section of the report and in Building Strong Relationships.

#### **Moving forward**

I am pleased that we have made considerable progress on meeting our stakeholders' expectations of us towards sustainability. I am confident that the right framework and standards have been put in place to embed and implement sustainability practices for the long term, which enables us to operate to international standards consistently across the Group. We are committed to continuing to work with all our stakeholders on this journey, ensuring we are a business that delivers value – both financial and non-financial – to all our stakeholder groups.

**Anil Agarwal**  
Chairman

## Chief Executive Officer's statement



Ensuring that our business produces resources responsibly is not only crucial for society, it is critical for sustaining the growth and development of our business.

MS Mehta  
Chief Executive Officer

# TAKING OUR RESPONSIBILITIES SERIOUSLY

As Chief Executive Officer and Chair of the ExCo Sub-Committee on Sustainability I am pleased to take this opportunity to illustrate the seriousness with which we take our responsibility towards our stakeholders, to broader society and to the planet. Leading a diversified natural resource company, whose business is locating and producing finite resources, makes me acutely aware of our obligation to run a sustainable business.

Ensuring that our business produces resources responsibly is not only crucial for society, it is critical for sustaining the growth and development of our business. All of us at Vedanta believe that we can strengthen our business and positively impact the world by managing all our business operations sustainably. By doing so, we maintain constructive and mutually respectful relationships with all our key stakeholders.

Vedanta uses state-of-the-art technology and we are committed to embracing and developing new technologies and innovations that add economic value, create efficiencies, and also make a significant contribution to reducing the environmental footprint of our business. For example, a few years ago we replaced our old copper smelter at our KCM business with the latest technology smelter. This has helped in improving our metal recovery from 91% to 98.5% from copper concentrate, which in turn has reduced our finite resource consumption per tonne of metal. Similarly, learning from that experience, at our BALCO business we have replaced our old aluminium smelter with the latest technology, saving approximately 3,000 units of power per tonne of aluminium. This has resulted in our reducing our carbon footprint per tonne of metal. It is also important to recognise the role our products play in facilitating a more sustainable society; much green technology is dependent upon the copper and aluminium we bring to market.

### Implementing our Sustainability Framework

Over the past year, we have further embedded our Sustainability Framework and implemented its practices and standards. We are committed to ensuring that the Framework is followed and managed in all our operations and new projects in order to continue our sustainability journey.

Our team, comprising over 600 key staff in health, safety, environmental management and community engagement around the world, is committed to support our vision and targets. These efforts are further supported and reinforced by engaging external experts.

This report is a reflection of how we have made progress on the three strategic pillars of the Vedanta Sustainability Framework: Responsible Stewardship, Building Strong Relationships and Adding and Sharing Value, and below I highlight some of the key achievements from the year which are detailed throughout this report.

### Responsible Stewardship

Responsible Stewardship encapsulates our approach to our employees, the environment and our business processes. In 2012-13, my greatest concern has been the 20 fatalities, and I am personally committed to driving this figure down to achieve our goal of zero fatalities. This goal is supported by our leadership teams, across-operations commitment to make our operations a safe place to work.

We have undertaken a number of activities in support of our Responsible Stewardship pillar over the past year:

- Our Code of Conduct sets out our expected behaviours and is the first step in guiding and training our employees in managing their way of working. During the year, we conducted around 36,000 man hours of training on the Code of Conduct.

- ▶ Post introduction of the Vedanta Sustainability Framework, we have launched the Vedanta Sustainability Assurance Programme (VSAP), to measure its implementation and effectiveness across our operations.
- ▶ Embedding the Framework is a long-term project and each site has a well-defined action plan that provides both direction and targets for improvement. These plans are supplemented by appropriate guidance documents and training to ensure that the business units are supported appropriately in its effective execution.
- ▶ We have taken a number of steps to enhance the way we manage the Group's environmental impacts, particularly in the areas of biodiversity and waste management.
- ▶ All our new projects are aligned to our new Sustainability Framework.

After a string of several successful years, we fell short of our targets on specific water and energy consumption, largely due to production interruptions at a few of our sites and slower progress than earlier planned. However, we remain committed to making progress this year, backed by our conviction and action plans.

Environmental incidents continue to be classified according to our internal rating system, based on their severity. Incident monitoring, reporting, investigation, and remediation and preventative action is practised with the aim of improving our overall performance. Our new generation plants together with the commitment of competent teams will remain the foundation to deliver benchmark results.

### Building Strong Relationships

Maintaining and managing relationships is crucial to ensuring that we continue to create value for all stakeholder groups and to this end we continue to enhance our stakeholder engagement processes. The deeper and more sophisticated our relationships are with our stakeholders, the better we are equipped to understand the material issues for our business. This allows us to respond to any challenges and maximise strategic opportunities.

Over the last year, a key achievement has been the inclusion of stakeholders, both internal and external, in the development of the business thinking on materiality and the subsequent deepening of our awareness and understanding of stakeholder priorities. This has been a real step forward in ensuring our Sustainability Framework comes to life and is meaningful for them. More detail on our materiality process is available in this section of the report.

In addition, in order to effectively reach different stakeholder groups, we have in place the dedicated [sustainability@vedanta.co.in](mailto:sustainability@vedanta.co.in) email facility in order to receive feedback directly. We remain focused on completing the upgrading and implementing of our existing stakeholder engagement standard to our Sustainability Framework. Our target is to have in place appropriate stakeholder engagement plans across all Vedanta's businesses by 2014.

As a proactive step, the Sustainability Committee commissioned an internal study to assess the robustness of our processes and identify any areas of improvement

in how human right issues are managed at each of our operations. The objective of the review was to confirm that we are meeting all applicable national and international legislation, guidelines and conventions on human rights with special reference to the UN Universal Declaration of human rights. This has helped us in strengthening our existing systems and delivering focused training for our staff.

### Adding and Sharing Value

Vedanta's activities add both financial and non-financial value. Our business generates significant revenues to governments and local bodies. We also make a positive impact by employing close to 90,000\* people worldwide, by developing infrastructure and through the engagement of local and regional suppliers. In addition, we add value to our communities by partnering in initiatives with local NGOs and host Governments for the upliftment of society.

We have a robust training programme for our employees to facilitate their career development and to equip us with the skills we need for our growth plans. We are committed to also ensuring and providing a motivated and happy working environment for our workforce. Our Chairman conducts frequent workshops with aspiring leaders within the Group, where employees have an opportunity to engage directly with the senior leadership. We feel this direct engagement adds value to our employees as well as our business.

Development of our host communities, a large part of which are under-privileged, has always been important to us, particularly in India and Africa. We continue to serve this cause through needs-based initiatives. During the year we spent US\$42 million on the community programmes that we delivered in collaboration with NGOs, local governments, academic institutions and private hospitals.

We recognise that we also share value through stakeholder relationships, such as those with shareholders, lenders and civil society groups. We continue to work to deepen our understanding of these groups' expectations of the business, with our stakeholder engagement process the first step in enhancing our mutual understanding.

All the actions we have taken in support of our Framework and the targets we have set ourselves make Vedanta a strong company which is able to make positive and meaningful long-term contributions to our stakeholders, our host countries and the areas we work in.

**MS Mehta**  
Chief Executive Officer

\* Total employees and contractors as at 31 March 2013



**As a responsible business, we provide regular and timely updates on significant initiatives and issues affecting our operations.**

Below, we present a summary of key current issues that have been highlighted publicly in the last year. For more information, please see our corporate website at:  
[www.sustainability.vedantaresources.com/home](http://www.sustainability.vedantaresources.com/home)

### **Vedanta Aluminium Limited – Lanjigarh**

Vedanta Aluminium Ltd (VAL) constructed a 1 million tpa alumina refinery at Lanjigarh, Kalahandi District, Odisha State, eastern India in 2007, with a Memorandum of Understanding signed with the Government of Odisha that up to 150 million tonnes of bauxite for the plant would be supplied by the Odisha Mining Corporation (OMC), a Government of Odisha-owned enterprise. Although the bauxite mining project was approved by the Supreme Court of India in 2008, OMC has not yet been able to start the mining project, mainly due to the rejection of the final clearance by the Ministry of Environment and Forest (MoEF). With OMC unable to supply the bauxite, the refinery was closed on 5 December 2012.

On 18 April 2013, the Indian Supreme Court directed the Government of Odisha to place issues concerning the individual, community, cultural and religious claims of local people before a local Gramsabha, which would decide the issue within three months and communicate the outcome to the MoEF. The court also confirmed that once the Gramsabha has resolved all the claims, the MoEF will make a final decision on project clearance within two months.

VAL continues to work with the Odisha state authorities for the allocation of bauxite. Separately, we are working on obtaining bauxite supplies for the refinery from other sources to allow the refinery to resume operations.

### **Sterlite Industries India Limited – Tuticorin**

Sterlite Industries owns a 1,200 tpd copper smelter at Tuticorin in Tamil Nadu state, south-east India. The smelter was built in the 1995-96 with capacity increased twice, and it now accounts for around half of all copper produced in India. In September 2010, the Madras High Court ordered the closure of the smelter because of allegations of pollution. In April 2013, the Supreme Court reversed that decision. A court-appointed independent investigation team – consisting of the National Environmental Engineering Research Institute (NEERI), the Tamil Nadu Pollution Control Board (TNPCB) and the Central Pollution Control Board (CPCB) – found that the business meets the required standards. The company has also implemented a number of improvement recommendations.

Separate from the earlier court decisions, after allegations of excess SO<sub>2</sub> emissions in March 2013, the TNPCB ordered the closure of the smelter on 29 March 2013, without carrying out scientific analysis. Plant parameters showed emissions remained within the permitted limits. Sterlite Industries continues to work with the TNPCB to enable the smelter to reopen, but has also filed an appeal with the National Green Tribunal (NGT). In the order dated 31 May 2013, NGT allowed operations to start in the presence of a committee set up by the tribunal.

### **Sesa Goa Limited**

Sesa Goa owns a 14 million tpa iron ore mining operation in Goa and a 2.29 million tpa iron ore mining operation in Karnataka State, south-west India. It is India's largest private sector producer and exporter of iron ore.

In 2011, the Supreme Court of India suspended all iron ore mining operations in Karnataka. This state-wide suspension of iron ore mining has affected Sesa Goa operations in Karnataka. In September 2012, the Government of Goa also suspended mining and ore transportation in the state. Consequently, we have stopped ore extraction and transport in Goa. In September 2012, the MoEF also suspended all environmental clearances given to the mines until verification of compliance with the set conditions. In October 2012, the Indian Supreme Court ruled that the ban on mining activities and transportation will continue in Goa and referred the matter to the Central Empowered Committee (CEC) to file a preliminary report in the Supreme Court.

For Karnataka, on 18 April 2013 the Indian Supreme Court authorised the resumption of mining for category A and B mines, subject to statutory clearances. Sesa Goa's Karnataka mine, a category B mine, is securing the necessary clearances to resume mining and is expected to start up again shortly. For Goa, the MoEF has set up an expert committee to investigate the compliance status of the environmental clearance conditions granted to the mines. Sesa Goa continues to work with the CEC and the MoEF to allow mining operations to recommence, but has also filed an application with the Supreme Court seeking a stay on the suspension of mining and restrictions on ore transportation.

#### **Scott Wilson Review**

Of the 29 recommendations made by the Scott Wilson Review, 27 have now been completed and closed.

The two pending recommendations that are outstanding are as a result of the following:

- ▶ Final sign-off audit to be carried out in the second quarter of 2013-14
- ▶ A recommendation pertaining specifically to the VAL-Lanjigarh site expansion is awaiting a legal verdict from the Indian Supreme Court.

We are committed to continuing the development of the Vedanta Sustainability Framework and to its implementation along the lines stipulated in the review, with systems now in place to deliver excellence across the Group. Full details of our progress can be found in the Assurance section of this report.

#### **Cairn India**

**In December 2011, Vedanta Resources plc completed its acquisition of a controlling stake in Cairn India, India's largest private crude oil producer.**

#### **About Cairn India**

Cairn India has been operating in India for more than 17 years and has played an active role in developing the country's oil and gas resources. In 2007, Cairn India Limited was listed on the Bombay Stock Exchange and the National Stock Exchange of India, and was the fastest growing upstream oil and gas company in Asia in 2011.

Cairn India has a portfolio of 10 oil and gas blocks – one in Rajasthan, two on the west coast and five on the east coast of India, and one in each of Sri Lanka and South Africa. It has produced over 100 million barrels of crude from its prolific Rajasthan oil fields in just three years of production, and today produces over 200,000 bpd, accounting for over 25% of India's domestic crude oil production. Cairn India has opened three frontier basins with over 40 discoveries, 25 of which are in the Rajasthan block.

#### **Cairn India's sustainability management**

Cairn India has in place a strong, experienced management team and a correspondingly robust approach to sustainability management. In order to ensure the delivery of sustainable and responsible corporate practices, the business has policies and standards in place including those on business ethics, HSE, local communities, supplier relations and human rights.

Cairn India has long committed to being a responsible and sustainable business and reported its activities against its 3R programme: Respect, Responsibility and

Relationships. Though the sustainability challenges faced by the extractive and oil and gas industry are diverse, the synergies between Cairn India and Vedanta's approach to sustainable development are clear: both businesses understand that the size, scale and nature of their operations mean they have a responsibility to treat the community and the environment with respect, whilst recognising that the business and the products it enables all contribute to society as a whole.

When developing sustainability initiatives, Cairn ensures that the development of the communities in the areas where it operates is paramount to ensure that the business has a sustained positive impact in the area. In pursuit of this goal, it works in partnership with government and local authorities to support government initiatives on local community development.

#### **Being part of the Vedanta Group**

Alignment between Cairn India and Vedanta's approach to managing business sustainably is currently being explored, together with sharing sustainability learning. The Vedanta Group approach to stakeholder engagement and the global reach of its operations provide growth and strategic opportunities for Cairn India. Cairn India has developed several programmes and initiatives to manage road safety and journey management as this poses a major risk for the business. Cairn's approach to training its people and the local community on road safety is being adopted by Vedanta business units.

# OUR SUSTAINABILITY MODEL

### Our Vision

Vedanta's vision is to be a world-class diversified resources company providing superior returns to our shareholders with high-quality assets, low-cost operations and sustainable development.

### Group Strategy

To deliver growth, long-term value and sustainable development through our diversified portfolio of large, long-life, low-cost assets.

## 1. Responsible Stewardship

p24

Responsible stewardship is the foundation on which we build our business – the way in which we respond to, and manage, our business. This includes: how we manage our employees and their health and safety, the management of our land and our environmental impact and our supporting business processes.

## 2. Building Strong Relationships

p57

We work hard to engage with our stakeholders to understand their key concerns and expectations of our business and practices. Proactive engagement also enables us to identify opportunities and mitigate risks by understanding and responding to issues rather than reacting to them.

## 3. Adding and Sharing Value

p69

We seek to add and share value through everything that we do. As a business we make a considerable economic impact: through employment, the payment of taxes, royalties and other contributions to local, state and national governments. We also build local infrastructure that benefits local communities in the form of roads, schools and healthcare centres.

### Our strategy

The Vedanta business model is focused on growth. The business strategy ensures that this growth is both sustainable and responsible. Our Sustainability Framework provides Vedanta with a robust structure for driving our future growth, supporting our sustainability model of Responsible Stewardship, Building Strong Relationships and Adding and Sharing Value. Through the implementation of the Framework, we can advance both our business outcomes and those of the communities and environment that surround us by offering significant benefits beyond our operations.

Since introducing our sustainability model and supporting Sustainability Framework in 2011-12, we have acted to implement them across the business. Each Group company has conducted a gap analysis of our existing management systems (ISO 14001, OHSAS 18001 and some to SA 8000 certification) with respect to the Vedanta Sustainability Framework (VSF), and subsequently put in place action plans to enable compliance. Progress towards targets is measured and monitored by teams in the businesses, but we have also developed a corporate central Sustainability Assurance Programme, supported by our external sustainability auditors.



For our complete sustainability framework, visit our website.

[www.sustainability.vedantaresources.com/our\\_approach/our\\_strategy](http://www.sustainability.vedantaresources.com/our_approach/our_strategy)

# SUSTAINABILITY MANAGEMENT

Vedanta has a clear structure for managing and implementing the Vedanta Sustainability Framework from the Group to the operational business units.

Sustainability is driven through all levels of Group business, from Board endorsement at committee level, through operational review and target setting by our ExCo Sub-Committee on Sustainability chaired by the CEO, to regular training and instruction conducted on-site.

We have a Board of Directors and Executive Committee in place which assume the role of giving strategic perspective and thus steering the organisation in line with the commitments made to various stakeholders.

We have introduced clear lines of responsibility and management to ensure that business performance is vigorously reviewed on a continuous basis, with mechanisms in place to promote shared learning across the Group subsidiaries, facilitating performance improvements. Every effort is being made to tighten the way that sustainable business practices are managed across the Group.

Group sustainability policies and guidance documentation are made available to all Vedanta employees through the corporate website, on individual company portals and through awareness training, which is attended by all levels of the business from the CEO to the 'shop floor'.

This year, refresher training was provided by the Group Chief Sustainability Officer to Board members on the Vedanta Sustainability Framework and the International Financial Corporation (IFC) Performance Standards and at the business level a continuous training programme was rolled out by the certified trainers, with 8,000 employees participating this year.

## Our governance structure



## Key

Review of assurance findings

Reporting route

Assurance process

### Sustainability Committee:

#### Permanent Members

Independent Director (Chairperson), Group CEO, KCM CEO, Group CSO (Committee Secretary)

#### Permanent invitation

All business unit CEOs

### ExCo Sub-Committee on Sustainability

#### Permanent Members

Group CEO (Chairperson), Group Sustainability Team, Heads of relevant departments: HR, HSE

#### Permanent invitation

All business unit CEOs

### Group Sustainability Team:

#### Permanent Members

Group CSO, Business HSE and CSR personnel

### Segment Business Committees:

#### Permanent Members

Business unit CEOs, COOs, different functional heads, HSE and CSR teams

## Overview:

# Our approach and strategy continued

### Sustainability Committee

The Vedanta Board is responsible for all aspects of sustainability across the Group and acts through the Sustainability Committee. The Committee is chaired by the Senior Independent Director, Mr Naresh Chandra, and also comprises Mr MS Mehta, CEO Vedanta, and Mr J Janakaraj, CEO KCM. All subsidiary company CEOs have a permanent invitation to attend and participate in the meetings. The Committee oversees and reviews sustainability performance and the Committee Chairman regularly updates the Board on its progress. Instilling rigour in the Group's processes has been a particular focus, for example, by introducing mechanisms such as a monthly Sustainability Sub-Executive Committee meeting, where monthly data and statistics on performance are shared across the business units.

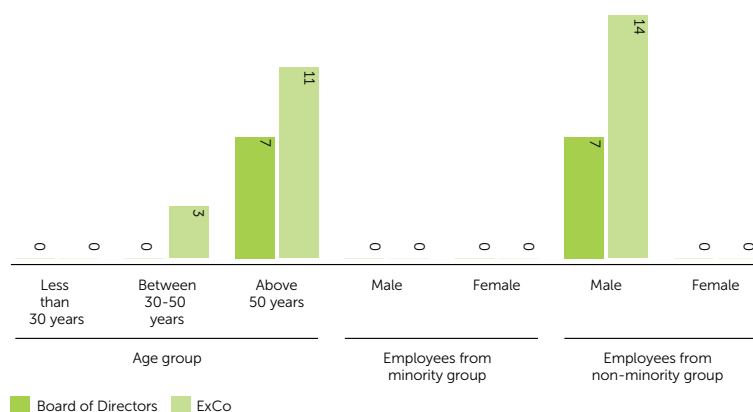
The Sustainability Committee's mandate includes:

- ▶ Outlining initiatives required to institutionalise a sustainability culture through involvement of employees at all levels of the business.
- ▶ To review, and report upon to the Board, the performance of the Group and its companies with respect to the implementation of the Sustainability Framework, and that sustainability and reputational risks are being assessed, controlled and managed effectively.
- ▶ To review targets for sustainability performance and report to the Board with respect to their appropriateness, and assess progress towards achieving those targets.
- ▶ To approve the Vedanta Sustainable Development Report.

### ExCo Sub-Committee on Sustainability

The Group CEO, Mr MS Mehta, chairs the Committee. The Committee works at an operational level to embed and deliver the sustainable vision of the business. All Group CEOs have a permanent invitation to the meetings and it is attended by selected human resources, and health and safety and environmental leads from across the Group subsidiaries, together with the Group Sustainability Team. This year, the Committee has mainly concentrated its efforts on ensuring that there is appropriate CEO oversight of operational performance against the Sustainability Framework.

### Composition of governance bodies



The Committee also reviews progress on actions to reduce accidents and injuries across the Group, on improving environmental performance and the Health and Safety – Elimination of Unsafe Conditions Programme. In addition, it sets Group-wide targets on sustainability performance, reviews sustainability assurance scores and approves business action plans. Performance updates against targets set are expected to be given on a regular basis.

### Segment Business Committees

Individual business units have their own corporate mechanisms such as health and safety and social committees to deliver on their targets and to drive sustainability across their operations. Performance indicators are developed in accordance with the risks associated with their operations, and guidance documents are provided by the Group to aid business implementation plans.

### Site Level Committees

All sites have a designated health and safety committee which is comprised of management, HSE personnel and union representatives where appropriate, covering the full workforce of the site. The committees meet quarterly to provide advice on occupational health and safety improvements.





We believe with our thrust and focus on sustainability strategy we can advance both our business outcome and those of people, host communities and environment surrounding us.

Naresh Chandra  
Senior Independent Director

## BUILDING ON THE FOUNDATIONS OF A COMMITTED BUSINESS

The role of the Sustainability Committee is to advise the Board on how it can meet its growth objectives in the most sustainable way. The Sustainability Committee's vision is to build on the foundations of a business committed to its cultural heritage to create a business that is a facilitator of shared value – both financial and non-financial.

The Sustainability Committee fully recognises the role that Vedanta's activities play in the world, particularly in developing economies where the business operates. Vedanta uses its talents, expertise and entrepreneurialism to help build these societies – physically through the commodities that help build functioning and thriving communities, but also by utilising its knowledge to train local employees and work with host Governments to improve their infrastructure. Our Group commitment to the long term – across the whole range of significant mining sites and related infrastructure that we develop – means that we can add significant value to the countries where we operate and benefits for the people who live there.

We are also committed to reducing Vedanta's footprint, acting responsibly and positioning ourselves as a partner of choice for key stakeholder groups – adding and sharing value in the broadest way.

### Delivering sustainably

This year the Sustainability Committee held four meetings over the year and has continued its efforts to implement the Vedanta Sustainability Framework across the Group.

The internal Vedanta Sustainability Assurance Programme has been successfully completed at 13 Vedanta sites and plans for further implementation are in place, with information available in the Responsible Stewardship section of this report.

As well as overseeing processes and the delivery of technical standards, the Sustainability Committee is driving business thinking on its overall approach to sustainability issues.

This has included the commissioning of research and evaluation on human rights and on child labour to understand the risks posed by the countries and markets in which Vedanta operates, including the socio-political context of these operations.

Other issues and matters dealt with by the Committee included:

- ▶ Consideration of the Group's stakeholder engagement with specific reference to the VAL-Lanjigarh mode of engagement, and project initiatives with the Dongria Kondh and other tribal groups.
- ▶ Safety  
Discussion and review of:
  - > Fatal incidents
  - > Review of the Elimination of Unsafe Conditions Programme.
- ▶ Environment  
Discussion and review of:
  - > Major environmental incidents
  - > Specific water and energy consumption performance with respect to targets
  - > Fly ash management plan
  - > Waste management plan
  - > CDM programmes for the Group.
- ▶ Health  
Discussion and review of:
  - > Occupational health data
  - > Group wellness programmes.

Naresh Chandra  
Sustainability Committee Chairman

# OUR MATERIALITY PROCESS

### Materiality

We believe that maintaining meaningful stakeholder engagement has multiple benefits for business, including allowing for future planning, deepening understanding of political, social, economic and environmental contexts, and ultimately improving efficiencies and driving profitability.

We consider material issues to be those that are deemed important to our stakeholders and to the sustainable operations of our business. These are also those significant risks which could result in reputational damage, litigation or statutory penalties (we discuss our approach to risk management in the Responsible Stewardship section of the report). Managing material issues appropriately is crucial to managing our business sustainably and meeting the business strategy to drive growth. Over the past year we have evolved our approach through developing relationships with both our internal and external stakeholders.

We consult with our stakeholders in a number of ways, on a wide variety of matters, and involve the relevant personnel. Understanding the areas that particularly interest stakeholders is important to ensure that the business provides appropriate feedback on activities and to meet the expectations of those interested in our business. More information on the business approach to stakeholder engagement and the various channels that we use to communicate with the various groups can be found in the Building Strong Relationships section of this report.

### The materiality process

In 2012-13, we engaged both internal and external stakeholders through a formal consultation process conducted by an external third party to ensure that the process was impartial and in line with best practice.

The consultation included interviews with representatives from shareholders, lenders and civil society organisations, surveys of a selection of community members and employees and one-to-one meetings with key personnel from across the business who work with customers, suppliers and in government relations.

Findings from the consultation process were consolidated and presented to management, giving clear indication of the priority topics that were identified by each of the stakeholder groups. These are reflected in the table on page 58-59.

In order to ensure that the materiality process marked an evolution in the business approach, the findings were mapped against the three pillars of Responsible Stewardship, Building Strong Relationships and Adding and Sharing Value, and the material areas outlined in last year's Sustainable Development Report.

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**Managing material issues appropriately is crucial to managing our business sustainably and meeting the business strategy to drive growth**

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### Findings

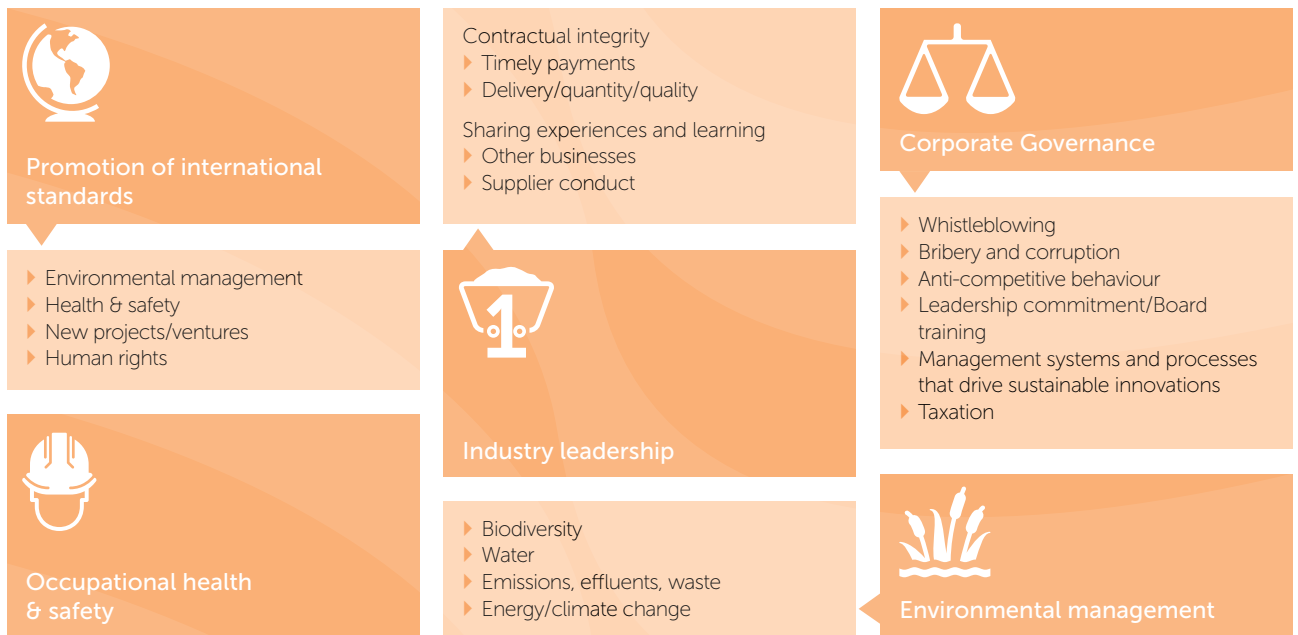
All our stakeholders recognised that the expectations placed on multinational companies have evolved, and it was considered that businesses should be aligning themselves with international standards, demonstrating effective corporate governance and ethical business practices.

Although the motivations for the choices varied, all stakeholders welcomed the process as a significant development for Vedanta. The consultation provided a valuable insight into the areas that stakeholders are interested in. Most significantly, we found that although the issues were largely similar to the themes identified in previous years, the way in which stakeholders are grouping them has evolved over time, towards a deeper and more holistic approach to business management and sustainability. Below, we have linked the key areas our stakeholders identified to the three pillars of our sustainability model and the thematic areas.

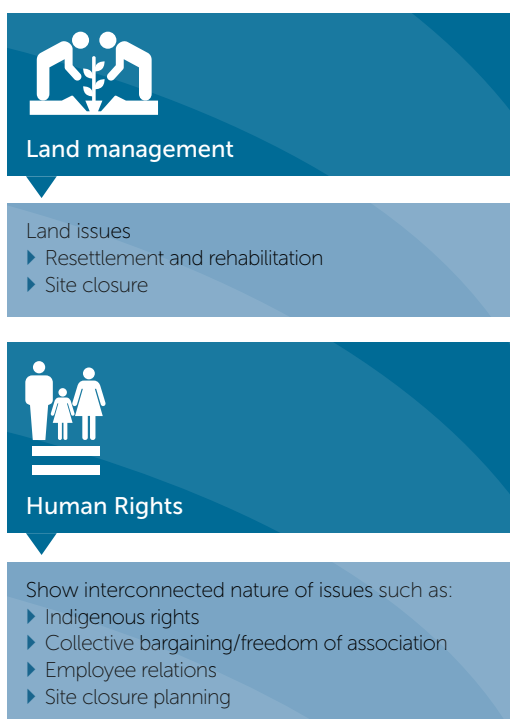
# MAPPING OUR MATERIAL ISSUES

The materiality process is an evolving one and we are committed to reporting against the areas identified here as material to the business and its sustainable success, in this and subsequent reporting.

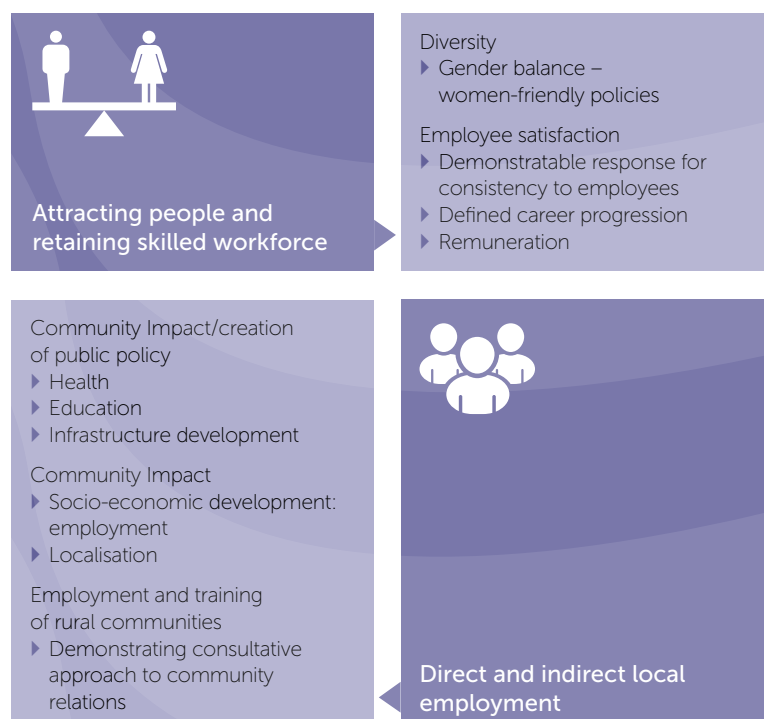
## Responsible Stewardship



## Building Strong Relationships



## Adding and Sharing Value



## Overview: Performance

### Vedanta performance highlights

Objectives and targets FY 2012-13	Status	Performance FY 2012-13	Objectives and targets FY 2013-14
<b>Responsible Stewardship</b>			
<b>Health and safety</b>			
Improving our safety performance with a core focus on fatality reduction	→	There have been 20 fatal accidents All incidents have been investigated. Lessons learned are shared across Group companies to avoid recurrence	Zero fatal accidents
LTIFR to be less than or equal to 0.80	↑	0.72: LTIFR rate reduced by 62% over the last five years	LTIFR to be less than or equal to 0.70
TRIFR to be less than or equal to 1	↓	1.95	TRIFR to be less than or equal to 1.7  95% reduction/removal of identified key physical hazards using the Elimination of Unsafe Conditions Programme
			<b>Initiation of behaviour-based safety training module to be rolled out and piloted at one site</b>
<b>Environment</b>			
Energy savings – 3.90 million gigajoules	↓	Owing to no production at our Sesa Goa and VAL-Lanjigarh business, and a delay in the commencement of some scheduled initiatives due to a more lengthy development stage than anticipated, the Group could not achieve the estimated environmental performance in water and energy savings. The absolute total water and energy saving for the Group was 5.53 million cubic metres and 0.35 million gigajoules respectively	Energy savings – 2.15 million gigajoules
Water savings – 18.72 million cubic metres of water	↓		Water savings – 6.12 million cubic metres
Scope 3 emissions	→	Plans and systems are being developed to start reporting data by 2015-16	Report on Scope 3 emissions disclosure by 2015-16
		Total non-hazardous waste generation – 7.8 million tonnes Total recycling – 5.6 million tonnes equal to a 71% rate of recycling	<b>Non-hazardous waste recycling to be 105% of the total tonnage of non-hazardous waste recycled. FY 2012-13 as baseline</b>
All sites to have biodiversity action plan (BAP) by 2015	→	We have reviewed all our operations to screen biodiversity risk using the IBAT tool	Initiation of high-risk BAPs across all sites
New project development and the implementation of site closure process across the business	↑	All new projects and site closures are being carried out as per the Vedanta Sustainability Framework which is aligned to international standards	Continue to monitor new projects and site closure as per the Vedanta Sustainability Framework



Exceeded target



On track to meet target



Target not met

Blue text:  
New targets

Objectives and targets FY 2012-13	Status	Performance FY 2012-13	Objectives and targets FY 2013-14
<b>Assurance</b>			
Implementation of annual internal sustainability audit programme	↑	Vedanta Sustainability Assurance Programme (VSAP) initiated to assess the effectiveness of implementation of the Vedanta Sustainability Framework across the Group	Each site to be assessed annually
Closure of Scott Wilson recommendations	→	27 of 29 recommendations are now completed (final sign-off audit and a recommendation relating to the on-hold Lanjigarh expansion project remain)	Closure of all 29 recommendations
<b>Building Strong Relationships Stakeholder engagement</b>			
Each business to have a stakeholder engagement plan (SEP)	↑	All units have an SEP. However, they are being upgraded as per the Vedanta stakeholder engagement standard	All sites to upgrade their existing SEPs
<b>Human rights</b>			
Implementation of our human rights policy	↑	Human rights policy rolled out. Continuous rolling out of Vedanta Sustainability Framework training at plants	Human rights training to be continued as part of the Vedanta Sustainability Framework training calendar
<b>Grievance management mechanisms</b>			
Roll out of grievance management process across all Group companies	→	Grievance management system as per the Vedanta grievance mechanism standard is in preparation. A number of sites have grievance management systems in place	All sites to develop/upgrade grievance management systems
<b>Adding and Sharing Value Employees</b>			
Continue rolling out training programme on Code of Conduct	→	Over 36,000 man hours of training on the Code of Conduct was provided to our employees	Continue improvement in rolling out of training programme on Code of Conduct (in terms of % coverage)
		We have identified 53 executives from across groups for phase 1 leadership development cycle	<b>Identification and grooming of next-generation leaders through integrated and intensive development exercises in order to encourage take up of more senior roles and responsibilities</b>
25% female representation at the Vedanta Resources plc Board level by 2015, although all appointments will be made on merit	→		25% female representation at the Vedanta Resources plc Board by 2015, although all appointments will be made on merit



Responsible Stewardship

# THE FOUNDATION ON WHICH WE BUILD OUR BUSINESS



Our VAL Lanjigarh operation has invested in the best technology and we see sustainable development in a natural way





# What does Responsible Stewardship mean to us?

In order for us to meet our strategic objectives and to create and preserve value for all of our stakeholders, it is essential that at all levels we conduct our business in a sustainable manner. For Vedanta, this is governed by our values, and delivered in practice through our approach to managing risk, health, safety and environment, and ethical business practices. Our Code of Conduct provides a set of principles to guide our employees, and our Sustainability Framework outlines the best practice standards that will drive improvement across all of our operations going forward.

<b>In this section</b>	
Our strategy and management	24
Sustainable management in practice	28
Health and safety	30
Environment	39

# ACTIVITIES DRIVEN BY BUSINESS VALUES

**Responsible Stewardship is how we conduct our business in a sustainable manner and the measurement of our performance against both our own targets and international benchmarks.**

It is critical to defining how the business operates, and covers all aspects outlined in our Code of Conduct – our approach to risk management and ethics, whistleblowing and bribery and corruption.

Responsible Stewardship covers our health, safety and environmental management – including the way we manage water and energy use, waste, our carbon footprint and our approach to biodiversity management.

Our activities are driven by the business values and the commitment of the Group's leadership to best practices across our operations. The standards developed by organisations such as the IFC guide the evolution of our sustainability practices. Training our employees on sustainability issues has been paramount in ensuring that these practices are understood and that international standards are adhered to.

During the reporting period we have been implementing the Vedanta Sustainability Framework in order to further embed sustainable practices across the Group.

## **Management**

We have in place a set of management structures and processes to ensure that our subsidiaries and operations embrace and follow sustainable business practices as part of day-to-day activities. This starts with our Board, which is ultimately responsible for ensuring Vedanta is managed sustainably. The Board has mandated the Sustainability Committee to institutionalise a sustainability culture at all levels of the business, which in turn is supported by the operationally-focused ExCo Sub-Committee on Sustainability. Closer to operations our subsidiaries have over 600 personnel working in health, safety, environmental management and community engagement to manage the implementation of the Sustainability Framework.

In line with the way we are structured, our subsidiaries have their own sustainability/HSE committees which provide more direct guidance and also oversee the performance of operational practices. The sustainability governance structure is outlined in the Overview section of this report. Vedanta Board-appointed committee memberships are available in our Annual Report and Accounts and on our corporate website at: [www.vedantaresources.com](http://www.vedantaresources.com).

## **Risk management and internal control**

Maintaining a robust risk management system is critical to the delivery of our objectives and achievement of sustainable growth. Oversight of our multi-layered risk management sits with the Board, which is responsible for setting the Group's risk appetite and determining the nature and extent of the risks it is willing to take to achieve its strategic objectives. The Directors also have ultimate responsibility for ensuring that the Group maintains a robust system of internal control to provide them with reasonable assurance that all information within the business and for external publication is adequate.

The Group's risk management framework plays a key role in the identification, analysis, mitigation and continual monitoring of the various risks that could impact the delivery of the strategic objectives set by the Board. Authority for detailed monitoring of the internal control and risk management framework is delegated to the Audit Committee, which reports to the Board regularly.

The Audit Committee is supported by the Group Risk Management Committee (GRMC), comprising the Chief Executive Officer, the Chief Financial Officer and the Director of

## Risk management and internal control



Management Assurance Services, which reviews quarterly the changes in the nature and extent of major risks. The Company's Chief Risk Officer and risk officers at operating subsidiaries are responsible for creating heightened awareness of the risk management framework both at Group level and at operating subsidiary level. They play an important role in ensuring that the organisation develops a risk management culture and ensure that the Group's risk management framework matures and grows with the organisation.

A consistently applied methodology, the Turnbull matrix, is used to identify risks to operations and projects at the operating subsidiary level. This includes financial, operational and compliance control and risk management, to ensure shareholders' interests and the Company's assets are safeguarded. The process also covers significant risks that may arise from environmental, social and governance matters. The GRMC reviews the top 20 risks every quarter, particularly any

changes to the nature and extent of the risks since the last assessment, while the operational level specialists are brought in where appropriate to review working practices such as control measures, action plans and risk management tools, and recommendations are implemented with the purpose of creating safe working environments.

The Management Assurance Services (MAS) function at Vedanta has arrangements with leading international accounting and audit firms, excluding the Group's external auditor, for carrying out internal audit within the Group.

### Audit Committee

The Audit Committee assists the Board in the discharge of its responsibility for maintaining and monitoring the integrity of the Group's financial statements, assessing the effectiveness of the Group's system of risk management and internal controls and the independence and objectivity of the external auditor. To carry out its duties effectively, the Committee receives detailed information from management and the internal and external auditors regularly, which is reviewed, discussed and challenged by the Committee as required.

The Audit Committee's remit falls into four categories: financial reporting, risk and the internal control environment, and oversight of external and internal audit processes. The main mandate of the Audit Committee includes:

- ▶ Monitoring the integrity of the financial statements, including its annual and half-year results;
- ▶ Reviewing the Group's internal controls and risk management systems and consider the effectiveness of these systems;
- ▶ Monitoring anti-bribery and corruption policies and procedures;
- ▶ Reviewing the Group's arrangements for its employees to raise concerns through its whistleblowing policy;
- ▶ Reviewing reports from the audit committees of the Group's main subsidiary companies.

The Committee's responsibilities are set out in its terms of reference, which are available on request from the Company Secretary.

## Responsible Stewardship: Our strategy and management continued

### Fraud and Bribery Act

The Company is committed to the elimination of fraud, with each suspected case thoroughly investigated and concluded. The Audit Committee reviews the actions taken by management in the elimination of fraudulent practices and to promote ethical working practices.

### Whistleblowing procedure

The Group's Whistleblowing Policy is regularly reviewed by the Audit Committee. This standalone policy is summarised in the Code of Business Conduct and Ethics and supports the Group's aim of working to the highest ethical standards. The Committee reviews any reports made under the Whistleblowing Policy and ensures that appropriate actions are then taken. The email address [whistleblower@vedanta.co.in](mailto:whistleblower@vedanta.co.in) is available for issues to be raised confidentially, with those emails sent directly to the Head of the Management Assurance Services – MAS (the internal audit function), who is independent of business management. Between January and December 2012, there were 76 whistleblowing cases, of which 32 were upheld, resulting in appropriate disciplinary actions including separation, warning, counselling and transfer.

### Remuneration Committee

The Remuneration Committee ensures that remuneration policies and practices are designed to attract, retain and motivate the Executive Directors and the senior management Group, whilst focusing on the delivery of the Group's strategic business objectives. The Committee is also focused on aligning the interests of the Executive Directors and senior management Group with those of shareholders, to build a sustainable performance culture.

The Remuneration Committee's responsibilities primarily include:

- ▶ Setting the Group's overall policy on executive and senior management remuneration;
- ▶ Determining the remuneration packages for individual Executive Directors, including base compensation, performance-based short- and long-term incentives, pensions and other benefits;
- ▶ Approving the design and operation of the Company's share incentive schemes; and
- ▶ Reviewing and determining the terms of the service agreements of the Executive Directors.

The Committee's responsibilities are set out in its terms of reference, which are available on request from the Company Secretary.

In setting the policy for Executive Directors' remuneration, the Committee considers pay and employment conditions across the Group including annual base compensation increases across the general employee population, and the overall spend on annual bonuses.

The Committee gives full consideration to the Code and published guidelines regarding the remuneration of directors of listed companies, including those published by the Association of British Insurers and the National Association of Pension Funds. The Committee is committed to ensuring that the Group remuneration policy reflects, to the extent practicable, global corporate governance guidance on executive remuneration.

The ESOP (Employee Share Ownership Plan) was introduced in 2012 as a replacement for the LTIP. Participation in the Plan includes Executive Directors, senior management and select wider management team, with performance conditions comprising business performance parameters such as operational deliverables including volume, cost of production, free cash flow and Health and Safety and enablers to enhance the high performance culture across the Group.

### ExCo Sub-Committee on Ethics

The ExCo Sub-Committee on Ethics' mandate is to evolve and ensure that across our operations we have a uniform and efficient process to deal with ethical matters after investigations are concluded. The committee has helped us in creating enhanced awareness in the Group of our resolve of zero tolerance of such matters. The committee is chaired by a senior executive from our Group company and comprises senior management representatives drawn from different subsidiaries.



## Case Study: Vedanta Sustainability Assurance Programme (VSAP)



Employees reviewing our procedures as part of the Vedanta Sustainability Assurance Process

Following the launch of Vedanta's management and technical standards for sustainability in 2012, we recognised a need to review the way in which business units were implementing these and measure the pace and depth of this implementation. To bring a sense of uniformity and to make the assessment more objective, we launched the Sustainability Assurance model to assess and improve practices across the Group.

The assurance model has 16 modules, which cover environment, health, safety and community elements. Among these are Compliance, Objectives and Targets, Competency and Training, Waste Management, Management Reviews, Accident Investigation, Safety, Environment Management and Social and Stakeholder Engagement.

The model components were discussed and reviewed with business CEOs, and pilots were conducted at select subsidiaries. Feedback from the

business units helped us to refine the model, prior to its formal launch. To support the roll out of the assurance system, training sessions were conducted with all subsidiary CEOs, COOs and their respective sustainability teams.

The assurance system works on the premise of tracking corrective and preventive action by the respective subsidiaries and periodic formal audit of the same by the corporate sustainability team. In the reporting year, all subsidiaries have completed a self-assessment against the 16 modules and 13 subsidiaries have been through the VSAP process, with the remaining nine to be audited before February 2014. The findings of the assurance audits, including corrective actions, are reviewed by the ExCo Sub-Committee on Sustainability and the results are reported to ExCo and the Sustainability Committee.

Going forward, each major site will be audited annually under the assurance programme.

# ROLLING OUT THE SUSTAINABILITY FRAMEWORK

The Vedanta Sustainability Framework includes a suite of technical and management standards, and a number of supporting guidance documents, to ensure that business units have the appropriate tools to embed sustainable practices into their operations.

This ensures that there is a consistent and systematic approach across all operations that is underpinned by a foundation of common values. Driving the adoption and implementation of these standards across our subsidiaries has been a key focus over the past year.



To view our full sustainability framework please visit our website.

more: [sustainability.vedantaresources.com/our\\_approach/our\\_strategy](https://sustainability.vedantaresources.com/our_approach/our_strategy)

In order to roll out the Sustainability Framework we have been delivering training across the Group. This has included training on specific topics such as health and safety management, environmental incidents, international standards such as the GRI, and reporting best practice and assurance. Internal management systems are also being updated to reflect the Vedanta Sustainability Framework. Over 8,000 employees have been trained in the Framework over the course of the reporting period to drive understanding and its subsequent implementation.

Our commitment to the sustainable performance of the business is also achieved by using the latest technologies. This makes the Group more efficient and ensures it remains competitive. For example, we have made technological advancements in the effective monitoring and management of water through installing adiabatic cooling towers and we have improved safety through monitoring site vehicle traffic with radar guns. Such initiatives drive performance as well as our sustainability agenda.

To support the implementation of our Sustainability Framework, we have adopted a robust evaluation and assurance system, the Vedanta Sustainable Assurance Process (VSAP). This process is overseen by the corporate sustainability team and run with full support from our subsidiary companies' CEOs and their senior management teams. This programme has enhanced the understanding of our operations team, which eventually will help to sustain superior performance. Currently, our operations are actively trying to bridge identified areas of improvement.

## **New projects**

In order to ensure that new projects are properly derisked to obtain and sustain their licence to operate, it is essential to have an appropriate development stage evaluation. Accordingly we carry out Environmental and Social Impact Assessments (ESIA) for all new projects in line with local and international standards.

The key standard that dictates new project activities and behaviours is the Management Standard – New Projects Planning Processes and Site Closure. Requirements under the standard include that any new project complies with our sustainability programmes and national, regional and local regulatory requirements. In addition, sustainability must be considered for the full lifecycle of the project, with design decisions taken accordingly. Consultation and feedback must also be obtained from stakeholders on how sustainability issues associated with the project are considered, prioritised and implemented. This ensures that effective implementation and due diligence have been carried out.

The Vedanta leadership team recognises that the future of the Company is dependent upon ensuring the right management systems are in place from the outset.

## **Conducting ESIA's to international standards**

Conducting an ESIA for all new projects and expansions enables the comprehensive assessment of the environmental, social and health impacts throughout the project lifecycle. For example, our new Gamsberg project in the Namakwa District, South Africa, initiated an ESIA study in the second quarter of 2012. As part of the process, the draft Scoping Report was

submitted to the public domain for 40 days for comments and after the incorporation of public comments, the final report was released for regulatory approval in January 2013. This was received from the Department of Environment and Nature Conservation, Government of South Africa in February 2013. The draft ESIA together with the non-technical summary was placed in the public domain for a consultation period of 30 days. The documents are made available at public places including the local library and municipal offices in order to reach community members effectively. To further promote public participation in the process, 'open house' (general public/community) and focus group (NGOs and neighbouring farmers) meetings are scheduled to understand views and concerns with regards to the project. Comments received during the public consultation period together with the business responses will be provided with the final ESIA document for submission to the authorities.

#### Site closure

In addition to the design and operation of our projects, appropriately preparing for and managing eventual site closure is part of an operation's good practice. Site closure means the post-operational phase of a project, that typically includes decommissioning, closure and post-closure considerations. Key elements are the removal of facilities, and rehabilitation and remediation of the site before returning the land to the local community.

We start considering site closure at the project development stage and work to ensure that the business has a sustainable legacy in terms of environment and community management. As a part of statutory clearance, all our mines' operations have a closure plan – a core step in obtaining regulatory approval. These closure plans include details of specific activities, roles and responsibilities, closure criteria and options, timeframes and resource requirements. They are regularly reviewed and updated to meet changing circumstances and stakeholder expectations. In addition, all our operations must ensure that adequate resources are provided to implement the closure plans and, nearer the time, this also includes preparing staff for site closure. Plans for site closures are also made public and used in stakeholder engagement activities where appropriate.

Work is currently being carried out in close collaboration with the South African



Our Lisheen mine in Ireland is scheduled for closure by 2015

Government, for the proposed new Gamsberg mine. These activities include extensive consideration of the socio-economic and environmental implications of site closure, which may occur in many decades' time. Factors such as the training of employees for alternative employment and infrastructure development are being considered.

Our Lisheen mine in Ireland is currently in the final stages of closure planning, with the site due to close in 2015. Work has been underway since 1995 to ensure that there are dedicated resources to manage the process. Initiatives in support of this include the development of a comprehensive project execution plan for the end of the mine's life, transparent stakeholder engagement to establish buy-in for closure, restoration and after-care management plans, and the establishment of success criteria with regulators. Monitoring data gathered in 2012-13 demonstrates ongoing success in rehabilitation and remediation of key areas, with livestock farmed on these areas as part of the test programme. All animal test results have been well within acceptable risk levels.

The mine is actively pursuing potential alternative industries and sustainable development projects for the site, to ensure a positive legacy is left and the socio-economic aspects of mine closure are adequately addressed. A task force made up of local government representatives, Lisheen staff and members of governmental industrial development agencies are already working in partnership to manage the closure of the site. A sub-committee of the Community Engagement Forum has joined Lisheen staff to form a closure committee, which meets on a quarterly basis. After-care at Lisheen will span 30 years, with an 8 to 10-year monitoring period.

# RESPONDING TO THE CHALLENGES OF OUR INDUSTRY

Mining and resource production is an industry where the risks of accidents are higher than other sectors.

This is exacerbated in developing countries, where attitudes to health and safety can differ markedly from standards in the developed world. Nevertheless, it is essential that we establish and cement a mindset of 'zero harm', with a corresponding improvement in workplace systems and behaviours.

Health and safety management is a material issue for Vedanta and a systematic approach is essential to ensure consistency across the business. We owe a duty of care to the many people who work for and with us, and we take that obligation seriously – the steps we have taken to implement the Vedanta Sustainability Framework are the foundation on which our approach is built.

A culture of health and safety compliance starts with our training programmes, which are as inclusive as possible. Our management standards emphasise the training of both employees and contractors based on role, risk and responsibilities, and use different learning methods to cater for differing needs – for example, videos and classroom training. During the year, 800,000 man-hours of training were recorded for employees and contract workers on health and safety topics. These include behavioural safety, fire safety, working at heights, critical job analysis, permit to work, 'lockout-tagout', first aid training, electrical safety and health workshops.

Activities include safety inductions before entry onto site, safety videos in local languages and site audits. Management systems and incentives for management personnel have also been developed to enhance their engagement in health and safety due diligence. Data is captured monthly on incidents and injuries and this is reviewed at the highest level of the business, including ExCo and the ExCo Sub-Committee on Sustainability, as well as the monthly global safety review meetings organised by the corporate sustainability team with subsidiary business HSE teams.

We have launched and rolled out the Unsafe Conditions Elimination Programme across the Group. Progress on areas of focus has been good, with no fatalities in the highest-risk activities and hazards of conveyors, machine guarding, pressure vessels and welding machines demonstrating the successful bedding down of processes throughout the Group.

There has been an overall declining trend in the incident rates experienced by the Group, with a lost time injury frequency (LTIF) rate in the reporting period of 0.72 (a 27% decrease compared to last year) accounting for 5,882 man-days lost. Regrettably however, we did experience 20 fatalities in 2012-13 (18 in India and 2 in Africa).

## Our approach

We are committed to using international standards on health and safety and to ensuring a 'zero harm' environment for our employees and contractors. We understand the key health and safety challenges our business faces and respond accordingly.

The business approach to safety is tailored according to the challenges posed by the operations linked to extraction and processing, and the geographies in which they are situated. For example, fleet management is a major risk for our operations above ground, whereas rock falls are a challenge for underground operations. All our subsidiaries run on-site training that is appropriate to that site's operations and contextual needs, such as the linguistic and literacy skills of employees and contractors in that area. Videos and infographics are used

Safety Guidance Notes – LOTO, Machine/ Conveyor guarding rolled out

Rolling out of Management Safety Leadership Programme

Initiation of Single Pointed Accountability programme at Sterlite – Copper

Health & Wellness activities in progress



across our sites to create and reinforce safety messages. We take the same approach when managing the health of employees. Our operations in Africa have tailored programmes

on HIV/AIDS in particular, whereas some of our Indian sites focus more on preventative health issues such as malaria prevention.



Signage helps employees keep safety procedures front of mind

Several mechanisms are in place at the Group, business and site level to manage health and safety issues, including:

#### Group level

- ▶ Processes to engage management to deepen understanding of health and safety requirements.
- ▶ Monthly safety meetings are led by the Group Head of Safety and Assurance to discuss performance across the Group, and share experiences and learning to facilitate development of processes and systems.
- ▶ Safety alerts are issued to all CEOs, COOs and the respective HSE personnel on every fatal and major incident, which are shared across all Group companies. This outlines the root causes and the action plans needed to avoid similar incidents.
- ▶ Guidance notes on identified safety risks are released to ensure the effective implementation of safety practices across the Group.
- ▶ The Unsafe Conditions Elimination Programme was launched to manage significant occupational health and safety hazards across the Group, the progress of which is reviewed in the monthly safety meetings.

#### Business and site level

- ▶ Each individual business conducts monthly operational and business management reviews, which include the assessment of occupational health and safety performance of the units, as well as guiding the effective implementation of safety practices.
- ▶ The Management Safety Leadership programme carried out by our subsidiaries ensures senior management visibility through conducting periodic workplace audits.
- ▶ The business-led Health and Safety Committee, which includes representatives of employees, contract workforce and unionised workers as appropriate. The total workforce varies significantly depending on the operations and is generally specified in collective contractual agreements. These committees meet on a regular basis to advise on occupational health and safety.
- ▶ Safety requirements are communicated through periodic safety meetings with contractor workers, suppliers and vendors.
- ▶ At business/site level periodic safety training is conducted to enhance and improve knowledge among employees and contractors.

62%

reduction in LTIFR over 5 years

800,000

man-hours of health and safety training

## Responsible Stewardship: Health and safety continued

### Health and safety risk mitigation

In order to manage health and safety risks appropriately, a clear process is required to identify hazards and to manage these appropriately. The table below shows the approach the Group has adopted to manage safety risks in each subsidiary, including the point in the operational process at which they exist and how the business is responding in order to manage and mitigate them.

Sector risk	Business response
<b>Aluminium</b>	
Fleet safety	<ul style="list-style-type: none"> <li>– Fleet management training</li> <li>– Use of speed guns to monitor vehicle speed</li> <li>– Speed controls through barriers and check points</li> </ul>
Electrocution	<ul style="list-style-type: none"> <li>– Work permits are issued as accreditation for those using electrical equipment</li> <li>– LOTO implementation</li> <li>– Guidance notes released</li> </ul>
Fluorosis	<ul style="list-style-type: none"> <li>– Site exposure monitors</li> <li>– Use of appropriate PPE</li> </ul>
<b>Copper</b>	
Fall of ground	<ul style="list-style-type: none"> <li>– Vedanta uses the RAMP.K risk assessment management programme at the KCM business, which through the monitoring of practices and management tools ensures a systematic approach to work.</li> </ul>
Working from height and risk of falling	<ul style="list-style-type: none"> <li>– Single Point Accountability (SPA) programme is used at the Sterlite Copper business as a verification tool that examines processes, develops improvements to the infrastructure and drives both implementation and investigation on-site.</li> </ul>
Acid splash/exposure	<ul style="list-style-type: none"> <li>– Apart from risk control measures all operators are issued with the appropriate PPE made from Tyvek – a specialist barrier material – in order to mitigate exposure</li> </ul>
<b>Iron Ore</b>	
Entangle with moving parts	<ul style="list-style-type: none"> <li>– Ensuring 100% compliance on machine and conveyor guarding</li> <li>– Guidance notes released</li> </ul>
Fleet safety	<ul style="list-style-type: none"> <li>– Fleet management training</li> <li>– Speed controls through barriers and check points</li> <li>– Speed guns to monitor vehicle speed</li> </ul>
<b>Zinc/Lead/Silver</b>	
Exposure to gases and hot material	<ul style="list-style-type: none"> <li>– Permits to work</li> <li>– LOTO</li> <li>– Use of appropriate PPE</li> </ul>
Entangle with moving parts	<ul style="list-style-type: none"> <li>– Ensure 100% compliance on machine/conveyor guarding</li> <li>– Guidance notes released</li> </ul>
<b>Oil and Gas</b>	
Operational safety	<ul style="list-style-type: none"> <li>– Asset Integrity and Process Safety Integration into Operation Management System</li> </ul>
Material handling safety	<ul style="list-style-type: none"> <li>– Safety Awareness Campaign on 'finger pinch' injuries</li> </ul>
<b>Power</b>	
Fleet safety	<ul style="list-style-type: none"> <li>– Fleet management systems in place with regular checks</li> </ul>
Fire	<ul style="list-style-type: none"> <li>– Online digital fire monitoring and management systems are in place for an automated response to fire risk</li> <li>– Periodic training is delivered on fire controls</li> </ul>



## Safety

We place great importance on understanding and managing our safety performance across the Group, with the safety of our employees, contractors and others impacted by our operations a core concern. We are committed to the aim of zero harm for our employees, with facilitated training across all sites.

### Safety management

Of our 48 sites, 40 are now OHSAS 18001 certified and, with the completion of the full suite of policies, management and technical standards, this year we have issued appropriate guidance notes in support of the implementation of our safety management system. Guidance on LOTO (lockout-tagout) and machine/conveyor guarding has been released to add rigour and adherence to processes.

To strengthen and improve Vedanta's safety practices, we hold ExCo Sub-Committee on Sustainability meetings, where subsidiary CEOs, COOs and HSE heads discuss progress on safety management, develop targets and discuss areas of improvement. In the event of a major incident or fatality, the respective businesses present a detailed finding report to the Sub-Committee on the causes, and the preventative measures that have subsequently been put in place.

A particular focus over the past year has been improving our approach to contractor safety. We are committed to ensuring that our 58,000 contractors receive the same level of health and safety training as employees. It is mandatory for subsidiaries to provide safety induction training before a contractor can gain entry to a plant. Training includes workplace

hazards, on-site emergencies, use of personal protective equipment (PPE) and incident reporting.

### Creating a safe working environment

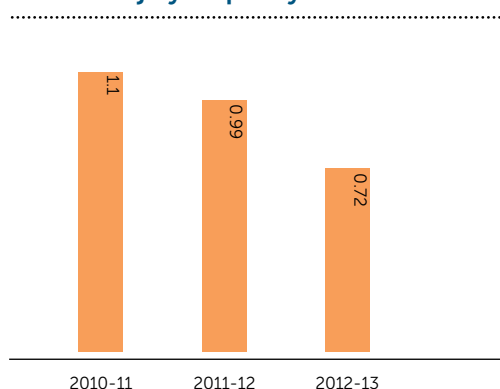
Promoting a strong safety culture for all employees and contractors is crucial for creating a zero harm environment. We seek to achieve this through regular communication and training. As a Group, we encourage employees and contractors to report near misses – with no fear of recrimination – in order to promote constant health and safety monitoring and evaluation.

A structured management leadership review is conducted on all sites across Vedanta. Senior management visit the workplace to focus staff attention on safety issues. They are there to observe, talk to personnel, and report conditions they believe need addressing, whether immediately or as part of a structured rectification programme. To further strengthen health and safety practices, the 16-module VSAP is carried out.

Our operational sites are demonstrating real progress on safety initiatives and are responding positively to the action plans that have been put in place. For example, as a result of these actions all sites now have earth leak circuit breakers for welding machines and for hand-held power tools. Also our Group company HZL stood first and completed a rigorous, Company-wide programme to ensure 100% machine-guarding for conveyors and rotating equipment was implemented to address the high risk of serious injury from unguarded machinery. To ensure ongoing compliance across all operations, Hindustan Zinc is conducting periodic audits to check that the guarding remains in place.

The Behaviour-Based Safety programme (BBS) launched at Sterlite Copper is an example of the steps we are taking to reinforce a safe behavioural culture across the Group. BBS was put in place in six of nine operating departments because analysis of three years of injury data showed that approximately 85% of incidents involved an unsafe behaviour immediately before the injury occurred. Key steps in the programme included establishing departmental BBS implementation teams and selecting and motivating observers. As a result, more than 100 barriers to safe behaviours were identified and eliminated. Our Hindustan Zinc subsidiary also took further steps to reinforce

### Lost time injury frequency rates



## Responsible Stewardship: Health and safety continued

safe behaviours this year. The human resources and safety teams implemented the "Safety Chaupal" concept, whereby senior management and union leaders engage with workers on the shop floor to emphasise the importance of a stringent safety culture. This is done through interactive discussions, demonstrations and information sharing, which is reinforced with a written work safety test.

### **Vedanta Fleet Safety Management – on-site and off-site**

Due to the scale and diversity of our operations, and our reliance on vehicle transport for people and materials, we recognise the risks posed by road transport and so have a rigorous approach to fleet management – both on and off-site. At the VAL-Jharsuguda operation, we have a large fleet and accident data had revealed that 32% of accidents on-site involved vehicles. In response, the company developed a site-specific road safety policy which was rolled out to promote behavioural change in all on-site road users.

VAL-Jharsuguda also engaged the services of the Institute of Road & Traffic Education (IRTE) to train employees and truck drivers.

We have also taken action to improve our off-site traffic management, for example, through our road safety training at the Cairn India operations at Barmer. To deliver the defensive driving training, Cairn India engaged IDTR (Institute of Driving and Traffic Research) and IRTE to provide training, which is conducted daily at the Enterprise Centre at Barmer and periodically at other sites. More than 2,000 drivers have undertaken the training. As a result, road traffic accidents have reduced significantly. The motor vehicle accident frequency rate (MVAFR) during the reporting period was 0.49 per million km, which is well below the general incident rate.

### **Single Point Accountability – SPA – at Sterlite Copper**



Employee receiving working at height training at Sterlite Copper

Launched two years ago, the SPA process continues to be a driving force in safety management at our Sterlite Copper business. The SPA process involves selecting priority safety protocols, nominating SPA Heads and Teams, undertaking gap analysis against self-auditing guidelines, and reducing safety risks to raise the self-audit score.

This year, in consultation with the HSE department, senior management selected 12 high-priority accident prevention protocols, including machine safeguarding, fall prevention, electrical safety and fatality prevention. For each of the 12 protocols, the senior management formally nominated a Sterlite middle manager to serve as SPA Head, supported by a team of employees.

In consultation with the safety consultant, each SPA team undertook a gap analysis of Sterlite Copper's performance against the relevant self-audit guideline. Each SPA team planned corrective actions to improve performance and raise their self-audit scores.

Over the course of the year, significant improvements were made – at April 2012, the average score across the 12 safety protocols was 42%, whereas it had reached 69% by the end of the reporting period in March 2013. As a result of the SPA process, examples of implemented engineering controls included insulated covers on the raised bus bars in the Tuticorin refinery. In addition, simple field compliance checklists were developed and implemented for 11 safety protocols.



## Case Study: Cairn Observation Programme (COP)



Employees at Cairn India

### The need

Cairn India understands that its hydrocarbon operations are inherently dangerous, and require focused attention and effort to operate safely and deliver on its commitment of “No harm to the people and environment”. Cairn has a robust approach to enhancing the safety culture among all the people who are engaged in its operations. Cairn’s HSE performance is in the top quartile amongst the Oil and Gas Producers’ Association (OGPA) for the last two years, and its mission is to be amongst the top five in the world by 2020.

### The solution

The Cairn Observation Programme (COP) focuses on behaviour-based safety practices in the organisation. The COP educates employees and contractor workers to identify ‘unsafe acts and unsafe conditions’ which, if unattended, may cause an accident. The programme focuses on the following:

- ▶ Cementing a zero harm culture that is practised and respected
- ▶ Creating an environment where safety rules are the norm
- ▶ Creating an environment that fosters caring behaviours
- ▶ Transforming ‘hearts and minds’ to ensure people work in safety.

‘Train the trainer’ programmes, including practical sessions, were organised at all sites, which then developed local teams. These trainers further cascaded the COP programme into the rank and file of the workforce. At present, all sites are reporting COP and the data is analysed to identify and prioritise safety hazards.

### The outcome

More than 24,000 COP cards were completed in the current financial year. The data is analysed on a monthly basis by each site. Various safety awareness campaigns, such as ‘Finger pinch injuries’ and ‘Safe handling of chemicals’ are launched to mitigate the high risks. This has helped to reduce major accidents and Cairn’s LTIFR is 0.10 per million man-hours worked for FY 2012-13.

## Underground mine – safe operations

Underground operations are always considered to be more risk prone. We always endeavour to support the occupational health and safety of our employees working underground. As a safety initiative for underground mines, HZL have installed a refuge chamber (e.g. at SK mine and others) which provides a place of safe refuge (protection) and fresh air, in case of emergency situations like fire, rock fall and blockage of escape routes etc. Each refuge chamber can accommodate 20 persons and has a life support back up of 36 hours. Proper training is provided to all operators for its effective use in case of emergency.



Emergency refuge chamber at our HZL mines

## Future programmes

Vedanta has a number of policies and systems that guide our compliance with international standards on health and safety. The business is, however, acutely aware that it is the attitudes and behaviour of its employees and contractors that determine a safe working environment. The focus for the forthcoming year is on behavioural change initiatives that encourage people to identify and report unsafe conditions. This programme will utilise the health and safety tools that have been developed by the Group, and make them applicable at the individual level and focused on preventative measures. We are committed to empowering our people to be responsible for themselves and for others by highlighting and reporting potentially hazardous situations. We are intending to roll out these behaviour-change initiatives across all sites by 2014-15.

## Responsible Stewardship: Health and safety continued

### Health

Due to the nature of our operations, there can be associated health risks and we are committed to understanding, managing and mitigating these. Risks can vary depending on the nature of the operations at each site and can include the effects of exposure to noise, heat stress, heavy metals and the impacts of manual handling.

Our occupational health standard commits us to minimising the adverse impact of our operations on the health of our workforce. All units maintain a health management system that minimises, as far as is reasonably practical, the hazards and risks to employees and contract workers. Our Vedanta Sustainability Assurance Programme (VSAP) identifies opportunities to strengthen our approach to health management.

### Health management

From the beginning of an employee's career with the Group, we have processes in place to manage and monitor health risks. This includes a pre-employment medical check followed by periodical medical check-ups with on-site medical professionals to monitor the occupational exposure limits. In 2012-13, more than 124,000 medical examinations were conducted across all sites. These included blood lead and cadmium testing, chest X-rays, audiometry tests and sight tests.

All of our sites have appropriate health and wellness facilities including to tackle diabetes, high blood pressure and work-life balance. Care is given to support colleagues and, as part of our Group medical policy, all our full-time employees receive medical insurance, which also extends to dependants. All contract employees are able to access our medical facilities and are covered by the Employee State Insurance Act, Group insurance and the Workman Compensation Act.

Our operational sites also promote health and well-being through the provision of on-site fitness centres that provide a range of services including yoga, health and nutrition workshops and sports and recreational facilities.

We invest in technologically advanced processes to enhance the health and safety environment of our employees. For example, our hospital at VAL-Lanjigarh houses the only equipment for detecting sickle cell anaemia, which was identified as a priority due to the

high prevalence of this disease in the region.

VAL-Lanjigarh has also developed health plans to monitor the effects of exposure to noise and dust, whilst KCM in Zambia monitors the effects of dust, noise and silicosis and records these systematically in order to improve its management programme appropriately. Group subsidiaries also monitor and review industrial hygiene issues such as noise and lighting levels, heat stress, heavy metal exposure and manual handling. This is supported by the mandated use of appropriate personal protective equipment.

In addition to being committed to meeting the health needs of our workforce, we also provide significant medical assistance to the communities which surround our operations. Various programmes are driven across the Group by human resource and occupational health and safety departments for advice and treatment for a variety of illnesses and conditions, educating employees, their families and community members about potential high-risk diseases. Identification of such programmes is based on the local community needs, WHO health surveys and employee health indices. Community-specific awareness programmes are organised on health and nutrition, HIV/AIDS awareness, malaria, tuberculosis and cancer.

### Future programmes

Our employees and the communities which surround our operations will continue to benefit from our health and wellness programmes, which we will evolve in conjunction with their needs.

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**In addition to being committed to meeting the health needs of our workforce, we also provide significant medical assistance to the communities which surround our operations**

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## Case Study: KCM HIV/AIDS Programme

### **The need**

HIV/AIDS remains one of Zambia's major health challenges with far-reaching economic and social consequences. The country has over 13 million inhabitants and although the nation's 2013 national health budget rose by over 40% to US\$679 million from the previous year, the country is still overwhelmed by health demands. Accordingly, private sector participation is an important component of the medical services and support offered to people with HIV/AIDS.

### **The solution and outcome**

Konkola Copper Mines (KCM) medical department operates two hospitals and eight satellite clinics on a US\$12 million annual budget. Using these resources and its medical personnel, KCM conducts an HIV/AIDS prevention and mitigation programme.

Since 2002, KCM has worked in partnership with the Zambian Government on a Prevention of Mother to

Child Transmission of HIV (PMTCT) programme.

This includes maternal and infant HIV testing and prevention counselling. In the event of a positive HIV test, all KCM facilities have trained PMTCT counsellors who administer the anti-retroviral drug Nevirapine and infant formula for babies whose mothers opt not to breastfeed, with all babies on the programme followed-up at regular intervals by a paediatrician.

KCM's HIV/AIDS policy also encompasses voluntary and confidential HIV testing of all employees, with pre and post-test counselling available. Employees of KCM who are found to have the HIV virus have access to continuing support and health services, including free anti-retroviral drugs. Spouses and dependants of employees are eligible for the same health benefits as employees.

Between April and December 2012, 6,418 workplace tests were provided and 14,227 community members were counselled and tested for HIV/AIDS.



HIV/AIDS community awareness programme organized by KCM

## Responsible Stewardship: Health and safety continued

### Case Study: Malaria training and treatment – VAL-Lanjigarh



Malaria education and awareness programme organized by VAL-Lanjigarh

#### The need

Rural locations in India often suffer from vector-borne diseases such as malaria, dengue, chikengunya and filariasis. These illnesses are preventable with access to the right resources and expertise. Ensuring public awareness on both the medical conditions and their prevention is critical to preventing unnecessary deaths.

#### The solution

##### Education and awareness

We raise awareness among our employees, contractors and communities of the simple steps they can take to reduce the risk of infection. Repeated training sessions are conducted by VAL-Lanjigarh's Mobile Health Unit which teaches people about the use and benefit of long-lasting insecticide-treated mosquito nets. Pamphlets, banners and posters with targeted messages are also distributed on-site and in VAL-Lanjigarh's surrounding communities and street plays and skits are conducted to deliver key messages as part of outreach programmes. Schoolchildren are also involved in spreading awareness through initiatives such as poster competitions which are used to stimulate discussion and understanding.

In order to spread awareness on health issues and to create a pool of change agents who can influence the community, a two-day teachers' workshop was conducted at the VAL township for local teachers and their schools, in which 120 people participated.

#### Mosquito eradication

Larvicidal treatment is encouraged at all waterlogged areas. The creation of larvicidal fish tanks is promoted, as fish can eat mosquito larvae, thereby helping to reduce the mosquito population. Issues such as cleanliness to avoid water-logging inside the plant and township are enforced. In addition, anti-larvae fogging is also undertaken at the township and 25 nearby villages to target mosquito eradication.

#### Screening, medication and treatment

Mobile health units and Vedanta hospital staff educate employees and people in surrounding communities on the need to report symptoms within the first 24 hours of fever. Rapid diagnostic kits, slide and QBC tests are utilised for early detection of diseases at the Vedanta Hospital. Prophylactic drugs are supplied each week free of charge to all employees and contractors through the Occupational Health Centre.

Radical cure treatment is provided free of charge to all diagnosed cases at our Niyamgiri Vedanta Nagar Dispensary, the Mobile Health Unit, our Occupational Health Centre and the Vedanta Hospital referral service.

Twice a year, screening is undertaken of all 850 students at our 33 supported child care centres, and 1,500 students in the 25 local government schools. This is to ensure the early detection and treatment of cases and to generate awareness of preventive measures.



# COMMITTED TO MINIMISING OUR FOOTPRINT

As a diversified natural resources company, we understand that the nature of our operations has implications for the environment in different ways – through the emission of particulates, wastes generated in mining, refining and smelting processes, water consumption and changes in land use. We are committed to minimising our environmental footprint from the start of operations to closure and beyond.

We are committed to ensuring that we comply with international best practice, with our processes mapped against international standards such as the IFC's Performance Standards which are applied to the entire lifecycle of all our operations.

We disclose our environmental performance to the Carbon Disclosure Project, with our score improving to 76 in 2013 (63 in 2012), and seeing Vedanta ranked 8th among 38 FTSE metal and mining companies.

## Environmental risk mitigation

In order to manage environmental impacts, we have identified key areas where the biggest impact and risks are associated. These are: water, biodiversity, energy management, land management, air quality and waste. The Group and our subsidiaries have developed a plan to effectively manage each of these areas, as detailed on the next page.

## Environmental management

Environmental management forms a key component of the Vedanta Sustainability Framework and a complete set of supporting environmental policies, management and technical standards finalised in 2012 and rolled out across the Group. We continue to augment our processes through the ongoing development of guidance notes and the implementation of an extensive supporting training programme.

To assess the effectiveness of the Framework's implementation, our VSAP and self-audit programme was launched this year, with 13 VSAP audits conducted to confirm the self-assessments. Action plans have subsequently been put in place to upgrade business management systems to reach the standards set by the Framework and we will rigorously monitor our progress.

As part of continual improvement, we plan to obtain ISO 14001 certification at all our units and as of now 42 units out of 48 units 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 products and services.

US\$ **65** million

environmental expenditure was incurred in the year, including waste and emissions management

**13%**

increase in use of renewable energy (with respect to FY 11-12), amounting to 8.0 million GJ

**42/48**

major plants are accredited to ISO 14001 environmental management standard

HZL – Dariba installed Vedanta's first adiabatic cooling tower, resulting in

**0.18** million

cubic metres of water saved in 2012-13

**61.60** MCM

of water was recycled in the reporting period – equivalent to filling over 24,000 Olympic swimming pools

**64%**

of non-hazardous waste (fly ash, red mud and slag) was recycled, amounting to 5.63 million metric tonnes

## Responsible Stewardship: Environment continued

### Environmental risk management

Sector	Business response
<b>Aluminium</b>	
Fugitive emission	<ul style="list-style-type: none"> <li>– Workplace audits are conducted periodically</li> <li>– Air pollution control equipment (conducting duct cleaning and duct balancing to reduce the fugitive emission) regularly maintained</li> <li>– Training and awareness programmes conducted for employees and contractors</li> </ul>
Waste management: spent pot lining (SPL)	<ul style="list-style-type: none"> <li>– Standard operating procedures in place for SPL management.</li> <li>– Regular training/awareness programmes conducted for waste handling contractors</li> <li>– SPL stored as hazardous waste within the plant premises</li> <li>– Exploring possibility of co-processing of SPL in cement kilns. Trials being conducted with different cement plants</li> </ul>
Dust emission during handling/transportation of bauxite	<ul style="list-style-type: none"> <li>– Roads are concreted and black-topped to the maximum extent</li> <li>– Tarpaulin covers on bauxite trucks</li> <li>– Water sprinkling from tankers</li> <li>– Vegetation planting undertaken on a regular basis</li> </ul>
<b>Copper</b>	
Water management: operating in water stressed regions with limited water availability	<ul style="list-style-type: none"> <li>– Consideration of alternative water sources (setting up desalination plant)</li> <li>– Reducing freshwater usage through process innovations</li> <li>– Augmenting water resources through artificial recharge</li> </ul>
Gaseous emissions	<ul style="list-style-type: none"> <li>– Installation and maintenance of appropriate emission control equipment</li> <li>– Training and awareness programmes conducted for employees and contractors on emissions management</li> </ul>
Waste management: tailings	<ul style="list-style-type: none"> <li>– Tailing pipeline assessment programme in place including carrying out periodical non-destructive tests on pipelines and regular patrols of the pipelines</li> </ul>
<b>Iron Ore</b>	
Dust generation due to ore transportation	<ul style="list-style-type: none"> <li>– Trucks covered with tarpaulin</li> <li>– Adopting wheel-washing and road washing</li> <li>– Vegetation planting undertaken on a regular basis</li> </ul>
Waste management: overburden	<ul style="list-style-type: none"> <li>– Proper dump management – use of geotextile to stabilise the dump slopes, maintaining appropriate dump slope and height, proper water channelling</li> <li>– Use of metal and underground pipes for water channelling, rock walls at the toe of dumps, series of settling ponds, check dams, filter beds at discharge point, regular water monitoring</li> </ul>
<b>Zinc/Lead/Silver</b>	
Water management: operating in water stressed regions with limited water availability	<ul style="list-style-type: none"> <li>– Maximising water recycling</li> <li>– Reducing freshwater usage through process innovations</li> <li>– Reducing evaporation of water at local reservoirs by using evaporation-retarding chemicals</li> </ul>
Waste management: tailings	<ul style="list-style-type: none"> <li>– Overflow section provided in tailing dams to avoid overflow of excess rain water over the earthen embankment</li> <li>– Regularly conducting stability analysis of tailing dams by external experts</li> <li>– Tailing pipeline assessment programme in place including regular pipeline inspection</li> </ul>
Waste management: jarosite disposal	<ul style="list-style-type: none"> <li>– Explore opportunities being utilised in road construction and cement manufacturing</li> </ul>
<b>Oil and Gas</b>	
Excess gas flaring	<ul style="list-style-type: none"> <li>– Minimise excess gas flaring to minimum operational level requirement, by compressing the excess gas and sending via pipeline to the gas market in Gujarat</li> </ul>
H2S presence in well fluids	<ul style="list-style-type: none"> <li>– Provision of handheld detectors and breathing apparatus for operators; training imparted to personnel and bulletins issued; and shut-in wells if concentration greater than threshold values.</li> </ul>
<b>Power</b>	
Waste management: fly ash	<ul style="list-style-type: none"> <li>– Periodic inspection of ash ponds and pipelines</li> <li>– Dedicated team to address work related to ash handling within and outside the plant premises</li> <li>– Dyke stability study carried out by competent party for the stability of ash ponds</li> <li>– Fly ash utilisation – in low-lying area filling, road construction, cement and brick manufacturing</li> </ul>



Environmental risk management: Continuous ambient air quality monitoring at VAL-Lanjigarh

### Environmental incidents

We strive for zero environmental incidents and have a robust internal process, including categorising incidents according to severity, for managing any incident that does occur. Subsidiary businesses monitor, report and investigate all incidents with the aim of applying lessons learned, to prevent the recurrence of similar events, and share learning across the Group.

### Environmental incident management

We continued to develop awareness across the Group about the importance of environmental incident reporting to be classified according to our internal categorisation, incident investigation and closure mechanisms. The incident reporting system and closure mechanism is communicated widely across the business.

Environmental incident training is provided to key staff, with environmental managers leading any investigation and closure, in co-ordination with the appropriate operations and maintenance personnel. Environmental incidents are discussed at monthly operational reviews led by the company CEO.

Vedanta's internal system for incidents categorises them according to their severity, with the Sustainability Committee reviewing Category 4 and Category 5 incidents (the highest categories) on a quarterly basis and all incidents (Categories 1 to 5) are reviewed

at a Group level on a monthly basis, in an environment meeting led by the Group Head of Environment. The higher category incidents are again reviewed at both the ExCo Sub-Committee on Sustainability and the Sustainability Committee to ensure that management and mitigation plans are put in place.

In order to strengthen the management of environmental incidents, VAL-Jharsuguda has introduced a new management programme. Environmental notices are issued in different colours for different categories of incidents. The notice remains open until the incident is closed, including the full application of lessons learned to prevent recurrence. This simple sign-posting ensures consistency of communications and understanding across the site.

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**Environmental incident training is provided to key staff, with environmental managers leading any investigation and closure, in co-ordination with the appropriate operations and maintenance personnel**

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## Responsible Stewardship: Environment continued

The following table reviews the most serious environmental incidents during the reporting period, detailing the action taken by the business to manage the situation:

Brief	Action taken
<b>Category 5: – SEL</b> <b>Date: 04/11/2012</b> Due to damage in fly ash pipelines, fly ash slurry was discharged into an adjacent area of an ash pond – non-agricultural land. The incident occurred due to thieves attempting to cut into the pipelines. Three pipelines were damaged	<ul style="list-style-type: none"> <li>– The fly ash slurry was removed within 24 hours</li> <li>– The damaged pipelines were isolated and repaired within 24 hours</li> <li>– Pipeline inspection and monitoring was increased</li> <li>– 24-hour security was implemented</li> <li>– A standard operating procedure and a standard maintenance procedure were developed to track the integrity of pipelines</li> </ul>
<b>Category 4: Black Mountain Mine</b> <b>Date: 20/04/2012</b> After the failure of the reed berm wall for underground waste water, waste water was released into neighbouring areas	<ul style="list-style-type: none"> <li>– Berm wall repaired and pipe unblocked</li> <li>– The released waste water was removed within 24 hours</li> <li>– Procedures were improved to include inspection and tracking of pipeline condition</li> </ul>
<b>Category 4: Black Mountain Mine</b> <b>Date: 26/04/2012</b> An expansion joint for the tailings pipeline from backfill to the tailings dam burst, releasing waste water	<ul style="list-style-type: none"> <li>– Line drained and expansion joint replaced</li> <li>– Pipeline inspection programme developed</li> </ul>
<b>Category 4: Black Mountain Mine</b> <b>Date: 20/07/2012</b> Fresh water was lost when three pipelines broke at different locations in the North Village	<ul style="list-style-type: none"> <li>– Pipeline fixed</li> <li>– Pipeline inspection frequency increased from monthly to fortnightly inspections</li> <li>– Air valves installed in pipeline</li> </ul>
<b>Category 4: Sesa Goa (MET Coke division)</b> <b>Date: 17/8/2012</b> Due to the misfiring of two high capacity diesel (HCD) burners during the pre-heating phase, emissions from stack 2A were released on 17 August. On 18 August, emissions from side of oven doors were observed. Emissions lasted for some 20 minutes and 40 minutes respectively Black soot was released and spread across neighbouring areas The misfiring primarily occurred due to choking-off of the burner nozzles The Goa State Pollution Control Board (GSPCB) inspected the area and a show cause was issued to the MET Coke Division of Sesa Goa.	<ul style="list-style-type: none"> <li>– Sesa Goa responded to the show cause notice issued, providing details of the incident to GSPCD. In addition, incident details were communicated to the Chief Inspector of Factories &amp; Boilers (CIF&amp;B), Navelim Panchayat and North Goa Collector. Also, clarification was given in local newspapers</li> <li>– Houses were cleaned employing a local contractor</li> <li>– The activity of pre-heating was resumed only after permission from GSPCB and CIF&amp;B with implementation of the following measures:               <ul style="list-style-type: none"> <li>– Flue gases were diverted through the waste heat recovery boiler (WHRB).</li> <li>– Mesh was provided on the stack top to trap fugitive soot particles</li> <li>– An external filter was fitted in the diesel line as well as cleaning the internal filter each shift</li> </ul> </li> <li>– Burners were operated at a controlled flow rate with close supervision by senior staff</li> <li>– Continuous visual monitoring of the stack was implemented by installing a closed circuit camera</li> </ul>
<b>Category 4: Sterlite Tuticorin Plant</b> <b>Date: 23/3/2013</b> Complaints received from the public about eye irritation and suffocation in certain areas of Keelashanmugapuram located 7.5km from the plant. The regional Tamil Nadu Pollution Control Board (TNPCB) inspected the area and Tuticorin factory premises and a show cause notice was issued to Sterlite Copper, Tuticorin	<ul style="list-style-type: none"> <li>– Sterlite Copper responded to the show cause notice, explaining that all emissions from the plant were well within the standards prescribed. The plant continued to operate with all emissions within prescribed limits. However, the TNPCB was not satisfied with the reply filed by Sterlite Copper and issued a closure order on 29/03/13</li> <li>– Sterlite Copper filed an appeal with the National Green Tribunal (NGT), Southern Bench, against the closure order by TNPCB for the alleged gas emission and for interim relief to operate the plant.</li> <li>– In the order dated 31 May, 2013 NGT allowed operations to start in the presence of a committee set up by tribunal.</li> </ul>

# APPROACH & PERFORMANCE IN KEY ENVIRONMENTAL AREAS

## Water

Our operations exist in areas of varying degrees of water stress. Consequently, we take our water consumption and management extremely seriously. An effective approach helps us focus on longer-term water access challenges as water increasingly becomes a material issue for communities, regions and nations.

We also take very seriously the obligations we have to the communities within which our business operates, and it is essential that they have access to clean drinking water. We accept that it is our role to manage our water usage in a way that protects, and indeed where possible enhances, local health, industry and the environment.

During the reporting period, we withdrew more than 340MCM from natural and artificial water sources whereas more than 250MCM of water is used in our operations. None of the natural water sources are being affected by our water withdrawal as water withdrawal in all of our operations is less than 5% of capacity of the source. Also, none of the water sources is designated as a protected area either nationally or internationally.

Due to the high water table in Zambia, our KCM subsidiary withdraws and dewateres (removes) a large quantity of water from its underground mines. Approximately 60% of the water withdrawal (128.24MCM in the reporting period) is discharged into the nearby river, with proper treatment ensuring that the waste water quality is within statutory prescribed norms.

## Water management

We use water in mining, smelting, refining and power plant operations from sources like ground water, surface water, rainfall and the municipality. None of the water sources from which we draw water is significantly affected

by the withdrawal. While some of our water-dependent operations are located in environments where access to water can be a challenge, we have a consistent approach to water management across all Group subsidiaries and a clearly stated water policy, available on our website at:

[www.sustainability.vedantaresources.com/responsible\\_stewardship/policies](http://www.sustainability.vedantaresources.com/responsible_stewardship/policies)

The policy commits us to recognising the social, economic and environmental value of water and the increasing global concern of water scarcity. We strive to minimise the amount of fresh water we consume by reusing as much water as possible in our processes.

Maintaining aquifer quality is the core aim driving our water policies and standards – an inability to fulfil a local community's water requirements, or causing permanent damage to an aquifer, would seriously restrict our ability to operate. In this regard, we have a governance framework to ensure that surface and ground water do not get contaminated by our operations. Our environmental policies and management standards are mandatory across the Group and address contaminated land management concerns: the standards require operations to prevent contamination of land and water.

Through our materiality process we have identified the following environmental areas to be the most significant to our business operations, therefore these have been reported on within this report. For all environmental reporting visit our website.

- ▶ Water
- ▶ Raw material
- ▶ Consumption
- ▶ Energy and climate change
- ▶ Waste

## Engagement with WBCSD: Development of India Water Tool

Vedanta is a member of the World Business Council for Sustainable Development (WBCSD) and engages with the WBCSD and its members and contributes to the debate on climate change and environmental issues.

During the year, together with other like-minded organisations, Vedanta worked with the WBCSD in the development of an "India water tool" with the objective of assessing and improving water use efficiencies. This helps organisations assess their own water use efficiencies and understand the risks related to water scarcity that may arise due to climate change. This is in addition to management of water savings targets set by individual units in order to ensure good practices.

## Responsible Stewardship: Environment continued

### Initiatives on water management

Many of our operational processes have been designed to be 'zero discharge' facilities, where the generated waste water is treated and completely recycled back into process areas such as slag granulation, lime preparation and gas cleaning plants. Many Group subsidiaries also harvest rainwater, such as Sesa Goa which is the Vedanta leader in rainwater harvesting. Rainwater harvested by Sesa Goa is nearly 79% of their total water consumption, amounting to 4.17MCM, while Sterlite Copper and Hindustan Zinc are also efficiently capturing and using rainwater. In total, we harvested 4.34MCM of rainwater. In addition to these initiatives, effluent and sewage treatment plants are installed at many locations for reusing water at primary locations.

Key water management initiatives executed during the reporting period include:

Sterlite Copper, Tuticorin installed a 10 million litres per day desalination plant to reduce the demand on fresh water sources and to ensure a sustainable source of water to its operations.

Cairn India's operations utilise the abundant supply of sub-surface saline water to meet its

operational and domestic water needs, with water required for injection into the reservoir to maintain hydrocarbon reservoir pressure. In the Rajasthan block, the Central Ground Water Authority (CGWA) has approved saline water abstraction. An extensive and ongoing ground water monitoring programme is in place to track the behaviour of the reservoir due to the proposed abstraction. Cairn works closely with the government and the regulators to ensure that data is transparently shared and that its activities do not pose any risk to the fresh water resource of the region, with the fresh water requirements of the plant being met by the desalination of saline water. Importantly, early in the project's lifecycle the 'first right' of local communities to fresh water was respected.

During FY 2012-13, water conservation efforts successfully led to recycling 61.60MCM – equivalent to filling over 24,000 Olympic swimming pools.

The waste water discharge complies with the applicable regulatory limits and, at all sites, waste water is treated in effluent treatment plants. Metals are precipitated by addition of lime and flocculants with the use of sediment ponds.



### Case Study: Water conservation – Installation of adiabatic cooling towers (ACTs) to minimise evaporation loss



Adiabatic cooling towers at HZL-Dariba

#### The issue

Hindustan Zinc uses cooling towers at its smelter to manage waste heat. Induced-draught cooling towers were in use to reduce the temperature of hot streams from the various operations in the plant with the evaporation of the water used to remove process heat and to cool the working fluid. This common process, seen at most power stations, resulted in significant water consumption in the form

of evaporation, so Hindustan Zinc sought a different, more environmentally-friendly solution.

#### The solution

Hindustan Zinc installed its first adiabatic cooling towers (ACTs) to replace the conventional cooling towers. An adiabatic cooling tower operates as an air-cooled heat exchanger, rejecting heat from a process cooling medium to the surrounding atmosphere by means of either dry cooling (convective heat transfer) or wet cooling (a double convection cycle between water and air), in which water acts as the cooling medium for wetting the air and the cool air in turn cools the hot process water. ACTs reduce water wastage by almost 80% by operating in a closed circuit.

#### The outcome

Results from the ACT installation have been encouraging, with an 80-85% reduction in water loss through dry cooling, amounting to approximately 0.18MCM of water savings.



### Total water withdrawal by source (MCM)

Sector	Unit name	Ground water		Surface water		Rainwater		Water from utility		Total (2012-2013)
		2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	
Zinc	HZL	3.74	<b>4.03</b>	22.56	<b>21.37</b>	0.03	<b>0.17</b>	0.99	<b>0.05</b>	<b>25.62</b>
	Skorpion Zinc	–	–	–	<b>2.83</b>	–	–	2.75	–	<b>2.83</b>
	Lisheen Mine	28.08	<b>27.27</b>	–	–	–	–	–	–	<b>27.27</b>
	BMM	0.01	<b>0.01</b>	4.37	<b>4.35</b>	–	–	–	–	<b>4.36</b>
Copper	CMT	–	<b>2.90</b>	4.60	<b>5.09</b>	–	–	–	–	<b>7.99</b>
	Sterlite Copper	0.01	<b>0.01</b>	3.29	<b>2.16</b>	0.06	–	–	<b>1.45</b>	<b>3.62</b>
	KCM	144.96	<b>149.25</b>	29.39	<b>28.30</b>	–	–	–	–	<b>177.55</b>
Aluminium	BALCO	0.06	<b>0.06</b>	28.84	<b>24.22</b>	–	–	4.88	–	<b>24.28</b>
	VAL-J	–	–	19.35	<b>19.44</b>	–	–	–	–	<b>19.44</b>
	VAL-L	–	–	4.04	<b>3.17</b>	–	–	–	–	<b>3.17</b>
Power	MALCO	–	–	3.01	<b>3.85</b>	–	–	–	–	<b>3.85</b>
	SEL	–	–	15.05	<b>24.92</b>	–	–	–	–	<b>24.92</b>
Iron	Sesa Goa	2.81	<b>0.18</b>	1.93	<b>0.81</b>	14.41	<b>4.17</b>	0.11	<b>0.10</b>	<b>5.26</b>
Oil & Gas	Cairn India	–	<b>14.07</b>	–	–	–	–	–	<b>0.07</b>	<b>14.14</b>
<b>Total</b>		179.68	<b>197.79</b>	136.43	<b>140.50</b>	14.50	<b>4.34</b>	8.72	<b>1.68</b>	<b>344.31</b>

Note: Cairn India withdrew nearly 14MCM of non-portable water – sourced from saline aquifers

Our KCM and Lisheen mines have to withdraw high amounts of underground water because of the high water table in each region

### Water usage and recycled – percentage and total volume (MCM)

Sector	Unit name	2011-12			2012-13		
		Water used	Water recycled	Percentage (%)	Water used	Water recycled	Percentage (%)
Zinc	HZL	36.72	9.97	27.15	<b>34.22</b>	<b>10.03</b>	<b>29.31</b>
	Skorpion Zinc	3.34	0.54	16.23	<b>3.17</b>	<b>0.24</b>	<b>7.51</b>
	Lisheen Mine	6.18	3.08	49.82	<b>0.037</b>	<b>0.003</b>	<b>8.72</b>
	BMM	1.65	0.21	12.72	<b>3.43</b>	<b>0.49</b>	<b>14.27</b>
Copper	CMT	3.31	–	–	<b>4.43</b>	–	–
	Sterlite Copper	3.46	0.49	14.13	<b>3.51</b>	<b>0.46</b>	<b>13.06</b>
	KCM	85.18	23.75	27.88	<b>93.75</b>	<b>30.73</b>	<b>32.77</b>
Aluminium	BALCO	35.25	6.35	18.01	<b>28.72</b>	<b>4.34</b>	<b>15.12</b>
	VAL-J	19.95	0.60	3.00	<b>20.77</b>	<b>1.50</b>	<b>7.25</b>
	VAL-L	5.73	1.68	29.41	<b>4.05</b>	<b>1.32</b>	<b>32.54</b>
Power	MALCO	2.50	0.08	3.25	<b>3.80</b>	<b>0.05</b>	<b>1.29</b>
	SEL	15.23	0.18	1.19	<b>26.33</b>	<b>2.25</b>	<b>8.55</b>
Iron	Sesa Goa	27.34	8.78	32.12	<b>8.03</b>	<b>2.27</b>	<b>28.31</b>
Oil & Gas	Cairn India	–	–	–	<b>22.08</b>	<b>7.91</b>	–
<b>Total</b>		245.86	55.72	22.66	<b>256.33</b>	<b>61.60</b>	<b>24.03</b>

Note: In FY 2011-12 SDR, water usage included only fresh water consumption whereas the revised water usage values for both FY 2011-12 and FY 2012-13 include fresh as well as recycled water

## Responsible Stewardship: Environment continued

### Waste water discharged by quality and destination (MCM)

Sector	Unit name	2011-12	2012-13	Destination
Zinc	HZL	Zero discharge	<b>Zero discharge</b>	NA
	Skorpion Zinc	Zero discharge	<b>Zero discharge</b>	NA
	Lisheen Mine	25.73	<b>29.21</b>	River
	BMM	Zero discharge	<b>Zero discharge</b>	NA
Copper	CMT	26.78	<b>22.74</b>	River
	Sterlite Copper	Zero discharge	<b>Zero discharge</b>	NA
	KCM	137.28	<b>128.24</b>	Stream and river
Aluminium	BALCO	3.84	<b>Zero discharge</b>	NA
	VAL-J	1.41	<b>0.82</b>	River
	VAL-L	Zero discharge	<b>Zero discharge</b>	NA
Power	MALCO	Zero discharge	<b>Zero discharge</b>	NA
	SEL	Zero discharge	<b>Zero discharge</b>	NA
Iron	Sesa Goa	Zero discharge	<b>Zero discharge</b>	NA
Oil & Gas	Cairn India	NA	<b>0.62</b>	Sea
<b>Total</b>		<b>195.04</b>	<b>181.63</b>	

Note: In FY 11-12 SDR, there was a typographical error in the Lisheen waste water discharge. Our CMT operation discharges 22.74MCM comprising mine dewatering (2.9MCM), water used in the process (4.42MCM) and storm water discharge (15.42MCM). The discharged water complies with the applicable regulatory limits

For our Cairn energy business, the total volume of produced water for the reporting period is 0.6MCM. The produced water disposal at the three producing assets is different and as follows:

1. **At Ravva** the produced water is treated and injected back into the sub-sea hydrocarbon reservoir as injection water
2. **At Suvali** the produced water is treated to meet the marine discharge standard and disposed into the sea through a sub-sea diffuser system
3. **At Rajasthan** treated produced water is treated as commingled with injection water and injected back into the sub-surface hydrocarbon reservoir to maintain reservoir pressure support



### Case Study: Upgrade of VAL-Jharsuguda Effluent Treatment Plant

#### The situation

VAL-Jharsuguda had set up a 300 m<sup>3</sup>/hr effluent treatment plant to treat effluent generated in its operations. This was operated by conventional fluoride removal technology. VAL sought further reductions in fluoride and an improvement in the water quality.

#### The solution

VAL selected a process-logical controller-based chemical dosing system for the existing treatment plant and upgraded this with ultrafiltration and reverse osmosis systems.

The reverse osmosis system produces around 5 m<sup>3</sup>/hr of reject, which gets evaporated in solar evaporation ponds with aided evaporation systems. The objective of the solar evaporation pond is to concentrate the

reject and convert it into solids or slurry. VAL has introduced an improved solar pond where the rate of evaporation is accelerated by increasing the surface area of exposure with atomisers along the pond. This is further aided by blowing hot air to the reject which is channelled through solar panels, with the resulting concentrated sludge disposed of in secured landfill.

#### Outcome

After the reverse osmosis process, the treated water can be used in any industrial application and is completely recycled. The treated water quality is of a far superior standard to the stipulation for industrial treated water quality.

### Raw material consumption

Raw materials consumed in our operations include bauxite (VAL-Lanjigarh), copper ore/concentrate (KCM, CMT & Sterlite Copper), zinc ore, lead ore (HZL, ZI) and iron ore (Sesa Goa) besides associated mineral inputs, semi-manufactured and packaging material.

During the reporting period, 30 million MT of raw material, 3.2 million MT of associate material, 16.88 million MT of semi-manufactured material were consumed. Packaging material consumption is not significant for our operations.

### Consumption of raw, associated and semi-manufactured materials (MT)

Sector	Unit name	Raw material (solid & liquid)	Semi-manufactured (solid and liquid)	Asso material (solid and liquid)	Packaging material
Zinc	HZL	8,764,413	32,128	356,472	742
	Skorpion Zinc	1,348,616	–	226,959	–
	Lisheen Mine	1,709,982	–	9,366	–
	BMM	1,521,812	–	–	–
Copper	CMT	–	135,779	121,797	370
	Sterlite Copper	–	1,113,183	1,424,905	85
	KCM	11,775,588	14,763,861	552,247	382
Aluminium	BALCO	2,412,169	98,826	6,499	–
	VAL-J	–	740,178	275,698	223
	VAL-L	1,763,938	–	109,342	–
Power	MALCO	–	–	–	–
	SEL	–	–	–	–
Iron	Sesa Goa	746,964	–	116,750	–
Oil & Gas	Cairn India	–	–	–	–
<b>Total</b>		<b>30,043,481</b>	<b>16,883,955</b>	<b>3,200,035</b>	<b>1,801</b>

Note: EN1 is not applicable to our Oil and Gas Sector as our Cairn business extracts crude oil from the ground directly. For our Power business – raw material like coal etc is already accounted for in EN-3

During the reporting period, BALCO unit recycled more than 2,500MT of rejected green anode from VAL Jharsuguda unit. Similarly, more than 400MT of rejected copper coil, copper cast bar, milling chips was recycled by the Sterlite Copper business.



The aerial view of our VAL - Jharsuguda plant demonstrates the scale of our operations

## Responsible Stewardship: Environment continued

### Biodiversity

Mining operations can affect local ecology. Our biodiversity policy commits the Group to minimise and mitigate biodiversity risks throughout our operations and we strive to avoid adverse impacts on natural habitats. We plan the management of our land use in a manner that allows biodiversity conservation to be integrated throughout the project's lifecycle, including decommissioning, closure and rehabilitation.

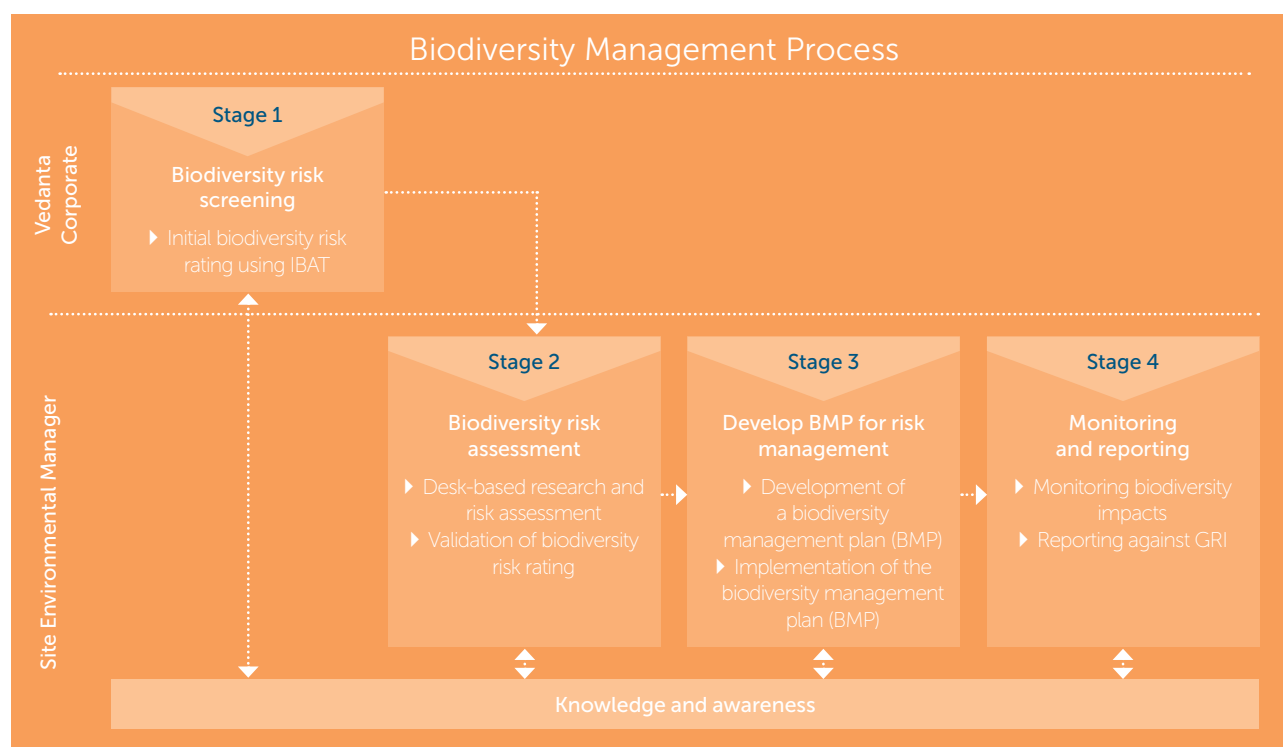
### Biodiversity management

In order to promote a best practice management approach to biodiversity, we have reviewed all operations to identify which of our sites are operating within close proximity to protected International Union for Conservation of Nature (IUCN) areas, important bird areas and key biodiversity hot spots. We have also mapped all our sites using the Integrated Biodiversity Assessment Tool (IBAT) mapping tool ([www.ibatforbusiness.org/](http://www.ibatforbusiness.org/)). Using the IBAT maps, we can determine if a site is located in or near an important biodiversity area, or a potential critical habitat. Based on the results of the biodiversity risk screening, we assign high/medium/low initial biodiversity risk ratings to each site. The results of the biodiversity risk screening programme have led us to prioritise

the subsequent biodiversity management processes. As biodiversity is a specialised discipline, we plan to review the risk assessment process including conducting pilot studies to validate the identified risks through the IBAT. The intention is to have a full suite of appropriate biodiversity management plans (BMPs) in place at all our sites by 2015.

To assist each site and ensure consistency and rigour across the Group, we have issued a biodiversity guidance note for critical habitat determination for new projects. The guidance note prescribes that the mandated ESIA screening checklist must include a biodiversity risk assessment utilising IBAT for new projects. The guidance note provides an overview of biodiversity management processes including typical elements of a biodiversity management plan (BMP). Specifically, it provides guidance on:

- ▶ The approach to be used to conduct biodiversity risk assessment;
- ▶ Describing the level of biodiversity at the site;
- ▶ Outlining the risks to biodiversity resulting from site operations;
- ▶ Specifying the biodiversity management goals for the site; and
- ▶ The actions and responsibilities for managing or offsetting impacts on biodiversity.







## Case Study: Skorpion Zinc artificial wetland for birds

### The issue

In 2006, the environment team at Skorpion Zinc noticed an increase in bird mortality around the refinery's lined evaporation and earthen ponds. The cause of the deaths was at that time unknown, although preliminary internal assessments suspected that birds were consuming refinery process waste water.

### The solution

Skorpion Zinc Management appointed an independent consultant, EcoMonitor, to carry out a detailed investigation on the cause of mortality in late 2006 and early 2007. The study revealed that bird mortality was due to acid burns (primary) and metal poisoning (secondary).

Skorpion Zinc decided to construct an artificial wetland in 2009 near the facility, deliberately making it more attractive to birds to encourage them away from plant facilities. The bird pond is far from the refinery

and administration building and has limited human disturbance. Skorpion Zinc has also actively grown indigenous and rare plants around the pond area, and a specialist nursery to assist with this process has also been developed.

The water source for the bird pond is the final-treated effluent from the site sewage plant. The water quality of the treated effluent is monitored to ensure that the water complies with disposal permit requirements. The ground water is monitored by sampling at a borehole.

### The outcome

No further bird fatalities have been recorded since the completion of the bird pond and it successfully attracted birds from the refinery. The pond has since become a habitat rich in a diverse range of bird species and is now also a nesting ground.



Enabling biodiversity at Skorpion Zinc artificial wetland



## Responsible Stewardship: Environment continued

### Energy and climate change

Meeting growing energy demands while limiting carbon emissions is a global challenge. We recognise that we have a social and economic responsibility both to take action to reduce our footprint and to engage constructively on climate change issues. By understanding the risks and opportunities of climate change, and how these affect the organisation, we can reduce our own impact on the environment and also make a positive contribution to the debate.

### Our approach to energy and climate change

As Vedanta is part of an energy intensive industry, our direct and indirect energy consumption is in the order of 341 million GJ. It is important that we carefully consider our approach to energy use, including our use of technology to maximise efficiencies. We have completed a carbon footprint exercise across all our manufacturing and mining locations. The long-term strategy for addressing climate change issues consists of diversifying the energy portfolio and water sources of all our companies and the Group is developing its thinking around these issues and how best to implement them.

Our Energy and Carbon Policy commits our operations to adopt and maintain global best practices in carbon and energy management and to minimise greenhouse gas (GHG) emissions. We are aware of the opportunities that energy management and climate change present and understand the business case for these initiatives, which can include efficiency savings based on a combination of new technology and advancing our business processes. Naturally, we are also keen to maximise the revenue generation potential of GHG reduction initiatives through the Clean Development Mechanism (CDM). During the reporting period, we identified CDM projects with a CER potential of 1.5 million units. Out of these, projects with a potential 0.67 million units are already registered on UNFCCC while projects with 0.82 million units are at an active stage of implementation. In 2012-13, around 0.47 million units CER accrued and 0.21 million units of VER accrued while 0.32 million units of CERs were sold, generating US\$1.38 million.

In order to give rigour to our energy programmes, plants are upgrading existing business management systems to allow accreditation to the energy standard

ISO 50001. Currently, the VAL-Lanjigarh captive power plant is ISO 50001 certified, with this achievement being used as a model for other operations. The smelter plant and independent power plant (IPP) of Sterlite Energy at Jharsuguda have been recommended for ISO 50001 certification.

### Key energy reduction and efficiency initiatives in 2012-13

We have been working to develop our production of electricity from waste heat generation. In 2012 we increased our installed capacity to 92.3MW, up from 60MW in 2011, allowing for greater efficiency in our operational energy usage.

A new energy-efficient copper scrap furnace was commissioned at our Konkola Copper Mine in December 2012 which reduced annual average GHG emission reductions by 15,213 metric tonnes with a corresponding carbon asset value of 15,213 CERs (certified emission reductions). The new scrap melting furnace uses lower HFO (heavy fuel oil) consumption – HFO consumption for the old scrap furnaces was 182.5kg/metric tonne while the new scrap furnace is designed to use HFO at 80kg/metric tonne of scrap. To reduce grid power consumption, Konkola has also installed a steam heater, replacing the 1.35MW electric heater at the oxygen plant at its Nchanga smelter. The steam heater is scheduled to come on-stream mid-2013 and will result in estimated GHG emission reductions of 2,676 metric tonnes per year.

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**By understanding the risks and opportunities of climate change, and how these affect the organisation, we can reduce our own impact on the environment and also make a positive contribution to the debate**

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VAL-Jharusguda has also introduced a range of energy and carbon emission reduction steps including the reduction of smelter-specific direct current energy consumption through the implementation of slotted anodes, resulting in approximate energy savings of 43,000GJ, and the optimisation of compressed air consumption in the smelter, resulting in approximate energy savings of 0.28 million GJ. Auxiliary energy consumption was also reduced through the replacement of the power plant cooling tower GRP fan, together with a reduction in primary air fan power consumption and the enhancement of boiler efficiency by the replacement of air preheater seals with soft-touch seals. In total during the period, we saved more than 922,000GJ of energy due to conservation and efficiency improvement projects at VAL-J, KCM, HZL, Sterlite Copper, BALCO and other units.

Operations at Cairn India recognise the need for energy conservation, and steps have been taken to reduce energy consumption.

Cairn India's current carbon emission intensity is estimated to be 95 metric tonnes of CO<sub>2</sub>E per thousand metric tonnes of hydrocarbons produced. The GHG emission intensity compares well with the industry sector performance. Additionally, Cairn is partnering with the Indian Government on 'Green Cover' development projects – Carbon Footprint Offset initiatives.

Cairn seeks to use the associated natural gas in oil production in its own operations or through commercial sale to prevent wastage of a potential energy source through flare-off.

Two of our operations (KCM and CMT) have purchased electricity from renewable energy sources – hydro power stations. 2.34% of our total energy is from renewable energy portfolio.

During the reporting period our Cairn India operation invested US\$0.12 million in the field of renewable energy and generated 198GJ of renewable energy.

### Direct and indirect energy consumption (million GJ)

Sector	Unit name	Direct consumption		Indirect consumption	
		2011-12	2012-13	2011-12	2012-13
Zinc	HZL	45.51	<b>45.96</b>	1.78	<b>0.44</b>
	Skorpion Zinc	0.38	<b>0.40</b>	2.44	<b>2.35</b>
	Lisheen Mine	0.06	<b>0.08</b>	0.48	<b>0.50</b>
	BMM	0.22	<b>0.11</b>	0.49	<b>0.42</b>
Copper	CMT	0.12	<b>0.16</b>	0.37	<b>0.41</b>
	Sterlite Copper	1.96	<b>1.85</b>	0.51	<b>0.60</b>
	KCM	1.57	<b>1.53</b>	6.62	<b>7.57</b>
Aluminium	BALCO	72.60	<b>70.62</b>	0.01	<b>0.01</b>
	VAL-J	79.11	<b>90.78</b>	0.31	–
	VAL-L	12.39	<b>6.99</b>	0.05	<b>0.04</b>
Power	MALCO	9.11	<b>10.94</b>	–	–
	SEL	65.99	<b>85.13</b>	0.14	<b>0.04</b>
Iron	Sesa Goa	1.98	<b>0.90</b>	–	<b>0.05</b>
Oil & Gas	Cairn India	–	<b>12.78</b>		<b>0.03</b>
<b>Total</b>		291.00	<b>328.24</b>	13.15	<b>12.47</b>

Note: In FY 2011-12 SDR, we double-accounted the electricity purchased through our sister concern as well as from the State grid

## Responsible Stewardship: Environment continued

### Air quality

Across the Group, we monitor air quality and the effects and implications that this may have on employees, local communities and the environment.

### Our approach to air quality management

Vedanta has an environmental management standard which commits our operations to identify and manage emissions to air from point sources, fugitive sources, and mobile sources, as well as from process activities associated with combustion and materials storage. We require all our operations to apply air quality prevention and mitigation measures.

Air emissions monitoring includes both ambient air quality monitoring (AAQM) and stack emissions monitoring. In general, as part of ESIA studies, the baseline ambient air monitoring data is collected within a 10km radius of the plant site. The monitoring locations are selected based on considerations including meteorological conditions on a synoptic basis, topography of the study area and the likely impact areas.

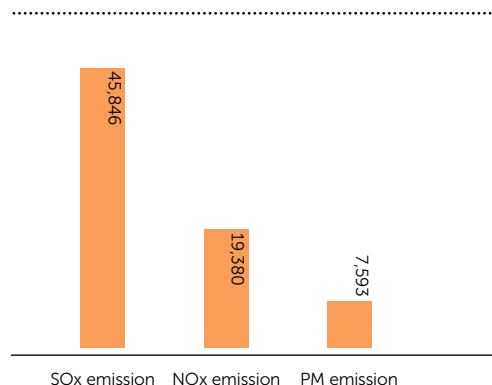
Suspended particulate matter (SPM), SO<sub>2</sub> and NO<sub>x</sub> are generally monitored as part of AAQM. The AAQM reports are regularly submitted to the regulatory authorities. In relation to stack emissions of particulate matter, emissions are legally regulated at most of our operations and are monitored to ensure compliance. During the year, we also monitored SO<sub>2</sub> and NO<sub>x</sub> and other relevant emissions including lead emissions in our zinc operations, fluoride emissions in our copper and aluminium operations and poly aromatic hydrocarbons (PAHs) in our aluminium operations.

Our significant emissions (> 5,000MT during the reporting period) include SO<sub>x</sub>, NO<sub>x</sub>, and PM and are summarised in the graph above right.

Other emissions include VOC emissions from our Cairn India operations (329MT), fluoride emissions (120MT), lead emissions (43MT) and PAH emissions (2MT).

The emission of ozone-depleting substances is not a material concern for Vedanta as none is used in processes associated with our operations.

### Significant emissions: Emissions from stack (MT)



### Initiatives on air quality management

Over the past year we have undertaken a number of air quality initiatives. At Sesa Goa a fine particulate emission control (bag filter) system was installed at blast furnace No. 2. At Sterlite Copper, Tuticorin, to reduce fugitive emissions, a scrubber and a bag house in the primary smelter and a bag house, upstream of existing scrubbers, in the secondary smelter were installed. Additionally, to reduce dust emissions, 0.75km of closed conveyors for gypsum transportation and permanent water sprinklers at the gypsum pond area were also installed.

At VAL-Lanjigarh, to reduce dust, all internal roads have been concreted and external roads are sprayed with water to reduce dust from road traffic. In addition, rail wagon tipping equipment has been installed to handle bauxite within the plant premises, eliminating the road transport of bauxite from the railway siding to the plant and so eliminating the dust that resulted from this means of transporting the material.

At Konkola Copper Mines a new scrap melting furnace equipped with filter bags was commissioned in November 2012. This replaced the use of one of the two old scrap melting furnaces at Nkana Refinery used for heating the charged scrap in the furnace. At the new cobalt recovery furnace (CRF No. 1) filter bags were commissioned in April 2012 and these have resulted in a significant reduction in air emissions at the Nchanga smelter. Dust and associated heavy metal emission discharge into the ambient air from the new CRF No. 1 is within statutory limits, with dust levels for the new plant below 50mg/Nm<sup>3</sup> compared to 300mg/Nm<sup>3</sup> for the old CRF No. 2.

Implementation of other projects to achieve full compliance with statutory emissions standards is in progress and targeted to be completed by December 2013. These include the installation of an off-gas cleaning system at the anode furnaces, installation of a bag house system after the gas cooler at the old CRF No. 2 and the installation of a bag house and evaporative cooling system in the slag cleaning furnace gas cooler.

#### Excess gas flaring – risk minimisation at Cairn India

At our Cairn business, we currently use associated gas at Mangala Processing Terminal to generate power for our operational facilities. The excess associated gas is flared at the assets where gas sales infrastructure does not exist. Our aim has constantly been to reduce our excess gas flaring. In 2012-13 hydrocarbon production as compared to 2009-10 has increased by about 67%, whereas the greenhouse gas (GHG) emission intensity has increased by only 4%. In addition, during the reporting period, we have reduced our excess gas flaring intensity by 42% from April 2012 to March 2013, our overall average flaring intensity being 4.5T/metric tonne of hydrocarbon produced. Initiatives to further minimise excess gas flaring to our minimum operational level

requirement have been introduced. These include compressing the excess gas and sending it through the gas pipeline to market in Gujarat. For the reporting period, the volume of flared and vented hydrocarbon emissions from Cairn operations were approximately 62.5 million m<sup>3</sup> and 3.7 million m<sup>3</sup>.

**Vedanta has an environmental management standard which commits our operations to identify and manage emissions to air from point sources, fugitive sources, and mobile sources, as well as from process activities associated with combustion and materials storage**

#### Direct and indirect GHG emissions (tonnes of CO<sub>2</sub> eq.)

Sector	Unit Name	Scope I Emission		Scope II Emission	
		2011-12	2012-13	2011-12	2012-13
Zinc	HZL	4,619,113	<b>4,743,627</b>	180,160	<b>94,327</b>
	Skorpion Zinc	28,044	<b>29,591</b>	649,823	<b>627,844</b>
	Lisheen Mine	4,403	<b>6,109</b>	71,551	<b>73,315</b>
	BMM	16,114	<b>7,895</b>	487,098	<b>420,632</b>
Copper	CMT	9,069	<b>11,704</b>	5,156	<b>33,465</b>
	Sterlite Copper	180,359	<b>241,508</b>	113,068	<b>136,368</b>
	KCM	119,237	<b>115,947</b>	12,868	<b>14,729</b>
Aluminum	BALCO	7,622,035	<b>7,340,560</b>	1,462	<b>1,694</b>
	VAL – J	9,112,679	<b>10,089,372</b>	68,193	<b>398</b>
	VAL – L	1,135,227	<b>644,141</b>	1,012	<b>8,974</b>
Power	MALCO	875,470	<b>1,051,398</b>	–	–
	SEL	6,325,020	<b>8,172,378</b>	–	–
Iron	Sesa Goa	671,534	<b>588,417</b>	68,720	<b>45,537</b>
Oil & Gas	Cairn India	–	<b>983,302</b>	–	<b>7,145</b>
<b>Total</b>		30,718,303	<b>34,025,949</b>	1,659,110	<b>1,464,428</b>

## Responsible Stewardship: Environment continued

### Waste

Mining and resource production results in waste production – our hazardous and non-hazardous waste generation is approximately 9.09 million tonnes, and how we manage and reduce our waste is an important measure of how successful we are in managing our business sustainably.

We recognise that we have a social and environmental responsibility both to manage our waste and to constructively engage in waste usage. By understanding the risks and opportunities around waste generation and its management, we believe we can reduce our impact on the environment and make a positive contribution to managing this challenge.

### Waste management

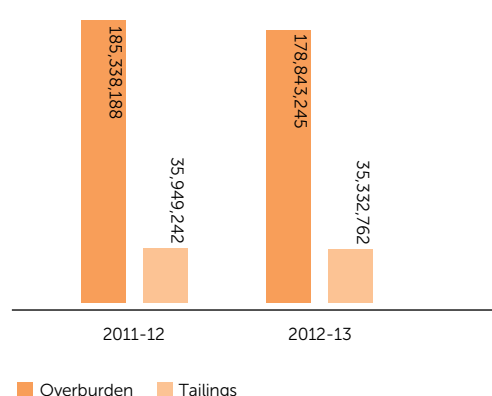
Vedanta has a resource use and waste management standard which commits our operations to minimise resource use across the lifecycle of each site, as well as requiring sites to demonstrate a commitment to applying appropriate waste management principles. The purpose of the standard is to ensure that Vedanta optimises resource consumption and manages the wastes it produces in ways that minimise the negative impact on the environment and to human health – supporting the Group's policies in relation to sustainability and the protection of the environment.

The standard requires us to apply the principles of a waste hierarchy in the design and implementation of all of our operations. Accordingly, priority is given to avoidance and minimisation of waste generation followed by recovery, reuse and recycling. The least preferred option is disposal (landfill or incineration). Opportunities to eliminate, reduce, reuse, recycle and recover waste, wherever practicable, are identified and implemented. We pay particular attention to hazardous and high-volume wastes such as our process and mineral wastes, which are stored in secured landfill sites and, where appropriate, sold to recyclers. We also ensure that non-hazardous waste is reused as much as possible within our operations to mitigate the amount sent to landfill.

The key non-hazardous wastes we generate include fly ash (from captive and merchant power plants), red mud (aluminium refinery waste), jarosite/jarofix (one of the wastes of refining and purifying zinc is jarosite, a basic hydrous sulphate of potassium and iron. When mixed with lime and cement using proprietary technology from the Canadian Electrolyte Zinc company, jarosite forms a hard, compact and inert substance called 'Jarofix'), slag, lime grit (process residues from smelters and alumina refineries) and phosphor gypsum. We have processes in place to ensure the appropriate management and disposal or recycling of these wastes.

Our hazardous waste generation includes used/spent oil, waste refractories, spent pot lining and residual sludge from smelters. Hazardous wastes are stored in authorised, licensed and secured landfills, while some have value and are sold to authorised recyclers. In the reporting period around 178 million MT of overburden and 3.5 million MT of tailing were produced. Much of our generated overburden is used in secondary construction work, for example, in raising tailing dam heights, back-filling mined out areas and exhausted mine pits.

### Waste (MT)



For our Cairn operation, around 4,100MT of drill mud and cuttings were produced using non-aqueous drilling fluid, whereas around 1,200MT of same were disposed onshore and offshore.



## Performance

In support of our aims to minimise waste we have introduced the following initiatives:

- ▶ 1.5 million metric tonnes of slag were used in various useful applications rather than being deposited in landfill. This included use in road construction, land levelling and in the abrasive and cement industries.
- ▶ Nearly 4 million metric tonnes of fly ash from our power plants was sent to nearby cement and brick manufacturing units together with land levelling.

## Amounts of hazardous and non-hazardous waste generated (MT)

Sector	Unit name	Hazardous waste		Non-hazardous	
		2011-12	2012-13	2011-12	2012-13
Zinc	HZL	581,960	<b>542,903</b>	589,267	<b>708,284</b>
	Skorpion Zinc	242	<b>382</b>	–	<b>173</b>
	Lisheen Mine	28	<b>29</b>	–	<b>696</b>
	BMM	107,502	<b>70</b>	965	<b>543</b>
Copper	CMT	88	<b>185</b>	133	<b>466</b>
	Sterlite Copper	46,219	<b>48,386</b>	1,425,232	<b>1,318,562</b>
	KCM	937	<b>5,751</b>	404,767	<b>483,577</b>
Aluminium	BALCO	8,470	<b>6,136</b>	2,295,497	<b>2,095,576</b>
	VAL-J	26,056	<b>24,299</b>	1,195,420	<b>10,340</b>
	VAL-L	8,074	<b>41</b>	1,736,323	<b>1,071,663</b>
Power	MALCO	21	<b>4</b>	31,889	<b>40,543</b>
	SEL	63	<b>100</b>	1,683,118	<b>2,626,296</b>
Iron	Sesa Goa	311	<b>152</b>	8,910	<b>5,972</b>
Oil & Gas	Cairn India	NA	<b>12,846</b>	NA	<b>256</b>
<b>Total</b>		779,971	<b>641,282</b>	9,371,521	<b>8,362,945</b>

Note: In FY 2011-12 SDR, there was a typo in hazardous waste data for the iron sector (Sesa Goa)

Building Strong Relationships

# COMMITTED TO STRONG RELATIONSHIPS WITH OUR STAKEHOLDERS



Employees are integral to building strong relationships



## What does Building Strong Relationships mean to us?

Effective engagement with our stakeholders is crucial for us to build long-lasting and effective relationships. Our stakeholder consultation process has been vital for deepening our encounters with our stakeholders.

### In this section

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# UNDERSTANDING KEY STAKEHOLDER NEEDS

Our stakeholders are considered crucial to the way that the business adds and shares value in the broader sense – both financially and in non-financial ways.

Vedanta also engages with other stakeholders, including the media and the wider public. Our stakeholders therefore have an important role to play in influencing the strategic direction of the business.

In order to engage effectively and understand the distinct requirements of our various stakeholders, the business has identified seven key groups as having significant interest in our operations:

- ▶ Employees
- ▶ Shareholders
- ▶ Lenders
- ▶ Host Governments
- ▶ Communities
- ▶ Civil society
- ▶ Industry

We effectively engage with our stakeholders by understanding their key concerns and opinions and our materiality process has been an important aspect of our approach to achieving this understanding. This year, we strengthened this process by commissioning an external assessment which encompassed detailed consultations with a broad range of internal and external stakeholder representatives. This enabled us to confirm their key priorities, informing the identification of our material issues.

Here we outline the various ways we engage with our seven key stakeholder groups, their significance to the business, the nature of engagement and the material aspects that they are interested in. This report, coupled with our Annual Report, responds to these areas.

## Stakeholder group

	Shareholders	Lenders
<b>Significance to the business</b>	<ul style="list-style-type: none"> <li>▶ Provide finance</li> <li>▶ Provide a critical assessment of management competencies</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide finance</li> <li>▶ Ensure right management systems are followed</li> </ul>
<b>Nature of engagement</b>	<ul style="list-style-type: none"> <li>▶ Regular updates and investor meetings</li> <li>▶ Presentations</li> <li>▶ Site visits</li> <li>▶ Annual AGM</li> <li>▶ Conferences</li> <li>▶ Dedicated contact channel <a href="mailto:ir@vedanta.co.in">ir@vedanta.co.in</a></li> </ul>	<ul style="list-style-type: none"> <li>▶ Meetings</li> <li>▶ Presentations</li> <li>▶ Site visits</li> </ul>
<b>Who in Vedanta leads</b>	<ul style="list-style-type: none"> <li>▶ Chairman</li> <li>▶ Deputy Executive Chairman</li> <li>▶ CEO</li> <li>▶ CFO</li> <li>▶ Investor Relations</li> <li>▶ CSO</li> </ul>	<ul style="list-style-type: none"> <li>▶ CEO</li> <li>▶ CFO</li> <li>▶ Corporate Finance</li> <li>▶ CSO</li> </ul>
<b>Identified material aspects</b>	<ul style="list-style-type: none"> <li>▶ Economic performance</li> <li>▶ Corporate governance</li> <li>▶ Human rights</li> <li>▶ Occupational health and safety</li> </ul>	<ul style="list-style-type: none"> <li>▶ Economic performance</li> <li>▶ Promotion of international standards</li> <li>▶ Human rights</li> <li>▶ Occupational health and safety</li> </ul>

Employees	Communities	Industry	Governments	Civil society
<ul style="list-style-type: none"> <li>▶ Key assets in delivering operational capabilities</li> <li>▶ Deliver business goals and targets</li> </ul>	<ul style="list-style-type: none"> <li>▶ Vital to the business's licence to operate</li> </ul>	<ul style="list-style-type: none"> <li>▶ Facilitators for product development</li> <li>▶ Suppliers' customers are directly linked with the business's growth</li> <li>▶ Vital for development of regulations and standards, lobbying, working processes</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide the regulatory framework (taxation, licensing, infrastructure, economic playing field for growth) in which the business exists</li> <li>▶ Partner in infrastructure development projects</li> </ul>	<ul style="list-style-type: none"> <li>▶ Provide a critical eye to the business's operation</li> <li>▶ Provide technical support to the learning and development of the business</li> </ul>
<ul style="list-style-type: none"> <li>▶ Various forums: Chairman's workshops</li> <li>▶ CEO meetings and feedback sessions</li> <li>▶ Performance management systems</li> <li>▶ Various committees at the plant level: Mentor programme, Event Management committee and Welfare Committee, women's clubs etc.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Community group meetings</li> <li>▶ Village council meetings (panchayats)</li> <li>▶ Public hearings</li> <li>▶ Grievance mechanisms</li> <li>▶ Cultural events</li> </ul>	<ul style="list-style-type: none"> <li>▶ Customer satisfaction surveys</li> <li>▶ Supplier and vendor meetings</li> <li>▶ Membership of industry bodies</li> </ul>	<ul style="list-style-type: none"> <li>▶ Participation in government consultation programmes</li> <li>▶ Engagement with national, state and regional government bodies at business operational level</li> </ul>	<ul style="list-style-type: none"> <li>▶ Partnerships with and membership of international organisations</li> <li>▶ Working relationship with organisations on specific projects</li> <li>▶ Engagement with international, national and local NGOs</li> </ul>
<ul style="list-style-type: none"> <li>▶ Chairman</li> <li>▶ CEO</li> <li>▶ HR</li> <li>▶ Senior Executives</li> </ul>	<ul style="list-style-type: none"> <li>▶ Chairman</li> <li>▶ CEO</li> <li>▶ Community Liaison officer/ coordinators</li> </ul>	<ul style="list-style-type: none"> <li>▶ Senior level meetings may include Chairman and CEO</li> <li>▶ COO</li> <li>▶ Marketing team</li> <li>▶ Commercial management</li> <li>▶ Senior Executives</li> </ul>	<ul style="list-style-type: none"> <li>▶ Senior level meetings may include Chairman and CEO</li> <li>▶ Senior Executives</li> <li>▶ Government Relations</li> <li>▶ Public relations</li> </ul>	<ul style="list-style-type: none"> <li>▶ Senior level meetings may include Chairman and CEO</li> <li>▶ CSO</li> <li>▶ Public relations Senior Executives</li> </ul>
<ul style="list-style-type: none"> <li>▶ Economic performance</li> <li>▶ Occupational health and safety</li> <li>▶ Training and development</li> <li>▶ Employee satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>▶ Direct and indirect local employment</li> <li>▶ Community development</li> <li>▶ Environmental management</li> <li>▶ Land management</li> </ul>	<ul style="list-style-type: none"> <li>▶ Contract integrity</li> <li>▶ Corporate governance</li> <li>▶ Product stewardship</li> </ul>	<ul style="list-style-type: none"> <li>▶ Economic performance</li> <li>▶ Promotion of international standards</li> <li>▶ Direct and indirect local employment</li> <li>▶ Community development</li> </ul>	<ul style="list-style-type: none"> <li>▶ Promotion of international standards</li> <li>▶ Human rights</li> <li>▶ Occupational health and safety</li> <li>▶ Community development</li> </ul>



## Building Strong Relationships: Stakeholder engagement continued

# PROVIDING STRUCTURE TO ENGAGEMENT

### Stakeholder management

An important part of the Vedanta Sustainability Framework is the Group's Social Policy and the supporting technical standards, which provide structure to the way we manage our stakeholder engagement. These standards require all operations to identify stakeholders and determine engagement plans, including recording and responding to stakeholder enquiries and grievances. Our stakeholder engagement technical standard is aligned with international best practice and equips our subsidiaries to have a consistent approach to the way they engage and communicate with their stakeholders.

All of our operations run their own stakeholder identification and analysis process. As part of this, they identify potential stakeholder representatives who act as a channel for the dissemination and receipt of information. In addition, our sites identify individuals and groups who may be additionally affected by operations due to their disadvantaged or otherwise vulnerable status. Ways in which stakeholders may be affected and the extent of both actual and perceived impacts are identified and recorded against each group. Using the information gathered, our operations can then determine, with the stakeholders themselves, the level of communication and consultation that is appropriate. From this, Stakeholder Engagement Plans (SEP) are developed and continuously updated as circumstances develop on-site.

All our businesses have SEPs; however, some of these are yet to be upgraded to our stakeholder engagement standard. We have already upgraded plans for Lanjigarh and BALCO and other business units have started documenting their stakeholder engagements in compliance with our stakeholder engagement process. Our target is to have SEPs in place in line with our Vedanta Stakeholder Engagement Standard by 2014.

As part of our continual engagement with those interested in our business, we are committed to effectively responding to stakeholder feedback. Effort is made by the business to ensure that multiple channels are used to maintain contact, for example, a dedicated email address – [sustainability@vedanta.co.in](mailto:sustainability@vedanta.co.in) – is available and is displayed in the Contacts section of our website, and this is complemented by an online feedback form in the Sustainable Development section of our website.

In addition to emails received at this address, all matters pertaining to our sustainable development initiatives received by departments such as the Vedanta Corporate Communications and Investor Relations teams are forwarded to the Chief Sustainability Officer or to [sustainability@vedanta.co.in](mailto:sustainability@vedanta.co.in). All emails are reviewed and appropriately responded to. The issues raised are also recorded and contribute to our continual monitoring and understanding of stakeholders' interests.

Our target is to upgrade our existing SEPs in line with our Vedanta stakeholder engagement standard by 2014

### Communicating progress on the Gamsberg project

The Gamsberg project is one of the most strategic projects of the Group's Zinc International business and an integral plan to harness the potential of BMM assets and to sustain growth.

The project consists of an open-pit zinc mine, together with processing facilities and associated infrastructure. The proposed mine is located in the Northern Cape Province of South Africa, 20km east of our existing Black Mountain Mine and the town of Aggeneys.

To ensure both transparency in the development of the project and that our stakeholders understand the project aims and the process of its development, updates to the Gamsberg Environmental and Social Impact Assessment (ESIA) are communicated by postings on the Company website [www.vedanta-zincinternational.com](http://www.vedanta-zincinternational.com). Interested stakeholders are directed to the project website, which has up-to-date information on the status of the ESIA. This site gets updated regularly, particularly when critical milestones are completed. All documents including reports and details of community engagement can be found on the website. The draft ESIA report has also been placed in public places including the local library and municipality offices. Advertisements have also been placed in four regional newspapers to create awareness of the publication of the draft ESIA.

A third open-house public meeting was scheduled to be conducted in the first half of 2013 to disclose the findings of the ESIA (prior to its final submission) in addition to focus group meetings for relevant stakeholders including farmers, NGOs and the municipality. We intend to distribute a non-technical summary of the draft to all participants, in both English and Afrikaans.



Community consultation session for the Gamsberg Project, BMM

## Broader stakeholder engagement

Vedanta and our subsidiary companies have proactive shareholder engagement programmes in the various geographies where we operate. In the course of the year, we have proactively met with several stakeholder groups including civil society organisations, media and industry associations, to increase awareness about the Group, explain our point of view and answer any queries that they might have. We use numerous channels of communication which include one-on-one and large format meetings and briefings, and online and print communications.

We also invest considerable resources in creating and publishing in-house journals such as the Zinc News and Yagna, newsletters to engage with employees, our wider industry and communities and host governments.

We also recognise the growing value of online and social media in engaging with various stakeholders. We have an active presence on various social media (YouTube, Facebook, Twitter, Flickr, Pinterest, blogs) to increase awareness about our business and activities, share latest news and respond to any queries or comments that are posted on our social media sites. We were pleased to be ranked 6th among FTSE 100 companies in a study conducted by Sociability, UK and Public Relations Consultants Association, UK. This independent study benchmarks corporate social media engagement using social media networks including YouTube, Twitter and Facebook. Vedanta has also been ranked number one among all FTSE 100 companies on use of YouTube to engage with its stakeholders.

## Vedanta Khushi

Launched in April 2012, Vedanta Khushi is a social media campaign and forum created to promote awareness of issues pertaining to underprivileged children, with a focus on their nutrition, education, health and overall development. The campaign uses the blog <http://khushi-creatinghappiness.blogspot.co.uk> as a central resource for issues to be raised and discussed and also as a means of sharing relevant external reports by NGOs. To date, the blog has received over 55,000 page views and the Facebook page has over 28,000 members.

## Responding to stakeholder concerns

We respond to stakeholders at the Group, business and operational levels as appropriate. Our subsidiary companies and operations teams on the ground are well placed to

understand the needs of their stakeholders as they are in continuous and active engagement with them. At the Group level, we support them in this engagement.

Our Group Chief Sustainability Officer and his team are also responsible for responding to stakeholder queries and requests for information, including from analysts, NGOs, banks and others interested in our sustainable development story. For example, Vedanta is currently in dialogue with Amnesty International regarding concerns pertaining to the VAL-Lanjigarh site. Our full corporate response to the matters raised by Amnesty International is published in the report, "The Lanjigarh development story – Vedanta perspective", which can be found on our website.

During the latter half of 2012, We also received 2,497 letters from members of the public asking questions about the project in Lanjigarh, following a campaign by Amnesty International in Holland. Individual replies were sent to 1,478 people where there was a readable correspondence address. Each response contained a copy of the report "The Lanjigarh development story – Vedanta perspective".

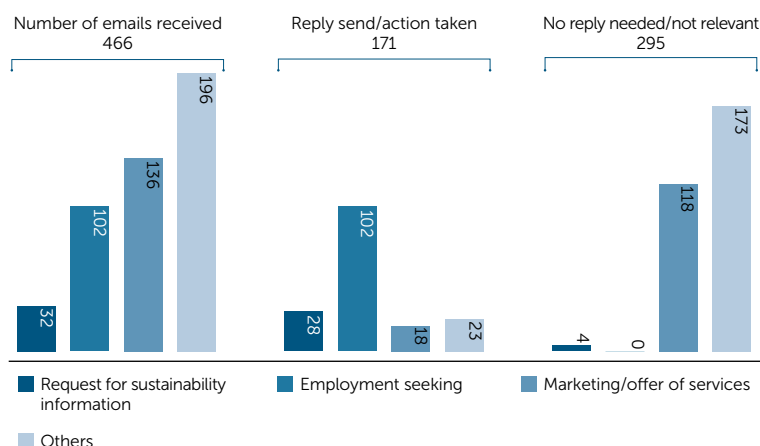
In order to ensure transparency in our operations, the Group's responses to major incidents or events are posted on our corporate website and information is channelled by the Group Communications and Investor Relations teams as appropriate. Our business subsidiaries also have a similar practice to communicate with their local and specific stakeholder groups.



"The Lanjigarh development story – Vedanta perspective" can be found online.

more: [sustainability.vedantaresources.com/our\\_performance/report\\_archive](http://sustainability.vedantaresources.com/our_performance/report_archive)

## Emails received by sustainability@vedanta.co.in



# RESPECTING HUMAN RIGHTS

Our human rights policy provides our governance framework and commits us to the principles of sustainable development including protecting human life, health and environment, promoting social well-being and adding value to the communities in which we operate.

Over

**36,000**

man hours training  
on Code of Conduct  
and human rights

Human rights and child  
labour – risk assessment  
conducted

Protecting and respecting human dignity is central to our everyday business operations. Moreover, as a global company working in a range of developing countries, we believe we have an important contribution to make through the example we set by our behaviours.

Human rights incorporates socio-political and economic issues that have implications for the responsibilities of our business – as an employer, as a global company with numerous suppliers and as a responsible corporate citizen working within communities. Over the past year, we have strengthened our approach, with our Sustainability Committee conducting reviews to deepen our understanding of the risks and opportunities associated with human rights management.

## Human rights management

Through our human rights policy – which has been implemented across all Group businesses – Vedanta is committed to ensuring that the processes that it has in place, and continues to develop, follow the UN Guiding Principles.

By conducting ESIs in compliance with applicable legal requirements and the Vedanta Sustainability Framework, human rights considerations are taken into account for all new projects, including the obligation to undertake a human rights screening process in all merger and acquisition activities. Last year no significant merger and acquisition activity was undertaken. Our Code of Conduct commits us to comply with all laws and regulations, including the protection of the fundamental human rights of all our employees.

Our commitment to human rights is backed through the practical application of our standards. In order to deliver this, all Group subsidiary companies provide focused training

in the Vedanta Sustainability Framework, including our human rights policy. Training in our Code of Conduct and SA 8000 also includes components on human rights. During the year, we conducted over 36,000 man hours of training on the Code of Conduct. Human rights is also a specific module of the VSAP. This therefore ensures that we review our human rights management systems at the business level.

We have a supplier and contractor sustainability management policy and our contract terms and conditions insist on compliance with respect to regulations on minimum wages, contract labour, worker compensation and other similar topics in the countries in which we operate. A number of our suppliers have endorsed our Code of Conduct, which includes clauses on human rights. This is now being introduced to all suppliers in a phased manner. In addition, our Security Management Standard requires Vedanta to manage security forces in line with IFC and ICMM guidelines. Based on our curriculum and the module that is being followed by all our Vedanta units, we have stressed the importance of human rights and sustainable training of security personnel, with all our security guards in India and Africa trained in human rights.

Led by the Sustainability Committee, in 2012-13 we undertook internal reviews related to human rights and risk assessment. The human rights audit and risk assessment review was commissioned to ensure that all our subsidiaries have a clear understanding of the areas of possible risk pertaining to human rights. The objective of the review was to confirm that we are meeting all applicable national and international legislation, guidelines and conventions on human rights with special reference to the UN Universal Declaration of

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## **We have strengthened our approach, with our Sustainability Committee conducting reviews to deepen our understanding of the risks and opportunities associated with human rights management**

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Human Rights. The assessment confirms that the human rights policy is being implemented by all units. The review also helped us in strengthening our existing systems and delivering focused training for our staff.

### **Child labour**

We prohibit the use of child labour in all our operations including activities that are outsourced to contractors. Whilst we operate in countries where the risk of child labour may be high, during the past year, no instances of child labour in our operations came to the Group's attention. To ensure compliance during the reporting period the Sustainability Committee reviewed child labour risks.

This was initiated to verify that Vedanta had sufficient control systems in place to ensure that the Code of Conduct with regard to underage labour is implemented across all operations.

Through the review, we identified transport management as the critical area of risk for child labour. To ensure that as a Group we are best equipped to mitigate risks it was recommended that, as a part of our continual improvement processes, periodic inspections be carried out.

### **Forced labour**

Our Code of Conduct expressly prohibits the use of forced labour. This is upheld in all our dealings with contractors and vendors, with guidance provided to sites on working with contractors and suppliers in order to eliminate any breach. In the reporting period, there were no recorded incidents of forced labour across any of our operations.

### **Indigenous peoples and vulnerable tribal groups**

We respect the rights of indigenous peoples and vulnerable tribal groups. In support of this commitment we have developed a technical standard on indigenous peoples/vulnerable tribal groups which is being implemented across the Group. It provides guidance for our subsidiaries when establishing new projects with regard to the Group's duty of care and engagement with these groups. None of our operating mines are operating in or adjacent to indigenous people's territory and hence no violations involving the rights of indigenous people or vulnerable groups were observed during the reporting period.

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## **We prohibit the use of child labour in all our operations including activities that are outsourced to contractors**

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## Building Strong Relationships: Community consultation and resettlement

# IN DIALOGUE WITH OUR LOCAL COMMUNITIES

### Community consultation

Effective and appropriate community consultation is critical to maintaining a positive and lasting relationship in our communities. In our journey as a growing and expanding business, it is important that we work collaboratively with our host communities, in order that they are engaged throughout the lifecycle of our projects, from initial planning, throughout the operations and to site closure and beyond.

We have a structured, two-tier approach to community engagement: consultation and community investment programmes.

All of our businesses have implemented local community engagement and impact assessment programmes. Through effective consultation we engage in dialogue with the communities surrounding our mines, facilities and proposed projects in order to ensure that they are effectively informed. We also work closely in collaboration to optimise our community investment programmes to ensure that these respond to the needs of the community and are an integral part of the broader engagement we undertake at the local level.

To provide a structured, consistent approach across all our subsidiaries, we have a suite of technical standards. These include land and resettlement management, grievance mechanisms and stakeholder engagement

and community consultation standard. These standards are used in conjunction with the ESIA process which has also been rolled out. Combined, these materials enable our businesses to understand their responsibilities to their host communities, and equally to, ensure that these communities understand our processes. These have been developed in line with the IFC Performance Standards.

### Community consultation management

We have a comprehensive approach to managing our interactions with local communities and ensure that this is done in a culturally appropriate and sensitive manner. To deliver this, we have dedicated personnel – largely drawn from the local area – who manage community relationships and act as our key conduit between the business and community.

Our New Projects, Planning and Site Closure standard stipulates that all companies within the Group will have in place effective consultation programmes to obtain broad community support in relation to any new project. All our operations are required to ensure stakeholders understand the risks, impacts and opportunities associated with proposed new projects so that they fully understand and appreciate our business intentions.

In the reporting period, in support of these aims, we undertook around 3,200 village and community meetings and around 220 panchayat

Around

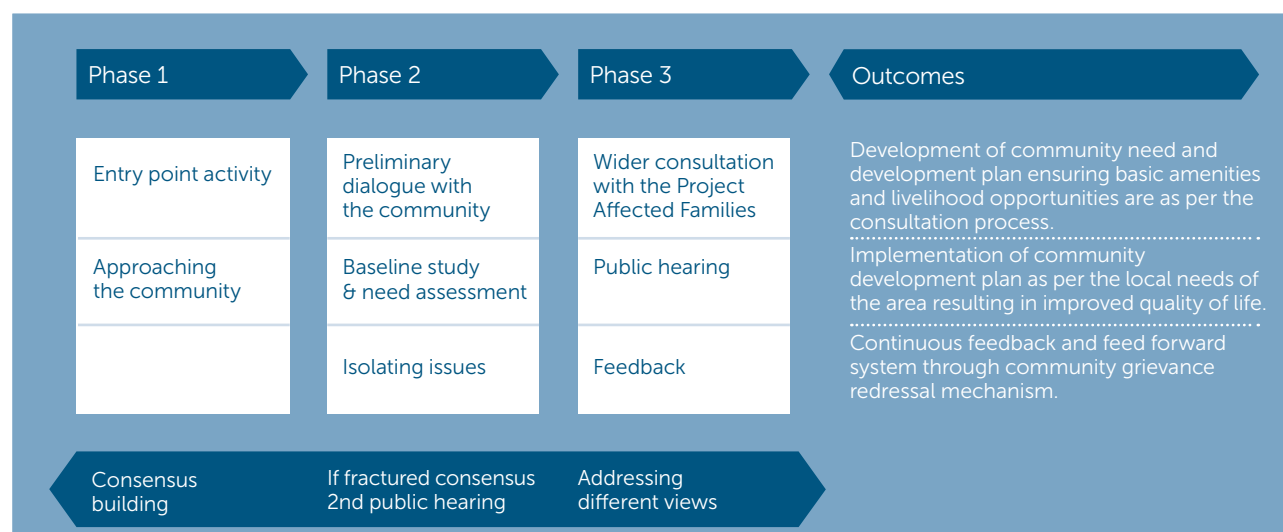
# 3,500

village meetings  
conducted

# 372

NGO meetings  
conducted

### Our consultation approach: building community understanding





meetings (village self-governments) across our operations. The main agenda items for these meetings were: infrastructure/community asset creation, community development and the development of employment opportunities. No significant disputes relating to land use, or customary rights of local communities and indigenous peoples were brought to our notice.

### Operating and ongoing projects

We recognise that community consultation is not just about engagement at the beginning or end of a project, but must be an ongoing, structured relationship throughout the life of the operation. Therefore, as both an active member of local communities and the deliverer of various community programmes, our community engagement is ongoing and interactive up to and beyond site closure.

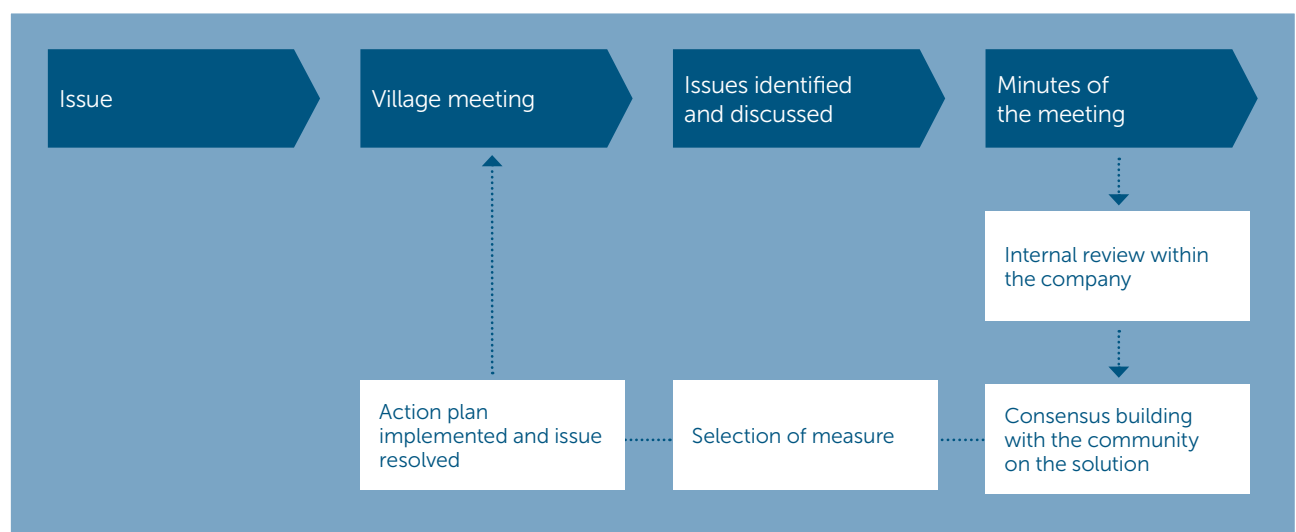
We continue to build and nurture meaningful relationships with communities near our operations. Importantly, we ensure that consultation occurs in a culturally-sensitive manner, in local languages when necessary and in a collaborative and open forum. To enable understanding, all community incidents and grievances are recorded and categorised as negligible (category 1), minor (2), moderate (3), serious (4) and disastrous (5) and captured on a monthly basis. None was recorded as lasting more than a week.

**We recognise that community consultation is not just about engagement at the beginning or end of a project, but must be an ongoing, structured relationship throughout the life of the operation**



A consultation session was undertaken at HZL to provide awareness in the local community and addressing their concerns

### How we resolve issues



# RESETTLEMENT

## Resettlement

The nature of our operations means that resettlement may have to occur in order for resources to be accessed in a responsible and safe way. We make every effort to avoid the resettlement of community members where possible and, where it is unavoidable, to minimise and mitigate the impacts.

In the reporting period, no resettlements took place at or adjacent to any of our project sites and no cases of artisanal mining in or adjacent to our mine area were recorded.

Our Group technical standard on land resettlement management provides our businesses with the tools to manage resettlement programmes in a structured and appropriate way. All Vedanta operations are required to manage land purchase through negotiated settlement and land expropriation through government agencies is not considered acceptable. We have a set standard for implementing grievance mechanisms to ensure that if they occur, complaints and grievances are heard, investigated and resolved in a timely manner.

As resettlement can be a time of uncertainty for communities, we use an extensive programme of engagement with both individuals and community members. Through the community consultation process, we make every effort to

gain the consent of local communities and then focus on providing displaced people with the means to improve and enhance their former living standards and earning capacity through various sustainability interventions. As a Group, we aim to provide long-term rehabilitation assistance and support to help restore and build livelihoods.

With any of our resettlement programmes, we are committed to ensuring that housing and access to infrastructure and amenities will be of an improved standard than before. Equally, these should be culturally appropriate and in suitable locations.

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**The nature of our operations means that resettlement may have to occur in order for resources to be accessed in a responsible and safe way**

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If resettlement is necessary, we build communities that aim to provide better infrastructure than was available previously

Our whole resettlement process aims to be conducted in an atmosphere of mutual consent. Resettlement Action Plans are used to ensure the disturbance to local people is minimal and that we make every effort to have in place the best package of valuation and compensation for land and other assets affected by the project.

### **Grievance mechanisms**

We recognise that we have a duty to provide community members with the opportunity not only to voice their opinions, but also to have the appropriate channels to raise concerns and grievances.

We have therefore developed a Group technical standard on grievance mechanisms. This was developed because as a Group we are aware that it is important to have robust and credible local mechanisms to systematically handle and resolve any complaints so they do not escalate and present a risk to our operations. In addition, an effective grievance mechanism fosters a positive relationship and increased trust with local communities, which is critical to the long-term success of our operations. The grievance redress cell constituted at each location will resolve the possible public grievances as per the process and procedure laid down under the Vedanta "Public Grievance Redress" technical standard. The external grievances regarding Vedanta and its subsidiaries can also be logged at [sustainability@vedanta.co.in](mailto:sustainability@vedanta.co.in). In the reporting period, no grievances related to human rights were recorded whereas all other grievances appropriately closed.

All Group companies are implementing the grievance technical standard with all subsidiaries required to have the grievance mechanism in place by 2014.



## **Case Study: Sesa Goa Grievance Process**



Open forum for discussion of grievances at our Sonshi mine, Sesa Goa

### **The situation**

At Sesa Goa's Sonshi Mine, the Honda Village required resettlement and land due to operational requirements at the site. This has necessitated a careful understanding of the community's needs and concerns in order to maintain effective relationships with local people.

### **The solution**

As part of the grievance standard a grievance office was created and operated to engage the local community, resolve issues and grievances and to understand local challenges and needs. This helped the business arrange resettlement effectively and with the consent and input of the project-affected people.

The office was open on weekdays and staffed by the Sesa Goa resettlement and rehabilitation project officer and his team and provided a valuable central point for any person having an issue or a grievance to come and register it. The grievance was assessed for appropriate action by management to create an amicable resolution. For transparency and to enable the most effective engagement, the process was conducted in the local Konkani language.

### **The outcome**

The grievance office was helpful in establishing better and deeper connections with the community through effectively listening to their needs, issues or grievances while also providing a platform for resolution. A total of 59 grievances were lodged, with the majority focused on land compensation issues. All grievances were resolved to the satisfaction of both parties.



Adding and Sharing Value

# ADDING VALUE TO OUR STAKEHOLDERS



Our employees working to develop aluminium, a resource used widely in everyday products



# What does Adding and Sharing Value mean to us?

By engaging with our stakeholders and identifying their most material issues, we're able to more strategically assess the value that we provide across society. This is represented not only through the commodities that we produce, but through the economic and social contributions we make across our global operations. Our global reach provides many opportunities to add value, particularly in helping the developing world on its journey of economic development.



To see more GRI reports go to:  
[www.sustainability.vedantaresources.com/our\\_performance/gri\\_docs\\_archive](http://www.sustainability.vedantaresources.com/our_performance/gri_docs_archive)

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# WORKING IN PARTNERSHIPS WITH OUR STAKEHOLDERS

## As a global company we have a broader role

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. We understand that as a global company we have a broader role in society than merely bringing resources to market. This is particularly true when considered in the context of operating in the developing world: with operations predominantly in India and Africa, we believe that our Group can and should add and share value in order to facilitate the development of the economies and communities where we operate.

Our stakeholders provide insights and make significant direct and indirect contributions to strengthen our business. For example, our communities and host Governments allow us to access finite resources whereas our employees help us in managing the resources in a sustainable way.

As part of the dynamic and evolving role of the resource sector and the developing expectations of stakeholders, adding and sharing value is an important pillar of our Sustainability Framework. Accordingly, our framework is providing the processes and standards to deepen our understanding of their needs. As we create financial and non-financial value within and beyond our business, ensuring our stakeholders understand and access this value is important to us as a Group.

## Ways in which Vedanta adds and shares value Economic value generated and distributed

Our financial contributions have positive implications for all key stakeholder groups: significant contributions are made directly in the form of taxes and community investment programmes. We also have a particularly positive economic impact through the wages we pay to our 90,000 employees and contractors around the world. Over the past year we paid US\$725.6 million in employee wages and benefits. In addition, since listing in 2004 we have returned US\$1.3 billion in dividends to our shareholders and have invested billions more in the development of our businesses.

## Economic value generated and distributed (EVG&D)

	Unit	FY 2010-11	FY 2011-12	FY 2012-13
Economic value generated	US\$ million	11,427	14,005	<b>14,990</b>
a) Revenues	US\$ million	11,427	14,005	<b>14,990</b>
Economic value distributed	US\$ million	9,523	12,921	<b>13,478</b>
b) Operating costs	US\$ million	8,388	10,983	<b>11,599</b>
c) Employee wages and benefits	US\$ million	505	543	<b>726</b>
d) Payments to providers of capital	US\$ million	-19	879	<b>960</b>
– Net Finance Cost (including other gain/loss)	US\$ million	-149	735	<b>806</b>
– Dividend paid	US\$ million	130	144	<b>154</b>
e) Payments to government – income tax	US\$ million	650	517	<b>40</b>
f) Community investments (including Donation) – already included in operating cost	US\$ million	40	38	<b>42</b>
Economic value retained (calculated as Economic value generated less economic value distributed)	US\$ million	1,904	1,085	<b>1,512</b>

Through our partnering approach with local authorities, NGOs and government agencies we have been successful in creating several community welfare assets which include building close to 100km of roads, 30 community centres and 45 classrooms,

and digging over 60 wells and some 80km of drainage network across our areas of operation. In 2012/13, around US\$3 million was spent on infrastructure and development projects across the world.

89%

Youths linked with jobs

US\$47 million

Total community spend

## Case Study: Cairn India: Enterprise Centre

### The need

Cairn India is committed to encouraging the economic growth and development of the communities in which it operates. This commitment is grounded in the knowledge that the business has a responsibility to ensure the sustainability of communities post-closure of a site, while also recognising that there may be a dependency on the business which can adversely affect the communities where it operates and therefore the business has a pragmatic approach to trying to manage and mitigate this.

Our Rajasthan oil block (RJ-ON-90/1) is situated in the arid region of the Thar Desert. It predominantly lies in the Barmer district. Due to the remoteness of the region and the prevailing desert conditions, the region has seen very limited development and has very limited economic opportunities for the local community.

### The solution

In 2007, Cairn India partnered with the International Finance Corporation (IFC) with support from the Government of Rajasthan to develop the Enterprise Centre near Barmer. The Enterprise Centre aims to increase and improve the employability of local people through skills development and training – both through employment and local contracts related to Cairn India activities, and in the development of local businesses and employment outside the influence of the company.

The Enterprise Centre's objectives include developing trade skill exposure and enhanced employability for communities in the Barmer Development Area. This is designed to encourage the development of micro, small and medium enterprises (MSMEs), to facilitate access to finance for MSMEs and micro entrepreneurs, to establish and expand businesses and to disseminate information on employment opportunities, enterprise development, government schemes and upcoming contracts and tenders. Various vocational skills are also taught at the Enterprise Centre and special emphasis



Training session at Cairn Enterprise Centre

is placed on empowering women through these initiatives. The Enterprise Centre has been extensively used as a means to train more than 15,000 local and other unskilled workers in construction safety skills.

### The outcome

As a result of the work of the Enterprise Centre, many local young people have gained key vocational and business skills, facilitating better future earnings and livelihoods. More than 8,000 young people have been trained in various skills including basic computing, spoken English, electrical repairing, home appliance repairing, welding, masonry, mobile phone repair, carpentry, and jewellery making.

Approximately 60% of the trainees have been linked to livelihood options. In addition, the Enterprise Centre has played a role in developing small enterprises, including flour mills, carpentry workshops, mobile phone repair stores and grocery shops, which all contribute to the socio-economic development of local areas and their economies.

## Adding and Sharing Value: Adding value to our stakeholders continued

### Non-financial value generation

At Vedanta, our focus is on creating financial value coupled with social benefits. We are also fortunate to employ thousands of talented individuals across our business and we are committed to using this expertise to facilitate value-creation for all our stakeholder groups. We do this in a variety of ways, including partnering with government-run programmes and community development in the areas in which we operate. Also, through our membership of key international organisations, we strengthen our understanding of how business can contribute to society.

All of our community activities stem from our Chairman's passionate commitment to the betterment of the communities where we operate and our broader stakeholder base – our goal is to be a true partner by creating positive value. In the context of our extensive presence in India and Africa, skill development and the up-scaling of the employability of local people are of significant importance to the socio-economic development of the areas in which we work. By virtue of our partnered initiatives, we play a significant role in this area.

**2.53** million

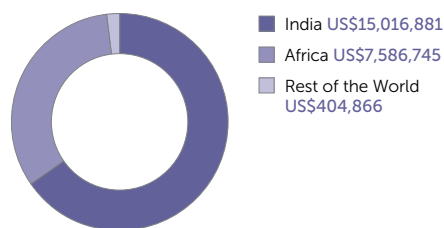
training man hours  
for employees

Developing local markets

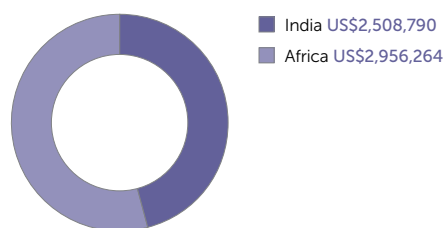
Robust financial result

Structure community  
initiative programmes

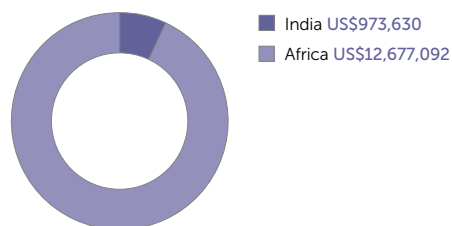
### CSR expenses (livelihood, infrastructure, community, development, etc)



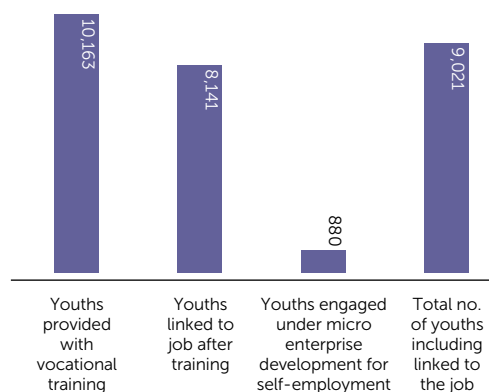
### Spent on Company-run school



### Spent on Company-run hospital



### Indirect economic value creation 2012-13



Our Self Help Groups (SHG) programmes aim to achieve an increase in socio economic empowerment of women

# BUILDING A BUSINESS FOR THE FUTURE

## Employees are our key asset

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

We are committed to providing our employees with a safe and healthy work environment. Through a high degree of engagement and empowerment we enable them to realise their full potential, creating a high performance work culture.

### Human Resources – strategy, approach and management

Our Human Resources function provides a governance framework and promotes synergies across the Group through collaboration and the sharing of best practices. Our Group Human Resource philosophy encompasses an inclusive approach that guides us in achieving our aim to be an industry-leading employer. The following are our guiding people philosophies, which apply across all of our Group companies:

- ▶ Ensuring a philosophy of meritocracy;
- ▶ Commitment to ensuring that all our work places are free from all forms of discrimination or any kind of harassment on the basis of age, gender, caste or religion;
- ▶ Commitment to comply with all applicable laws of the land where our operations exist;
- ▶ Meeting all our responsibilities and HR obligations as direct and indirect employer and ensuring that there is no violation of human rights;
- ▶ Effective internal systems and processes in place for talent management and engagement;
- ▶ Creating a high performance culture – recognising and rewarding in a fair and equitable manner;
- ▶ Striving to drive and achieve industry best practices in our social stewardship;
- ▶ Ensuring smooth integration in terms of mergers and acquisitions, upholding and honouring all ongoing commitments and sharing the best practices – with an aim of achieving internal alignment of processes and systems;

- ▶ Engaging with employees to encourage feedback and address concerns;
- ▶ Continuously upgrading our IT framework; and
- ▶ Generating local employment and providing support and resources for long-term skill building.

To take forward our philosophy, the table below summarises the key priorities of the Group:

Key priorities	Action initiatives
<b>Organisational Growth – both people-related and for economic performance</b>	<ul style="list-style-type: none"> <li>– Ensuring right person in right place.</li> <li>– Succession planning with a focus on critical positions.</li> </ul>
<b>Performance Culture</b>	<ul style="list-style-type: none"> <li>– Alignment of individual KRAs with business targets.</li> <li>– Rewarding high performance.</li> <li>– Focus on Business Plan achievement, SHE performance and Assets Optimisation.</li> <li>– Improving workplace safety.</li> </ul>
<b>Talent Management &amp; Development</b>	<ul style="list-style-type: none"> <li>– Fostering excellence by building skills and capabilities.</li> <li>– Identifying and developing leaders – making future-ready organisation.</li> <li>– Encourage job rotation opportunities for talent.</li> </ul>
<b>HR Process and Systems Improvement</b>	<ul style="list-style-type: none"> <li>– Measurement and improvement – ‘HR Scorecard’ to drive process development.</li> </ul>
<b>Employee Engagement</b>	<ul style="list-style-type: none"> <li>– Continuous improvement initiative through: TQM, TPM, and Six Sigma etc.</li> <li>– Providing accelerated opportunities for high potential employees.</li> <li>– Maintaining diversity and equal opportunity commitment.</li> </ul>

## Adding and Sharing Value: Our employees continued

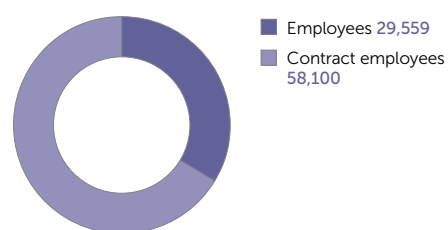
The ExCo Sub-Committee on Human Resource, comprised of CEOs and Business HR Heads, sets the strategic direction with a focus on continuous improvement in managing our Group talent.

To promote consistency in our approach and drive continuous improvements, we have appropriate metrics and a Scorecard in place which enable us to gain insights into key development areas as well as measuring functional objectives against the business' goals and objectives. These metrics are audited and reported through the Management Assurance process.

### Costs incurred during the year in respect of employees and Executive Directors (US\$ million)

Defined contribution pension scheme costs	26.2
Defined benefit pension scheme costs	23.2
Share-based payments charge	25.5

### Employees across the Group



### Attracting talent

Our recruitment philosophy focuses on inducting the right person for the right job, which has helped us to recruit the best people regardless of gender, age, caste or religious beliefs. In our industry, securing this talent is a challenge because of high growth and competition for skilled personnel across the industry. It has also been a challenge to help change the culture of thinking of mining and oil and gas industries as inherently male-dominated. Our workforce comprised 11.5% female professionals in management grades in 2012 and we aim to increase this number by providing equal opportunities for women, whilst always prioritising merit.

We provide an array of benefits to our full-time employees which includes coverage under a stock options scheme for management grades, insurance coverage and retirement benefits.

A high proportion of our workforce joins us immediately after completing their education, making us their first employer. Our Chairman actively engages with the student community to inspire and instil entrepreneurial spirit amongst aspiring future business leaders. He spends quality time with the students of reputed business schools and engineering colleges, enabling the students to experience the DNA of Vedanta – more specifically the 'humility' and 'head on shoulders, feet on ground' approach. To date, close to 5,000 students have been engaged.

We also focus recruiting from the communities that surround our operations to encourage local employment generation. Over the reporting period, across our business, the total percentage of senior management who are locally hired is: India (96%), Australia (87%), Zambia (53%), Namibia (67%), Ireland (86%) and South Africa (86%). We continue to encourage local hires at a leadership level as these hires are well versed in the challenges and opportunities of working in the local context.



### Talent management – learning opportunities, managing career aspirations

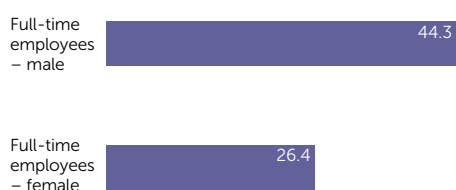
Our Group recognises that in order to ensure that the business is fit both to serve the markets in which we operate and to meet our growth strategy, we must invest in the development and retention of our people to drive innovation and efficiencies within the business. In this regard, our attrition rate has remained stable and this year was reported at less than 5%.

Training and development remains a constant element of Vedanta's commitment to its employees and an annual training calendar of events and opportunities is developed across our businesses. Over the last year we have delivered 2.53 million training hours for all staff, averaging 35.3 man hours per employee. Training is carried out on-site by both internal and external experts. Themes covered include health and safety, behavioural training and technical skills training.

Training opportunities are not restricted to core roles – we provide a number of training programmes in areas beyond the remit of an individual's role, to facilitate personal and professional growth. To ensure a consistent approach across the business, employees are also trained in Vedanta's Code of Conduct, as we have discussed in the Responsible Stewardship section of this report, and this year we provided 36,636 hours of training. It has been our endeavour to ensure career advances for female employees across our corporate functions; for instance, we incorporated planned rotations across corporate functions.

There are also structured programmes conducted to assist employees in a smooth transition from work to retirement. These programmes include computer literacy, wealth management, tradesman skill building, certificates and diploma courses, retirement workshops and employee assistance programmes.

#### Average hours of training



As a high proportion of our workforce join as new graduates, managing career progression and development is very important to the business, particularly to ensure talent retention. To manage a new recruit's transition from "Campus to Corporate", we have a structured orientation programme that includes: making new employees conversant with the Company values, business principles and Code of Conduct; familiarisation with business scenarios and with Group policies, benefits and systems. Support is also given through a mentoring programme initiative.

To inspire our employees, we conduct Chairman's workshops, where talented employees attend round table discussions with our Chairman. These workshops aim to inspire and energise colleagues to achieve the business' strategic aims and encourage them to seek continuous development within the Group. The exposure to senior management and the Chairman also provides employees with the opportunity to ask questions and engage with the leaders of the business, an opportunity that may not normally be available, particularly for junior colleagues. To date 2,500 employees have attended the workshops.

Our Group-led "Star of Business – Accelerated Competency Tracking and Up-Graduation (ACT-UP)" programme systematically identifies high potential talent at an early stage in order to provide a fast growth track through the business. To qualify for the programme, individuals are assessed against Vedanta's competency model, which includes core attributes, behaviours and leadership style. Over the past year, the programme has been expanded to incorporate the development of more employees in general management and technical sections of the business, and currently we have 850 'stars of business' – a potential pool of future leaders for the Group.

### Performance management

All our employees participate in a reward-linked annual appraisal and review programme where performance is measured against a predetermined five-point scale. Feedback and the identification of areas of improvement for further development are an integral part of the performance appraisal process.

To ensure that all employees are aligned to the overall business sustainability objectives, health

## Adding and Sharing Value: Our employees continued

### Swift career development – Mr Murali Krishnan

Mr Murali Krishnan, AGM- HSE, has been with Sterlite for 12 years. He joined the business as a Chemical Engineer from Coimbatore Institute of Technology and progressed rapidly through a number of roles, including Scrubber In-charge in the Secondary Smelter department and then on to Head SAP in 2009. Improving his cross-functional knowledge and people handling skills, he was then made Associate General Manager of the Health, Safety and Environment Department, the position he holds today.

Mr Murali was identified as a Star of Business and was picked as a High Potential Star. He has also been a recipient of several letters of appreciation for his contributions and innovative projects that have been instrumental in improving the efficiency of processes.



As per Mr Murali, "Along with additional responsibilities at every step of the way, the organisation also provides appropriate developmental opportunities. I have attended numerous conferences and training programmes with renowned institutes not just in India but also around the world including Germany, USA and Australia."

and safety, environmental management and community investment indicators all feature as vital components in the annual appraisal process and are considered elements of the Key Results Areas (KRA) that individuals are assessed against.

New graduate recruits undergo training, and probationary periods are upheld prior to full employment contracts. Performance is reviewed and feedback provided by line managers throughout this period. They are also encouraged to undertake special projects to bring in fresh perspectives and to enhance their learning during this time.

All non-supervisory staff are governed by long-term agreements that require conducting performance reviews.

### Coverage of defined benefit plan obligations (US\$ million)

2011-12	2012-13
542.7	725.6

Includes salary and wages, defined contribution and payment to pension scheme costs and share-based payment changes.

### Workforce and diversity

We aim to be an industry-leading employer with an inclusive approach that is designed to ensure a rich diversity in the employee base. Our recruitment, remuneration and promotion policies and standards are designed to avoid all forms of discrimination and ensure equal opportunity, regardless of race, nationality, religion, gender, age, sexual orientation, disability, political opinion, or any other basis. In addition, we are fully compliant with regulatory requirements in the countries we work within to meet their diversity aims.

Challenges to our diversity aims do remain, particularly around the perception of many that the sector is male-dominated, especially at site management level. In addition, we are conscious of the need for flexible working hours and shift work to cater for childcare.

We ensure that the ratio of entry level wages meets or exceeds the legal requirements and complies with all applicable laws. The ratio with regards to gender is 1:1 and we don't discriminate in any way in terms of standard entry level wages. Women are also encouraged through our development programmes and supportive working practices and policies. In support of our approach to diversity and gender equality, we aim to have adequate representation to improve diversity in Board composition including representation of women professionals.

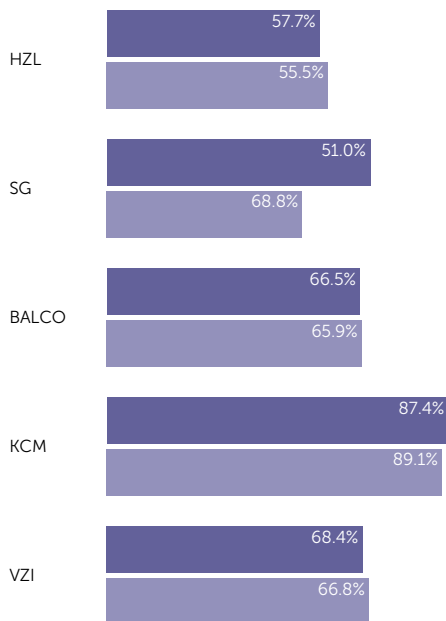
### Working environment

We aim to have constructive relations with all employees and labour unions in the locations where we operate and ensure that compensation for workers meets or exceeds the legal requirements.

We do not believe that any country where we have operations represents a risk to freedom of association and collective bargaining, and we uphold this right at all the operations we manage. We understand that collective bargaining offers the opportunity to build a constructive relationship with unions – management and union representatives negotiate agreements which include clauses on productivity, health and safety, working conditions, remuneration, allowances, incentives and bonuses. In addition, unions play an active role in safety committees at many sites and union representatives participate in various steering committees.

We have collective bargaining agreements with our non-supervisory staff at the following entities (see chart right):

### Percentage of employees covered by collective bargaining agreements (%)



■ Employees covered under collective bargain 2012-13

■ Employees covered under collective bargain 2011-12

## Case Study: BALCO Junior Executive Trainee (JET) Programme

### The situation

With a plan to almost double its production capacity, BALCO identified the need for a restructuring programme that included the up-skilling of its existing workforce.

### The solution

In the context of expanding production capacity and meeting the skills needs of the workforce, various workshops were conducted across all employee levels to understand the critical gaps and developmental needs. As a result of these workshops, BALCO developed the Junior Executive Trainee (JET) programme which was designed to enhance employee skills and give them the opportunity for greater responsibility. The programme covered 235 employees. The participants were supported through targeted skill development programmes led by leading educational institutes including BITs Pilani, PES Global, NPTI, Durgapur and coached by 'Internal Training Champions'.



JET Programme in action at our BALCO unit

### Outcomes

Successful JET participants have received diplomas and degrees and also addressed the need for a skilled workforce. The success of the JET programme has led to the development of additional training and development initiatives across the business.

## Adding and Sharing Value: Our employees continued

We have a number of mechanisms in place to inform employees of any significant operational change including restructuring, mergers, acquisitions and expansions. Notice periods regarding significant operational changes are also indicated in the collective bargaining agreements and certified standing orders at our respective businesses as per regional notice period requirements. These vary from region to region as per local regulations.

Employees are also encouraged to convey their views and opinions. For example, we have suggestion boxes and an "open-door" policy at the senior management level. Committees are also in place to oversee issues including sexual harassment and welfare as well as conducting 'Employee Speak' Forums. Formal employee grievance mechanisms also exist to deal with specific concerns.

### Welfare

We take our obligations to the welfare of our employees and contractors extremely seriously. We have a comprehensive benefits package for employees that is tailored by our subsidiaries in order to be appropriate to their locations. The benefits package includes: performance-related compensation; maternity leave; medical insurance covering family and dependents; transport facilities; subsidised canteen facilities; and a share options programme for executive level employees.

As our operations tend to be located in remote regions, access to health facilities is often limited. In order to ensure that employees and contractors are able to receive such services, we have on-site medical facilities, local hospitals and supporting medical staff available to our employees, contractors and local community members. In addition, and in order to encourage a healthy work-life balance around our sites, Vedanta businesses promote social gatherings organised by



### Case Study: Effective employee engagement through the "Zero Abnormality Movement Drive" at VAL-Lanjigarh

The Zero Abnormality Movement (ZAM) is an initiative for creating a culture of zero defects, zero breakdowns, zero pollution, zero customer complaints and zero losses at VAL-Lanjigarh.

ZAM's objectives include the identification and rectification of abnormalities; the maintenance of a neat, clean and hazard-free work place; and the motivation of employees to assume ownership of their machines/workplace.

ZAM commenced in December 2012 with VAL employees and associate partners forming 17 cross-functional teams, each of which is responsible for the identification and rectification of abnormalities in an allocated section of the plant. The plant's ZAM status is reviewed every 10 days by the ZAM core committee. Shop floor audits by senior management, including the COO, are also carried out at the completion of various steps of its implementation.

Nearly 12,500 abnormalities have been identified by the cross-functional teams and approximately 90% of the abnormalities have been eliminated, with the remainder on track to be completed.



Employee working to eliminate abnormality at VAL-Lanjigarh

ZAM is a highly effective tool for employee engagement, empowering employees to take ownership of their working environment. Through developing values, beliefs and attitudes which reject abnormalities/deviations from world class standards, ZAM is building a culture of prevention which is self-driven by the individuals on the shop floor.

events committees. Employees are actively encouraged to include their families in these events and also in the use of our provided recreational facilities. Further information on our wellness programme is available in the Health & Safety section of this report.

In addition to medical and recreational facilities, we provide fully furnished accommodation for employees at most locations and fully equipped townships. This is an essential aspect of our people strategy, ensuring that our employees are safe, healthy and comfortable.

### Total manpower (as on 31 March 2013)

Employment category	Gender	Australia	Zambia	Namibia	Ireland	South Africa	India	Liberia	Total
Full-time employees	Male	105	7,545	641	340	619	17,793	25	27,068
	Female	10	748	113	42	92	1,485	1	2,491
Contract employees	Male + Female	235	11,521	601	25	681	45,037	0	58,100
<b>Total</b>		<b>350</b>	<b>19,814</b>	<b>1,355</b>	<b>407</b>	<b>1,392</b>	<b>64,315</b>	<b>26</b>	<b>87,659</b>

### Employee attrition

	% of Total full-time employees		
	2012-13	2011-12	2010-11
Employee turnover including retirements but excluding VRS	<b>11.43%</b>	10.70%	10.60%
Total attrition	<b>4.74%</b>	5.50%	5.40%

Note – employee-initiated separation is considered as attrition

### Region-wise breakdown (attrition)

	% of Total full-time employees						
Full-time employees (FY 12-13)	Australia	Zambia	Namibia	Ireland	South Africa	India	Liberia
Employee turnover including retirements but excluding VRS	0.01%	2.00%	0.20%	0.04%	0.27%	8.92%	0%
Attrition	0.01%	0.31%	0.11%	0.01%	0.11%	4.19%	0%

New hires joined and left in FY 2012-13

### Gender-wise breakdown

	FY 12-13	
	Male	Female
Full-time employees	3.62%	1.01%

### New hires

Full-time employees (FY 12-13)	Australia	Zambia	Namibia	Ireland	South Africa	India	Liberia	Total
New hires joined	18	260	70	11	70	1149	7	1585
New hires left	0	88	1	2	2	104	0	197

### Return to work and retention rate after parental leave

	Male	Female
No of employees who have taken parental leave FY 2012-13	132	72
No of employees who returned to work after parental leave ended and were still employed 12 months after their return to work	126	60
<b>Retention %</b>	<b>95%</b>	<b>83%</b>



# A NEED BASED APPROACH TO DEVELOPMENT

**We operate in countries that are developing and have unique requirements for community support.**

Our approach to community development is holistic, long-term, integrated and sustainable. Our community reach is significant and extends to all our operations around the world.

## Significant global reach to communities

Running an effective community investment programme is core to our business. We do this by helping communities identify their priorities through participatory needs assessment programmes and then work closely with them to design programmes that seek to make progress towards an overall improvement in the quality of life of the local communities. This includes through enhanced incomes, better health and education facilities and better utilisation of available resources. During reporting period our businesses have invested around US\$42 million in community programmes around the world, benefitting 3.7 million people across 2,240 villages.

Our community activity is delivered at a local, regional and national level to ensure that businesses are able to effectively maximise their impact in facilitating socio-economic development. Our collaborations and support vary from work with international organisations to national and local institutions, including universities, local schools and hospitals.

In order to maximise the outcomes and impacts that the business can have, we focus on seven key areas through our community investment activities. These have been chosen as a response to both local need and direction from international development frameworks such as the UN Millennium Development Goals. Vedanta's direct and indirect impacts from our community activities include child care programmes and augmenting the skill capacity of local people by running various certified vocational training programmes for youth and women. Our livelihood projects in the farm and non-farm sectors also provide sustainable livelihood opportunities. These programmes are underpinned by the provision of health infrastructure and services, which work to improve outcomes for all community members. In addition, we work to create a better environment through our bio-investment initiatives.

The programmes we create and assist in providing play an important role in increasing the empowerment of individuals and communities and are specifically tailored, taking into account cultural background and levels of need in the local areas. One of the key features of any project is that it can be handed over to the community; accordingly, projects are designed on a sustainable basis, informed by the principles of our sustainability strategy.

## Our approach

Vedanta's approach to community programmes is governed by two key considerations: the needs of the local people and the development plan in line with the UN Millennium Development Goals (UNMDG).

In order to manage both our community relationships and community investment programmes, Vedanta has a dedicated team of over 180 corporate social responsibility personnel. These individuals are crucial to driving and managing local engagement and act as a point of contact for community members.

Our community engagement process, together with baseline studies and needs assessments, helps to develop 3-5 year initiative plan for local communities. In order to assess their effectiveness, we use monitoring and evaluation tools, with results reviewed at both the business unit and Group level. These results in turn inform our approach in the future.

The majority of our initiatives are carried out in collaboration with community organisations and are developed in partnership utilising a needs-based approach to community investment, underpinned by the use of the 'Public-Private-People-Partnership' (4P's) model. The level of our community engagement is customised according to the business cycle – commencing with the project and progressing through the operation to eventual closure.

**3.7 million**

people\*\* benefited across 2,240 villages

**8**

centralised midday meal kitchens

**250,000**

students benefited at around 2,700 schools

\*\* Some of the beneficiaries could be involved in more than one project

## Key focus areas

### Health, nutrition and sanitation

#### The context

Vedanta's operations tend to be located in rural areas, where access to health, nutrition and sanitation facilities is scarce and local infrastructure and facilities are poor or non-existent. Local communities therefore frequently suffer from conditions such as malnutrition and preventable diseases such as malaria.

#### Activities

Our activities include the delivery of medical infrastructure such as the 36 hospitals we run across the Group.

Our hospitals are supported by medical outreach services, which include mobile health vans and medical outposts to enable isolated rural communities' access to medical services. Our Sterlite Copper business

in India has established rural health clinics to address general health problems in adjoining communities.

Our health education programmes focus on prevention and also form an important aspect of the services we offer. This includes running a variety of medical-issue-focused health camps. Medical staff at Sesa Goa identified anaemia as a potential problem for women around its location and, as a result, anaemia detection camps were organised and diagnosed women were suitably treated.

In Zambia, we play a significant educative role in HIV/AIDS prevention, particularly in our engagement with pregnant women in the community which surrounds our KCM operations. At a broader level, we provide location-specific disease counselling across all our operations, which covers issues of both prevention and treatment.



## Case Study: Cataract Surgery Project at Black Mountain Mine – South Africa



Pilot programme participant undergoing assessment at BMM

#### The need

Resource constraints in the Northern Cape have resulted in the provincial Department of Health reporting a significant backlog in cataract surgery. Black Mountain Mining (BMM) set out to support the Northern Cape Department of Health in addressing this backlog.

#### The solution

BMM's engagement with the Northern Cape Department of Health considered various methodologies, including the possibility of utilising Indian ophthalmic surgeons who are experienced in conducting high-volume, high-quality cataract surgery. The suitability of State facilities in the Namakwa and Siyanda districts was assessed and formal proposals submitted to meet the objectives.

In consultation with the Department of Health it was agreed to run a first phase intervention as a pilot project and to host this at BMM's Aggeneys Health Centre. Screening took place first at local clinics and then by the Bureau of the Prevention of Blindness Team in Nababeep after which patients were referred for assessment in Aggeneys, prior to surgery.

#### The outcome

Fifty-eight patients were assessed by the ophthalmologist and 47 underwent cataract surgery in Aggeneys in December 2012.

Following the success of the pilot programme, plans are underway to grow the programme in collaboration with strategic partners so that the objective of zero cataract blindness in the Northern Cape can be achieved in a reasonable timeframe.

## Adding and Sharing Value: Our communities continued

Our businesses also promote broader health issues such as sanitation through the construction of household toilets and improved nutrition through programmes with preschools. In order to provide basic sanitation facilities, MOUs have been signed with district administrations for the construction of more than 20,000 household toilets in the coming two years.

### Education

#### The context

Education is indispensable for the development and sustainability of a society. Vedanta's operations exist in rural poor locations where access to education is limited.

We work to enhance the quality of education received by pre-school children through our Vedanta Bal Chetna Anganwadi (VBCA) – Integrated Child Development Scheme, our mid-day meal programme and targeted youth and women skills development.

#### Activities

Our work with children's education is targeted at the pre-school level, particularly through our VBCA Project – Integrated Child Development Scheme (ICDS). ICDS is a centrally sponsored scheme of the Government of India aimed at providing services to pre-school children in rural, tribal and slum areas in an integrated manner so as to ensure their proper growth and development. Currently being implemented by BALCO, HZL and VAL-Lanjigarh, VBCA collectively reaches out to more than 125,000 children across over 4,600 centres.

In addition to pre-school support, we also support a mid-day meal programme through eight centralised kitchens, aimed at improving the health status of children from Class I to VIII in Government-aided schools as well as encouraging regular attendance at school. It is run in partnership with the state Government and reaches out to more than 250,000 students at 2,710 schools on a daily basis.

The projects' key focuses are the retention of children at pre-school, improvement in health outcomes and cognitive development. The projects are managed by a project head with a team of chief co-ordinators who are responsible for each district. Dedicated project staff workers, helpers and ancillary health workers have been trained.

As well as supporting health and education, we understand the importance of enabling skills development, particularly in rural and isolated communities. This year, the total training hours we generated for rural youth and women members exceeded 2.9 million. At Hindustan Zinc limited, we have sponsored talented girls from surrounding villages with limited financial means to enable them to attend the Vedanta PG Girls College, Ringus.

### KCM – Child Aid and Village Uplift Programme



Child benefitting from a KCM education programme

In 2009, KCM collaborated with the NGO, Development Aid for People to People (DAPP), implement child education and development and village uplift projects in the Chingola and Nampundwe districts. The project targeted 10,000 households over four years.

To date 6,000 households have been supported through a range of initiatives including improved health through good hygiene practices and access to water and sanitation facilities, improved food security and income generation and contribution to community development including education programmes. Benefits have included lower incidences of water-borne diseases due to increased access to safe sanitation and water facilities. More families have been able to meet their basic needs through the various entrepreneurship activities that have been supported by a micro-credit loan facility. Farmers have also been provided with seed loans for legumes and vegetables. Initiatives have improved the welfare of the families and created alternative sustainable sources of income away from mining.

## Sustainable livelihoods

### The context

Opportunities for developing a sustainable livelihood (where an individual or community is able, through their own resources and skill, to earn a living and provide for themselves for the long term) are often non-existent in rural developing communities, restricting self-dependency and sufficiency.

### Activities

Given our locations, we have a particular focus on assisting our surrounding communities in developing sustainable livelihoods based on agricultural commodities and livestock. These are traditional resources and, accordingly, local people are capable of maintaining livelihoods beyond the presence of our own operations.

Education about yield improvements and moving production into cash crops has been a particular focus to assist farmers in maximising their returns. For example, we have assisted farmers in gaining access to high-yield seeds and fertilisers, soil testing, watershed management and cultivation. In particular, we conducted a successful pilot project of growing strawberries as a cash crop at Lanjigarh and at Sesa Goa meaning we are assisting surrounding farmers in obtaining organic certification for their rice, which could result in a tripling of its sales value.

As well as working with communities to increase the financial value of their production, we have undertaken education programmes around innovative technology, which offer multiple benefits. For example, at BALCO we have worked with cattle owners to establish bio-gas units. These units both produce clean gas for household use as well as reducing the need to fell trees for fuel. In addition, through coupling the bio-gas slurry with a vermi-composter, natural fertiliser can be efficiently produced.

Through our on-the-ground community development teams, we have also assisted in income generation with animal husbandry, including goat rearing and chicken production, in the communities surrounding our KCM operations in Zambia.

In total, over 44,000 farmers are assisted by our Agriculture Initiatives, including watershed management, wadi project horticulture, vegetables and floriculture, while over 9,400 farmers benefited through other

livelihood initiatives. In addition, we assisted over 1,300 families through animal husbandry projects including mini-dairy and poultry.

## Women's empowerment

### The context

Rural women play a key role in supporting their households, in achieving food and nutrition security, generating incomes and improving livelihoods and overall well-being of the communities they live in. Having operations in under-developed economies and communities, we are able to assist in creating sustainable development through supporting initiatives that have women's empowerment at their heart.

### Activities

Our key activity in working to empower women is through our work with over 1,100 women's Self Help Groups (SHG) comprising over 14,800 members.

The Vedanta Integrated Jan Jivika Yojana (VIJJY) plan developed in partnership with the NGO ACCESS. VIJJY is focused on improving income generating opportunities in nine villages around our VAL-Jharsuguda plant and currently comprises 140 groups, over 1,500 members in trades including leaf plate making, poultry, floriculture, fishery and mushroom cultivation.

To increase their effectiveness, the SHGs (in Jharsuguda) have federated into the "Subhalaxmi Mahila Samabaya Ltd" co-operative. The co-operative is the core body for loans and marketing the products of the SHGs and SHG members receive financial help and support as part of their membership. As an example of a co-op supported project, siali leaves – which are available in districts surrounding Jharsuguda – are pressed into plates, which are in demand as they are hygienic and environmentally friendly. A common space

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**I always wanted to be an entrepreneur. Now I am the busiest woman in my village, running my own poultry farm thanks to VIJJY**

**Sabita Mirig from Banjari Village**

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## Adding and Sharing Value: Our communities continued

### Women Self Help Group (SHG) membership

No. of SHGs	1,184
Women members in SHGs	14,879
SHGs engaged in income-generation activities	295
Women members engaged in SHG income-generation activities	4,454
No. of women establishing microenterprises	1,194

has been identified by the Co-operative for production, storage and training. Individual families sew the plates in their homes and come to the centre for pressing and packaging. As a result of the success of the project, and how well it has been received by its members, there are plans to expand the initiative further.

### Community asset creation

#### The context

Areas where we are located often lack basic amenities and infrastructure. Our engagement in infrastructure development programmes helps in connecting people and enabling prosperity through access to markets and information.

#### Activities

Rural infrastructure is a key driver of our community development programmes. In India, we partner with the District Rural Development Agency under various Government schemes. For example, in the Basantpada village in Odisha, Meena Ka Jhopra and Godwa villages in Rajasthan, we have collaborated with government bodies for the electrification of the areas. Similar projects have been carried out across the Group creating several community welfare assets, which include building close to 100km of roads, 30 community centres, over 60 wells, 45 classrooms and some 80km of drainage network across the areas of operation.

### Bio-investment

#### The context

Restoring and improving natural systems is key to our bio-investment programme. They help not only to improve the biological balance of the locality but also to reduce rural poverty.

#### Activities

As part of our bio-investment initiatives, the following programmes are underway:

- ▶ Afforestation: to date, the Group has planted more than 18 million saplings.
- ▶ Bio-waste management: organic waste converter plant MDM kitchen: leftover food waste is being converted into organic manure.

Other initiatives that we have been involved in include: watershed management, social forestry, cattle breed improvement and cash crop farming.

### Integrated village development

#### The context

Rural villages often lack basic amenities including education, sanitation, healthcare and infrastructure facilities.

Our objective is to facilitate the development of long-term change that allows benefits to local rural communities based on their needs and to develop Vedanta's own relationship with the community through our Integrated Village Development Programme (IVDP). This includes

### Tubombeshe Women's Club of Shimulala Community, Chingola

The Tubombeshe Women's club is located in Shimulala farming block some 10km from the Nchanga mine in Zambia. It was formed in 2010 by 20 women from various community action groups in the local farming block. The club equipped them with training in good hygiene practices, family planning, entrepreneurship and loan management. The group benefited from the vegetable and legume seed loans which enabled the creation of a community garden. Ten women also received cash loans, and five received livestock loans. The members are able to regularly

generate income and have since paid back the cash loans into the revolving loan fund. Through the funds raised from the sale of vegetables from their group garden, they have been able to sponsor two members to undertake training in tailoring so that they can diversify their income-generating activities and procure farming implements. The group has also identified vulnerable children and the aged in the community who they assist with food and toiletries. (Figures in the case studies have been provided by the Concern Group company).





## Case Study: Using Environment Friendly Solutions to Improve Livelihoods – Sesa Goa, Chitradurga, India

### The need

Increasing the yield and therefore income for farmers is a means of developing livelihoods and the socio-economic progression of local communities.

### The solution

It was believed that something could be done to transform the waste material farmers already collect (plant waste, such as branches, leaves and straw) into something productive. In order to find an appropriate solution, our Sesa Goa team partnered with the University of Agricultural Sciences (Dharwad) to develop a way for the waste to be turned into a rich fertiliser for plants and crops. Training was then provided by the University in order to ensure that farmers understood the process and how the fertiliser would be able to assist in improving their agricultural yields.

Compost pits were provided by the company (approximately 2 feet high) and filled with mud and plant waste. Once the matter started to decompose, the University provided worms, who feast on the plant matter, to assist the process. The worms' faecal matter is rich in nutrients and is a very effective fertiliser for the crops.



Local women managing worm composting pit near Sesa Goa

As these worms multiply rapidly, the programme was able to scale up the number of farmers engaged, assuring the sustainability of the initiative.

### The outcome

A total of 85 composting units have been built in three villages surrounding our Sesa Goa operations. These have been successful in generating rich fertiliser and the impact on yield and income generation has been felt by the farmers.

There is also scope for the farmers to sell any excess fertiliser, thereby providing a further source of revenue.

pooling available government resources through various schemes in the project villages.

### Activities

The IVDP core objective is to enable the holistic development of villages surrounding our operations. Under the IVDP, villages are identified for assistance by a number of indicators including limited infrastructure, low literacy rates, the level of government services available and the availability of healthcare and education services. When a village is identified, we work with NGOs and government authorities, in collaboration with the village, to prepare an integrated development plan. This includes analysis, identification and prioritisation of needs together with an independent survey and inventory by an external agency to create a joint action plan for village development. A partnership strategy is drawn up to enable the implementation and periodic meetings with the local government and the community are conducted to track progress and implementation in a collaborative manner.

The plan usually results in the development of infrastructure, including health and education support, together with environmental planning and the implementation of sustainable livelihoods programmes.

From commencement of the IVDP to handover, the process takes between three and five years.

All activities are designed to enable eventual handover of the village as self-sustaining with significant improvements in baseline livelihood indicators and infrastructure. For example, we worked in collaboration with the Mineral Foundation of Goa and local village councils to enable local communities to participate in the collective management of their resources combined with support for site-specific infrastructure development including health, education and energy and livelihood support. In total, we have utilised our IVDP process as a major intervention in 153 villages across communities around our operations.

# SUPPORTING THE MARKET DEVELOPMENT

## Our operations make a significant contribution to the industry

Across our Group, we extract and process aluminium, copper, zinc, lead, silver, iron ore and oil and gas in Australia, India, Ireland, Namibia, South Africa and Zambia. Through our operations, we make a significant contribution to the development and maturity of these markets and directly and indirectly contribute to the development of these nations' industrial output.

### Developing local markets

Vedanta is the largest iron ore exporter in the private sector in the India and the largest producer of aluminium, copper and zinc-lead in India – and through the acquisition of Cairn India, we are also now the biggest private producer of crude oil in the Indian market. Due to the scale of our operations, we generate opportunities for the downstream industries and support services such as transportation. This has led to the growth of other industries which are capitalising on the increased availability of domestic raw materials. Sourcing locally not only benefits local economies and government but also contributes to reducing the carbon footprint.

At a local level, because pre-existing employment in some of the remote areas

where we operate is often low, our sites make a major contribution in creating employment opportunities – directly in operational roles or as service providers in areas such as maintenance and catering. In addition, we strive to work with local suppliers wherever possible, contributing to local market development. Importantly, this relationship extends to non-financial benefits such as skills development and training in areas such as health and safety as well as making improvements to local infrastructure.

Vedanta's subsidiaries also contribute to creating new industries and skills to support our operations. For example, in Zambia, KCM has led the market's copper production from 200 ktpa production in 2012 to a targeted

### Commodity output

Commodity	Positioning	Meeting expectations
Aluminium	Largest producer in India	48% primary aluminium consumption in India
Copper	Largest producer in India	46% primary copper consumption in India
	Largest private employer in Zambia and largest contributor to the nation's exchequer	
Iron Ore	Largest private sector producer in India	Largest private sector exporter in India
Oil & Gas	Largest private sector producer in India	Produce more than 25% of India's domestic crude production
Zinc/Lead	Largest integrated zinc-lead producer in India	80% of India's zinc consumption
	Largest producer in Africa	
Silver	Largest primary producer in India	Record production of silver in India (13.1moz) in the reporting period

Sources – Aluminium Association of India, International Copper Promotion Council India (ICPCI), Indian Zinc-Lead Development Association

production of over 400ktpa through brownfield expansion. As a result of this development in production, the team at KCM is working with the Zambian authorities and transportation companies to ensure that the nation's infrastructure is able to cope with the growing need for logistics that can manage the transportation of the material for export purposes. This will ensure the sustained development of the country in order to meet the growing development of the copper market as well as other industries as a result of the better infrastructure.

### Customers

Our growth and success are directly linked with/to and co-dependent on the success of our customers, who are predominantly large industrial downstream producers with whom we deal directly. We understand that meeting customer expectations is crucial to the growth of our business, particularly when we have such a significant presence in the market. We are therefore committed to ensuring that our raw materials meet the required London Metal Exchange (LME) standards for entering the commodity market.

### Customer relations

Our subsidiaries have defined systems and practices in place to understand and meet customer expectations. We constantly engage with customers through our marketing and customer service personnel. All our activities are focused on ensuring our customers' needs are met in an appropriate and timely manner.

Honouring our contract obligations on price, quality and quantity is crucial to building the business' credibility with customers. We sell our commodities on price circulars that are linked to the commodity index, ensuring a clear and transparent process. Alongside the timely delivery of our products, their quality must be assured and in compliance with agreed technical standards, with the certification of all deliveries vital for ensuring that customers trust the product and that its quality has been verified. Assistance is also provided to customers both by our internal experts and by international consultant visits, together with workshops and seminars on technical issues and product development for first use.

Our corporate governance mechanisms ensure that we have robust management in areas such as bribery and corruption

and whistleblowing that contribute to building and maintaining customer trust in our operations.

In order to measure the success of our customer relations, customer satisfaction surveys are conducted periodically by external third parties. The accumulated feedback is shared in management review meetings and appropriate corrective actions taken to address particular customer requirements. This is supported by senior executives making frequent visits to customers to get direct feedback on our products and services and other related issues.

To implement a consistent approach to our engagement with our customers and suppliers, all our sites have in place contract terms and conditions which insist on compliance with standards related to payment of minimum wages, contract labour and other relevant acts in the countries in which we operate. The majority of our sites have started rolling out outlines of our sustainability requirements, particularly our supplier and contractor sustainability management policy. A number of suppliers have now also endorsed our Code of Conduct, which includes clauses on human rights. The Code is being introduced to all suppliers in a phased manner. As we continue to evolve our business, we are committed to developing a comprehensive approach to supply chain management across the whole Group.

### Suppliers

Our suppliers are an integral part of our business and include government utility companies, international manufacturers and local service providers. We aspire to use local suppliers where appropriate, for both service and supply purposes.

### Supplier relations

To facilitate positive relations with suppliers, we partner with organisations to enable effective and mutually beneficial relationships. For example, our KCM business runs frequent meetings with the Mine Supplier Association & Chamber of Commerce in Zambia.

At Vedanta, we believe in continuous and progressive adoption of IT and automation to improve our operating efficiencies. Recently, the Group has launched the SAP – Supplier Relationship Management (SRM) module, which includes an SAP supplier portal which is an easy-to-use, highly efficient and secure method of communication between purchasing

## Adding and Sharing Value: Our industry continued

organisation and vendors. Requests for quotations, vendor bidding and auctions are carried out online to ensure transparency, with easy access to the status of offers, material dispatched and payments, ensuring transparency within the business and added value to our suppliers.

### Product stewardship

As primary producers, we have limited control of the full lifecycle and the way in which products are produced and disposed. However, the business is committed to ensure that the beginning of the lifecycle adheres to appropriate international commodity trading standards. To support this, 40 of our 48 plants are certified to OHSAS 18001, ISO 9001 and ISO 14001 – this covers the entire manufacturing lifecycle assessment. Ensuring that the extraction, processing and refining of our natural resources is done in a responsible and sustainable way is core to our product stewardship commitment and a critical part of delivering quality to our customers.

A key aspect of our product stewardship is our commitment to the highest technological standards and processes. Of particular importance is that we upgrade our technology to maximise recovery and to minimise waste.

Our operations involve mining, processing, smelting and refining of various minerals and power generation using well-established processes/technologies. Our products are commodities, which are sold through commodity markets and used in a large number of industries. Our final products are refined metals and meet the required international standards (such as LME) for entering the commodity market. To ensure the safe handling of our products, we use a Material Safety Data Sheet which includes information on physical data, health effects, storage and disposal. We also use a Technical Services Resource for quality assurance. Together with scorecards, all this information is available to support our customers, allowing them to have a full, detailed understanding of our products and their composition. We seek to comply with all prevailing standards and laws related to marketing communications, including advertising, promotion, and sponsorship of the country where we operate. Over the reporting period, no cases of non-compliance with relevant regulations and voluntary codes concerning the health and safety impacts of our products and services were observed or reported. Similarly, no significant fines for non-compliance with laws and regulations concerning the provision and use of products and services were reported.

### Case Study: Supplier Relations

#### The need

Strong supplier relations are crucial for Vedanta Group companies to meet contractual obligations and customer expectations. We fully understand the virtuous circle that is supplier, business and customer success. To ensure the Group's sustainable success, our business and its operations place great importance on the management of effective supplier relations.

#### The solution

Vedanta businesses run different forums of engagement; for example, our Sterlite Copper business ran a vendor conference in 2012 where suppliers were given a tour of the site, shared know-how and developed ways of working more efficiently with the business as well as providing feedback. The event was attended by approximately 200 vendors.

Our KCM business ran its first logistics conference in 2012 where delegates discussed strategies for the

handling and security of KCM metals in transit to its global markets. 120 delegates attended from haulage firms and logistic agents from South Africa, Tanzania and Zambia. The forum was a way for the business to engage and partner with logistic agents so that ultimately it is able to meet customer expectations through minimising transportation risks.

#### The outcome

The result of such interventions by Group businesses means a more collaborative approach to supplier relationship management. Consultation with suppliers ensures that the business has an understanding of their drivers and challenges and is able to work with them to achieve the best possible result: that our businesses are able to meet their contractual obligations to customers without compromising on the quality, quantity or cost of their natural resources.

# FACILITATING INFRASTRUCTURE DEVELOPMENT

Working within the jurisdictions of developing countries necessitates an understanding of the socio-economic, political and cultural contexts of these nations, which are often distinct to those of developed economies.

## Making a valuable contribution

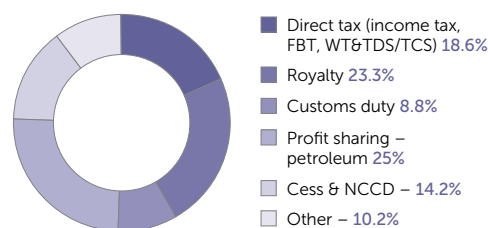
We believe that, as a Group, we make a significant, valuable contribution by ensuring that both the financial and non-financial returns that the business can deliver are realised. For example, where infrastructure including roads, housing, sanitation and healthcare facilities do not exist we can partner with host Governments to sustainably develop these areas for future generations. At a broader level, we are committed to contributing to the development of democracy and democratic processes in the countries where we operate. We do this in a number of ways, including through membership of industry organisations and international bodies.

## Government relations

Understanding the expectations of host Governments – including adherence to international standards – is key to ensuring that we are operating in a sustainable way.

Through our stakeholder engagement programme, we have identified a range of areas that national, state and local governments are primarily interested in when considering the role of business in their societies. These include the economic performance of the company and socio-economic development through investment in employment of local people, and secondary/indirect employment through supporting industries. Community investment programmes that centre on infrastructure development in areas such as education, health and sanitation are also regarded as important because of the contribution they make to the sustainable development of local communities.

## Vedanta's economic contribution



## Delivering value

Vedanta offers an attractive value proposition for our host Governments, both because of the positive economic contribution we can make to national and state budgets through the taxes and royalties we pay, and also through the broader contribution we make in developing infrastructure, skills and employment opportunities. This is particularly true due to the significance of our presence across a number of commodities, including copper, aluminium and iron ore.

In the last year, our Group contributed US\$5.3 billion to host Governments by way of taxes and royalties. Importantly, we have a transparent approach to disclosing the tax we pay and recognise that, for developing countries, the revenue received facilitates the sustainable development of host communities. We have not received any direct financial assistance from governments, although as a part of various direct tax holidays and similar exemptions Vedanta did benefit by US\$960 million during 2012-13. No significant legal fine was levied against the Company or its subsidiaries for non-compliance with laws and regulations.

Our businesses provide a range of important commodities, which are the building blocks of any society, including iron ore, zinc, copper, lead and silver – we provide close to 50% of India's aluminium and copper and produce more than 25% of its oil. We also provide



## Adding and Sharing Value: Our host Governments continued

some 90,000 direct and indirect employment opportunities and many times that through secondary, supporting industries the estimates go to 500,000. This has a direct positive impact on overall livelihoods and domestic consumption, contributing to economic growth locally and nationally and the development of local markets. This is underpinned by the broad range of health and education services and infrastructure that we provide, either independently or in constructive partnerships, benefitting close to 3.7 million people.

It is Board policy, as per the UK Bribery Act, that neither Vedanta nor Group subsidiaries will make donations or contributions to political parties within the United Kingdom or European Union. In India, political donations or contributions made within the context of legitimate business operations are only made with the approval of the Board.

As well as having internal systems that adhere to international standards, as we have highlighted in the Environment section of this report, Vedanta works within parameters stipulated by the Government of India.

### **Biodiversity management – partnering with the Indian government**

A key challenge for the Group is balancing and managing guidance from international standards on biodiversity management in conjunction with guidance from, for example, the Equator Principles which stipulate adherence to local jurisdiction.

In India, biodiversity management is implemented by the Government and not by individual companies, with biodiversity classified under two categories:

- ▶ Compensatory afforestation (which applies in circumstances of forest land change of use)
- ▶ Wildlife management (which applies if proposed operations impact on wildlife).

A company must prepare a biodiversity plan which the State Government reviews and approves. Once the State Government has approved the plan, the company has to deposit the full amount budgeted in the plan to the State Government, which manages its implementation. To date, Vedanta has deposited US\$8 million with the Indian Government for biodiversity management at seven sites in India.

For example, in 2012 BALCO Coal Block project deposited INR 310 million to the Chhattisgarh State Forest Department. For its Wildlife Conservation Plan INR 25 million was deposited with the Chief Conservator of Forests (CCF), Chhattisgarh State Government, towards compensatory afforestation and biodiversity management.

### **KCM partners with the Zambian Government to revamp national railways**



First railway wagon reaching our KCM operation

Transportation of copper to overseas markets from the Copperbelt mining hub in Zambia has mainly been by truck the due to the deteriorating railway infrastructure. The use of trucks is an inefficient form of transport with significant environmental effects and a major cause of congestion and fatalities.

To address the issue, our Konkola Copper Mines (KCM) business has become the first company to resume regular copper exports using trains – on 6 February 2013 the first 26 wagons loaded with over 1,000 metric tonnes of copper left the KCM's Nkana Refinery in Kitwe, Zambia's second largest city. The copper haulage partnership comprises KCM and Zambia Railways, which will be carrying copper from KCM to Chozi on the border with Tanzania, where Tanzania Zambia Railways (Tazara) will pick up the commodity for onward transport to Dar-es-Salaam.

The KCM partnership's assistance in revitalising the Zambia Railways operations will also boost the Government's plans to sustain jobs and grow economic activity. It also bodes well for long-term plans to upgrade the railway network into a major gateway to ports in Namibia, South Africa and Tanzania, not only for copper exports, but for other goods as well. In addition, using the railways will provide an alternative and competitive mode of transporting goods for KCM as it will help to reduce freight costs, improve transit and cycle time by eliminating double-handling and other related costs. In addition, every 26-wagon train removes the equivalent of 40 trucks from Zambia's roads, making a significant contribution to the environment and the quality of life of Zambia's people by reducing congestion.

# EFFECTIVE PARTNER IN CHANGE

## Our opportunity to facilitate sustainable development

As a Group, we are conscious of the pressing issues that the world faces, including climate change, poverty, the growth of megacities and the depletion of finite natural resources. Though mitigating these challenges may not be fully possible, we appreciate that through our presence in local communities and our global reach we have the opportunity to facilitate sustainable development. This is assisted by our engagement and partnerships with civil society – encompassing a wide range of non-governmental and not-for-profit organisations – to meet global and local challenges in the most effective and appropriate way.

Assisted by our materiality process, we understand expectations that civil society organisations have of business, particularly with reference to human rights, occupational health and safety and the management of all new projects and ventures. We understand that as a global business there is an expectation not only to manage and monitor the socio-economic implications of our operations for local communities but also to make a positive contribution for the betterment of society.

### Delivering value

We engage and partner with a wide range of civil society organisations at an international, national and local level depending on the nature of the programme. These relationships are managed at the appropriate level within the Group; at the Group corporate level, at our subsidiary companies and at the local level, utilising our CSR, investor relations, sustainability and other functional teams. We have, for example, partnered with leading environmental organisations to mitigate biodiversity impacts, engaged with numerous non-profit organisations to deliver a wide range of health and education programmes in rural communities and worked with government bodies to improve employee and community health and safety outcomes.

In order that we maximise the effectiveness of these relationships, our approach is determined by the types of organisations we partner with: those that provide technical support to the learning and development of the business and those that challenge the way in which our business operates, such as campaigning organisations which can facilitate learning.

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**It is undeniable that Vedanta has had a positive impact on the economic situation of the local community**

**Vedanta civil society stakeholder**

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## Adding and Sharing Value: Civil society continued

Vedanta currently plays no direct role in developing public policy; however, we are a member of the UNGC and World Business Council for Sustainable Development, who are working on various sustainable development programmes. Some of our subsidiary companies are also members of the following trade and industry bodies, and actively participate in their forums:

- ▶ Federation of Indian Mining Industries
- ▶ Confederation of Indian Industries
- ▶ India Lead-Zinc Development Association
- ▶ Indian Institute of Metal
- ▶ Federation of Indian Chambers of Commerce & Industry
- ▶ Zambia Extractive Industries Transparency Initiative

- ▶ Irish Business and Employers' Confederation
- ▶ The Energy Resources Institute, India

We are committed to engage in an open and transparent way with our stakeholders. In response to concerns raised by social groups on our VAL-Lanjigarh project in Odisha we have produced the detailed report "The Lanjigarh development story: Vedanta's perspective".

This report seeks to present our perspective with a broad overview of the Vedanta Group and detailed information about the operations at the Lanjigarh Alumina Refinery in response to each of the concerns raised by Amnesty International. The report is available publicly on our corporate website at: [www.sustainability.vedantaresources.com/our\\_performance/report\\_archive](http://www.sustainability.vedantaresources.com/our_performance/report_archive)

### Tasmanian Devil Conservation – Copper Mines of Tasmania



Our CMT operation helping in protecting Tasmanian Devil

The Tasmanian devil is a marsupial the size of a small dog and it is only found in the Australian state of Tasmania. Since the 1990s, devil facial tumour disease has drastically reduced the population, threatening its survival and making it an endangered species. The "Save the Tasmanian Devil Programme" (STDP) has a number of captive breeding centres and free range enclosures keeping devils as part of an insurance population, which also includes animals held in mainland wildlife parks. The insurance population is designed to provide a source of genetically diverse devils for future conservation of the species. This is a fundamental strategy in protecting the devil from extinction. The programme is the State and Commonwealth governments' response to this

conservation threat and forms part of a comprehensive array of strategies to protect the species.

STDP initially approached CMT to purchase used conveyor belts to line the animal enclosures with rubber for barrier-proofing. CMT management donated 17 tons of used conveyor belts and CMT contractors and staff cut the rubber down into two to three metre sections from lengths of over 1,000 metres – a task done by hand over several days. The rubber was used to line the base of each fence line, blocking access to gaps that had formed beneath due to soil erosion. As a result, housing pens were greatly improved – decreasing the chance of devil injury or escape for this valuable population of healthy devils.

In addition to engaging and partnering with international organisations, we also partner with national institutions such as universities for research & development and talent recruitment and local community organisations which target delivery of services to meet local community needs such as schools and hospitals. Worldwide, we partner with close to 250 organisations such as IL & FS Skill Development Corporation Ltd, (Naandia) Foundation, Development Aid From People to People (DAPP), Council of Churches in Zambia, National Bank for Agriculture and Rural Development (NABARD), Ministry of Education (Chingola), Department of Community Development (Kitwe and Chingola), The University of Zambia, DAV (Dayanand Anglo Vedic, Lanjigarh) and many others.



**"The Lanjigarh development story – Vedanta's Perspective" can be found online**

More: sustainability.  
[vedantaresources.com/resources/36/VED009\\_Amnesty\\_Report.pdf](https://vedantaresources.com/resources/36/VED009_Amnesty_Report.pdf)

## International Union for Conservation of Nature – Black Mountain Mine Collaboration on a Sustainable Biodiversity Management System

The key objective of this collaboration is to support BMM with credible independent scientific advice on the establishment of a sustainable biodiversity management system and efforts to enhance and diversify rural livelihoods within the Gamsberg ecosystem and surrounding regions (Namakwaland).

As part of the collaboration, IUCN has agreed to establish an Independent Review Panel (IRP) on programmes to avoid, mitigate or offset biodiversity impacts and mine closure and rehabilitation planning and implementation at Gamsberg, and to review and provide technical advice on BMM's biodiversity management system. The IRP will also assist BMM in ensuring the adequacy of its due diligence and adherence to national and international quality standards. In addition, they will also establish a Biodiversity and Livelihoods Coordination Committee (BLCC) to oversee, advise on and monitor grant-making for biodiversity conservation and sustainable solutions as part of BMM's sustainable development programmes.

\* IUCN is the world's oldest and largest global environmental organisation, with more than 1,200 government and NGO members and almost 11,000 volunteer experts in some 160 countries



An example of the biodiversity in the Gamsberg (BMM) Area

# DELIVERING A STRONG FINANCIAL RESULT

## Committed to deliver progressive returns

We are committed to deliver progressive returns for our finance providers – our shareholders and lenders – and this remains core to the business growth strategy.

We have periodic dialogue with shareholders and lenders in a targeted and timely way and as part of this year's materiality process we consulted with representatives of our shareholders and lender institutions. We recognise the importance of our shareholders and have a number of ways, including the Annual General Meeting, in which we engage with shareholders and receive feedback from them. Members of the senior management also engage with shareholders on a periodic basis.

The majority of Vedanta's lenders are aligned to the Equator Principles and IFC standards and our business relationship with them is more than purely financial. Lender interest in sustainability has developed over recent years, with specialist teams driving socially responsible investments. We engage with these technical experts on a regular basis through site visits, responding to requests for information in a timely way and providing regular presentations and meetings. Accordingly, we have a clear understanding of their expectations, which includes adherence to best-practice health, safety and environmental management and broader issues of human rights and community and stakeholder engagement.

We work towards sustaining and improving our Corporate Governance systems and processes to mitigate risk, and this is enabled by transparent and ethical practices driven from the top. Our Board remains committed to the embedding of sustainable practices to ensure the long-term viability of the business, and in recent years we have rolled out a new Group sustainability strategy and framework.

## Delivering returns

Our strong relationships with our shareholders and lenders ensure that we are able to, through the access to finance, expand and grow our business in a sustainable way, thereby facilitating the adding and sharing of value with our broader stakeholder groups as outlined in this report. By meeting the financial return expectations of our shareholders and lenders we create a positive feedback loop where we are able to meet our finance providers' expectation that we manage our business sustainably.

In order to meet the economic commitments that the business has with its finance providers, Vedanta invests in projects and businesses that drive the development of the Group asset base and increase production, and therefore sales.

Additional financial and business development highlights over the past year include:

### Consistent returns to shareholders

Since our IPO in 2004, we have maintained a progressive dividend policy, increasing dividends in every year except one when dividends were held constant. US\$1.3billion has been returned to shareholders during this period. This year, our final dividend was 37 US cents per share, up 6%.

Our focus continues to be on generating shareholder returns through measured capital allocation with focus on low-risk, phased projects with high returns

**+15%**  
dividend CAGR since IPO

**US\$1.5 billion**  
reduction in net debt

**US\$3.5 billion**  
free cash flow

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**We work towards sustaining and improving our Corporate Governance systems and processes to mitigate risk, and this is enabled by transparent and ethical practices driven from the top**

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Our employees are experts in the resources we extract

#### Track record of delivering EBITDA growth

Over the last nine years, the Group EBITDA has increased almost 15 times, from US\$323 million following flotation to US\$[4.9] billion in FY 2012-13. This reflects strong growth in production complemented by a successful programme of acquisitions. Our industry-leading investment programme has expanded capacity and improved efficiency, leading to the delivery of consistent profit margins. We have a strong balance sheet with cash and liquid investments of US\$8 billion. Net debt also reduced by US\$1.5 billion and our gearing ratio reduced to 31% from 35%.

#### Significant growth in mineral assets – reserves and resources

Asset values have grown substantially during the year, driven by an exceptional performance by Cairn India in the first year since its acquisition, combined with strong production growth across the portfolio including record production of mined zinc-lead and silver at Zinc India. This is underpinned by a proven track record of consistently growing our reserves and resources organically. This year this resulted in successful discoveries in Rajasthan and mine life extensions in our copper, zinc and iron mines.

In the financial year, our merger of Sesa Sterlite to streamline the Vedanta Group structure has been a particularly important step in securing equity and minimising the Group's long-term financial risk. This consolidation removes cross-holdings to create a more efficient capital structure through better alignment of assets and liabilities while also generating capital, tax and operational synergies. This Group simplification received approval from the High Court of Bombay at Goa, with approval by the Madras High Court awaited.

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**As shareholders we have a duty to our own investors to ensure that we work with the companies that we invest in on their behalf to develop their sustainability performance**

**Vedanta shareholder**

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Assurance

# VERIFYING OUR APPROACH



The BALCO plant is one of our key aluminum assets in India



## What does assurance mean to us?

Our commitment to be a world-class diversified natural resources company means that we are equally committed to aligning our approach to international principles and developing initiatives that drive our sustainable journey. Verification of our progress is essential to this.



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To see the Scott Wilson Report for previous years please go to our website:  
[www.sustainability.vedantaresources.com/our\\_performance/scott\\_wilson\\_docs\\_archive](http://www.sustainability.vedantaresources.com/our_performance/scott_wilson_docs_archive)

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# REVIEW OF PROGRESS

## URS (Scott Wilson) Report

We are committed to achieving the highest operating standards and we respect the environment and communities in which we operate. In support of this commitment, we have developed the Vedanta Sustainability Framework.



To see the URS (Scott Wilson) Report for previous years please go to our website: [www.sustainability.vedantaresources.com/our\\_performance/scott\\_wilson\\_docs\\_archive](http://www.sustainability.vedantaresources.com/our_performance/scott_wilson_docs_archive)

Scott Wilson, now URS (URS acquired Scott Wilson in 2010), on behalf of certain financial institutions, conducted an independent and comprehensive review of our sustainable development policies and procedures in line with international standards and best practices in November 2010. The review covered our sustainability practices including health, safety and environment (HSE), our social policies and our business Code of Conduct. It made recommendations towards further aligning Vedanta's policies and practices to the IFC Performance Standards and IFC EHS Guidelines, including those specifically related to mining and thermal power. A summary of the review, including findings and recommended actions, is available via the link [http://sustainability.vedantaresources.com/our\\_performance/scott\\_wilson\\_docs\\_archive](http://sustainability.vedantaresources.com/our_performance/scott_wilson_docs_archive)

In line with our commitment to sustainable development and the implementation of the Scott Wilson recommendations, in July 2012 and January 2013 we produced our third and fourth six-monthly progress reports. The January 2013 report details the actions we had taken up to 31 December 2012.

A team from URS visited our Skorpion Zinc Mine and Konkola Copper Mines operations in October 2012 and VAL-Lanjigarh in March 2013 to undertake their review of our progress against their original recommendations. During the March 2013 review the team also had a review with our Vedanta Sustainable Development staff at our corporate office in Delhi.

The URS March 2013 full report (and other reports) is available at [http://sustainability.vedantaresources.com/our\\_performance/scott\\_wilson\\_docs\\_archive](http://sustainability.vedantaresources.com/our_performance/scott_wilson_docs_archive) and in summary it said:

"The range of policies, management and technical standards that form the new Sustainability Framework is now complete with the issue of the delayed Technical Standard on Indigenous Peoples/Vulnerable Tribal Groups and work continues developing the supporting Guidance Notes. An extensive training programme has been rolled out across the Group to support the implementation of the Sustainability Framework, which is also subject to a combination of self-assessment/ internal audit and assurance process and extensive action plans to drive consistent and correct application... The outstanding Recommendation dealing with the Lanjigarh Expansion Project is still 'pending' and cannot be tested until the situation there is resolved... Although the implementation process is incomplete and somewhat patchy in places (some elements are still to be fully completed while others require minor adjustments),

overall... we consider that sufficient progress has been demonstrated on each of the other Recommendations at each level to conclude that Vedanta can undergo the final close-out audit in June 2013..."

The current situation in regard to the URS Scott Wilson recommendations after their November 2012 and March 2013 reports is briefly summarised below:

### Corporate level:

- ▶ Last year (FY 2011-12), six recommendations were closed out and a further five recommendations were on track for closure.
- ▶ During the reporting period, ten out of eleven recommendations were closed.
- ▶ One external audit recommendation is considered on track for closure in June 2013.

### Company level:

- ▶ Last year (FY 2011-12), three recommendations were closed out and a further four recommendations were on track for closure.
- ▶ During the reporting period, all recommendations were closed.

### Lanjigarh:

- ▶ Last year (FY 2011-12), one recommendation was closed out and a further nine recommendations were on track for closure. One recommendation regarding Lanjigarh expansion was on hold as the matter was sub judice.
- ▶ During the reporting period, 10 out of 11 recommendations were closed.
- ▶ One recommendation regarding Lanjigarh expansion is still on hold as the matter is sub judice.

Overall, 27 of 29 recommendations are now completed (the Final Sign-Off Audit and a recommendation relating to the on hold Lanjigarh expansion project remains).

## Corporate Level Recommendations

Recommendation	URS – SW November 2012 status	URS – SW March 2013 status	URS – SW comments and observations/ March 2013
<b>2.5.2</b> The preamble to the Code, "How We Do Business", should include reference to local communities as a key element affecting Vedanta's reputation together with customers, shareholders, competitors and suppliers.	✓	✓	Code updated and still available online
<b>2.5.3</b> Adopt internal procedures to ensure that all requests for information from stakeholders (including investors, NGOs, international organisations and the press) are dealt with in a timely manner. We see this as an important part of a wider programme to inform and communicate with all stakeholders.  To assist with transparency Vedanta should maintain a register of enquiries and responses and provide a summary in their Annual Sustainability Report/website.	✓	✓	Details of requests for information verified – improvements needed in stakeholder communications at the local level
<b>2.5.4</b> Revise the wording of the Value Statement on Sustainability to state: "We aim to contribute to the social and economic welfare of the communities where we work and to protect and conserve the environment."	✓	✓	Value statement updated and still available online
<b>2.5.6</b> Develop a series of policies to realise the aims stated for each of the four sustainability areas (environmental stewardship, nurturing people, health and safety and empowering communities). The policy statements should be succinct, should reflect best international practice and reflect a commitment to continuous improvement. Annual targets for progress and reporting should be considered wherever possible. Noise should be included as a policy issue.	→	✓	All core policies, management and technical standards now completed – work continues on the Guidance Notes.
<b>2.5.7</b> The title of the HSE Committee should be changed to the Sustainable Development Committee and its terms of reference expanded to reflect the breadth of its role covering all aspects of the environmental and social sustainability of the Group.	✓	✓	No post-reorganisation changes affecting membership; meetings continue
<b>2.5.8</b> 'The Corporate Sustainability Development Committee' should continue to ensure that subsidiary companies take a consistent approach to promoting sustainable development in accordance with international best practice by monitoring performance, lesson learning and dissemination of best practice.  Appoint an appropriately qualified Chief Sustainability Officer with international experience to direct and coordinate the HSE, CSR and related functions. The CSO will act through single points of contact in each subsidiary company.	✓	✓	However, EXCO Committee still needs to drive improvements at sites with 'Unacceptable' self-assessment/assurance scores  Incumbent CSO leaving Vedanta, no confirmation yet regarding replacement; lack of social expert in central team?
<b>2.5.9</b> Keep under review the full range of HSE and CSR competencies required across the business and consider the need for additional training, as appropriate, in relation to the IFC Performance Standards and Guidelines, human rights, vulnerable groups and the GRI Mining and Metals Sector Supplement.	→	✓	Training is ongoing and significant progress made at all subsidiary companies
<b>2.5.13</b> Report, where possible, on Group environmental and social performance as a whole and seek to benchmark performance against industry best practice and seek assurance from appropriate bodies with industry and sustainability expertise.	→	✓	
<b>2.5.16</b> Adopt a specific human rights policy demonstrating its commitment to the UN Declaration of Human Rights and procedures to ensure its implementation. This should be communicated to all stakeholders via its website.	✓	✓	
<b>2.5.24</b> Undertake an audit of Group and Company environmental and social performance against international standards (IFC, ICMM, OECD) after 12 months of implementing the recommendations in this report (i.e. January 2012). Recommendations which are not implemented will be included in a Remedial Action Plan and their compliance with them reviewed every six months.	→	→	



Recommendation complete/closed



In progress/ on track



Not yet due/dependent upon external factors



## Assurance: URS (Scott Wilson) Report continued

### Company Level Recommendations

Recommendation	URS – SW November 2012 status	URS – SW March 2013 status	URS – SW comments and observations/ March 2013
<b>2.5.11</b> Develop a policy and implementation practices to more proactively manage land in their ownership in order to maximise environmental gains and promote biodiversity. This would include the development of environmental management plans for all non-operational land and the carrying out of habitat surveys for all new sites prior to development.	→	✓	Documentation improved, although some minor amendments to be actioned
<b>2.5.12</b> Communicate environmental monitoring regimes at plants and regularly report to stakeholders, including local communities, on their environmental performance, benchmarking this against international standards (e.g. IFC Guidelines) and reporting in their 2012 Sustainability Report.	→	✓	Adequate evidence of communications and stakeholder reports to facilitate closure at the current time, although some sites still need to fully address requirements for disclosures to affected communities
<b>2.5.15</b> Produce and test EIAs and EMPs against the IFC Performance Standards and ICMM best practice and define clear links between the EIAs, EMPs and Environmental Management Systems. Specifically EIAs should be expanded in relation to biodiversity and habitat identification, the identification of cultural heritage (scheduled and non-scheduled sites) and social and human rights impacts. Vedanta should commission independent reviews of one or more major EIAs each year in order to ensure compliance with IFC Standards.	→	✓	EXCO Committee to drive improvements in self-assessment/assurance scores relating to ESIA implementation
<b>2.5.17</b> Develop a standardised approach to community consultation for new developments which responds to IFC guidance and communicate this to all stakeholders via its website.	✓	✓	
<b>2.5.20</b> Adopt a specific policy in relation to engagement with and assistance to social groups that may be vulnerable to change and communicate this to all stakeholders on its website.	→	✓	Indigenous Peoples TS issued, but Guidance Notes should be considered. Delay to documentation may affect availability of evidence of implementation for the final audit
<b>2.5.22</b> In developing new sites adopt a standardised approach to the identification of sites of cultural heritage value involving formal documentary sources, site surveys and community consultation.	✓	✓	
<b>2.5.23</b> Maintain a register of major social and labour incidents at their plants and report to VRL	✓	✓	URS still monitoring incident registers for the lenders. A single workplace fatality in Q3

## Lanjigarh Level Recommendations

Recommendation	URS – SW November 2012 status	URS – SW March 2013 status	URS – SW comments and observations/ March 2013
<b>3.3.20</b> Undertake a systematic gap analysis of the EMS against the Industry Best practice criteria and update it accordingly.	→	✓	New documentation is broadly acceptable; some amendments needed to plans dealing with social issues
<b>3.3.3</b> Notwithstanding the current problems arising from equipment storage, VAL seek to improve site housekeeping with particular regard to ensuring the correct segregation, collection and disposal of waste materials and the fitness for purpose of the refinery's storm water drainage systems.	✓	✓	
<b>3.3.32</b> Develop suitable and sufficient retrenchment plans to mitigate the adverse impacts of future suspension or closure of the refinery on both direct and indirect employees.	→	✓	
<b>3.3.48</b> Undertake a gap analysis for contractors' labour accommodation against IFC/EBRD guidance and address any serious deficiencies. VAL should therefore amend its contractual documentation to specify minimum expectations for contractors in regard to labour accommodation, and then enforce contractors' adherence to its specified requirements.	✓	✓	
<b>3.3.63</b> Undertake a gap analysis against the occupational and community health and safety requirements set out in the lenders' Industry Best Practice criteria (specifically the IFC's general and applicable sector EHS Guidelines) and take appropriate measures to address any outstanding gaps.	→	✓	As per 3.3.20 above
<b>3.3.79</b> Review the draft Disaster Management Plan against recognised industry guidance (such as the ICMM/UNEP publication "Good practice in emergency preparedness and response", 2005) and upgrade its emergency prevention and response arrangements including improved drill and simulation exercises.	✓	✓	
<b>3.4.3</b> If the expansion of the refinery is to proceed, a supplementary report should be prepared to augment and update the existing EIA, thus meeting international best practice. This report would be used to guide further development and would be made available to key stakeholders.	↔	↔	Awaiting Supreme Court decision
<b>4.5.5</b> Review the issue of sporadic dust nuisance, seek to reduce such pollution and monitor both dust emissions and incidence of respiratory infections in the immediate locality of the refinery.	✓	✓	Health Impact Assessment update to be checked in final audit
<b>4.5.8</b> Establish and strengthen a simple and accessible grievance mechanism by which villagers can identify any concerns about the operation of the refinery by using the village co-ordinators already deployed by VAL.	✓	✓	Grievance mechanism functioning and well monitored, although could be improved through introduction of a 'Pending' classification, and more systematic analysis of root causes
<b>4.6.8</b> Give further consideration to accelerating livelihood training programmes for villagers via self-help and business start-up support, especially in those villages close to the refinery, and monitor local employment creation in these villages and the Lanjigarh block.	✓	✓	
<b>4.6.12</b> Work together with local government to develop and publicise an integrated rural development strategy for the area.	✓	✓	



Recommendation complete/closed



In progress/ on track



Not yet due/dependent upon external factors

## Assurance: Global Reporting Initiative (GRI) index

We have again developed our Sustainable Development Report 2012-13 in accordance with the Global Reporting Initiative's G3.1 guidelines.

This year, following consultation with our stakeholders, we have structured the report around our key material issues and the GRI G3.1 standard and core performance indicators, including both the mining & metal supplements.

A comprehensive GRI G3.1 Content Index, together with all core and additional indicators including both mining and metal sector and oil and gas supplement performance, is available on the Vedanta Resources corporate website at: [www.sustainability.vedantaresources.com/our\\_performance/gri\\_docs\\_archive](http://www.sustainability.vedantaresources.com/our_performance/gri_docs_archive).



To see the GRI report from previous years go to:  
[www.sustainability.vedantaresources.com/our\\_performance/gri\\_docs\\_archive](http://www.sustainability.vedantaresources.com/our_performance/gri_docs_archive)

### Standard Disclosures Part I: Profile Disclosures

Profile disclosure	Disclosure	Reported	Cross-reference/ Direct answer
1.1	Statement from the most senior decision-maker of the organisation.	Fully	SDR Page 8-9, 10-11
1.2	Description of key impacts, risks, and opportunities.	Fully	SDR Page 4-7, 10-18
2.1	Name of the organisation.	Fully	SDR Front Cover
2.2	Primary brands, products, and/or services.	Fully	SDR Page 2-5
2.3	Operational structure of the organisation, including main divisions, operating companies, subsidiaries, and joint ventures.	Fully	SDR Page 2-5
2.4	Location of organisation's headquarters.	Fully	SDR Internal Back cover
2.5	Number of countries where the organisation operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	Fully	SDR Page 2-3, 6-7
2.6	Nature of ownership and legal form.	Fully	SDR Internal Front cover
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	Fully	SDR Page 2-3, 86-87
2.8	Scale of the reporting organisation.	Fully	SDR Internal Front cover
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	Fully	SDR Internal Front cover, Page 4 -5
2.10	Awards received in the reporting period.	Fully	Website
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	Fully	SDR Front Cover
3.2	Date of most recent previous report (if any).	Fully	Website
3.3	Reporting cycle (annual, biennial, etc.)	Fully	SDR Internal Front cover
3.4	Contact point for questions regarding the report or its contents.	Fully	SDR Back cover
3.5	Process for defining report content.	Fully	SDR Page 14-19
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	Fully	SDR Internal Front cover, 2-3, 4-5
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	Fully	SDR Internal Front cover
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organisations.	Fully	SDR Internal Front cover
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	Fully	Mention within the sections and in DNV Assurance Statement
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/ periods, nature of business, measurement methods).	Fully	Mention along with the indicators
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Fully	SDR Internal Front cover
3.12	Table identifying the location of the Standard Disclosures in the report.	Fully	SDR GRI Mapping Page 102-106
3.13	Policy and current practice with regard to seeking external assurance for the report.	Fully	SDR Internal Front cover, Page 15-16, DNV Assurance Statement Page 110-111

Profile disclosure	Disclosure	Reported	Cross-reference/ Direct answer
4.1	Governance structure of the organisation, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organisational oversight.	Fully	SDR Page 15-16
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	Fully	AR Page 80
4.3	For organisations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	Fully	AR Page 72-75
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	Fully	AR Page 85, 86
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organisation's performance (including social and environmental performance).	Fully	SDR Page 26& AR Page 100-102
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	Fully	AR Page 81
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	Fully	AR Page 77
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	Fully	SDR Page 14, AR Page 83
4.9	Procedures of the highest governance body for overseeing the organisation's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	Fully	SDR Page 15, 17
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	Fully	SDR Page 10, 17, 21 & AR Page 83
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organisation.	Fully	AR Page 34-39
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organisation subscribes or endorses.	Fully	SDR Internal Front cover, Page 43, 97-109
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organisations in which the organisation: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	Fully	SDR Page 98-101
4.14	List of stakeholder groups engaged by the organisation.	Fully	SDR Page 18-19
4.15	Basis for identification and selection of stakeholders with whom to engage.	Fully	SDR Page 18-19
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	Fully	SDR Page 18-19, 58-59
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting.	Fully	SDR Page 18-19, 58-59

## Standard Disclosures Part II: Disclosures on Management Approach (DMAs)

Profile disclosure	Disclosure	Reported	Cross-reference/ Direct answer
<b>DMA EC</b>	<b>Disclosure on Management Approach EC</b>		
<b>Aspects</b>	Economic performance	Fully	SDR Page 4-7, 70 -71
	Market presence	Fully	SDR Page 2-3, 86-87
	Indirect economic impacts	Fully	SDR Page 70 -71
<b>DMA EN</b>	<b>Disclosure on Management Approach EN</b>		
<b>Aspects</b>	Materials	Fully	SDR Page 47
	Energy	Fully	SDR Page 50
	Water	Fully	SDR Page 43-46
	Biodiversity	Fully	SDR Page 48, 90, 91, 93, 100
	Emissions, effluents and waste	Fully	SDR Page 46, 50-55
	Products and services	Fully	SDR Page 39
	Compliance	Fully	SDR Page 41-42
	Transport	Fully	SDR Page 42, 52
	Overall	Fully	SDR Page 39

## Assurance: Global Reporting Initiative (GRI) index continued

### Standard Disclosures Part II: Disclosures on Management Approach (DMAs) continued

Performance Indicator	Description	Reported	Cross-reference/ Direct answer
<b>Aspects</b>	Employment	Fully	SDR Page 73-79
	Labour/management relations	Fully	SDR Page 63, 73-79
	Occupational health and safety	Fully	SDR Page 30-33, 36
	Training and education	Fully	SDR Page 75
	Diversity and equal opportunity	Fully	SDR Page 76
	Equal remuneration for women and men	Fully	SDR Page 84
<b>DMA HR Disclosure on Management Approach HR</b>			
<b>Aspects</b>	Investment and procurement practices	Fully	SDR Page 62
	Non-discrimination	Fully	SDR Page 73
	Freedom of association and collective bargaining	Fully	SDR Page 77
	Child labour	Fully	SDR Page 63
	Prevention of forced and compulsory labour	Fully	SDR Page 63
	Security practices	Fully	SDR Page 62
	Indigenous rights	Fully	SDR Page 62
	Assessment	Fully	SDR Page 19, 62
	Remediation	Fully	SDR Page 67
<b>DMA SO Disclosure on Management Approach SO</b>			
<b>Aspects</b>	Local communities	Fully	SDR Page 64-65
	Artisanal and small-scale mining	Fully	SDR Page 66
	Resettlement	Fully	SDR Page 66
	Closure planning	Fully	SDR Page 29, 66
	Grievance mechanisms and procedures	Fully	SDR Page 72
	Emergency Preparedness	Fully	SDR Page 29, 66
	Corruption	Fully	SDR Page 26-27
	Public policy	Fully	SDR Page 89, 91
	Anti-competitive behavior	Fully	SDR Page 89
	Compliance	Fully	SDR Page 89
<b>DMA PR Disclosure on Management Approach PR</b>			
<b>Aspects</b>	Materials stewardship	Fully	SDR Page 88-89
	Customer health and safety	Fully	SDR Page 88-89
	Product and service labelling	Fully	SDR Page 88-89
	Marketing communications	Fully	SDR Page 88-89
	Customer privacy	Fully	SDR Page 88-89
	Compliance	Fully	SDR Page 88-89

### Standard Disclosures Part III: Performance Indicators

#### Economic

Performance Indicator	Disclosure	Reported	Cross-reference/ Direct answer
<b>EC1</b>	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	Fully	SDR Page 70
<b>EC2</b>	Financial implications and other risks and opportunities for the organisation's activities due to climate change.	Fully	SDR Page 50
<b>EC3</b>	Coverage of the organisation's defined benefit plan obligations.	Fully	SDR Page 76
<b>EC4</b>	Significant financial assistance received from government.	Fully	SDR Page 89
<b>EC6</b>	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	Partially	SDR Page 86
<b>EC7</b>	Procedures for local hiring and proportion of senior management and workforce hired from the local community at significant locations of operation.	Fully	SDR Page 74
<b>EC8</b>	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	Fully	SDR Page 72,84



Standard Disclosures Part III: Performance Indicators continued

Performance Indicator	Description	Reported	Cross-reference/ Direct answer
<b>Environmental</b>			
EN1	Materials used by weight or volume.	Fully	SDR Page 47
EN2	Percentage of materials used that are recycled input materials.	Fully	SDR Page 47
EN3	Direct energy consumption by primary energy source.	Fully	SDR Page 51
EN4	Indirect energy consumption by primary source.	Fully	SDR Page 51
EN8	Total water withdrawal by source.	Fully	SDR Page 44-45
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Partially	SDR Page 48, 90, 91, 93, 100
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Partially	SDR Page 48, 90, 91, 93, 100
MM1	Amount of land (owned or leased, and managed for production activities or extractive use) disturbed or rehabilitated.	Partially	SDR Page 48, 90, 91, 93, 100
MM2	The number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place.	Partially	SDR Page 48, 90, 91, 93, 100
EN16	Total direct and indirect greenhouse gas emissions by weight.	Fully	SDR Page 53
EN17	Other relevant indirect greenhouse gas emissions by weight.	Not	
EN19	Emissions of ozone-depleting substances by weight.	Fully	SDR Page 52
EN20	NOx, SOx, and other significant air emissions by type and weight.	Fully	SDR Page 52
EN21	Total water discharge by quality and destination.	Fully	SDR Page 46
EN22	Total weight of waste by type and disposal method.	Fully	SDR Page 54-55
MM3	Total amounts of overburden, rock, tailings, and sludges and their associated risks.	Fully	SDR Page 54
EN23	Total number and volume of significant spills.	Fully	SDR Page 41-42
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Fully	SDR Page 39
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	Fully	GRI Web Table
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	Fully	SDR Page 41-42
EN21	Total water discharge by quality and destination.	Fully	SD Report – Page number 40
EN22	Total weight of waste by type and disposal method.	Fully	SD Report – Page number 41
MM3	Total amounts of overburden, rock, tailings, and sludges and their associated risks.	Fully	SD Report – Page number 41
EN23	Total number and volume of significant spills.	Fully	SD Report – Page numbers 42-43
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Fully	SD Report – Page number 16
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	Fully	SD Report – Page number 36
<b>Social: Labour Practices and Decent Work</b>			
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	Partially	SDR Page 79
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	Fully	SDR Page 79
LA15	Return to work and retention rates after parental leave, by gender.	Fully	SDR Page 79
LA4	Percentage of employees covered by collective bargaining agreements.	Fully	SDR Page 77
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	Fully	SDR Page 77
MM4	Number of strikes and lock-outs exceeding one week's duration, by country.	Fully	SDR Page 65
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	Fully	SDR Page 20, 30
LA8	Education, training, counseling, prevention, and risk-control programmes in place to assist workforce members, their families, or community members regarding serious diseases.	Fully	SDR Page 36
LA10	Average hours of training per year per employee by gender, and by employee category.	Fully	SDR Page 75
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	Fully	SDR Page 15

## Assurance: Global Reporting Initiative (GRI) index continued

### Standard Disclosures Part III: Performance Indicators continued

Performance Indicator	Description	Reported	Cross-reference/ Direct answer
<b>LA14</b>	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	Fully	SDR Page 76
<b>Social: Human Rights</b>			
<b>HR1</b>	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	Fully	SDR Page 62
<b>HR2</b>	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	Partially	SDR Page 62
<b>HR4</b>	Total number of incidents of discrimination and corrective actions taken.	Fully	SDR Page 26
<b>HR5</b>	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	Fully	SDR Page 77
<b>HR6</b>	Operations and significant suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour.	Fully	SDR Page 63
<b>HR7</b>	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour.	Fully	SDR Page 63
<b>MM5</b>	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.	Fully	SDR Page 62
<b>HR10</b>	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	Fully	SDR Page 62
<b>HR11</b>	"Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms."	Fully	SDR Page 67
<b>Social: Society</b>			
<b>SO1 (MMSS)</b>	Nature, scope, and effectiveness of any programmes and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	Fully	SDR Page 64
<b>SO1 (G3.1)</b>	Percentage of operations with implemented local community engagement, impact assessments, and development programmes.	Fully	SDR Page 64
<b>MM6</b>	Number and description of significant disputes relating to land use, customary rights of local communities and Indigenous Peoples.	Fully	SDR Page 65
<b>MM7</b>	The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and Indigenous Peoples, and the outcomes.	Fully	SDR Page 65
<b>MM8</b>	Number (and percentage) of company operating sites where artisanal and small-scale mining (ASM) takes place on, or adjacent to, the site; the associated risks and the actions taken to manage and mitigate these risks.	Fully	SDR Page 66
<b>MM9</b>	Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process.	Fully	SDR Page 66
<b>MM10</b>	Number and percentage of operations with closure plans.	Fully	SDR Page 29
<b>SO9</b>	Operations with significant potential or actual negative impacts on local communities.	Fully	SDR Page 66
<b>SO10</b>	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	Fully	SDR Page 66
<b>SO2</b>	Percentage and total number of business units analyzed for risks related to corruption.	Fully	SDR Page 24-25
<b>SO3</b>	Percentage of employees trained in organisation's anti-corruption policies and procedures.	Fully	SDR Page 10, 62
<b>SO4</b>	Actions taken in response to incidents of corruption.	Fully	SDR Page 24-25
<b>SO5</b>	Public policy positions and participation in public policy development and lobbying.	Fully	SDR Page 89
<b>SO8</b>	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	Fully	SDR Page 88-89
<b>MM11</b>	Programmes and progress relating to materials stewardship.	Fully	SDR Page 88-89
<b>PR1</b>	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	Fully	SDR Page 88-89
<b>PR3</b>	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	Fully	SDR Page 88-89
<b>PR6</b>	Programmes for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	Fully	SDR Page 88-89
<b>PR9</b>	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	Fully	SDR Page 88-89

## Communication on Progress

We are committed to upholding the 10 principles of the UN Global Compact and are supportive of the UN Millenium Development Goals. Our Sustainable Development Report communicates our progress in implementing the 10 principles, and below we have mapped out where information about our progress can be found throughout the report.

Issue area	UNGC principle	Reference	Page number
Human rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.	Building strong relationships – Human rights	62-63
	Principle 2: Businesses should make sure that they are not complicit in human rights abuses.	Building strong relationships – Human rights	62-63
Labour	Principle 3: Businesses should uphold the freedom of association and the effective negotiation of the right to collective bargaining.	Adding and sharing values – Our employees	77
	Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labour.	Building strong relationships – Human rights	62-63
	Principle 5: Businesses should uphold the effective abolition of child labour.	Sustainability Committee Chairman's Statement	17
		Building strong relationships – Human rights	62-63
	Principle 6: Businesses should uphold the elimination of discrimination in respect of employment and occupation.	Adding and sharing value – Our employees	73-76
Environment	Principle 7: Businesses should support a precautionary approach to environmental challenges.	About Vedanta	6
		Chairman's introduction	8
		Chief Executive Officer's statement	10-11
		Our approach and Strategy	16
		Responsible stewardship: Our strategy and management	24-27
		Responsible stewardship: Sustainable management in practice	28-29
	Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.	Responsible stewardship – Environment	39-55
		Chief Executive Officer's statement	10-11
		Sustainability Committee Chairman's statement	17
		Responsible stewardship – Environment	39-55
Anti-corruption	Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.	Chief Executive Officer's statement	10-11
		Responsible stewardship – Environment	39-55
	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.	Responsible stewardship – Our strategy and Management	24-27
		Adding and sharing value – Our industry	87
		Adding and sharing value – Our host governments	90

# Millennium Development Goals (MDGs)

## UN Millennium Development Goals

We are committed to ensuring that our operations contribute to meeting the sustainable development needs of the communities and host Governments where we operate. Below we outline how our activities align to the broad aims of the UN Millennium Development Goals and the contribution that our activities make. More information to support our approach to community investment is outlined in the Adding and Sharing Value section of this report.

Number	Description	Progress
<b>MDG#1</b>	Eradicating extreme poverty and hunger	<p>All our programmes seek to ensure the socio-economic development of the communities in which we operate which then have implications to helping people out of extreme poverty and associated hunger. Our sustainable livelihoods programmes seek to improve the overall annual income of families through agriculture and animal husbandry programmes.</p> <p>Programmes include education about yield improvements and moving production into cash crops which have enabled farmers to learn about the use of high-yield seeds, fertilisers, soil testing and watershed management and cultivation. At our site at Sesa Goa we are working with local farmers to achieve organic certification for their rice crops, which has the potential to triple the sales value and therefore significantly contribute to the movement from extreme poverty. Our Mid-day meal programme supports eight centralised kitchens and aims to improve the health and nourishment status (and by default, hunger) of children from class 1-8. For many children, this provides not only a nourishing meal, but also has the dual role of providing incentives to attend school. 205,710 children are reached through this initiative.</p>
<b>MDG#2</b>	Achieving universal primary education	<p>Our education programme seeks to support both formal and non-formal education systems.</p> <p>The Vedanta Bal Chetna Anganwadi (VBCA) programme targets pre-school level education through the Integrated Child Development Scheme which is run in partnership with the Indian Government. It aims to provide services to pre-school children in rural, tribal and slum areas in an integrated manner so as to ensure their growth and development. Through Vedanta's operations, the Group collectively reaches more than 125,000 children at 4,600 centres.</p> <p>Our community asset creation programme facilitates the building and development of infrastructure projects in partnership with national and local governments. Amongst other initiatives, this also includes the building of schools in rural and remote locations.</p> <p>Operations in Zambia have worked with the NGO Development Aid for People to People (DAPP) to create pre-schools for children in the Chingola and Nampundwe townships. Working together with the local communities and including parents, KCM has supplemented the initiative with teaching staff, operating materials and school uniforms in order to ensure that access to education remains universal at the school.</p>
<b>MDG#3</b>	Promoting gender equality and empowering women	<p>Vedanta recognises that gender equality starts with the actions of the business itself. The Group has a strongly enforced equal opportunities policy and ensures that remuneration packages are the same irrespective of gender differences. The business is also developing women-friendly policies such as providing crèche facilities at sites where appropriate.</p> <p>At the community level, women are considered to be crucial to the sustainable development of rural and poor communities and therefore one of our community investment streams focuses on women's empowerment specifically.</p> <p>Through our work with c.1,100 Self Help Groups we reach over 14,800 members. The groups promote collaboration and learning amongst women including promotion and support in creating sustainable businesses. Such was the case in Jharsuguda where a cooperative was created to provide loans and support the development of small enterprises. More than 330 (overall) women received financial help and support in getting their businesses started. Such initiatives seek to empower women by building a sense of community and collective action through sustainable solutions.</p>

Number	Description	Progress
<b>MDG#4</b>	Reducing child mortality rates	<p>The Group's health programmes seek to both raise awareness of health related issues and provide much needed provision of services to the communities in which we operate, where often comprehensive medical facilities have not previously been available.</p> <p>The Group site at MALCO has run a successful programme: The Institutional Delivery Promoting Scheme (IDPS), which seeks to encourage local community mothers-to-be to have their birth delivery at the local public health centre. Each woman is presented with a gift basket of useful items which presents an incentive to others to have their children at the facilities and has led to a rise in institutional deliveries, thereby impacting mortality rates.</p> <p>Women are educated as a part of the Women's Self Help Groups in areas such as nutrition and family planning, all contributing to improving child mortality, coupled with child welfare specific initiatives at the pre-school level as indicated above.</p>
<b>MDG#5</b>	Improving maternal health	<p>Maternal health features as a component of Vedanta's overall community health programme. Specific and targeted programmes include that at BALCO where the business has been active in an awareness-raising programme that seeks to raise awareness that certain cultural practices such as women fasting after delivery and not breastfeeding new-born infants has a significant negative impact on the health of mother and child. Infant and maternal mortality rates have declined as a result of the business intervention from 115 to 85 and from 60 to 40 respectively.</p>
<b>MDG#6</b>	Combating HIV/AIDS, malaria, and other diseases	<p>The Group is committed to supporting employees and the community in combating preventable diseases such as HIV/AIDS through targeted programmes. Since 2002, KCM has worked in partnership with the Zambian Government on a Prevention of Mother to Child Transmission of HIV (PMTCT) programme. This includes maternal and infant HIV testing and prevention counselling. In the event of a positive HIV test. All KCM facilities have trained PMTCT counsellors who administer the anti-retroviral drug Nevirapine and infant formula for babies whose mothers opt not to breastfeed, with all babies on the programme followed-up at regular intervals by a paediatrician.</p> <p>KCM's HIV/AIDS policy also encompasses voluntary and confidential HIV testing of all employees, with pre and post-test counselling available to all. Employees of KCM who are found with the HIV virus have access to continuing support and health services, including free anti-retroviral drugs. Spouses and dependants of employees are eligible for the same health benefits as employees. At VAL-Lanjigarh the business has been active in targeting vector-borne diseases such as malaria, dengue, chikungunya and filaria through education and behaviour based initiatives.</p> <p>Training sessions run by the business' Mobile Health Unit include outlining the benefits of long-lasting insecticide-treated mosquito nets, coupled with communications campaigns including on-site posters/banners and community outreach work in the form of plays and skits in local languages. Training of local teachers has also been underway in order to ensure message penetration into the community and making headway in combating preventable diseases in the areas where the business operates. 120 teachers participated in this programme.</p>
<b>MDG#7</b>	Ensuring environmental sustainability	<p>Vedanta is committed to managing all of the Group's operations in the most environmentally responsible way and in line with international best practice standards as governed by the Group business Sustainability Framework and implemented through the internal sustainability assurance programme. In order to ensure that best practice standards are adhered to, Vedanta partners with international organisations such as the World Business Council on Sustainable Development in areas such as water management issues, including the development and implementation of a water toolkit. Measures are taken to manage the areas of: waste, water, energy and climate change, biodiversity and air, with progress and performance rigorously monitored on a monthly basis across all Group operations. The operations are complemented by the use of efficient technology to reduce the business environmental impact and mitigate the occurrence of environmental incidents.</p> <p>The business' efforts are complemented by initiatives in the community that centre on bio-investment in the areas of water conservation and forestry programmes. The Group's forestry regeneration programme has seen the planting of more than 18 million saplings to date.</p>
<b>MDG#8</b>	Developing a global partnership for development	<p>Vedanta recognises that in order to achieve the full potential of the business – both financially and non-financially – effective partnerships and effective stakeholder engagement are critical to the business operations. In order to implement the Adding and Sharing Value pillar of the Group business Sustainability Framework the business uses the Public-Private-People-Partnership (4P's) model to drive effective, needs-based development programmes.</p> <p>Our relationships with our key stakeholder groups complement this approach and drive the business growth, therefore playing the instrumental role the Group can have in facilitating sustainable development – through the jobs that we create, taxes that we pay and the contribution that we can make to community investment endeavours. By the very nature of partnerships with host Governments, civil society groups and local suppliers, Vedanta is able to contribute effectively to both the thinking on sustainable development and also the practical implementation of programmes that drive socio-economic growth for host nations and their communities.</p> <p>During the reporting period, Vedanta partnered with 116 NGOs, contributed US\$42 million in community investment activity, and reached 3.7 million people through development initiatives.</p>



## Assurance: DNV assurance statement

### Introduction

Det Norske Veritas AS ('DNV') has been commissioned by the management of Vedanta Resources plc ('Vedanta' or the 'Company'), to carry out an independent assurance engagement (Moderate level) on the Company's Sustainable Development Report 2012-13 ('the Report') in its printed format. The engagement was carried out against the DNV Protocol for Verification of Sustainability Reporting ('VeriSustain' – [www.dnv.com/cr](http://www.dnv.com/cr); available on request) including verification of application level and adherence to principles of the Global Reporting Initiative (GRI) 2011, Sustainability Reporting Guidelines Version 3.1 (GRI G3.1).

The intended users of this assurance statement are the management of the Company and readers of this Report. The management of Vedanta is responsible for all information provided in the Report as well as the processes for collecting, analyzing and reporting that information. DNV's responsibility in performing this work is regarding the verification of the Report only, in accordance with the agreed scope of work. The assurance engagement is based on the assumption that the data and information provided to us is complete, sufficient and authentic. DNV expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement. Our assurance engagement was planned and carried out in March 2013 to June 2013.

### Scope, boundary and limitations of Assurance

The scope of the assurance as agreed upon with Vedanta included the verification of the content of the Report. In particular the assurance engagement included:

- ▶ Verification of the application of report content principles set out in GRI G3.1 and quality of information presented in the report over the reporting period 1st April 2012 to 31st March 2013;
- ▶ Review of the policies, initiatives, practices and performance described in the Report;

- ▶ Review of the Report against the requirements of VeriSustain with moderate level of assurance;
- ▶ Verification of the reliability of GRI G3.1 performance indicators and performance information specifically related to Green House Gas Emissions (EN16) and Health & Safety (LA7).
- ▶ Confirmation of the Vedanta's declared Application level i.e. A+.

The reporting boundary is as set out in the Report covering sustainability performance of Vedanta Resources plc. As part of our verification we visited the following operations in addition to the Vedanta Corporate office at New Delhi, India,

- ▶ Vedanta Aluminum Ltd, Jharsuguda and Lanjigarh, India,
- ▶ Hindustan Zinc Ltd, (Dariba Mines & Smelter), Rajasthan, India,
- ▶ Bharat Aluminum Company Ltd, BALCO Nagar & Kawarda Mines, Chattisgarh, India,
- ▶ Konkola Copper Mines plc, (Head office & Operations), Chingola, Zambia,
- ▶ Sterlite Industries India Ltd, Silvassa, India,
- ▶ Sterlite Energy Limited, Jharsuguda, India and
- ▶ Cairn Energy, (Corporate office), Gurgaon, India.

Our engagement did not include assessment of the adequacy or effectiveness of Vedanta Strategy or management of sustainability related issues. The review of sustainability performance of Cairn Energy was limited to desktop review and meetings at their corporate office at Gurgaon; site level verification was not done at any of the blocks or fields as stated in the report.

### Verification Methodology

This assurance engagement was planned and carried out in accordance with the DNV Protocol for Verification of Sustainability Reporting (VeriSustain). The Report has been evaluated against the following criteria:

- ▶ Adherence to the principles of Materiality, Completeness, Neutrality,

Reliability, Responsiveness and Stakeholder inclusiveness,

- ▶ The principles and requirements of the GRI G3.1 for an application level A+ including the sector supplement on Metal and Mining Industries and Oil & Gas.

As part of the engagement, DNV has verified the statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls. In doing so, we have:

- ▶ Reviewed the company's approach to stakeholder engagement and its materiality determination process;
- ▶ Verified the sustainability-related statements and claims made in the Report and assessed the robustness of the data management system, information flow and controls;
- ▶ Examined and reviewed documents, data and other information made available by the Vedanta plc; including the performance indicators related to health and safety data to ICMM definitions and GHG emissions (tCO<sub>2</sub>e) to WBCSD/WRI.
- ▶ Conducted interviews with key representatives including data owners and decision-makers from different levels and functions of the Company;
- ▶ Performed sample-based reviews of the mechanisms for implementing the company's sustainability related policies, as described in the Report;
- ▶ Performed sample-based checks of the processes for generating, gathering and managing the quantitative data and qualitative information included in the Report.

### Conclusions

In DNV's opinion, based on the scope of this assurance engagement the Report provides a fair representation of the Company's sustainability performance. The Report, along with the referenced information in the website and annual report along with the commitments with timelines to report the partially reported core indicators, generally meets the requirements for GRI application level A+.



We have evaluated the Report's adherence to the following principles on a scale of 'Good', 'Acceptable' and 'Needs Improvement':

#### Stakeholder Inclusiveness:

The Company has documented its stakeholder engagement process and demonstrates engagement with key stakeholders through different channels both at corporate level and operational site level. The issues emerging from the stakeholder engagement are analyzed, prioritized and addressed through appropriate sustainability strategies through Stakeholder Engagement plan. In our view, the level at which the Report adheres to the principle of inclusivity is "Acceptable".

#### Materiality:

The Company has reported its material issues based on internal and external stakeholder perspective i.e. through a formal consultation process at the macro level, and has not missed out any known material issues, however the existing materiality determination process needs to bring out all material aspects related to individual operational sites and aggregated at corporate level. In our view, the level at which the Report adheres to the principles of Materiality is "Acceptable".

#### Responsiveness:

We consider that the Company's response to key stakeholder concerns, through its policies and management systems including governance are fairly reflected in the Report. In our view, the level at which the Report adheres to the principle of Responsiveness is "Acceptable".

#### Completeness:

The Report has fairly attempted to report or to respond the sustainability strategy, management approach and sustainability performances against the GRI G3.1 core indicators including the Mining and Metal Supplement and Oil and Gas Supplement. The Report explains with omissions or commitments to future reporting that are material within the Company's reporting boundary for application level A+; In our view, the level at which the Report adheres to the Principle of Completeness is "Acceptable".

#### Reliability:

The majority of data and information verified at head office and site were found to be accurate. Some of the data inaccuracies identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors related to GHG emissions and reporting. Hence in accordance with the DNV VeriSustain protocol for a moderate level assurance engagement, we conclude that the specified sustainability data and information presented in the Report are generally reliable and "Acceptable".

#### Neutrality:

The Company has reported its sustainability issues and performance in terms of content and presentation in a neutral tone. In our view, the level at which the Report adheres to the principle of Neutrality is "Good".

#### Opportunities for Improvement

The following is an excerpt from the observations and further opportunities for improvement reported to the management of Vedanta Resources plc and are not considered for drawing our conclusion on the report; however, they are generally consistent with the Management's objectives:

- ▶ Improve the quality and reliability of sustainability-related data by providing internal guidance for data-owners on frequency of data collection and reporting to internal and external stakeholders and strengthen internal mechanisms for quality control checks through implementing an internal audit process;
- ▶ Strengthen the process of material determination to capture all issues related to operational sites (mining, metal and oil and gas) at various geographies and evolve sector specific sustainability strategy to drive growth and address short, medium and long term sustainability impacts;
- ▶ Implement recommendations from stakeholder concerns to improve sustainability performance and mitigate associated risks at all levels of the business;

- ▶ The GHG emissions may be evaluated against WBCSD/WRI protocols and internally verified for its accuracy and reliability wrt emission factors, assumptions and documented in the form of Standard Operating Procedure (SOP), to ensure consistent approach in managing reporting and verification of GHG data.

#### DNV's Competence and Independence

DNV is a global provider of sustainability services, with qualified environmental and social assurance specialists working in over 100 countries. The DNV assurance team were not involved in the preparation of any statements or data included in the Report except for this Assurance Statement. DNV maintains complete impartiality towards any people interviewed. DNV expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement.

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Det Norske Veritas AS, India.

**Antonio Astone**  
Assurance Reviewer  
Det Norske Veritas AS, Italy

12th June' 2013, New Delhi, India.

## Assurance: Glossary

<b>A. Nairaine</b>	Sesa Goa mine in Karnataka, India	<b>GRI/G3</b>	Global Reporting Initiative	<b>MW</b>	Megawatt
<b>AAQM</b>	Ambient Air Quality Monitoring	<b>GRMC</b>	Group Risk Management Committee	<b>NABARD</b>	National Bank for Agricultural and Rural Development
<b>ACTs</b>	Adiabatic Cooling Towers	<b>GSPCB</b>	Goa State Pollution Control Board	<b>NEERI</b>	National Environment Engineering Research Institute
<b>AGM</b>	Annual General Meeting	<b>HCD</b>	High Capacity Diesel	<b>NGO</b>	Non-Governmental Organisation
<b>AR</b>	Annual Report	<b>HIV/AIDS</b>	Human Immunodeficiency Virus/ Acquired Immuno Deficiency Syndrome	<b>OHSAS 18001</b>	Occupational Health and Safety Assessment Series (standards for occupational health and safety management systems)
<b>BALCO</b>	Bharat Aluminium Company Limited, a company incorporated in India	<b>HR</b>	Human Resources	<b>OMC</b>	Odisha Mining Company
<b>BAP</b>	Biodiversity Action Plan	<b>HSE</b>	Health, Safety and Environment	<b>PAH</b>	Poly aromatic hydrocarbons
<b>BBS</b>	Behaviours-Based Strategy	<b>IBAT</b>	Integrated Biodiversity Assessment Tool	<b>PPE</b>	Personal Protective Equipment
<b>Bicholim</b>	A mine of Sesa Goa	<b>ICDS</b>	Integrated Child Development Scheme: Anganwadi catering to health and educational needs of children in the age group 0–6 years	<b>PPPP, or 4Ps</b>	Public-Private-People-Partnership
<b>Black Mountain</b>	Zinc asset (mine) in South Africa	<b>ICMM</b>	International Council of Metal and Mining	<b>RMC</b>	Risk Management Committee
<b>BLCC</b>	Biodiversity and Livelihoods Coordination Committee	<b>IFC</b>	International Finance Corporation	<b>SDR</b>	Sustainable Development Report
<b>BMPs</b>	Biodiversity Management Plans	<b>IPP</b>	Independent Power Plant	<b>SEL</b>	Sterlite Energy Ltd., a company incorporated in India
<b>C</b>	C India Ltd., a company incorporated in India	<b>IRP</b>	Independent Review Panel	<b>SEP</b>	Stakeholder Engagement Plan
<b>CCF</b>	Chief Conservator of Forests	<b>IRTE</b>	Institute of Road & Traffic Education	<b>Sesa Goa</b>	Sesa Goa Limited and its subsidiaries
<b>CDM</b>	Clean Development Mechanism	<b>ISO 9001</b>	International Organisation for Standardisation (standards for quality management system)	<b>SHG</b>	Self Help Groups
<b>CEC</b>	Central Empowered Committee	<b>ISO 14001</b>	International Organisation for Standardisation (standards for environmental management systems)	<b>Skorpion Zinc</b>	Zinc asset (mine) in Namibia
<b>CEO</b>	Chief Executive Officer	<b>ISO 50001</b>	International Organisation for Standardisation (standards for energy management system)	<b>SPA</b>	Single Point Accountability
<b>CER</b>	Certified Emission Reduction	<b>IUCN</b>	International Union for Conservation of Nature	<b>SPL</b>	Spent Pot Lining
<b>CFO</b>	Chief Financial Officer	<b>IVDP</b>	Integrated Village Development Programme	<b>SPM</b>	Suspended particulate matter
<b>CGWA</b>	Central Ground Water Authority	<b>JET</b>	Junior Executive Training	<b>SRM</b>	Supplier Relationship Management
<b>Chanderiya</b>	One of the smelter units of HZL	<b>KCM</b>	Konkola Copper Mines PLC, a company incorporated in Zambia	<b>STDP</b>	Save the Tasmanian Devil Programme
<b>CIF&amp;B</b>	Chief Inspector of Factories & Boilers	<b>KRA</b>	Key Result Area	<b>TNPCB</b>	Tamil Nadu Pollution Control Board
<b>CMT</b>	Copper Mines of Tasmania Pty Limited, a company incorporated in Australia	<b>Lisheen</b>	Zinc asset (mine) in Ireland	<b>TPM</b>	Total Product Management
<b>COO</b>	Chief Operating Officer	<b>LME</b>	London Metal Exchange	<b>TQM</b>	Total Quality Management
<b>COP</b>	Cairn Observation Programme	<b>LOTO</b>	Lockout-Tagout	<b>TRIFR</b>	Total Recordable Injury Frequency Rate
<b>CPCB</b>	Central Pollution Control Board	<b>LTIFR</b>	Lost Time Injury Frequency Rate: the number of lost time injuries per million man-hours worked by employees and contractors in our operations	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>CRF</b>	Cobalt Recovery Furnance	<b>m<sup>3</sup></b>	Cubic metres	<b>UNGC</b>	United Nations Global Compact
<b>CSO</b>	Committee Secretary	<b>MALCO</b>	The Madras Aluminium Company Limited, a company incorporated in India	<b>UNMDG</b>	UN Millenium Development Goals
<b>CSR</b>	Corporate Social Responsibility	<b>MAS</b>	Management Assurance Services	<b>VAL</b>	Vedanta Aluminium Ltd, a company incorporated in India
<b>DAPP</b>	Development Aid from People to People	<b>Mboe</b>	Millions of Barrels of Oil Equivalent	<b>VAL-J</b>	VAL-Jharsuguda
<b>DNV</b>	Det Norske Veritas AS	<b>MCM</b>	Million Cubic Metres	<b>VAL-L</b>	VAL-Lanjigarh
<b>EBITDA</b>	Earnings before interest, taxes, depreciation and amortisation	<b>MDG</b>	Millenium Development Goals	<b>VBCA</b>	Vedanta Bal Chetna Anganwadi Centres
<b>EHS</b>	Environment, Health and Safety	<b>MHU</b>	Mobile Health Unit	<b>VER</b>	Voluntary Emission Reduction
<b>EIA</b>	Environment Impact Assessment	<b>MOEF</b>	Ministry of Environment and Forests	<b>VIJY</b>	Vedanta Integrated Jan Jivika Yojana
<b>ETI</b>	Extractive Industries Transparency Initiative	<b>Moz</b>	Million Ounces	<b>VRS</b>	Voluntary Retirement Scheme
<b>ESIA</b>	Environmental and Social Impact Assessments	<b>MT</b>	Metric tonnes	<b>VSAP</b>	Vedanta Sustainability Assurance Programme
<b>ESOP</b>	Employee Share Ownership Plan	<b>MVAFR</b>	Motor Vehicle Accident Frequency Rate	<b>VSF</b>	Vedanta Sustainability Framework
<b>EVG&amp;D</b>	Economic Value Generated and Distributed			<b>WBCSD</b>	World Business Council for Sustainable Development
<b>ExCo</b>	Executive Committee			<b>Zinc International (ZI)</b>	Zinc assets in Black Mountain, Namibia and Ireland
<b>Fatality</b>	The death of an employee, contract employee, business associate or visitor at our operations and project sites				
<b>FTSE</b>	Financial Times and the London Stock Exchange				
<b>FY</b>	Financial Year				
<b>GHG</b>	Greenhouse Gas				
<b>GJ</b>	Gigajoules				

## FURTHER INFORMATION

We value your feedback and welcome comments on this report or any aspect of our approach to Sustainability Reporting.

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