



**TRANSFORMING
ENERGY
RESPONSIBLY**

Cairn Oil & Gas
Sustainability Report 2022

For Planet | People | Prosperity

Our vision of transforming responsibly to secure India's energy future is a reiteration of our commitment to delivering growth responsibly and sustainably.



INSIDE THIS REPORT

1 Company profile

Cairn at a glance	06
Application of Oil & Gas	09
Diversification and growth	10
Geographical presence	14
Message from Chairman	18
Message from Vedanta CEO	20
Message from Cairn Deputy CEO	22
Board of directors	28
Executive committee	30

2 Our sustainability approach

Sustainability at Cairn	31
Stakeholder engagement	38
Materiality assessment	40

3 Transforming communities

Agricultural and animal husbandry	48
Children's well-being and education	50
Skill development	53
Healthcare	54
Drinking water	56
Community infrastructure development	57
IEC (Information, Education and Communication) and microlevel interventions	58
Sports and culture	60
Project Sanjeevani - Special COVID-19 support	61
Passion to serve	61



4 Transforming the planet

Climate change and energy	66
Air quality and stack emissions	74
Water	76
Waste management and circular economy	81
Biodiversity	86
Environmental compliance	93
Oil spill management	94



5 Transforming the workplace

Health and safety	100
Human capital	107
Corporate governance	114



6 Responsible business

Sustainability in supply chain	118
Digitisation and IT	120
Awards and recognition	128


7 Annexures

Assurance statement	132
GRI index	136
Performance table	142




PERFORMANCE HIGHLIGHTS FY 2021-22


Environmental




37% ↓
Potential Gas flaring intensity* in last two years
Flaring intensity* is defined as tonnes of gas flared per thousand tonnes of HC produced




0.62 mn kL
Water conserved in last three years




51,520 tonnes
of CO₂e/annum
Reduced in GHG emissions in FY 2021-22



>96%
Produced water recycled through re-injection




94%
Of waste is diverted for gainful utilisation*
*Beneficial utilisation either through co-processing for AFR (alternate fuel or raw material) or reprocessing or reuse/recycling



99%
Of water requirement is met through saline water
Entire operational water requirements at RJ and Ravva assets met through saline aquifers only (No impact on fresh water sources)





Social




₹25.53 cr
CSR spend

8.57 cr
Lives touched across 569 villages through our community initiatives






18,060 lives
Impacted through Nand-Ghars since inception from October, 2020




7 lakh
Student subscribers to E-Kaksha (Digital education) programme so far


Economic




17%
Gender diversity*
*Full-time employees




11%
Women in managerial positions*
*Full-time employees



9%
Women in senior leadership positions*
*Full-time employees




60% ↓
TRIFR* in last two years
Total Recordable Injury Frequency Rate* (TRIFR)




33% ↓
LTIFR* in last two years
Lost Time Injury Frequency Rate* (LTIFR)

₹12,430 cr
Net Revenue






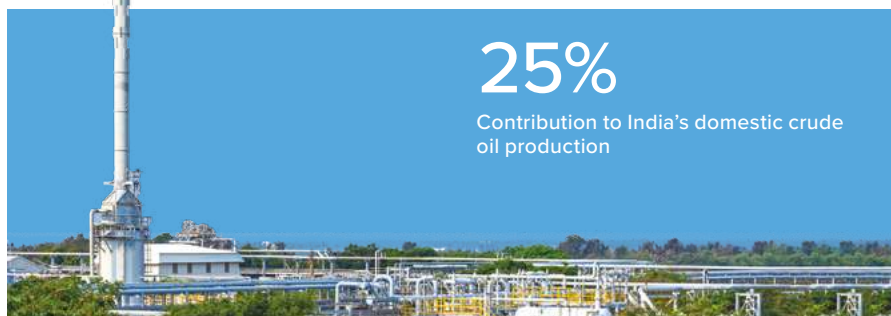
₹5,992 cr
EBITDA



₹19,345.7 cr
Contribution to the state and national exchequer




52 wells
Hooked up



25%
Contribution to India's domestic crude oil production

Operational



~65,000 km²
Acreage across 58 blocks in India

1,60,851 boepd
Average gross operated production





REPORT PROFILE

Cairn Oil & Gas, a division of Vedanta Limited, is committed towards disclosing relevant information with regards to our material issues, with the highest standards of transparency and integrity. Our Sustainability Report 2021-22 provides insights into our approach towards integrating sustainability into our governance system, strategy, and performance.

This Report highlights the environmental, social, and economic aspects of our operations. This Report aims to share our sustainability commitments with various stakeholders including investors, shareholders, customers, suppliers, employees, communities, and the government. We consistently review our performance on sustainability parameters and communicate the same with our stakeholders.



Scope and boundary

This report covers the reporting period from April 1, 2021 to March 31, 2022 and provides material information related to the sustainability strategy, performance, and governance of Cairn.

The report provides insights into our operations across all our assets in Rajasthan, Andhra Pradesh, and Gujarat.

Standards, principles, and goals adopted in this Report

- ▶ In accordance with 'Core' option of Global Reporting Initiative (GRI)
- ▶ United Nations Global Compact principles (UNGC)
- ▶ United Nations Sustainable Development Goals (UN SDGs)
- ▶ International Petroleum Industry Environmental Conservation Association (IPIECA)
- ▶ IOGP (International Association of Oil & Gas Producers)

Approach to materiality

Our stakeholders are individuals or organisations who are interested in, or whose activities have an influence on our strategic execution. We regularly engage with different stakeholder groups in order to actively respond to their concerns and challenges. This report includes information that our stakeholders consider material for us. It assists us in identifying, discussing and resolving issues that affect our capacity to produce value in the short, medium and long term.

Assurance

We safeguard the quality of information contained in this report through a robust assurance process, leveraging our internal expertise and external assurance. The assurance statement can be found on page 132-135 of this report.

TRANSFORMING ENERGY RESPONSIBLY

For Planet | People | Prosperity

The need to transform has never been greater. In today's world, we are faced with numerous challenges. But one challenge that is increasingly urgent is global climate change and the need for responsible action-right now. Despite the uncertainties, what made Cairn emerge stronger, was our commitment to "Transforming Responsibly for Securing India's Energy Future." Throughout our operating environment, we consistently strengthened our operating capacity and contributed to India's crude oil production by 25%, and we aim to soon produce 50% of the country's total oil and gas production so that India may achieve self-sufficiency in the long run.

We strive to be environmentally friendly and sustainable. We plan to reach net zero carbon by 2050 to preserve our planet. To achieve this, we're innovating, becoming net water positive and using renewable energy sources. In addition, part of our commitment includes planting two million trees by 2030 and supporting biodiversity.

As a responsible organisation, we dedicate ourselves to enabling social equality and environmental justice. Local communities in our area of operations have been critical partners in our growth, and we work diligently to improve the socio-economic conditions in these regions. Every part of our value chain is committed to transforming energy responsibly and creating a better future for everyone.





Cairn at a glance

POWERING INDIA'S GROWTH STORY

Cairn is the largest private oil and gas exploration and production company in India, currently producing from assets in Rajasthan, Andhra Pradesh, and Gujarat. As an industry leader, we base our exploration strategy on a portfolio of high reward prospects across the risk spectrum.

We continually invest in advanced geological and geophysical technologies to enhance the probability of exploration success, while monetising hydrocarbon resources effectively. Through our ESG objectives, we aim to pursue sustainable growth and make a significant contribution to India's energy self-sufficiency, while remaining socially and environmentally responsible. We focus on innovation and technology for the well-being of our people and the nation at large.

We have a world-class resource base, with a current interest in 58 blocks in India, including the 41 blocks under the Open Acreage Licensing Policy (OALP) Round I auction, five blocks each under Round II and Round III, and two awarded under the Discovered Small Fields (DSF) Round-II.

We have recently reiterated that we are a separate entity with no connection to Cairn Energy PLC, the Scottish oil and gas exploration company. The brand name 'Cairn' is now exclusively owned by Vedanta Limited, and all others will discontinue the use of the brand name 'Cairn'.



Our vision

To be a best-in-class Exploration & Production Company with a balanced portfolio delivering value through superior business performance and partnerships. We aim to produce 50% of India's oil and gas in the near future.

Our core values

At Vedanta, our core values underpin everything we do, guiding our behaviour, as we expand into new markets and countries.



Trust

We actively foster a culture of mutual trust in our interactions with our stakeholders and encourage an open dialogue which ensures mutual respect.



Care

As we continue to grow, we are committed to the triple bottom line of 'People, Planet and Prosperity' to create a sustainable future in a zero-harm environment for our communities



Entrepreneurship

Our people are our most important assets. We actively encourage their development and support them in pursuing their goals.



Innovation

We embrace a conducive environment for encouraging innovation that leads to a zero-harm environment and exemplifies optimal utilisation of natural resources, improved efficiencies and recoveries of by-products.



Excellence

Our primary focus is to deliver the highest standards of excellence to our stakeholders. We are constantly motivated on improving our costs and our quality of production in each of our businesses by inculcating best practices of benchmarking.



Integrity

We place utmost importance on engaging ethically and transparently with all our stakeholders, taking accountability of our actions to maintain the highest standards of professionalism and complying with international policies and procedures.



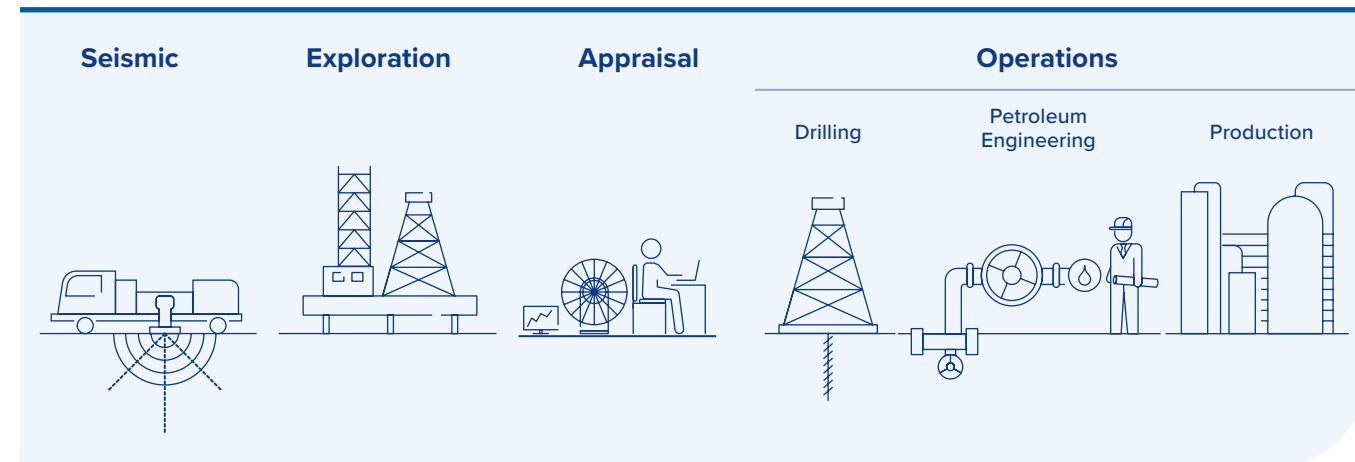
Respect

We lay consistent emphasis on human rights, respect the principle of free, prior and informed consent while our engagements with stakeholders give local communities the opportunity to voice their opinions and concerns.



Cairn at a glance

Robust portfolio across various stages of upstream E&P industry



Upstream assets

Onshore assets

RJ-ON-90/1 Block, Rajasthan)

- ▶ Mangala Processing Terminal and Mangala, Bhagyam fields and Aishwariya oil fields
- ▶ Raageshwari Gas Terminal and associated gas fields, Satellite fields-Raag Oil, Saraswati, Guda, Kaameshwari etc.

Offshore assets

- ▶ CB/OS-2 Block in Cambay, Gujarat
- ▶ PKGM-1 Block, Ravva, Andhra Pradesh

Midstream operations: ~670 km pipeline

~670 km pipeline from Barmer to Bhogat including Viramgam terminal, Radhanpur terminal, and Bhogat Terminals and 36 Above Ground Installations (AGI)

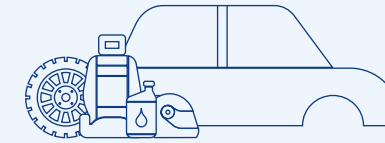


Application of oil & gas

OUR INDUSTRY TOUCHES PEOPLE'S EVERYDAY LIVES

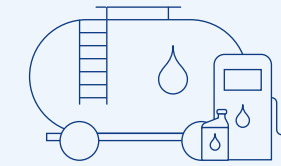
Vehicle

Car battery cases, vehicle body, tool boxes, wheels, tyres, car seats, bumpers, window seals, etc.



Fuel

Diesel fuel, jet fuels, gasoline, motor oils, gear oils, propane, furnace oil, kerosene, compressed natural gas (CNG), liquefied petroleum gas (LPG), lubricants, grease and waxes, naphtha, etc.



Construction

Paint, floor wax, putty, traffic cones and barrier tapes, asphalt, tarapaulin, water pipes, roofing shingles, plywood adhesive, paint rollers, epoxy, caulk, etc.



Medical

Petroleum jelly, antiseptics, antihistamine & aspirin, heart valve and pacemakers, hand sanitiser and scrubs, anaesthetics, medical examination equipment, cast and crutches, artificial limbs and hips, hearing aids, eye glasses and contact lenses, bandages, glycerine, vitamin capsules, etc.



Agriculture

Fertilisers, fungicides, pesticides, herbicides, insecticides, tractor body and other agriculture equipments, irrigation piping, fishing lures, etc.



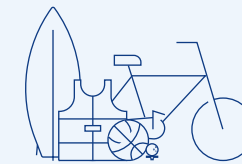
Clothing and accessories

Clothing made out of polyethylene terephthalate (pet), flame-retardant clothing, yarn, artificial fiber, rubber boots, shoe soles and polish, sunglasses, briefcase and carrier bags, luggage bags and handbags, synthetic leather, jewellery and ornaments, etc.



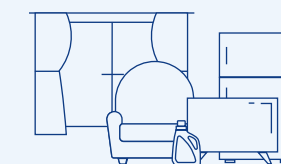
Sports

Tennis racket and balls, basketballs, footballs, surfboards and skis, cleats and shoes, bicycles, parachutes, roller-skate wheels, golf bags and golf balls, helmets, lifesaving jackets, etc.



Household and electronic

Paints and dyes, heating oils, window frames, plastic surfaces and sheets, umbrellas, artificial fibres, lamps and candles, toys, guitar strings, balloons, ink and crayons, mops, detergents, utensils, cable coating, toilet seats, refrigerator linings, tv and computers, parasols, upholstery, headsets and speakers, camera and mobiles, trash bags, etc.



Cosmetics and personal need products

Hair coloring, soaps, cold cream, lipstick, perfumes and deodorant, nail polish, shampoo, toothpaste, make-up, etc.



Diversification and growth

WIDENING HORIZONS FOR A RESILIENT TOMORROW

We are on a mission to responsibly accelerate India's journey towards energy self-sufficiency, through our industry-leading oil and gas exploration and production. We are determined to ramp up our operations to contribute for 50% of India's crude oil and gas production in the coming years.

We made the largest onshore discovery in more than two decades in Mangala, Rajasthan, in 2004. We have expanded our reach in India, evolving from five PSC blocks to 58 blocks with newer onshore and offshore blocks across various sedimentary basins of India, with established R&R base of 1.1 bboe and potential resources of 5.0 bboe. With the addition of new blocks, our acreage is now ~65,000 sq km, making us one of the largest private acreage holder in the country.

We plan to expedite our exploration and production in these areas, moving closer to achieving our goal of an overall production level of 500 kboepd.

As we set out to invest USD 4-5 billion over the next three-four years to contribute 50% of India's total domestic crude. Our strategic ESG roadmap will enable the Company to achieve this vision sustainably.



1,60,851 boepd

Operated production in FY 2021-22



58 blocks

In India



1.1 bboe

Established R&R base



~50 discoveries

Made till date

Innovation and technology leadership

Technology focus areas

Enhanced oil recoveries from polymer and Alkaline Surfactant Polymer (ASP) flooding

Monetisation of tight oil and satellite fields

At Cairn, we explore novel technologies and ideas to develop new resources. These technologies aim to improve the efficiency of our operations and help us discover more resources while recovering from existing fields.

Global leadership



World's largest Enhanced Oil Recovery (EOR) polymer flood project



World's largest ASP



World's longest heated and insulated oil pipeline

Key technologies deployed



3-D seismic



Hydraulic fracturing



Enhanced oil recovery



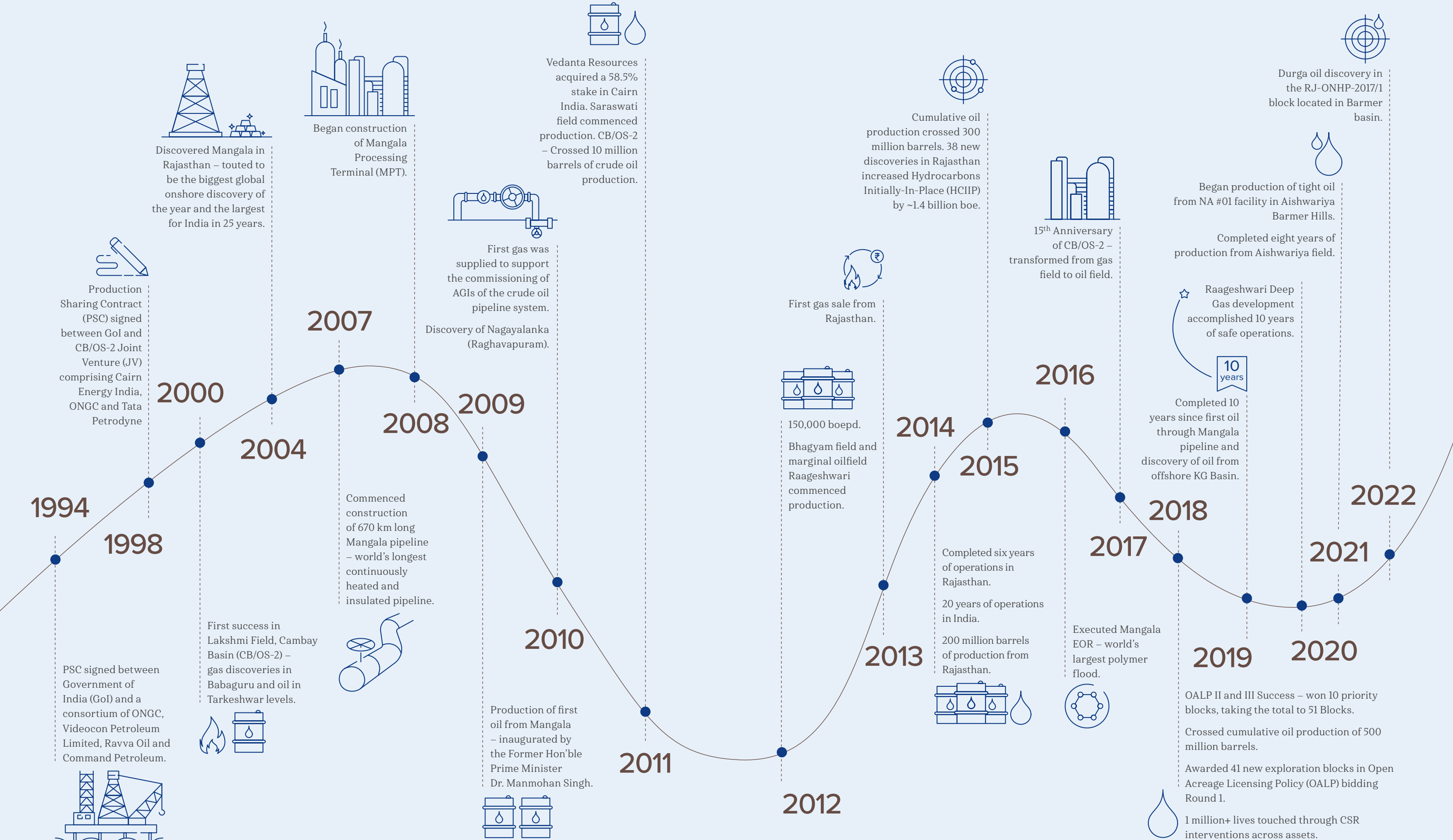
Artificial lift



Skin effect heat management system

To learn more, refer <https://www.cairnindia.com/pages/leadersintechnology.aspx>

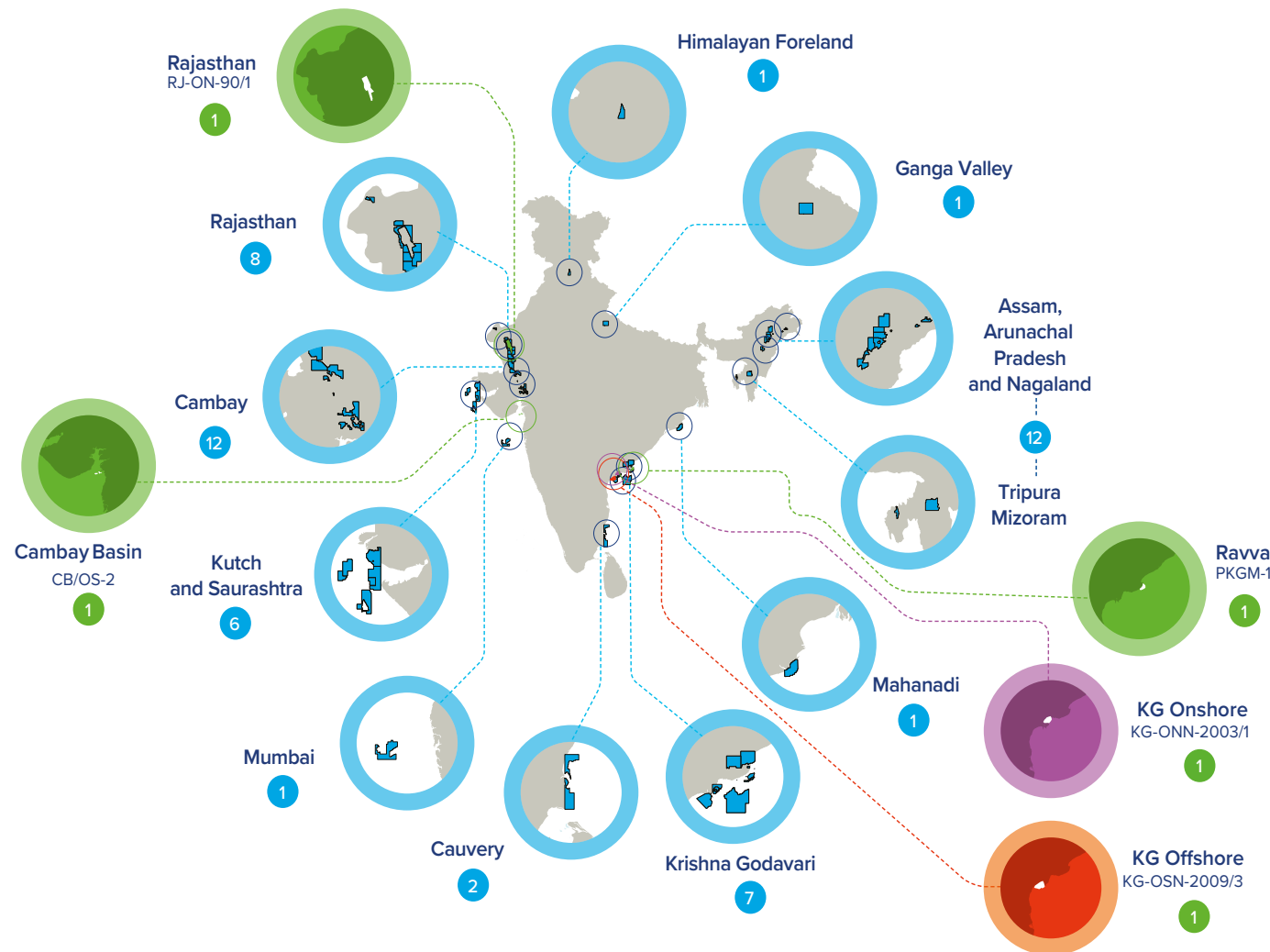
Diversification and growth



Geographical presence

DIVERSIFYING OUR PRESENCE

We are the largest private oil and gas player in India with a geographically diverse portfolio.



India's largest private acreage holder ~65,000 sq.km.



Producing blocks

Rajasthan (RJ-ON-90/1)

3,111 km²
Acreage

~700 mmbbl
Produced since inception (upto March 31, 2022)

137,723 boepd
Gross average saleable production for FY 2021-22

~40 discoveries

Our Rajasthan block is stretched across 3,111 km² in the Barmer district. We had drilled 13 dry wells in Rajasthan before striking oil in the 14th well. Since then, we have made multiple discoveries in Rajasthan, bringing several fields to production for the next phase of expansion. Our Rajasthan block's total output has surpassed 700 mmbbls. The three biggest findings in Rajasthan are Mangala, Bhagyam, and Aishwariya (MBA). In January 2004, we discovered the Mangala field - the largest onshore hydrocarbon find in India - in the last two decades. Since then, 40 additional discoveries have been made in this block. Studies indicate that the block has further potential for growth and we plan to capitalise on this in the near future.

Cambay, Gujarat (CB/OS-2)

82 acres
Onshore processing facility

47 mmbbl
Crude oil produced since inception (upto March 31, 2022)

250 bcf
Natural gas produced since inception (upto March 31, 2022)

8,923 boepd
Gross average saleable production for FY 2021-22

We operate the Lakshmi and Gauri oil and gas fields in Gujarat's CB/OS-2 block. Gas production began in 2002 at the Lakshmi gas field and at the Gauri field in 2004. Since establishment, Cambay has produced over 47 million barrels of crude oil and over 250 billion cubic feet of natural gas. After the discovery of an oil leg, we utilised modern geophysical methods to turn the CB/OS 2 block, from being primarily a gas resource to an oil field. We deployed technological strategies in order to triple the blocks output.



Geographical presence

Producing blocks

Ravva, Andhra Pradesh (PKGM-1)

225 acres

Onshore processing facility

307 mmbbl

Crude oil produced since inception (upto March 31, 2022)

In March 1993, hydrocarbon production began in the Ravva block of Andhra Pradesh. Considering our substantial holding in the block, our strategies were focused on growing the field's potential and increasing the asset's residual value. The field has pioneered many of India's operational firsts, including the use of time lapse (4D) seismic technology and Ocean Bottom Cable (OBC) seismic survey. Over the years, the block has produced ~307 million barrels of crude oil and 380 billion cubic feet of natural gas.

380 bcf

Natural gas produced since inception (upto March 31, 2022)

14,166 boepd

Gross average saleable production for FY 2021-22

OALP blocks

~60,000 km²

Acreage proven oil and gas basins, both conventional and unconventional play

~USD 800 mn

Capex for exploration

We have a total of 51 OALP blocks and two DSF blocks. We have undertaken a significant number of activities in these blocks including seismic and airborne surveys. We have also drilled six or seven wells in different blocks, leading to two additional discoveries.

We have a sizeable portfolio of OALP blocks in Rajasthan, Gujarat, and Assam, along with offshore blocks. We are in the process of judging their potential. When a specific block presents the potential for high output, we move towards production.

11 exploration wells

Drilled till FY 2021-22



Production and revenue

DAILY GROSS OPERATED PRODUCTION (BOEPD)

Particulars	FY 2020-21	FY 2021-22
Rajasthan	132,599	137,723
Ravva	19,177	14,166
Cambay	10,329	8,923
OALP	0	39
Average daily gross operated production	162,104	160,851

DAILY WORKING INTEREST PRODUCTION (BOEPD)

Particulars	FY 2020-21	FY 2021-22
Rajasthan	92,819	96,406
Ravva	4,315	3,187
Cambay	4,131	3,569
KG-ONN 2003/1	441	535
OALP	0	39
Average daily working interest production	1,01,706	1,03,737

OIL AND GAS PRODUCTION (MMBOE)

Particulars	FY 2020-21	FY 2021-22
Gross	59.2	58.7
WI	37.1	37.9

REVENUE

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
Net revenue	12,661	7,531	12,430
Gross revenue	25,555	18,475	32,903

OIL RESERVE – VOLUME AND TYPE OF ESTIMATED PROVED AND PROBABLE RESERVES AND PRODUCTION

Particulars	Oil (mmstb)	Gas (bscf)	Oil (mmstb)	Gas (bscf)
Reserves as of March 31, 2020	304	301	164	143
Additions/revision during the year	(11)	(14)	30	51
Production during the year	(32)	(28)	(32)	(28)
Reserves as of March 31, 2021	261	259	162	166
Additions/revision during the year	(19)	(34)	5	(9)
Production during the year	(32)	(36)	(32)	(36)
Reserves as of March 31, 2022	210	189	135	121

Message from Chairman

FUELLING INDIA'S ENERGY DREAMS

Dear Stakeholders,

I am often asked about the role businesses play in today's world, and my answer has remained constant. It is my firm belief that long-term success is dependent on how an organisation works towards creating a strong, resilient society for all.

On one hand, we witnessed the stability of the global oil markets being heavily undermined by COVID-19, and, more recently, the geopolitical conflict in Ukraine. While on the other, we saw an increase in awareness and positive action towards climate change, energy transition, circular economy, and digitalisation, all which have prompted the evolution of our sector. These developments reflect Cairn's conviction that sustainable development is crucial.

This sustainability report provides insights into our overall approach, initiatives, and performance, across environmental, social, and economic dimensions. It reflects our commitment to shifting our mindset and broadening our view to create value for all our stakeholders.

India's journey towards energy Aatmanirbharta

As one of the fastest-growing economies in the world, India is impacted by the volatilities of global crude oil prices. Today, we import 85% of our domestic crude oil needs, and with our economy set to grow, the domestic demand for energy resources is only expected to rise.

The government has been cognisant of this growing import burden and the outflow of foreign exchange to fuel our energy needs. To address this, several steps and conducive policies have been implemented to increase the domestic production of oil and gas.

As India's largest private oil and gas exploration and production company, Cairn Oil & Gas is currently producing ~25% of India's domestic crude oil production, and our vision is to build capabilities to ensure a 50% contribution in the years to come.

Committed to sustainable growth and transformation for good

At Vedanta, we have embraced and pursued sustainable practices that are aligned with India's net zero ambitions. The Group, as well as its subsidiaries, plays a key role in driving positive economic growth and building a sustainable future as ESG leaders in the respective sectors. Our ethos of 'Transforming for Good' is implemented through the levers of Transforming Communities, Transforming the Planet, and Transforming the Workplace.

By innovating technological solutions and using nature-based solutions to decarbonise our operations significantly, we set out to achieve net zero by 2050. Our vision is to minimise our environmental impact, and transition to zero harm, zero waste, and zero discharge. We also aspire to emerge energy self-sufficient or 'aatmanirbhar' by following a low carbon trajectory.

Prioritising community interests


Our local communities are key allies in our growth journey. We have undertaken initiatives to improve the socio-economic conditions in our areas of operations and are dedicated to transforming the lives of millions at the grassroots level.

One such testimony is Barmer district. The area has witnessed the impact oil and gas operations can have on the local economy, with per capita income seeing a staggering 650% rise since 2010.

Enriching our human capital

Our people are integral to our operations, and we are committed to ensuring their well-being and development. Our businesses generate direct and indirect employment to around 100 thousand people. We are also conscious of our role in empowering women and work towards achieving gender parity and diversity across all our businesses.

As an organisation, our focus is on building an ecosystem of values, culture, and passion—one that motivates our people to do more. Our talent strategy is closely tied in with our goal of doubling production and achieving aatmanirbharta in the energy sector responsibly. We believe in not just recruiting the best, but also ensuring they remain upgraded with the latest skills to emerge as future leaders. We always emphasis on the health, safety, well-being, and security of our employee and also the people around us.

 **We are steady in our commitment to 'Transforming for Good' and building a sustainable future for all.**

Way ahead

We are steady in our commitment to 'Transforming for Good' and building a sustainable future for all. Our focus will always be on the well-being of our people, local communities, and the environment.

I would like to express my sincere appreciation and gratitude to our stakeholders for their continuous support in taking us to our goals. As always, we will continue to be led by our vision to becoming a purpose-led organisation.

Regards,

Anil Agarwal
Chairman, Vedanta



Message from Vedanta CEO

PROGRESSING WITH RESPONSIBILITY

Dear Stakeholders,

At Vedanta, sustainability is an integral and non-negotiable factor. It helps us foster a nurturing environment that allows both our businesses and communities to flourish. As a company that is a role model for many, we lead by example and have made commitments to create a better world for everyone.

In the time during and post the pandemic, the oil and gas sector has faced several challenges on a global level. However, Cairn Oil & Gas' resilience and ability to adapt to the new normal has allowed us to stay committed to executing our business plans with precision. At the same time, we continue to progress on our sustainability journey that is aligned with Vedanta's renewed Environmental, Social, and Governance (ESG) purpose — 'Transforming for Good'.

Being the leader in sustainable operations is imperative to us, and this will be achieved through compliance to environmental standards and pioneering several sustainable projects.



With a purpose, towards a mission

Our ESG vision of 'Transforming for Good' is based on three pillars: Transforming the Planet, Transforming Communities, and Transforming the Workplace. These pillars are an indication of Vedanta's unwavering dedication to become the best-in-class, with the preparedness to deal with current and emerging risks. These pillars are supported by nine goals, each with specific quantifiable goals to track our progress. Staying true to our Group's vision, we are committed to 'transforming responsibly for securing India's energy future'.

For the planet

We are aware that our environmental stewardship focus, and efforts will continue to lead the way in helping us achieve a more sustainable energy future and the country. Taking the lead in response to larger climate change imperatives, we have a well-defined ESG programme with a strong commitment to achieve net-zero carbon by 2050 as a group and for oil and gas business as well.

Being the leader in sustainable operations is imperative to us, and this will be achieved through compliance to environmental standards and pioneering several sustainable projects. In addition to this, we have set focused targets of 'renewable energy power purchase of 25 MW by 2025 and 45 MW by 2030', 'exploring possibilities for harnessing geothermal energy by repurposing hydrocarbon wells', 'utilisation of flared gas from satellite fields', 'carbon offsetting through nature-based solutions' and 'carbon capture, utilisation, and or/storage (CCUS)'.

For our communities

We have always been supportive of the local communities around our operational regions. Their trust and support are essential for the continued longevity of our business and our contribution to society. We believe that their faith in us is our social license to operate and it is our fiduciary duty to conduct our operations responsibly and provide them with opportunities to grow along with us.

At the same time, we continue to build upon the strong social impact projects that help bring access to healthcare, education, livelihood programmes, revival

of cultural traditions, and development or upkeep of public infrastructure. Under our pillar of transforming communities, Cairn is committed to 'positively impacting 1 million people by 2030 through sustainable livelihood opportunities', 'educating ~9 million students by 2030 through digital education programmes' and 'uplifting 20 million women and children by investing in education, nutrition, healthcare, and welfare'.

For the workplace

Our focus on the capability building of our people has enabled us to elevate our employees for leadership positions. Transforming the workplace prioritises the safety and health of all our workers; promotes gender parity, diversity, and inclusion; and adheres to highest global business standards of corporate governance.

Our goal is to design efficient occupational health management systems and assist our management in areas of workforce health and wellness. We also focus on delivering high-quality therapeutic, preventive, and emergency medical treatment, frequent leadership interactions demonstrating HSE as foremost priority, Visible Felt Leadership (VFL) to raise awareness of safety, reporting unsafe acts and unsafe conditions, and tracking performances through key safety indicators remain key across our operations.

On the path to steady growth

Our focus is on maintaining production levels and growing resources across our portfolio. Additionally, we have established strategic relationships with global oil and gas service providers to leverage the best and latest in technology.

I am extremely proud of the significant progress we have made. This has been possible due to the unwavering confidence of our stakeholders. With this support, we are confident of advancing into a more diverse portfolio, building a stronger financial profile, and, most importantly, achieving a renewed ESG focus.

Regards,

Sunil Duggal
CEO, Vedanta Ltd.



Message from Cairn Deputy CEO

IN THE PURSUIT OF EXCELLENCE

Dear Stakeholders,

I am pleased to present our FY 2021-22 Cairn Oil & Gas Sustainability Report, highlighting our commitments and progress towards building a more secure and sustainable future for all our stakeholders.

ESG has always been a top priority for us. One aspect of our sustainability journey is a holistic socio-economic development while aiming to achieve energy *aatmanirbharta* for India. Our vision of transforming responsibly to secure India's energy future is a reiteration of our commitment to delivering growth responsibly and sustainably.

Transforming responsibly to secure India's energy future

At Cairn Oil & Gas, we believe it's essential to take care of the environment and positively impact society and the nation at large. Our ethos of 'Transforming for Good' is implemented through the levers of Transforming the Planet, Transforming Communities, and Transforming the Workplace.

Transforming responsibly for securing India's energy future



Transforming the Planet

By committing to Net Zero Carbon and Net Water Positivity along with protecting and enhancing biodiversity.



Transforming Communities

By providing nutrition and healthcare, education, and sustainable livelihood opportunities.



Transforming the Workplace

By promoting diversity, inclusivity and gender parity with constant focus on health and safety of all our employees and business partners.

Three prong strategy for business growth

- Increase production from existing blocks through investments and partnerships
- Explore unconventional energy sources
- Expand production footprint in new blocks

The oil and gas sector are among the eight core industries in India, and it plays a significant role in influencing all the other sectors of the economy.

India is the third largest consumer of crude oil

5.35 mn
barrels per day

Demand is projected to register a 2x growth to reach

11 mn
barrels per day by 2045

We plan to invest USD 5 billion over the next three to four years. This will act as a catalyst for augmenting production in existing fields and new blocks via focused exploration and technological interventions. India must develop its share of oil and gas. And, as the country's largest private oil producer, we have a huge responsibility.

Currently, we have 62 blocks of which five are under Production Sharing Contract regime and the remaining 57 blocks secured under Open Acreage Licensing Policy (OALP) & Discovered Small Fields (DSF) bidding rounds. Of the five Blocks under PSC regime, four are already operational, with Cairn having operatorship in three of these producing blocks. This includes our recently secured blocks (in Sep'22) wherein Cairn won bidding round for 8 DSF and 1 Coal Bed Methane (CBM) block, making us the largest private acreage holder in the country with ~62,000 sq km area.

Our vision is to contribute to 50% of India's domestic oil and gas production.

To achieve this, we are collaborating with global partners to devise breakthrough innovations and adopt cutting-edge technologies that will result in a sustainable growth portfolio. Our focus is on maintaining production levels and growing resources across our portfolio. We are pleased to announce that our exploratory endeavours in the year led us to two hydrocarbon discoveries (Durga-1 in Rajasthan and Jaya-1 in Cambay).



Message from Cairn Deputy CEO

Accelerating to net zero


We aim to be a leader in sustainable oil and gas operations by being compliant with environmental standards and pioneering sustainable projects in our operations. Some of our key projects include harnessing geothermal energy by repurposing hydrocarbon wells, utilising flared gas from satellite fields, converting our vehicle fleet to electric use, and offsetting emissions through nature-based solutions and CCUS.

We are also striving to maximise the use of renewable energy in our operations. One project that has seen success is using solar power at 13 of 36 Above Ground Installations (AGIs) in our midstream pipeline operations. These AGIs now depend on solar PV for their power needs. The goal is to shift the AGI load entirely to solar energy by 2025 and make the world's longest continuously heated and insulated hydrocarbon-carrying pipeline a greener and more efficient resource.

Sustaining net water-positive

Another priority area is water conservation and recently we have been declared as net water-positive company with NPWI (Net Positive Water Impact) index of 1.12. Further, four of our operational sites are declared net water-positive assets. To achieve this, we have implemented water conservation measures, effluent reuse-recycling and rainwater harvesting systems within facility areas and in community areas as well across all operational sites.

Our biodiversity initiatives at our offshore asset - Ravva is the catalyst for one of the largest mangrove areas in coastal India. The mangrove spanning over 56.4 acres and a greenbelt of 106 acres provide habitat for 150+ species of birds and 50+ species of butterflies. Along with sustainable waste management practices, we strive to limit our environmental impact and safeguard our planet's valuable resources.

 **We have been declared as net water-positive company with NPWI (Net Positive Water Impact) index of 1.12.**

Making an impact

86 mn lives

Benefitted from our CSR projects

We make social responsibility a priority in everything we do. We are committed to improving the lives of the communities around us, helping people find income-generating opportunities, education, nutritional food and healthcare, and more. Our Corporate Social Responsibility activities have benefitted 86 million people in and around our operational areas. We helped families during the pandemic by connecting their children to schools through our E-Kaksha project, a digital intervention which gave them access to quality education even in remote villages. To help members of our communities earn a living wage, we also introduced Cairn Dairy Development Projects that connect them to large milk producers in the country.

Nand Ghars – modern-day crèches – set-up in partnership with the Ministry of Women and Child Development, Government of India, is committed to the Prime Minister's vision of eradicating child malnutrition, providing education and healthcare to children, and skill development for women. We presently manage and operate 49 Nand Ghars in Barmer, Rajasthan.

Promoting safety-first culture

As a responsible business and people-focussed organisation, health, safety and well-being of our people is paramount. We always look for ways to enhance our health and safety across our operations to benchmark with gold standards in HSE practices. There is 60% reduction in our total recordable injury rate in the last two years. Our approach is to proactively implement HSEQ practices, including Visible Felt Leadership (VFL) digitalising HSEQ activities, and reviewing both leading and lagging safety indicators.

We have engaged with Dupont Sustainable Solutions (DSS) to transform our HSE culture and this journey has been titled suitably as Cairn Sustainable Safety Performance (CSuSP). We have also implemented many strategies, such as integrating our online safety observation platform (e-COP) into the Cairn Incident Management System (CIMS) and leveraging Artificial Intelligence (AI) and image analytics coupled with autonomous drone inspections for safety reporting.

Create equal opportunities for our people

Our goal is to create an inclusive environment where employees feel respected, heard and valued. We strive to promote gender parity and diversity in our teams. We currently have 17% women on staff, and we plan to get that number up to 30% by the year 2030. We aim to achieve 40% of women in leadership roles and 50% of female decision-makers by 2030. When it comes to attracting, retaining, and developing new talent, we are an equal-opportunity employer, and our personnel processes reflect our commitment of being an inclusive organisation.

Being ahead of the curve

Cairn Oil & Gas has planned its growth journey by intensifying exploration activities and improving recoveries from existing producing fields. By developing safety-conscious practices coupled with the best-in-class technical architecture, we have created a digitalised ecosystem for all levels of operations - from exploration to distribution. Project Pratham, our digital transformation programme designed to keep a forward-looking business

strategy in mind. This programme has led us to large-scale digital capability building interventions in our operations which has enabled improved efficiency on many fronts. With this initial success, we are confident these changes will take us far into the future.

Looking ahead with optimism

We are optimistic about the future and the growth of our company and so of the sector in India. We will continue in strengthening our ESG vision and incorporating robust practices across our oil and gas value chain. More importantly, we will strive to grow and deliver on our commitments aligned with the energy security of our nation.

Thank you to all our business partners, employees and stakeholders who have helped us secure a brighter tomorrow.

Regards,

Prachur Sah
Deputy CEO, Cairn Oil & Gas, Vedanta Ltd.





Our endeavor is to safeguard the surroundings by leveraging technology and innovation towards a sustainable business and eco-system.

Ravva offshore platform, Andhra Pradesh, India





Board of Directors

POWERED BY INSIGHT AND EXPERTISE

We have a diversified Board comprising several professionals with deep industry knowledge and expertise. Hailing from different backgrounds with unique perspectives, our Directors set the highest standards of control and governance, giving the Company direction and motivation to keep achieving new milestones. Our Board is composed of 50% Independent Directors and 25% women Directors, ensuring transparency, independence, and inclusivity.



Anil Agarwal

Non-Executive Chairman

Mr. Anil Agarwal is the Non-Executive Chairman of Vedanta Limited. Since March 2005, he has served as the Executive Chairman of Vedanta Resources. He established the Vedanta Group in 1976 and has close to four decades of mining and business expertise. He has helped create the Company's strategic vision to contribute to the greater goal of elevating communities.



Navin Agarwal

Executive Vice Chairman

Mr. Navin Agarwal has four decades of strategic leadership expertise and has been with the Vedanta Group since its establishment. Under his guidance, Vedanta has risen to the top of every key industry in which it operates. Mr. Agarwal, a commerce graduate of Sydenham College in Mumbai, has finished Harvard University's President Management Program.



Sunil Duggal

Whole-Time Director and Chief Executive Officer

Mr. Sunil Duggal was named Interim CEO of Vedanta Limited on April 6, 2020, followed by CEO on August 1, 2020, and a Whole-Time Director on April 25, 2021. He is a goal-oriented professional with 37+ years of experience directing high performance teams and 20+ years in leadership roles.

He has an Electrical Engineering degree from Thapar Institute of Engineering & Technology in Patiala and is an Alumnus of IMD, Lausanne Switzerland and IIM Calcutta.



Upendra Kumar Sinha

Non-Executive Independent Director

From February 2011 until March 2017, Mr. Upendra Kumar Sinha served as the Chairman of the Securities and Exchange Board of India (SEBI). He was essential in implementing critical capital market changes. Prior to joining SEBI, he was the Chairman and Managing Director of UTI Asset Management Company Pvt. Ltd. He has also worked for the Government of India's Ministry of Finance's Department of Economic Affairs.



Dindayal Jalan

Non-Executive Independent Director

Mr. Dindayal Jalan is a Chartered Accountant with 40+ years of expertise in business and financial management, in significant metal and mining industries. He is currently an entrepreneur and an Independent Director on the Boards of a number of well-known corporations. Prior to his retirement in 2016, he was the Group CFO of London-listed Vedanta Resources Plc. and an Executive Director and CFO of Vedanta Ltd.



Padmini Sekhsaria

Non-Executive Independent Director

Ms. Padmini Sekhsaria is a Principal of the Narotam Sekhsaria Family Office, where she oversees several investing and charitable initiatives. She has ~20 years of expertise in youth education, health, and vocational skill development. She possesses a doctorate degree in Financial Economics and is a graduate of the London School of Economics.



Akhilesh Joshi

Non-Executive Independent Director

Mr. Akhilesh Joshi was appointed to the Board of Directors on July 1, 2021. He received his Bachelor of Mining degree from MBM Engineering College in Jodhpur. He graduated from the Paris School of Mines with a Diploma in Economic Evaluation of Mining Projects.

Mr. Joshi has 44+ years of professional mining expertise and has nurtured one of the world's biggest integrated zinc, lead, and silver producing organisations.

To read more, please refer to [Vedanta Limited Integrated Report 2021-22 \(Page 58-61\)](#)



Priya Agarwal Hebbar

Non-Executive Non-Independent Director

Ms. Priya Agarwal Hebbar is Vedanta's Non-Executive Director. She is passionately committed to the environment and sustainability, and she has been instrumental in enhancing Vedanta's ESG policies.

Ms. Hebbar formerly worked in public relations at Ogilvy & Mather and Rediffusion Y&R. She earned a B.Sc. in Psychology and Business Management from the University of Warwick in the United Kingdom.



Executive committee

DRIVEN BY PROFICIENT LEADERSHIP



Prachur Sah
Dy. Chief Executive Officer

Mr. Prachur Sah joined Cairn Oil & Gas, Vedanta Ltd. in August 2018 and was appointed as the Deputy Chief Executive Officer in October 2020.

Experience: 22 years
Education: B.Tech from IIT Bombay; MSc from Herriot Watt



Pushkar Kataria
Chief Human Resource Officer

Mr. Pushkar Singh Kataria joined Cairn Oil & Gas, Vedanta Ltd. in December 2018 and was appointed as the Chief Human Resource Officer in October 2020.

Experience: 25 years
Education: BE from GEC; MBA from Symbiosis



Martyn Smith
Chief Operating Officer

Mr. Martyn Smith joined Cairn Oil & Gas, Vedanta Ltd. as the Chief Operating Officer in November 2021.

Experience: 35.6 years
Education: BSc from Cardiff; MBA from INSEAD



Hitesh Vaid
Chief Financial Officer

Mr. Hitesh Vaid joined Cairn Oil & Gas, Vedanta Ltd. in August 2007 and was appointed as the Chief Financial Officer in February 2022.

Experience: 18.3 years
Education: CA from ICAI



Rakesh Agiwal
Chief Commercial Officer

Mr. Rakesh Agiwal joined Cairn Oil & Gas, Vedanta Ltd. in September 2004 and was appointed as the Chief Commercial Officer in April 2021.

Experience: 26.2 years
Education: CA



Praveen Palakeezhil
President – Business Development & Policy

Mr. Praveen Palakeezhil joined Cairn Oil & Gas, Vedanta Ltd. as the President – Business Development & Policy in April 2022.

Experience: 22 years
Education: B.Tech from IIT Bombay

Our sustainability approach

SUSTAINABILITY AT CAIRN

A successful business is defined not just by its profitability but also by its commitment to attaining sustainable development for the long haul. By effectively strengthening our ESG focus, we have embarked on a journey to transform our way of doing business. We are embracing strategies and targets that align with Vedanta’s vision of ‘Transforming for Good’.

With our renewed purpose of ‘Transforming Responsibly for Securing India’s Energy Future’, we intend to contribute 50% of India’s domestic oil and gas production. Our three pillars of ‘Transforming Communities, Transforming the Planet, and Transforming our Workplace’ will pave the way for a sustainable future not only for ourselves but also for the environment and India as a whole.

We are committed to holistic socio-economic development of the communities around our operations. We are proactively minimising our environmental footprint and innovating for a healthier planet. We also strive to promote gender parity, diversity, and inclusivity, adhering to global corporate governance standards. The health and safety of our employees, as well as our business partners is also one of our primary focus areas and we continually upgrade our processes to ensure the highest standards of foresight.



Our sustainability approach

Transforming Communities



Our ESG commitments

Positively impact 1 million people by 2030 through sustainable livelihood opportunities

Educating ~9 million students by 2030 through digital education programmes

Uplifting 20 million women and children through education, nutrition, healthcare, and welfare

Key areas of action

- ▶ Sustainable livelihood programmes
- ▶ Farm and non-farm livelihood opportunities (agri, dairy, livestock etc.)
- ▶ Youth training
- ▶ Skill development
- ▶ Vocational trainings

- ▶ E-Kaksha project (digital education programmes)
- ▶ 151 ICT (Information and Communication Technology) labs in Barmer district school by 2025
- ▶ Project Ujjwal

- ▶ Nutrition and healthcare
- ▶ Safe drinking water
- ▶ Wellness and fitness outreach
- ▶ Women empowerment
- ▶ Early childhood care and education
- ▶ Nand Ghar

Transforming the Planet



Our ESG commitments

Achieving net zero carbon by 2050

Sustain net water positive impact

Planting 2 million trees by 2030

Protect and enhance biodiversity throughout the project lifecycle

Key areas of action

- ▶ Renewable energy projects
- ▶ Exploring opportunities to harness Geothermal Energy by re-purposing hydrocarbon wells
- ▶ Utilisation of flare gas from satellite fields
- ▶ Transition to electric vehicles
- ▶ Nature-based solutions for carbon offsets
- ▶ Carbon capture, utilisation, and/or storage (CCUS or CCS) opportunities
- ▶ Support communities to adapt to the impacts of climate change

- ▶ Reduction in freshwater withdrawal
- ▶ Maximising reuse-recycling rate of trade effluent and domestic sewage
- ▶ Maximising produced water recycling rate
- ▶ Rainwater harvesting and recharge structures
- ▶ Access to safe drinking water

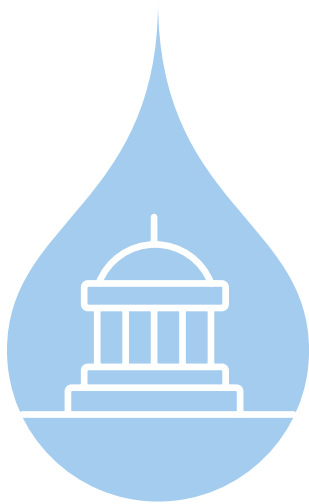
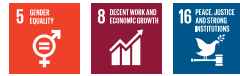
- ▶ Developing carbon sink through mass plantation
- ▶ Plantation of indigenous and native species to support local biodiversity
- ▶ Agro-forestry models involving community farmers to provide livelihood opportunities
- ▶ Protect habitat and restore ecosystem

- ▶ Biodiversity assessment and projects to achieve "No net loss" and strive for "Net positive impact"
- ▶ Supporting wildlife through construction of dedicated drinking water facilities in forest areas
- ▶ Proliferation of native and ecologically sensitive species
- ▶ Protection of endangered species
- ▶ Afforestation/social forestry across locations (incl. offsets)
- ▶ Supporting local communities for biodiversity enhancement through Agro-forestry projects



Our sustainability approach

Transforming the Workplace



Our ESG commitments	Key areas of action
Prioritising safety and health of all employees	<ul style="list-style-type: none"> ▶ To be in top quartile in HSE performance amongst E&P industries ▶ Strengthening of process safety management ▶ Cairn sustainable safety excellence programmes ▶ Strengthening occupational health management and upgrading medical facilities
Promote gender parity, diversity, and inclusivity	<ul style="list-style-type: none"> ▶ 30% women in overall workforce by 2030 ▶ 40% women in leadership role by 2030 ▶ 50% women in decision making roles by 2030 ▶ Equal opportunity to diverse candidates in all recruitment drives ▶ Policies to support diverse talent groups to enable inclusivity ▶ Leadership development programmes
Adhere to global business standards of corporate governance	<ul style="list-style-type: none"> ▶ Transparency and performance disclosures ▶ Risk management and controls ▶ Ethical work practices ▶ Women representation in decision-making bodies

Mission Net Zero Carbon

As a responsible corporate citizen, we are cognisant of the urgent need to align with the larger climate imperative. To this end, we have added a new paradigm to our ESG approach, committing to achieve Net Zero Carbon by 2050. This renewed ESG-focused programme has enhanced our ability to meet India's growing energy needs, sustainably. With our philosophy of "Zero Harm, Zero Waste, Zero Discharge", we are working towards formulating robust targets to bolster India's journey towards 'Aatmanirbharta'.



Vedanta Sustainability Framework (VSF)

VSF drives our operational and social excellence, enabling us to achieve business outcomes while imbuing sustainability into our communities and the environment. We educate, train, and develop employees in this framework, ensuring that they adhere to industry-leading sustainability standards in all areas of our business.

Our sustainable development agenda is built on four pillars:

- ▶ Responsible stewardship
- ▶ Building strong relationships
- ▶ Adding and sharing value
- ▶ Strategic communications

These are established in line with our core values, internal and external sustainability imperatives (such as materiality), UNGC's principles, UNSDGs, and standards set by International Finance Corporation (IFC), ICMM, and OECD.

Four pillars of sustainability framework



Responsible stewardship

Ensuring effective and appropriate business processes by way of robust compliance and risk management, ensuring health and safety of our employees, and responsibly managing environmental and social impacts.



Building strong relationships

Meaningfully engaging with the people and organisations that are interested in our business.



Adding and sharing value

The direct and indirect positive economic impact we make by investing in people through employment, infrastructure, technology, and taxes, royalties and other payments to local, state, and national governments.



Strategic communications

Enables the organisation to engage with our stakeholders in a transparent dialogue, aiding in the implementation and strengthening of efforts that make us a responsible corporate citizen.

Nine policies

- ▶ HSE&S
- ▶ Energy and Carbon
- ▶ Water
- ▶ Biodiversity
- ▶ HIV-AIDS
- ▶ Human Rights
- ▶ Social
- ▶ Supplier and contractor sustainability management
- ▶ Indigenous people and vulnerable tribal group policy

92 standards and guidance notes

- ▶ Covering all the policy subject areas
- ▶ In line with ICMM, IFC performance standards, Global Reporting Initiative (GRI)

Robust monitoring

- ▶ Annual audit (VSAP) conducted at all Vedanta locations to check compliance with VSF
- ▶ Monitored by Group ExCo

To read more, please refer to Vedanta Limited Sustainability Report (Page 18-19) and <https://www.vedantalimited.com/eng/esg-sustainability-framework.php>

Our sustainability approach

Sustainability governance

We are deeply committed to imbibe sustainability into our strategy and operations. We take the lead in managing and establishing a robust sustainability governance process to make sure all of our strategies are aligned.






We have broadened the scope of the former Board Sustainability Committee and adopted a new ESG governance structure. The ESG Committee, along with our Group Sustainability and ESG function, are responsible for starting, mainstreaming, and monitoring initiatives under the 'Transforming for Good' agenda. We have created dedicated forums for regular management supervision at all levels.

We have also put together ESG focused groups at each BU and SBU to own projects and ensure timely implementation.

Detailed insight of our Governance structure can be found in Vedanta Limited's Annual Integrated Report. Our Board of Directors offer strategic viewpoints to lead the Company in accordance with the obligations made to diverse stakeholders. The Board Sustainability Committee has been renamed the Board ESG Committee. The Committee meets twice a year and continues to oversee the execution of our ESG goals, beginning July 2021.

Forums set up to drive ESG agenda

ESG Board sub-committee

	Group ESG ExCo (Part of Group ExCo)	Monthly forum with ExCo to update on overall ESG progress
	ESG ManCom	Fortnightly meeting to oversee the overall programme update
	Corporate Transformation Office	Weekly meeting with Group CEO to drive and accelerate the implementation of high-impact projects
	Transformation Office - BU and Functional	Monitor progress and drive implementation across the organisation
	Community of Practice (CoPs)	12 CoPs and 250+ community members identified across all BUs/SBUs to drive agenda within communities

Communities of Practice (CoP) – taking ESG to the shop floor

We needed an organisational structure that would enable us to integrate the policies, standards, and KPIs across all organisational levels in order to put our ESG vision into practice. We also needed avenues that allowed those on the shop floor to identify opportunities and best-practices and send them up the organisational hierarchy so that they could be adopted across all Business Units. By doing so, we could both give internal subject-matter specialists the

chance to participate in how the organisation promotes ESG while also accelerating the achievement of our ESG goals. We are also cognisant of the fact that any policy changes we make, must be driven across functions (such as HR, Commercial, and Finance) in order for ESG-thinking to influence every action we take.

The 11 CoPs

- ▶ Carbon and Energy Management
- ▶ Biodiversity Management
- ▶ People (HR)
- ▶ Supply Chain
- ▶ Water & Effluent Management
- ▶ Waste Management
- ▶ Communications
- ▶ Acquisition
- ▶ Communities
- ▶ Health and Safety
- ▶ Expansion (Projects)

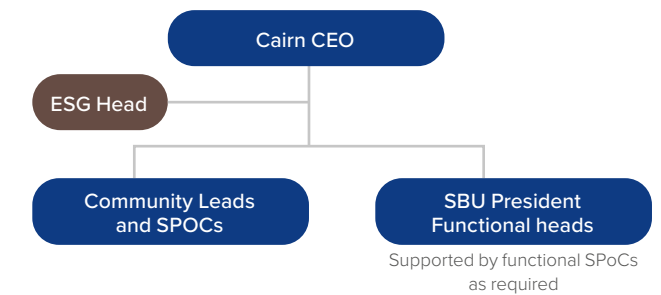
ESG governance structure

Cairn ESG transformation office

Frequency: Fortnightly

Charter:

- ▶ Overall progress on ESG commitments
- ▶ Review progress against ESG KPIs
- ▶ Progress on high impact (A-class) projects
- ▶ Review performance of ESG committees - initiative wise progress
- ▶ De-bottlenecking
- ▶ Guidance for new opportunities



Community meetings

Frequency: Weekly/as required

Charter:

- ▶ Progress on high impact (A-Class projects)
- ▶ Driving initiatives related to the assigned area of ESG and delivering performance against KPIs
- ▶ Building and providing topic-related expertise, new ideas/opportunities as per best practices
- ▶ Update on group-wide initiatives

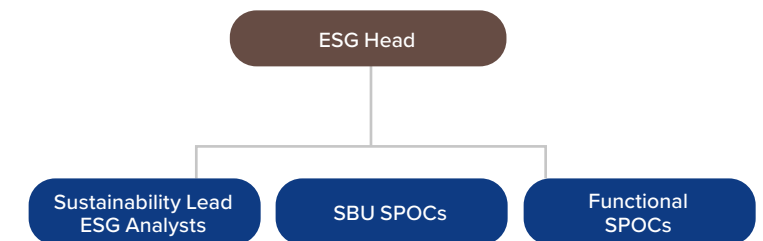


ESG core team

Frequency: Twice a week/as required

Charter:

- ▶ Problem solving on SBU, initiative wise
- ▶ SBU wise progress update on KPIs
- ▶ De-bottlenecking for initiatives
- ▶ Guidance as per Global ESG initiatives, best practices from peer industries
- ▶ Update on group-wide initiatives and other Vedanta BU's initiatives



Stakeholder engagement

PRIORITISING STAKEHOLDER INTERESTS

Establishing successful relationships with our stakeholders is of paramount importance to us. We make it a point to maintain constant contact with key stakeholders and be aware of the issues they face. This helps us identify material issues, while staying ahead of emerging risks, opportunities, and challenges. We believe that open communication is key to building successful relationships with our stakeholders.

Our social responsibility performance standards ensure effective engagement with relevant stakeholders across multiple geographies. These also provide adequate grievance mechanisms to help resolve situations of potential conflict, in addition to developing specialised measures for potentially vulnerable communities, such as indigenous people.

Our five principles of engagement

Ask
Our dialogue begins with questions that solicit feedback. Our stakeholders have access to multiple platforms to reach out to us and voice their concerns.

Answer
We disclose not just because we want to be heard, but also because we feel responsible. We aim to provide a constructive response to feedback received.

Analyse
We have established a robust investigation process for complaints reported.

Align
We work hand-in-hand with stakeholders and align our goals and actions with their high-priority areas.

Act
We support our words with demonstrable actions that move the needle towards promised outcomes.

Our key stakeholders

 <p>Local communities Strong relationships with our communities is critical for our social licence to operate.</p>	<ul style="list-style-type: none"> ▶ Community connect programme “Samman Se Samvad Tak” ▶ Community group meetings ▶ Village council meetings 	<ul style="list-style-type: none"> ▶ Community needs/social impact assessment ▶ Public hearings ▶ Grievance mechanisms ▶ Cultural events ▶ Engaging with communities via various community initiatives ▶ Dedicated communication channel Secretary.cf@cairnindia.com
 <p>Employees Employees are crucial to our growth, as they are at the centre of all our operations. Their experience, expertise, and teamwork, are imperative for our organisation to achieve its goals and vision.</p>	<ul style="list-style-type: none"> ▶ Chairman’s/Group CEO’s townhall ▶ CEO’s town hall meetings ▶ SBU President’s townhall ▶ Feedback sessions 	<ul style="list-style-type: none"> ▶ Performance management systems ▶ Various plant-level meetings ▶ V-connect mentor programme ▶ Wellness committee ▶ Employee grievance ▶ HR helpdesk ▶ Dedicated communication channel Secretary.cf@cairnindia.com
 <p>Business partners Business partners are crucial to delivering growth, development, and performance excellence with respect to operations, safety, and ESG.</p>	<ul style="list-style-type: none"> ▶ Monthly business partners meet ▶ Monthly safety council 	<ul style="list-style-type: none"> ▶ HSE performance review meeting ▶ Focused group discussions ▶ Communication channels ▶ Regular meetings and site interactions
 <p>Shareholders, investors, and lenders They play a crucial role in our growth and development plans. Along with providing financial capital, they play a significant role in promoting robust corporate governance.</p>	<ul style="list-style-type: none"> ▶ Regular updates ▶ Investor meetings ▶ Site visits ▶ Annual General Meeting and conferences 	<ul style="list-style-type: none"> ▶ Quarterly result calls ▶ Dedicated contact channel – Vedantaltd.ir@vedanta.co.in and sustainability@vedanta.co.in
 <p>Civil society Collaboration and partnerships are necessary to support and promote sustainable business practices. Our partnership with civil societies contribute to our efforts towards creating shared value.</p>	<ul style="list-style-type: none"> ▶ Partnerships with, and membership of international organisations ▶ Working relationships with organisations on specific projects 	<ul style="list-style-type: none"> ▶ Engagement with international, national, and local NGOs ▶ Conferences and workshops ▶ Dedicated contact channel corporate.communication@cairnindia.com
 <p>Value-chain partners, suppliers, and customers Maintaining a positive relationship with our collaborators provides us with the opportunity to raise growth capital.</p>	<ul style="list-style-type: none"> ▶ Customer satisfaction surveys ▶ Vendor meets ▶ Suppliers/Customers meet 	<ul style="list-style-type: none"> ▶ In-person visits for customers, and suppliers’ and vendors’ meetings ▶ Dedicated communication channel reach.pscm@cairnindia.com
 <p>Regulatory stakeholders They are significant in ensuring compliance, adhering to regulations, and carrying out uninterrupted operations.</p>	<ul style="list-style-type: none"> ▶ Participation in government consultation programmes 	<ul style="list-style-type: none"> ▶ Engagement with national, state, and regional government bodies at business and operational level

Materiality assessment

FOCUSING ON THE IMPERATIVES

Global investors, regulators, and other important stakeholders are increasingly emphasising on decarbonisation, while enabling a socially just and economically viable transition. With the view to staying ahead of the curve, and mitigating any potential ESG risks, we have conducted a detailed assessment of material issues through an independent agency by engaging a wide spectrum of internal and external stakeholders.

Our materiality assessment helps us in identifying key issues significant to our internal and external stakeholders. It allows us to develop strategies for risk management and better capitalise on opportunities. We believe in open communication and listening to our stakeholders, because it helps us anticipate market scenarios that may affect our ability to create value over the short, medium, or long term.

In the year under review, we conducted an extensive materiality analysis. We engaged with relevant stakeholders and collected their responses to identify ESG issues pertaining to our organisation. Extensive brainstorming sessions were conducted with business functions, along with consultations with subject matter experts for mapping out the potentially relevant material topics. The materiality matrix is reviewed and ratified by the Cairn Management Committee and leadership team.

Stakeholders consulted to identify our critical material topics



Standards referred



Approach to materiality assessment

Identifying material topics

We used a four-step approach to identify material topics. An initial list of 126 topics were narrowed down to create and to collect qualitative and quantitative inputs of 28 material ESG topics.



Industry material topics
Material topics recommended by six industry specific standards were identified.

Peer review
Topics considered material by 11 peer companies were reviewed.

Consolidated list
A consolidated list of key topics identified from standards and peers was prepared.

MECE list
The consolidated list was reviewed to identify the Mutually Exclusive and Cumulative Exhaustive (MECE) set of 28 material topics to be considered as a base for survey and interview questionnaires.

Gathering stakeholder inputs

We finalised and prioritised our internal and external stakeholders based on influence, impact, and dependency. This was followed by developing stakeholder-specific data collection tools, such as interview guides and survey questionnaires, to collect qualitative and quantitative inputs.



Preparation of materiality matrix

The data collected from stakeholders was analysed to prepare the materiality matrix. For qualitative inputs, we identified common themes from stakeholder inputs and mapped their aspirations. For quantitative inputs, we normalised responses to a common scale for prioritising ESG topics. The weight that each stakeholder had in the analysis was assessed differently depending on the criticality of the stakeholder.



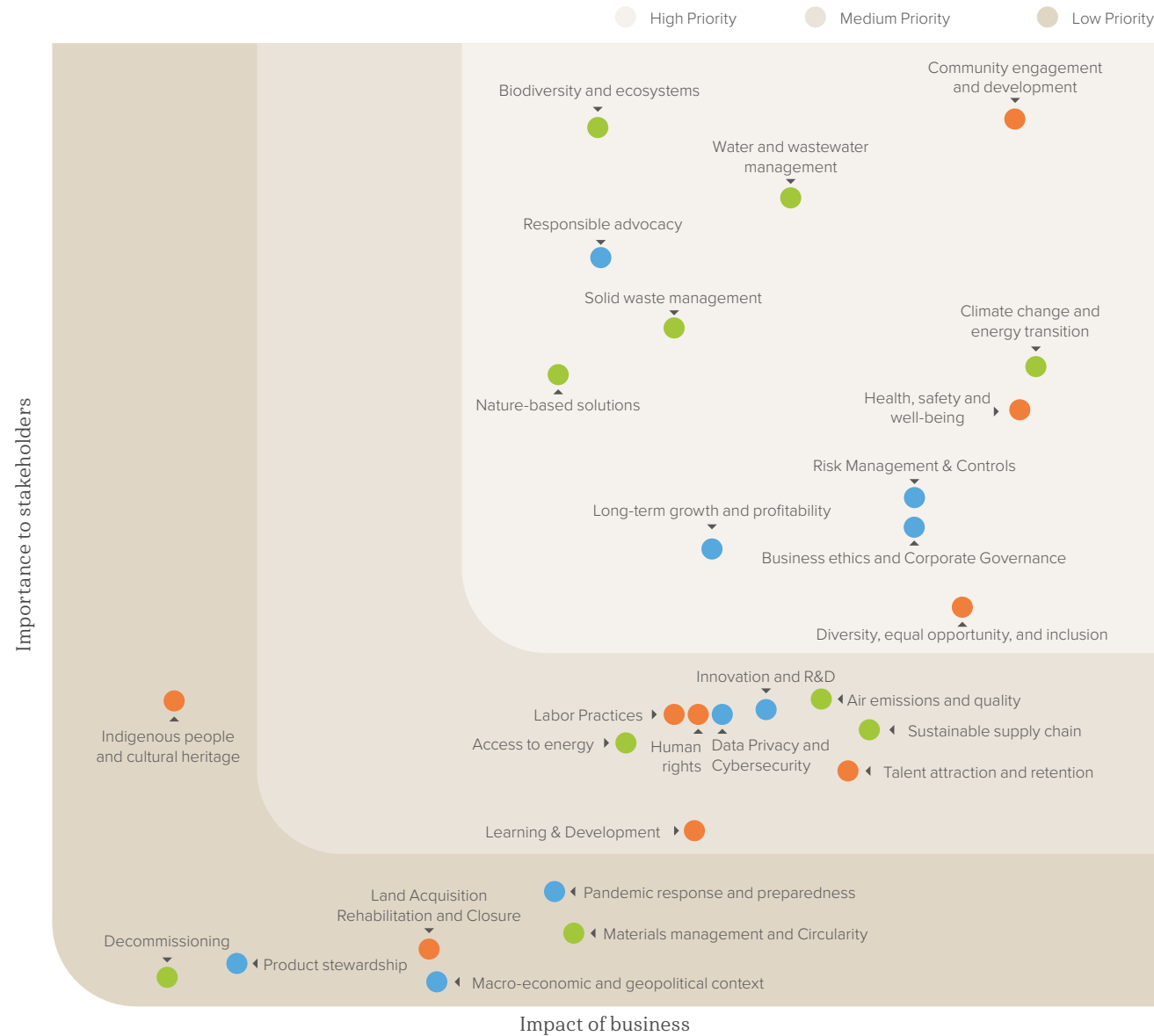
Finalisation of the materiality matrix

We organised a workshop with our senior management to receive feedback and finalise materiality matrix.



Materiality assessment

Materiality matrix



High priority material topics




<p>E</p> <ul style="list-style-type: none"> ▶ Climate change and energy transition ▶ Nature-based solutions ▶ Water and wastewater management ▶ Solid waste management ▶ Biodiversity and ecosystem 	<p>S</p> <ul style="list-style-type: none"> ▶ Community engagement and development ▶ Health, safety, and wellbeing ▶ Diversity, equal opportunity, and inclusion 	<p>G</p> <ul style="list-style-type: none"> ▶ Business ethics and corporate governance ▶ Risk management and control ▶ Long-term growth and profitability ▶ Responsible advocacy
---	--	---

Management approach for various material topics

Material topics

<p>High priority</p> <ul style="list-style-type: none"> ▶ Climate change and energy transition ▶ Nature-based solutions ▶ Water and wastewater management ▶ Solid waste management ▶ Biodiversity and ecosystems ▶ Community engagement and development ▶ Health, safety, and well-being ▶ Diversity, equal opportunity, and inclusion ▶ Business ethics and corporate governance ▶ Risk management and controls ▶ Responsible advocacy ▶ Long-term growth and profitability 	<p>Medium priority</p> <ul style="list-style-type: none"> ▶ Access to energy ▶ Air emissions and quality ▶ Sustainable supply chain ▶ Human rights ▶ Labor practices ▶ Talent attraction and retention ▶ Learning and development ▶ Data privacy and cybersecurity ▶ Innovation and R&D 	<p>Low priority</p> <ul style="list-style-type: none"> ▶ Decommissioning ▶ Macro-economic and geopolitical context ▶ Product stewardship ▶ Land acquisition, rehabilitation, and closure ▶ Indigenous people and cultural heritage ▶ Materials management and circularity ▶ Pandemic response and preparedness
---	---	--

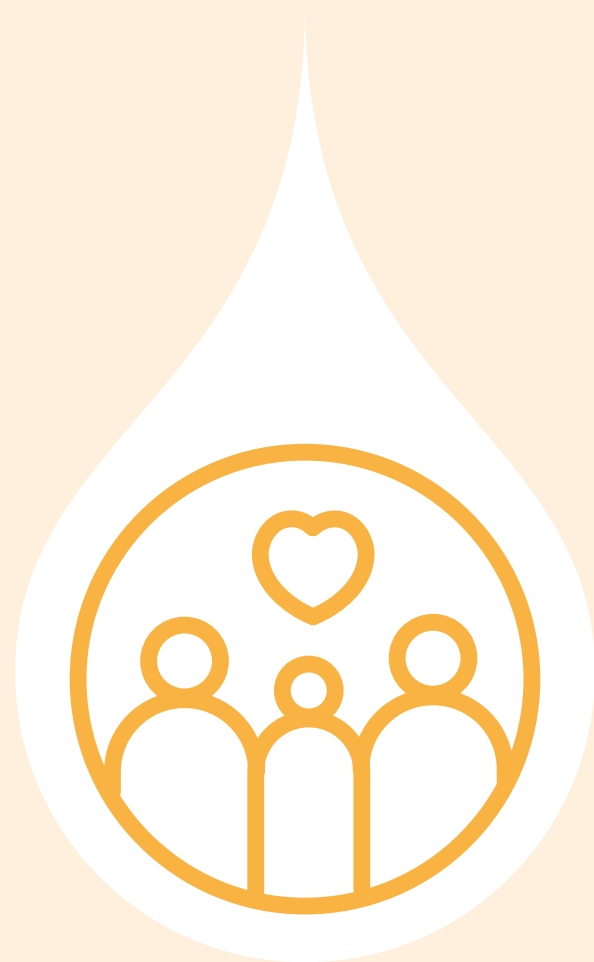
Management approach

<p></p> <p>Lead and shape</p> <ul style="list-style-type: none"> ▶ These topics can significantly impact our business performance ▶ We look at setting industry benchmarks in these topics ▶ We are actively involved in policy advocacy on these topics to ensure that a strategic, balanced and forward-looking approach is adopted in these areas 	<p></p> <p>Align and amplify</p> <ul style="list-style-type: none"> ▶ We align with industry best practices on these topics ▶ We closely monitor these topics to reshape strategy, if any of them transition into "high priority" category in the future 	<p></p> <p>Manage and comply</p> <ul style="list-style-type: none"> ▶ Whilst these topics are low priority, they are still relevant to our business, and therefore we continue to manage and monitor them ▶ We ensure regulatory compliance for these topics
---	--	--



Sustainable livelihood and empowerment for women is a key focus while developing community level interventions

Women engaged in handloom weaving, Jorhat, Assam



TRANSFORMING COMMUNITIES

We are committed to conducting our businesses in a socially responsible manner. Empowering our local communities to promote inclusive growth is our top-most priority. Our social responsibility programmes are aligned with the needs of our communities, facilitating social-economic upliftment. Our two-pronged approach involving partnerships with, the government and the communities makes our CSR activities more impactful.

Our commitments



Positively impacting
1 million people by 2030
through sustainable
livelihood



Educating
~9 million students
by 2030 through digital
programmes



Uplifting
20 million women
and children by investing
in education, nutrition,
healthcare, and welfare

Focus areas linked with UN SDGs



Agricultural and animal husbandry



Healthcare



IEC (Information, Education and Communication) and microlevel interventions



Children's well-being and education



Drinking water and sanitation



Sports and culture



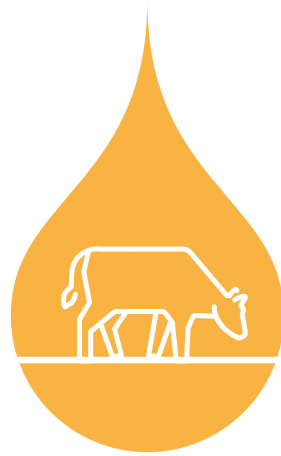
Skill development



Community infrastructure development



Transforming Communities



AGRICULTURE AND ANIMAL HUSBANDRY

We support local farming communities in earning a better livelihood by training them in different technologies and management practices.

1,05,900

Lives impacted



SDGs impacted

Barmer Unnati

The project aims to develop livelihood models and implement value chain interventions, to help farmers in the region increase their income. We are introducing them to different crops, technologies, and natural resource management practices.

38,000 beneficiary

Lives impacted

~6,000 farmers

Benefitted, since inception

Dairy Development Project

The project focuses on enhancing income of dairy farmers and mitigating regional problems, including issues related to adulteration of milk, involvement of middlemen, among others. It has also helped women engage with self-help groups and financial institutions for training and soft loans respectively.

5,683 farmers

Impacted across 61 villages



A Company that thinks about its communities: Dairy development project

In 2018, Laxman Ram Choudhry attended a Dairy Development Project introduction session held at the primary school in Gandhav Khurd village. Initially, he was hesitant but subsequent interactions with the project team helped alleviate his doubts. Soon after, he agreed to join the project and started supplying milk to the dairy collection units. In a short period, he began witnessing the benefits of the project which included increased awareness, better training, access to green fodder and veterinary services, among others. He realised that becoming an active member would bring more such benefits in the long run, compared to selling milk to the local middlemen.

Since its inception, our Dairy Development Project has created significant impact. Average milk collection has increased from 200 litre/day at ₹8-10 per litre in 2009, to 19,804 litre/day at ~₹43 per litre in 2021, a remarkably improved market price.

Over the last three years, Laxman Ram has successfully gotten made both his sons to complete their schooling, built a house, and increased his cattle count from just three goats to six goats, three buffaloes, and a cow. He has also taken on the role of collecting milk from his village with his newly purchased Bolero Camper vehicle, helping to maximise the project outreach.

“All I see is how much my family and I have developed due to my association with Cairn’s Dairy Development Project ”

-Laxman Ram Choudhry



Transforming Communities



CHILDREN'S WELL-BEING AND EDUCATION

In order to create sustainable change in communities, we need to empower women and children. Through our initiatives, we make quality education accessible to children and empower them to make sound choices for a better life.

8,28,25,958

Lives impacted



SDGs impacted

Nand Ghar

The primary objective of this project is to strengthen the effectiveness of the government's Integrated Child Development Services. Through our efforts, we will improve the health and well-being of children under six years of age. We have set up 49 Nand Ghars in Barmer, Rajasthan to implement this goal. To promote a community ownership approach, we have organised community-based monitoring committees.

18,060 beneficiaries

Since the inception of the Nand Ghar initiative

Anganwadi project

We have created a state-of-the-art anganwadi centre to provide need-based support services (as determined by the baseline study analysis), ensuring the holistic development of children. We are also carrying out IEC activities to instil a sense of ownership within all. We have refurbished and handed over 11 anganwadi centres in Gujarat to communities for improved delivery of services to students.

296 students

From 11 refurbished anganwadi centres in Gujarat benefitted

Ujjwal project "Ghar Bethe Gyan Ganga"

Through this project, we have initiated education interventions in 33 schools that were identified across our operational areas in Gujarat. The focus was to improve basic school infrastructure, introduce behavioural change sessions, conduct capacity-building training for teachers, and include smart classes for improving overall academic results. COVID-19 brought with it sudden changes that created uncertainties and stressful times for everyone, including students.

To address this, we initiated a unique e-connect programme "Ghar Bethe Gyan Ganga," which focused on using technology, such as laptops, organising virtual meets, online training, and sessions with experts (behavioural and academic). We also coordinated with school teachers and parents to create peer learning groups, to help students who lacked access to any digital medium.

1,25,700 students

Benefitted through Ujjwal project

Giving wings to young girls' dreams

Our work on behavioural change especially related to menstrual health and hygiene has brought about a significant paradigm shift in understanding issues related to school education for girls. We have worked closely with adolescent girls, empowering them to make home-based safe and clean sanitary napkins. This has created a clean breakthrough in the practice of confining girls to their homes during menstruation. We also created proper sanitary facilities, helping reduce the school dropout rate of girls.

In addition, we organised awareness sessions to address the social stigma present in the community. It resulted in improved school attendance and better support extended by parents towards completion of higher education of girls. Under the Ujjwal project, 1,500+ girls across 33 government schools have been sensitised regarding the importance of menstrual health.



E-Kaksha

We signed a tripartite MoU with the Department of Education and Mission Gyan for this project, to provide free and quality education through digital platforms, for the government schools of Rajasthan. Since its launch in October 2020, educational videos are uploaded on the E-Kaksha channel on YouTube which has not only impacted the students of our operational area but also established a nationwide footprint.

In FY 2021-22, 4,27,774 new subscribers were added to the platform, generating over 82 million views.

7 lakh students

Subscribed to our platform, garnering 12 cr views





Transforming Communities



Community help-desk project

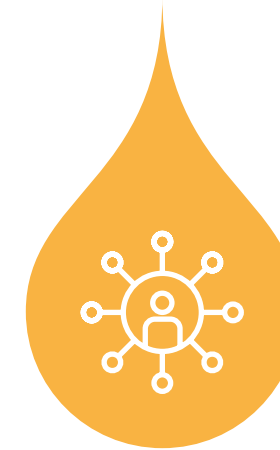
Launched in February 2020, the project aims to improve the overall community access to various government welfare schemes across Gujarat and strengthen its utilisation by eligible beneficiaries. To facilitate this, six digital-powered community helpdesk centres were set up around Cairn's operational areas in partnership with Gujarat CSR Authority.

10,795 beneficiaries
with 1,094 directly linked to government schemes

Giving a voice to the underprivileged

Sadhu Manhulabe Farshurambhai (65) belongs to Hansalpur Village. After the demise of her husband, she had to resort to doing household work for others, in order to sustain herself. With poor health, meagre income, and no one to support her, it had become extremely difficult to make ends meet. The Cairn Community Helpdesk team provided her with the necessary information regarding the benefits from multiple government schemes that she was eligible for. Before the Helpdesk team approached her, Manhulaben was not aware of the benefits she could get from the provisions made by the Government.

Today Manhulaben is a beneficiary of the 'Vidhya Sahay Yojana' which provides direct cash transfers to economically marginalised women who have lost their husbands. With the help of this monetary support, she has been able to become more self-reliant than before. Under this project, we have so far helped 1,500+ community members across the selected villages.



SKILL DEVELOPMENT

We invest in the upskilling of our communities, empowering more people to earn their own livelihoods. We have established two vocational training centres, Cairn Enterprise Centre (CEC), Barmer, and Cairn Centre of Excellence (CCoE), Jodhpur, for helping the rural youth to develop skills that make them employable.

2,628
Lives impacted



SDG impacted

In FY 2021-22, we organised certified trainings across various skills for 438 students. Some of the professions covered include Computer Operator, Electrician, Debt Recovery Agents, Goods and Services Tax (GST) Accounts Assistant – Online, Handset Repair Engineer (Level II), among others. In these vocational centres, the focus is to provide a hands-on-learning experience

along with classroom learning through exposure visits to shop floors, interaction with industry experts as well as project work. In addition, continuous engagement with students through weekly training activities, celebration of batch ceremonies, alumni connections, and commemorating special days helped create enthusiasm and connect among students.

'ZERO TO HERO'- the shining star of the village

Goga Ram from Mokhab village of Barmer District joined his father as a masonry labourer.

Not liking the job, he was on the lookout for different avenues when he came across Krishna. As an alumnus of Cairn Enterprise Centre, Krishna suggested to enrol in a vocational course for upskilling. Given that Goga Ram had dropped out of school due to financial crisis, he was not certain whether this would be the right option for him. He visited the centre and attended a counselling session that ultimately convinced him to join the Electrical batch.

Soon enough, he developed conviction about both the institute and his training. The industry exposure, soft skill classes, basic computer skills, and English-speaking knowledge along with academic hands-on learning, made the three-month long training period an impactful experience.

Initially he found it hard to adhere to basic decorum like punctuality, but soon he realised how essential these skills were in order to work in companies. We provided him with a placement opportunity with Tata Motors at Ahmedabad, where he started earning ₹ 12,500 per month.

While things were going well for him, during the COVID-19 pandemic he lost his job. For guidance, he reached out to the centre again, where he received assistance from the CEC placement cell. He applied to L&T, where post rigorous interview rounds, he was selected.

Today, he earns ₹ 20,000 per month and is proud to wear the company's coverall. This has turned him into a role model among the youth of his village, who also aspire to join the Cairn Enterprise Centre for a similar experience.



Transforming Communities



HEALTHCARE

Our three-tier health intervention approach aims at providing preventive and curative healthcare facilities to our local communities. Our primary focus is to formulate initiatives that mitigate the challenges attached to the affordability and accessibility of healthcare services.

16,61,227
Lives impacted



SDG impacted

Support to Primary Health Centre, Ravva

In partnership with the Department of Health and Medical Office in the East Godavari District, Cairn has constructed a Primary Health Centre (PHC) in Surasaniyanam village, which is further supported by 11 medical professionals attending to patients in emergency cases. Various health services such as OPDs, IPs, diagnostic tests, and COVID-19 vaccines are provided at the PHC. In addition, a new initiative has been introduced this year in partnership with the government. Through this initiative, women's health is prioritised with the distribution of nutrition kits. Additionally, we offer the same to pregnant women registered at the PHC.

42,133 community members
Benefitted from our healthcare support at PHC

Supporting district hospital, Barmer

To improve the condition of the health facilities at the district hospital, Barmer, we initiated two interventions. One being the "Green Barmer and Clean Barmer" campaign to create health and hygiene awareness in the district hospital; and the other to strengthen health services by providing medical specialists both at District hospital as well as CHC Baytu. These specialists include an ENT specialist, a general surgeon, and a dentist. Approximately 12.27 lakh people visited the district hospital and availed the facilities.

31,157 community members
Benefitted from services provided by our doctors



Mobile Health Van (MHV)

Our MHVs effectively disseminate affordable, accessible, reliable, and quality preventive healthcare services to beneficiaries at their doorsteps. We have partnered with two agencies, HelpAge India and Dhara Sansthan for delivering these services across 249 villages in Rajasthan and Gujarat.

79,651+ community members
Benefitted from Mobile Health Vans



Reaching out to the remotest of villages with Mobile Health Vans

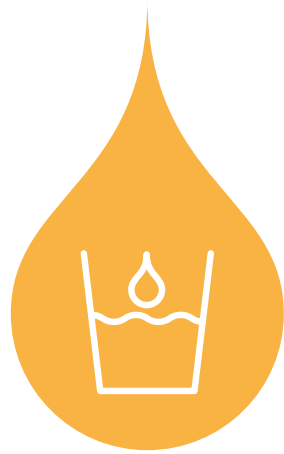
Monghiben Meridas Bharwad hails from Nani Majethi village, near Viramgam district in Ahmedabad. Monghiben had been suffering from a fungal infection for eight months. Despite being treated by well-known private doctors in the region, she was not getting much relief. Apart from causing her immense emotional distress, the frequent travel costs (the private doctor was 21 km from her location in the city), as well as the high price of medicines were adding to her financial burden.

She came to know about the Cairn Mobile Health Van from another resident in the village, Manjithi Devi, whose entire family had availed its services in the past. Hearing the positive feedback, Monghiben consulted a Cairn-supported MHV doctor. Her consultation continued, and now she has finally rid of the infection.





Transforming Communities



DRINKING WATER

Securing the availability of safe drinking water for our communities is of utmost importance to us. We have launched Jeevan Amrit project for providing door-to-door access to safe drinking water.

1,60,716

Lives impacted



SDGs impacted

Jeevan Amrit project

We have established 124 RO units across Barmer, in partnership with the Public Health Engineering Department (PHED) government department. This is a step towards exploring community readiness to continue the operations and management of these plants, on a revenue-based working model. We have already handed over 92 RO plants with the aim to create sustainable communities.

1,39,716 community members

Benefitted from the RO plants

Borewell project

Carrying forward our partnership with PHED, we have established 10 community borewells and cattle troughs in areas with severe water constraints. We have also signed an MoU with PHED for five additional borewells, to expand the second phase of our project.

18,000+ community members

and 3,000 cattle across 10 Gram Panchayats benefitted from our borewells

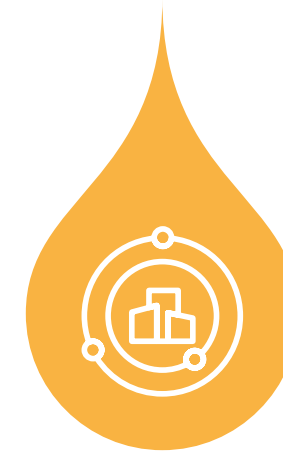
Creating sustainable communities with the RO water project

Water has been a pressing issue in the Barmer district of Rajasthan for ages. To address this chronic problem, our CSR programme began a customised approach to establishing RO units. We handed over 14 RO plants as part of our CSR project at Ambawa village in Dhanau block, in Barmer Rajasthan, in the presence of key village representatives, PHED, along with our team members. This first-of-its-kind endeavour marked the beginning of many such events that will strengthen our CSR vision of developing community ownership for sustainable change.

Today, these RO plants provide safe drinking water to communities at their doorstep, reaching ~1 lakh people annually.

To ensure that these RO units are self-sustainable, we have made considerable efforts to increase awareness, establish village water committees, and chalked up a business plan for them. With the success of these interventions, community members appreciated us for addressing their needs and eventually proposed to manage the Operations and Management of these RO units, going forward.

The village water committees have collected a revolving fund and will charge a minimum cost towards the sale of water, ensuring the continuation of these plants post the handover. This is a testament to our commitment to making CSR interventions self-sustainable, keeping in mind the long-term benefits of the communities.



COMMUNITY INFRASTRUCTURE DEVELOPMENT

We have supported multiple infrastructure development projects in Barmer with the aim to improve the socio-economic growth rate and lifestyle of the communities and work towards holistic rural development for nation building.

1,62,100

Lives impacted



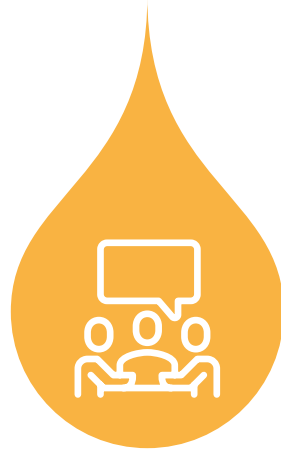
SDGs impacted

Some key initiatives include the revamping of important landmarks and green belt development. After initial success, the projects are handed over to the communities as a part of our sustainable exit plan. A total of

12,100 visitors from Barmer and the surrounding villages benefitted from our initiatives. In partnership with local communities, we also ensure that the improved amenities are maintained regularly.



Transforming Communities



IEC AND MICROLEVEL INTERVENTIONS

Our CSR Strategy is centred around creating multiple channels of continuous engagement with communities, by undertaking need-based projects. These continuous engagements help us align our interventions with their demands and perspectives.

7,87,472
Lives impacted



SDGs impacted

Microlevel interventions were made across Suvali, OALP blocks of Gujarat, Assam and Ravva. These interventions include health awareness drives, community infrastructure developments, and livelihood generation, among others.

Some initiatives implemented under these thematic areas are:

- ▶ COVID-19 awareness mobile vans impacted more than 61,000 community members across 20 villages of the Amod and Jambusar region in Gujarat.

- ▶ Refurbished and functionalised Nand Ghars (Anganwadi centres) in Gujarat and Assam to address malnourishment and pre-education among children.
- ▶ Direct livelihood interventions and training programmes benefitted more than 6,000 women SHG members in Assam.
- ▶ Introduced climate-resilient technologies and new seeds to rural farmers in Assam through training. 346 farmers adopted systematic rice intensifications resulting in 30-50% higher yield, and 106 farmers adopted vermicomposting.

- ▶ Reached out to 100 households through the Pashu Seva Abhiyan and other similar campaigns in Assam.
- ▶ Renovated the community infrastructure at the Government Upper Primary School in Baytu, which benefitted around 78 students in the Rajasthan OALP area.
- ▶ As part of the Nirogi Rajasthan campaign, free health check-up camps were organised in 58 villages of 12 Gram Panchayats.
- ▶ Bal Mahotsav, cricket tournaments, and workshops were organised to encourage the participation of local students and employees in Suvali.
- ▶ Organised a volleyball tournament, a kite festival, few sports and other engagement events to encourage participation from the Ravva community.
- ▶ 6,000 community members benefitted from the infrastructure repair and rehabilitation work carried out in Ravva.

'NIVAARAN' a web-enabled, online community grievance register

Nivaaran is our internal community grievance reporting and monitoring platform. This central repository platform primarily aims to enable the submission of community requests / grievances from anywhere and anytime (24x7). Our stakeholder and CSR teams validate the request and take the

necessary actions for speedy closure while a system-generated unique registration number tracks requests/grievances on the portal. It also enables the analysis of data related to grievances across various categories, including the type of grievance/requests, resolution time, and location/asset, among others.



Transforming Communities



SPORTS AND CULTURE

Over the years, we have supported various sports, fitness and wellness programmes focused on creating awareness and improving health. Our interventions extend to infrastructure, training, capacity building, and awareness creation. Along with need-based support, we have also introduced initiatives with a particular focus on the growth of paralympic athletes.

47,859

Lives impacted



SDG impacted

Project Divyang

Our project aims to create social awareness through the medium of sports and restore equality in our society by providing opportunities for all. We focus on supporting para-athletes to inspire, educate, and uplift the lives of specially-abled people. With the success of this programme, we have increased our support to 10 athletes in FY 2021-22. Through this programme, we provide improved training, better physiotherapy classes, and nutritional support for the para-athletes. Three of them represented India at the 2020 Olympics, where Mr. Devendra Jhajharia won a silver medal and Mr. Sundar Singh Gujar brought home a bronze medal in Javelin Throw F46 category.

Cairn Pink City Half Marathon

For the last 10 years, we have been the title partner of the Cairn Pink City Half Marathon. Apart from promoting health and fitness among the youth, the collaboration spreads awareness on important campaigns such as 'Swatch Bharat Abhiyan', and 'Saving and Educating Girl Child'. For the 6th edition, the theme was 'Get Set Vaccine' to promote vaccination for all. Around 47,000+ people from 22 countries participated in the event to create awareness around vaccination to fight the COVID-19 pandemic. Our marathon entered the UK World Book of Records, for being the largest virtual run.



Project Sanjeevani

The pandemic affected the entire world, putting millions of lives at risk and slowing down the economy. During these trying times, we adopted a proactive role in engaging with and supporting all our stakeholders beyond our asset areas of Rajasthan, Gujarat, Andhra Pradesh, and Assam. We closely coordinated with the district authorities of these locations and launched Project Sanjeevani to provide relief care and support to the administration. Our efforts continued even during the second and third surges of the pandemic.

2,81,188

Beneficiaries

Initiatives:

- ▶ A 100-bed Vedanta hospital was inaugurated by Mr. Ashok Gehlot, Chief Minister of Rajasthan. As an additional support, we also built a 610-bed COVID-19 facility during

the second quarter. All equipment and beds were handed over to the district hospital for ongoing treatment and care of patients.

- ▶ Two mobile health vans were provided to the District Administration of Barmer for awareness and transportation of patients.
- ▶ A first-of-its-kind community vaccination drive was organised at Ravva for people of the age group 18-45. 1,906 community members were vaccinated through multiple camps.
- ▶ Supported the District Administration with thousands of medical and surgical consumable items including VTM kits, COVID-19 kits, para-monitors, medicines, masks, sanitisers, and several other items.
- ▶ Vaccination drive for employees and business partners continued across all locations and achieved 99% coverage.

Passion to Serve

Our CSR values are what make it possible for us to connect with our communities and conduct business in an ethical and socially responsible way. Our employees also have a vital role in making this happen by volunteering to create a positive impact on the lives of community members, under various CSR initiatives.

For FY 2021-22, 500+ volunteers contributed their time and skills across various initiatives, benefitting close to 1 lakh community members.

A glimpse of the journey so far:

1,556

Manhours

94,652

Community members touched

548

Volunteers

Top 10 volunteers

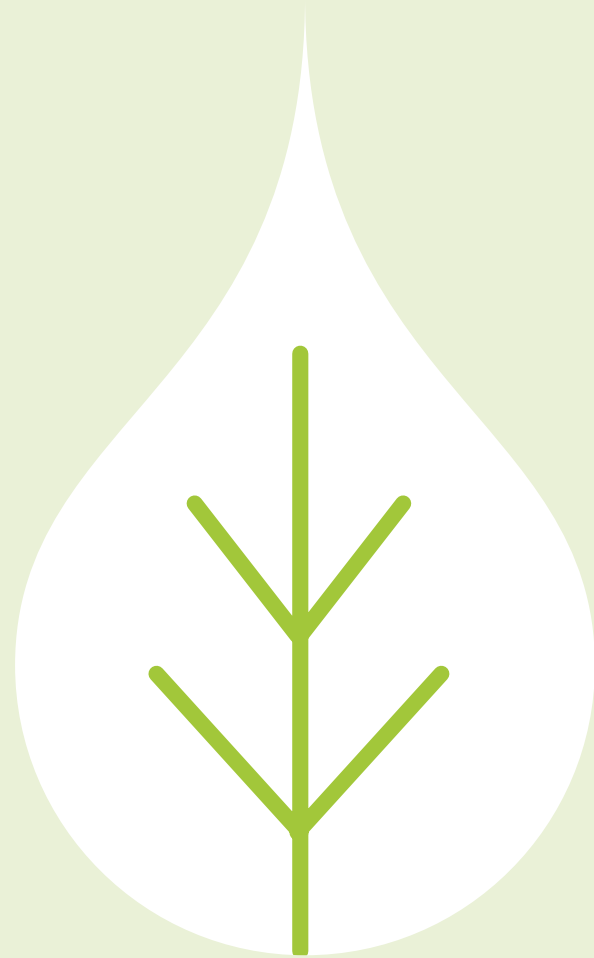
Mr. P. Venkata Ramana Superintendent Instrumentation	Mr. Samir Kulkarni Head-Midstream
Mr. Brig BS Shekhawat President - Barmer	Mr. Sunil Agasti Manager-Administration
Mr. Alok Kumar Associate Manager-Admin	Mr. Kasi Maheshwararao Superintendent-Civil and fabrication
Mr. Rajendra Saran Senior Engineer-Electrical	Mr. Binaya Kumar Nanda Lead-Land Department (RJ)
Mr. Shailesh Sharma Manager -Stakeholder Relations	Mr. Sunil Kathat DGM-Midstream Operations: North

To read more refer to [Cairn Oil & Gas CSR AR FY 2021-22 \(Page 58-62\)](#)



Transformation of swampy land to a nurtured ecosystem through mangroves forest is a testimony of our biodiversity efforts.

**Mangroves at our Ravva block,
S'Yanam, Andhra Pradesh**



TRANSFORMING THE PLANET

Environmental stewardship is inherent to our operational philosophy and ESG purpose. Our preventative approach is based on conducting comprehensive risk assessments and establishing protocols and practices to minimize environmental impact. We are continuously striving towards innovating and reimagining a planet that is healthier and sustainable.

Our commitments



Achieving net zero carbon by 2050



Sustaining net water positive impact



Planting 2 million trees by 2030



Protecting and enhancing biodiversity throughout the project lifecycle

Focus areas linked with UN SDGs



Transforming the planet



CLIMATE CHANGE AND ENERGY

We have been consistently innovating technological solutions to decarbonise our operations significantly to achieve Net Zero Carbon by 2050. Our vision is to alleviate our environmental impact, and to ensure zero harm, zero waste, and zero discharge. We aim to progress on a low carbon trajectory while working towards energy self sufficiency for India.

Decarbonisation strategy: Our low carbon trajectory

In line with our decarbonisation commitment, we are setting an important precedent in the industry by reducing our dependency on polluting energy sources. We aspire to enhance our operational performance in synergy with climate change mitigation. To minimise footprint, we are setting newer carbon reduction targets, keeping our eyes on the Net Zero ambition by 2050. These targets are consciously curated and aligned with the Government of India's Nationally Determined Contributions (NDCs). We are also lending a helping hand to communities and aiding them with directions in building resilience and combatting climate change.

We are committed to using clean and renewable energy sources, upsurging energy efficiency, reducing flaring, and minimising fugitive emissions through process optimisation.

We are actively investing in low-carbon technologies, exploring opportunities in Carbon Capture Utilisation and Storage (CCUS), and adopting GHG reduction measures to achieve our targets. Simultaneously, we are also focused on diversifying our energy portfolio, pursuing multiple initiatives to decarbonise our operations.

Vedanta Group is committed to achieving Net Zero Carbon by 2050, and Cairn's decarbonisation strategies are aligned with Group-level commitments.

We are well-positioned to benefit from the increasing crude oil production in India. Backed by significant investments, we have initiated several projects to explore opportunities, with the intent to improve our carbon performance and effectively utilise the resources at hand. Conventional oil production also forms a major part of our operations and we have taken prudent measures for recycling the oil residues. Based on internal carbon prices, we have initiated climate scenario planning and stress-testing of the Company's projects.

We are building a roadmap and committing financial resources for an infrastructure upgrade to address climate impacts. We are also working with Innovation Cells at all BUs to include GHG reduction as a key focus area.

Vedanta plan to engage long-term, essential Tier-1 suppliers to submit their GHG reduction strategies by 2025. Their strategies must align with Vedanta's decarbonisation commitments by 2030.

Levers of the decarbonisation process

Renewable energy

- ▶ Sourcing renewable energy of up to 45 MW by 2030.
- ▶ Assessing the feasibility of tapping geothermal energy by repurposing existing hydrocarbon wells of RJ Gas fields.
- ▶ Installing solar PVs on 36 AGIs of pipeline operations from Barmer district, Rajasthan to Bhogat Terminal, Gujarat by 2025.
- ▶ Installing solar PV on available building structures of processing terminals, base camps, living quarters, and guest houses, etc.
- ▶ Installing solar lightings at terminals, platforms and well pads periphery.
- ▶ Exploring feasibility for renewable energy hybrid models (solar and wind or tidal) in offshore assets.

Flare gas reduction

- ▶ Installing Gas Engine Generators (GEGs) to meet the power requirements of satellite and stranded fields by utilising the flared gas, thereby reducing emissions.
- ▶ Conducting periodic LDAR (Leak Detection and Repair) studies to control fugitive emissions.

Energy efficiency

- ▶ Adopting energy-efficient lighting systems.
- ▶ Converting induction motors to Permanent Magnetic Motors.
- ▶ Optimising turbine operations for saving fuel gas.
- ▶ Deploying energy-efficient equipment, fittings and technologies.

Carbon sequestration

- ▶ Developing carbon sink by planting 2 million trees by 2030.
- ▶ Exploring possibilities for CCUS.






Electrical mobility

- ▶ Transitioning to electric vehicles for LMV fleet.
- ▶ Adopting electrically operated golf carts for commute within the plant.

Innovative/new technologies

- ▶ Adopting alternate cleaner fuels like biodiesel, bio-methanol, and refused derived fuel, among others.
- ▶ Exploring possibilities of green hydrogen adoption in energy mix.

Targets

				
Renewable energy power purchase of 25 MW by 2025 and 45 MW by 2030	Exploring possibilities for harnessing geothermal energy by repurposing hydrocarbon wells	Utilisation of flared gas from satellite fields	Transition of LMV fleet to electric vehicles	Carbon offsetting through nature-based solutions and CCUS (carbon capture, utilisation, and/or storage)



Transforming the planet

Green OB Project

Green OB (operational base) project is our sincere feat at transitioning to green renewable power. The idea is to decarbonise our operational area by utilising the open rooftop area for the installation of solar PVs, to meet the energy requirements.

The power requirement of the OB camp is 450 kW, which is met through the captive power plant at MPT, and backed up with DG sets of 1,000 kVA each.

The project is about installing a 530 kWp solar power plant on the available rooftop area of OB, Mangala Processing Terminal (MPT) covering the living quarters, innovation centre, security building, medical centre building, and parking area, etc.

This plant will generate ~930MWh of green power per annum which will lead to reduction of 790 tonnes of CO₂e/annum.

Rooftop solar power across midstream pipeline operation

The Above Ground Installations (AGIs) operations at our Midstream location in Gujarat are powered by electricity from the state electricity board, predominantly coal-based and high GHG emission intensity. In line with our decarbonisation commitment to reduce our carbon footprint and dependency on fossil fuel-based power, the Midstream team has initiated a project to install rooftop solar photovoltaics at all 36 AGIs in a phased manner by 2025. The idea is to shift to solar energy to make world largest heated insulated hydrocarbon-carrying pipeline, into a greener operation.

We have installed solar rooftop on 13 AGIs with capacity of 15 kW each, cumulatively reducing ~270 tonnes of CO₂e/annum. Further, the plan is to install solar PV on all remaining AGIs to complete the project by 2025 and achieve a total GHG reduction of ~770 tonnes CO₂e/annum.



Initiatives implemented in FY 2021-22

Renewable energy

- ▶ Partnered with Baker Hughes for a feasibility assessment of tapping geothermal energy by repurposing existing hydrocarbon wells in RDG
- ▶ Installed solar rooftop of 530 kWp at Operation Base Camp of OB, MPT, resulting in a GHG reduction of 790 tonnes CO₂e/annum
- ▶ Revamped the 100 kWp solar plant at Sara WP-01, leading to a GHG reduction of ~104 tonnes CO₂e/annum
- ▶ Installed solar rooftop on 10 AGIs (Above Ground Installations) of pipeline operations of 15 KW at each AGI, observing GHG reduction of 208 tonnes CO₂e/annum

Flare gas reduction

- ▶ Commissioned a pipeline from Raag Oil to Raageshwari Gas Terminal for transferring the gas to the terminal instead of flaring, avoiding ~0.8 mmscfd of gas flaring, with an annual GHG reduction of 32,500 tonnes CO₂e/annum
- ▶ Optimised the Bridge plant and diverted condensate from the Bridge plant to Raageshwari Deep Gas plant (RDG), avoiding ~1 mmscfd gas flaring, resulting in a GHG reduction of 27,750 tonnes CO₂e/annum
- ▶ Instead of sourcing power from grid, we utilised natural gas by installation of 1.1 MW Gas Engine Generator (GEG) at NI-02 field for meeting the power requirement. This solved the issue of gas flaring, resulting in a GHG reduction of ~ 2,400 tonnes CO₂e/annum

Energy efficiency

- ▶ Optimisation of turbine operations at Ravva resulted in fuel gas saving of 0.94 mmscm and GHG reduction of 2,268 tonnes CO₂e/annum
- ▶ Energy conservation by replacing conventional lights with energy efficient lighting, leading to savings of 4.9 lakh units of energy in FY 2021-22, resulting in a GHG reduction of ~385 tonnes CO₂e
- ▶ Converting induction motors to Permanent Magnetic Motors (PMM) to improve energy efficiency

Electrical mobility

Introduced five electric golf carts at RJ Gas for internal commuting with RGT and RDG terminal

Transforming the planet

Emissions and energy

The extraction of oil and gas is an energy-intensive process. The primary fuel powering our operations is associated natural gas that accompanies our extracted oil.

Other fuels we use to power our operations are grid electricity, free gas, diesel, and renewable energy. This energy usage has had a cumulative impact on our operational carbon footprint.

With the fields maturing, we are experiencing rising GHG emissions. For producing the same amount of hydrocarbon, we need to handle larger quantities of well fluid leading to higher energy consumption and GHG emissions.

<p>Scope 1 Our Scope 1 emissions come from:</p> <ul style="list-style-type: none"> ▶ Gas combustion ▶ Gas flaring and venting ▶ Diesel ▶ LPG/propane 	<p>Scope 2 Our Scope 2 emissions come from grid electricity.</p>	<p>Scope 3 Our major Scope 3 emissions come from:</p> <ul style="list-style-type: none"> ▶ Processing of sold products ▶ Use of sold products
---	---	--

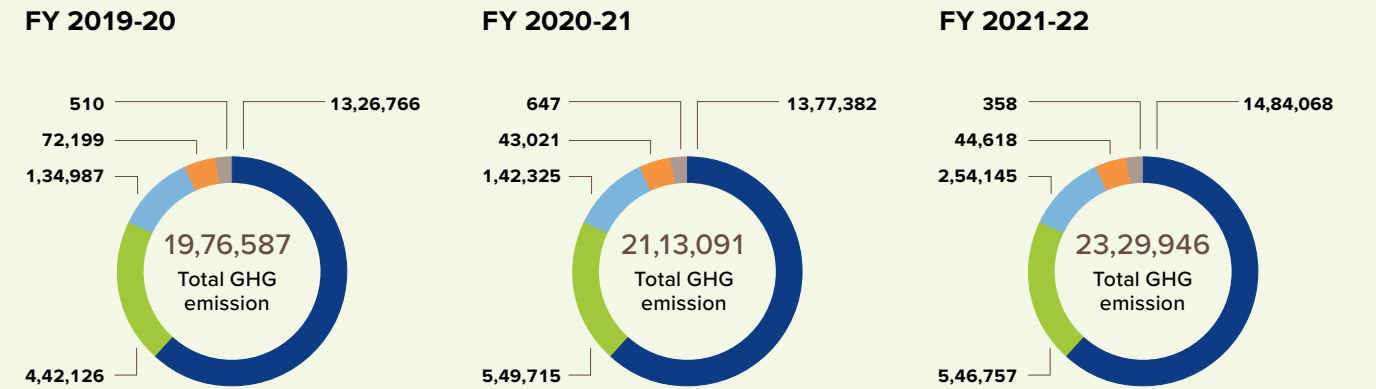
SCOPE EMISSIONS

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Direct (Scope 1) GHG emissions	20,75,801	19,70,766	18,41,600
Indirect (Scope 2) GHG emissions	2,54,145	1,42,325	1,34,987
GHG emissions intensity (Scope 1 & 2) tonnes of CO ₂ e/MT of HC produced	0.256	0.232	0.203
GHG emission Intensity (Scope 1 & 2) (tonnes of CO ₂ e/Gross revenue in ₹ mn)	7.08	11.44	7.73



GHG EMISSIONS (SCOPE 1 & 2)

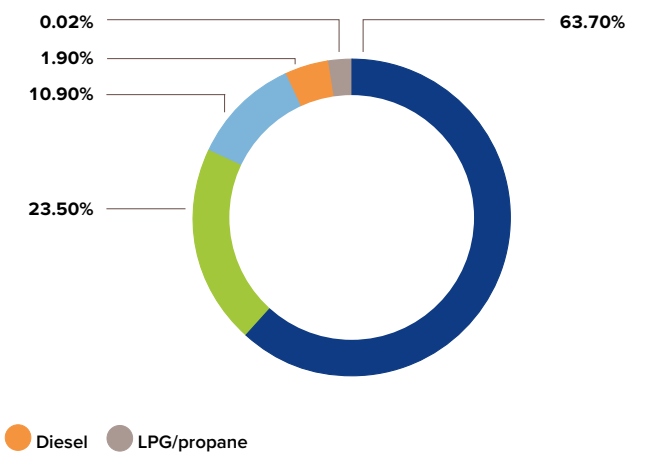
(tonnes of CO₂e)



SOURCES CONTRIBUTING TO GHG EMISSIONS (FY 2021-22)

Our reporting comes with a correction factor of +5% to capture any uncertainty or unaccounted non-significant direct GHG emission. Although, as per the third-party fugitive emission study conducted in 2018 for RJ operations, the actual percentage of fugitive emission was found to be 0.010%.

Additionally, we also account for emissions for the hydrocarbons that we process for other oil and gas industries at Ravva and Suvali.

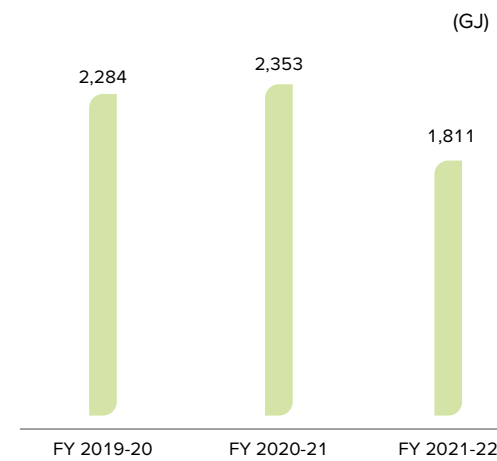


Transforming the planet

ENERGY CONSUMPTION

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Energy consumption within the organisation	2,25,78,186	1,98,40,711	1,93,62,613
Energy consumption outside the organisation	11,58,127	6,24,841	5,92,627
Energy intensity (GJ/MT of HC produced)	2.61	2.24	2.05

RENEWABLE ENERGY CONSUMPTION



Flaring and venting

Our production facilities, by design, have incorporated technologies and processes to minimise our energy footprint, including the impact of flaring and venting. We are conscious of the fact that flaring not only causes an increase in GHG emissions but is also a waste of an energy source. However, at times, we face the constraints of operational issues such as stranded satellite fields operation, lack of gas utilisation infrastructure and well services operations or upsets in reservoir behaviour.

We are taking strides towards capturing and utilising the gas from satellite fields through bottling and transferring to other distributors, to avoid flaring of valuable energy resources. We have planned a pilot of the same at our RJ Gas asset, Kaameshwari WP-02. The success of this will help us minimise flaring from satellite fields and standalone facilities.

Particulars	Flaring (mmscm)	GHG emission-flaring (tonnes of CO ₂ e)	Venting (mmscm)	GHG emission-venting (tonnes of CO ₂ e)
FY 2021-22	230.22	5,33,964	0.723	12,793
FY 2020-21	222.31	5,36,174	0.760	13,540
FY 2019-20	174.73	4,28,952	0.744	13,174

Aishwariya & Aishwariya Barmer hill (ABH), which is one of our fields in the RJON 90/1 block, produces non-potential associated gas (natural gas with a high CO₂ content of around 85%). The high CO₂ content makes the gas non-utilisable for power generation. So, it is ultimately

flared after it gets passed through the thermal oxidiser to ensure no unburnt hydrocarbon is released into the atmosphere. Due to the high gas-to-oil ratio of the ABH field, we are observing higher flaring volumes of non-potential gas from this reservoir.

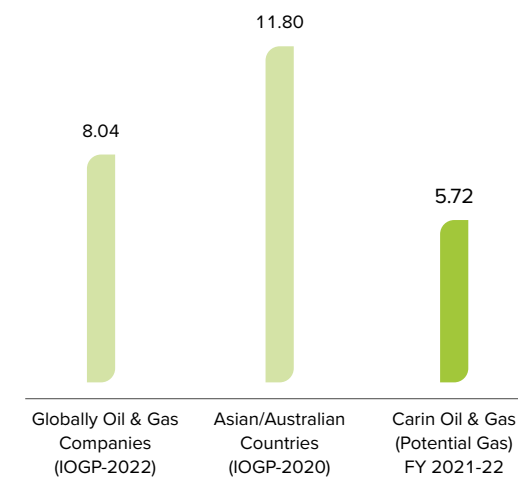
GAS FLARING

Particulars	Unit	FY 2021-22	FY 2020-21	FY 2019-20
Potential gas flaring	tonnes/day	120.41	193.16	213.04
GHG emission: Potential gas flaring	tonnes of CO ₂ e/ annum	1,57,723	2,51,417	2,66,743
Non-potential gas flaring (Natural gas with high CO ₂ content around 85%)	tonnes/day	618.11	485.88	293.71
GHG emission: Non-potential gas flaring (Natural gas with high CO ₂ content around 85%)	tonnes of CO ₂ e/ annum	3,76,240	2,84,758	1,62,210

POTENTIAL FLARING INTENSITY AND IOGP BENCHMARK*

Gas flaring	Unit	FY 2021-22	FY 2020-21	FY 2019-20
Potential gas flaring	Tonnes	43,951	70,505	77,971
Hydrocarbon production (excluding Aish-ABH field)	Tonnes of hydrocarbon production	7,681,203	7,917,812	8,637,950
Potential flare gas intensity	Tonnes of gas flared/thousand tonnes of HC production	5.72	8.90	9.03

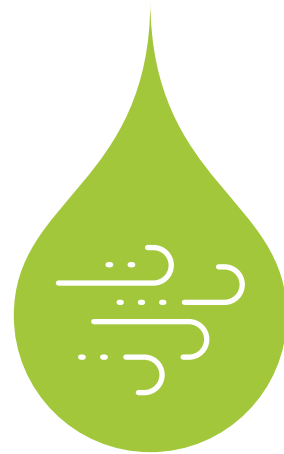
FLARING INTENSITY (POTENTIAL GAS)



Benchmarking with IOGP 2020 (IOGP environmental performance indicators - 2020 data) Report released in Feb 2022



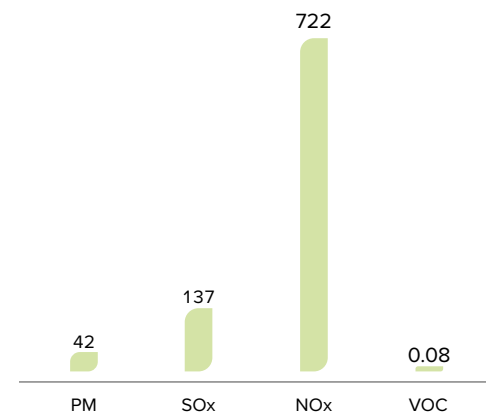
Transforming the planet



AIR QUALITY AND STACK EMISSIONS

Air pollution is a severe health concern as it impacts millions of lives yearly. We always keep an eye on how our operations affect the environment, communities, workforce, and air quality.

STACK EMISSIONS IN FY 2021-22
Emission value (MT/annum)



While we are not among the 17 high-polluting industries and hence are not required to have continuous ambient air-monitoring stations. Our operating philosophy is to assess our surroundings comprehensively to ensure zero harm. With scientific planning, we capture environmental data through Ambient Air Quality (AAQ) stations, as per the approved monitoring plan by pollution control boards. We also submit our periodic reports of our progress to regulatory bodies.



Mitigation



Utilising cleaner fuel

Associated natural gas is a by-product of crude oil extraction. The associated gas is flared as per standard industrial practices for the safety of the plant equipment and processes. However, as the gas contains more than 80% methane, we have designed our facilities to use it for captive power generation and steam generation to meet energy requirements. Natural gas is cleaner—compared to other fossil fuels—and has negligible emissions (PM, SOx and NOx), thereby having a lesser impact on the environment.



Installing vapour recovery systems

We have installed six vapour recovery units at MPT to recover low-pressure gas from tanks and other vessels to avoid flaring and fugitive emissions. The recovered gas is processed and used as fuel in boilers. To reduce flaring at satellite well pads, we have replaced diesel engines with Gas Engine Generators (GEGs) to meet the local power requirement. We have also altered our milling operations to avoid gas flaring during well services. The gas during milling is diverted to the production header through a pressure control system to avoid flaring/venting.



Adequate stack height and CEMS

In addition to flare, gas-fired boilers are the only continuous source of emissions. Adequate stack height is provided for boilers to ensure proper dispersion of air pollutants. A Continuous Emission Monitoring System (CEMS) is also installed at boilers to monitor the emission parameters.



Preventive maintenance programme

Routine inspection and maintenance of Emergency Diesel Generator (EDGs) are conducted.

We have in place a robust SAP-based preventive maintenance programme and all the EDGs are maintained regularly as per OEM specifications.



Fugitive emission control

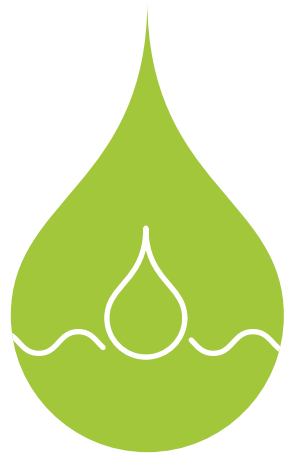
We have built our facilities based on the 'Fire and Gas Detection and Protection' philosophy and in accordance with the American Petroleum Institute (API), National Fire Protection Association and Oil Industry Safety Directorate (OISD) standards. All the pop-ups from the PSVs are routed, and there is no fugitive emissions or cold venting of gases.

LDAR (Leak Detection and Repair) or fugitive emission studies are conducted periodically through optimal imaging or infrared scanning across all assets to assess and address

fugitive losses. Studies have confirmed that our assets have minimal fugitive losses and are well below the limits specified by the Environment Protection Act 1986.

This demonstrates our stringent preventive maintenance of equipment/joints that prevents process leaks. The preventive maintenance, critical function test, and annual maintenance activities are carried out through a SAP system-driven 'preventive module', prepared based on OEM's recommendation and risk-based inspection approach.

Transforming the planet



WATER

One of our primary objectives is to conserve water using efficient water harvesting and recycling techniques. Following groundwater modelling research, we extract saline water available in deep aquifers, minimising the usage of fresh groundwater/community water resources. With our structured management approach and technological interventions, we have been optimally using water resources for industrial as well as human use within our operations.

96%
Of produced water is treated and re-injected into the reservoir

~32,250 kld
Water extracted, of which 99% is from saline water sources

75%
Water reuse/recycling rate

As most of our operations are in regions facing scarcity of potable water, it is crucial water sourcing and utilisation are done in an effective manner. This is also imperative for the uninterrupted functioning of our operations. Thus, we endeavour to locate water sources utilising geological and sub-surface studies. Additionally, we monitor the usage of water sources closely every year to map out the adverse changes that could have occurred due to our current water abstraction practices. In Rajasthan, we estimate that our operations will impact less than 0.2% of the saline aquifer over the lifetime of our operations.




As a part of sustainability initiatives, we also monitor the effectiveness of our existing

operations and take up new projects that optimise our water usage.

Vedanta works on the principle of zero discharge and its policies cover aspects of understanding water footprints, maintaining water balance, ensuring sustainable water supply, maximising reuse and recycling of wastewater, ensuring compliance to legal requirements, and promoting community participation in watershed management.

We comply with this policy by sourcing water from deep saline aquifers, maintaining zero discharge operations via recycling water for injection and void replacement, and utilising RO rejects in drilling activities. The sewage from our plant and living quarters is treated and utilised to maintain the green belt.

Targets

 <p>Maximising water reuse and recycling to >80% by 2025</p>	 <p>Increasing produced water recycling to >97% by 2025</p>	 <p>Developing 300+ structures by 2025 in Barmer district to enable harvesting of 3 mn kL of rainwater annually</p>
--	---	--

Cairn is a Net Water Positive

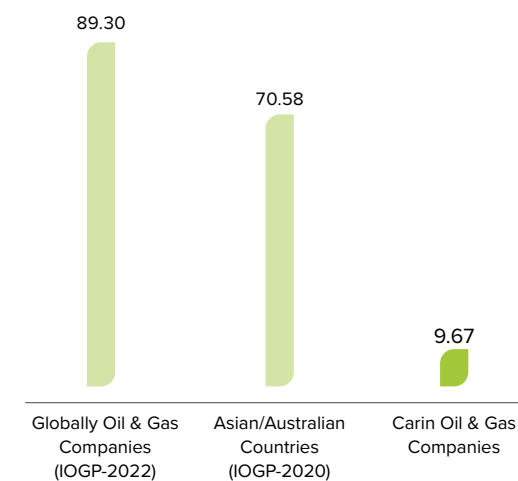
We have been declared as Net Water Positive with a NPWI (Net Positive Water Impact) index of 1.12, as per the recent water impact assessment carried out across all our assets.

Additionally, four of our sites have been individually declared as Net Water Positive Assets:

RJ Oil (MBA Operations)	NPWI 01.08
RJ Gas	NPWI 03.95
Midstream Operations	NPWI 18.56
Ravva	NPWI 01.04



FRESH WATER INTENSITY (kL/1000 tonnes of hc produced)



*Fresh water defined as TDS <2000 ppm

Water conservation

Water conservation opportunities are identified and implemented as a part of our sustainability KPIs. A few of the water conservation programmes carried out:

- ▶ Reject water treatment plants for recycling injection filter backwash, recovering produced water for reinjection
- ▶ Recycling drilling and frac wastewater for injection
- ▶ Recycling of wastewater generated from well services activities
- ▶ Automated Tube Cleaning System (ATCS) for increasing the uptime of process tubes, resulting in a 50% reduction of water demand for cleaning the tubes
- ▶ RO reject water utilisation for drilling and well services activities
- ▶ STP and reed bed treated water, drip irrigation network and boiler blowdown water at MPT is used to water the greenbelt





Transforming the planet

WATER WITHDRAWAL

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Ground water	1,16,05,301	1,06,19,818	1,09,87,439
Surface water (River)- PHED	46,468	49,878	26,006
Water tankers (third party supply)	1,11,259	79,858	1,01,068
Produced water generated	4,07,75,601	4,05,64,902	37,451,655
Total water withdrawal (A)	5,25,38,629	5,13,14,456	4,85,66,168

WATER CONSUMPTION

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Mineral water purchased	10,153	8,246	7,960
Water consumption (Withdrawal (A)+ mineral water purchased)	5,25,48,782	5,13,22,702	4,85,74,128

VOLUME AND DISPOSAL OF FORMATION OR PRODUCED WATER

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Produced water generated	4,07,75,601	4,05,64,902	3,74,51,655
Produced water recycling rate	96.1%	96.8%	95.6%



Water management

Rainwater harvesting

Rainwater harvesting is one of our key water conservation initiatives. We have installed rainwater harvesting structures along with groundwater recharge facilities in the Mangala processing terminal and other locations of the block area, including community areas/villages. Rainwater collection tank receives stormwater from the paved areas (non-hazardous operation areas) and rooftops. Infiltration wells (~20 m deep) have been built within the tank area. Once the water collected crosses a certain level it overflows into the well and recharges the groundwater. The stormwater drainage system of the plant routes the rainwater through a paved drain system to a rainwater harvesting structure with infiltration wells.

As part of our CSR programmes, we have desilted 27 Nadis, constructing around 800 Khadins and Tankas, established rooftop rainwater harvesting systems at 40 government schools, thereby creating a total rainwater harvesting potential of ~1.72 million m³ per annum.

Wastewater disposal

We dispose the rejected wastewater, including nano-filtration rejects, desalination process rejects, and produced water filter backwash rejects into a deep dump well (>1,000 m depth) through high-pressure pumps, after necessary treatment.



Water management projects



Rainwater harvesting pit of ~72,000 m³ storage capacity installed at Mangala processing terminal



Retrieval of rainwater in deep saline aquifer; rainwater collected in lined pit of ~58,000 m³ capacity at NR-1, RJ



Renovation of ~1,500 traditional rainwater harvesting structures in the Barmer area



Installation of six community-based desalination plant in saline groundwater zone



50 rainwater recharge structures installed at well-pad of MBA-R field with total catchment area of ~7,58,000 m² and a potential of ~1,50,000 m³/year of water to percolate into the ground



Transforming the planet

Recycling of produced water for injection purposes

Cairn RJON 90/1 block lies in a water-scarce area and an over-exploited zone in the Thar desert in Western Rajasthan.

In oil and gas upstream operations, the well fluid consists of crude oil, Natural gas, and Produced Water (PW), which undergo phase separation.

The crude in the RJ-ON-90/1 Block has a high viscosity and can be efficiently extracted only through hot water flooding into the oil reservoir to replace the voids. Thus, a large volume of water abstraction is required to sustain the longer plateau production of crude oil.

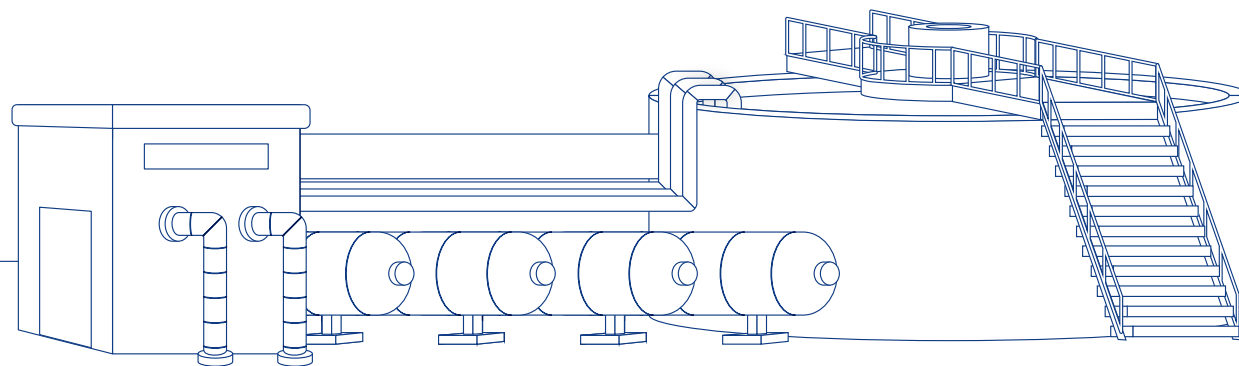
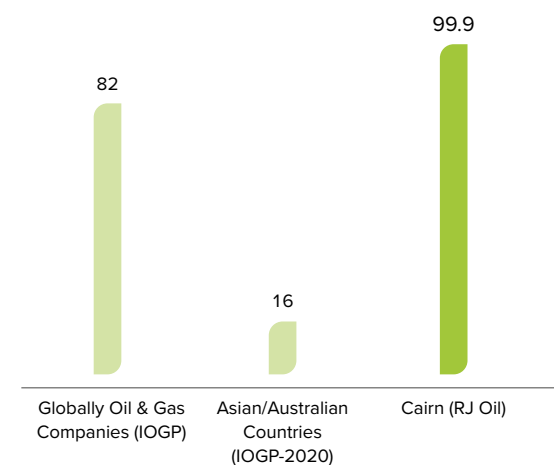
We recycled 3,73,79,838 kL of produced water in RJ Oil in FY 2021-22, by reinjecting into the reservoir for void replacement, which would have otherwise required groundwater sourced from saline aquifer 'Thumbli'.

To increase produced water recycling, we have installed and commissioned stage II and stage III ETP for treatment of reject stream of produced water filter backwash.

In RJ Oil, produced water recycling rate has risen to 99.9%, which is higher than the IOGP benchmark, with continuous improvement and installation of additional injection filter system.

With increased recycling, we have reduced further water abstraction demand from 'Thumbli' and mitigated the risk associated with water sourcing to sustain operations.

PRODUCED WATER REINJECTION
(Onshore %)



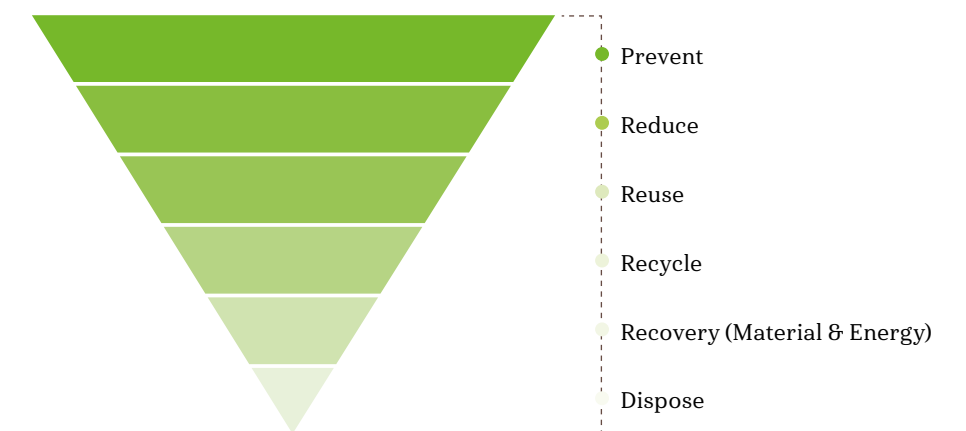
WASTE MANAGEMENT AND CIRCULAR ECONOMY

We have developed a standard procedure to ensure effective waste management. This entails generation, collection, segregation, transportation, storage, treatment (based on the waste management hierarchy principle) and disposal, during exploration and production. Our waste management procedures comply with legal requirements and the lifecycle approach.

Lifecycle approach

We have a 'Zero Waste, Zero Discharge' philosophy. Our lifecycle approach in managing waste and disposal considers the cradle-to-grave environmental impact associated with our operations. Our waste management hierarchy follows the practice

of source reduction through the optimum use of resources and reusing, recycling, re-processing, and recovery/co-processing for material and energy recovery. Waste disposal through incinerators or in landfills is the least preferred methods of disposal.







We have conducted various trial operations for co-processing hazardous wastes as AFR (Alternative Fuels and Raw Materials) and have received necessary approvals. By implementing co-processing initiatives, we aim to minimise the emissions produced through continuous incineration operations. Diverting the disposal pathways of synthetic oil based mud from captive landfill to

co-processing in cement industries helps to reduce the environmental footprint in terms of landfill burden, which in turn helps in the elimination of emissions (landfill gaseous emissions) that would have occurred post-closure. We are committed to having the environmental impact from our operational activities is kept to a minimum.

Transforming the planet

Our lifecycle approach for managing waste

	Raw material consumption	Use of associated gas for power generation and thereby minimising the flaring, leading to reduction in environmental footprint and resource conservation
		Use of off-spec chemicals for neutralisation
	Planning phase	Use of low sulphur diesel
		Minimisation of usages of diesel by replacing DG sets with GEGs in marginal fields
		Use of high-efficiency boilers equipped with adequate stack height (30 m) for power generation
		Usage of acoustic enclosures, exhaust muffler, and proper stack height for DG sets
	Design phase	Usage of Vapor Recovery Units for vapour recovery, compression and utilisation of gases
		Produced water treatment system generates water that is reinjected into the reservoir, reducing the resource (water) consumption
		Usage of low ODP refrigerants (i.e. R 134a, R407C, R410a etc. in place of R22)
		Use of energy efficient lightings and other equipment
	End-of-life disposal	End-of-life disposal of hazardous waste, including synthetic oil base mud cuttings, and waste containing oil—oily rags/oily sludge, is carried out through co-processing in cement industries. Besides energy and material recovery, it eliminates emissions due to incinerator operations, reduces landfill burden, and uses off-spec polymers as coagulants by other ETP plants.

HAZARDOUS WASTE GENERATED

Particulars	(MT)		
	FY 2021-22	FY 2020-21	FY 2019-20
Waste generated	25,777	24,729	47,700
Waste diverted from disposal (gainful utilisation)	20,642	21,628	43,240
Waste directed to co-processing for energy recovery	3,376	2,973	4,256
Waste directed to disposal (landfill and incinerator)	1,666	57	124

Managing waste

Captive landfill in MPT

A captive Solid Waste Management Facility at the Mangala Processing Terminal serves as an integrated waste disposal facility for the RJ-ON-90/1 Block. The facility comprises a double-layer hazardous waste landfill, non-hazardous waste landfill, incinerator, and hazardous waste storage sheds.

The sites use colour-coded dustbins for the onsite waste segregation. We have constructed seven observatory wells around the landfill to monitor the sites regularly and ensure soil and groundwater are not contaminated.

The landfill is capped with HDPE liner during the rainy season to avoid rainwater contamination. The leachate from landfill is collected and disposed through a solar evaporation pond. The evaporation residue is then collected and disposed into the landfill.

Co-processing

The SOBMs (Synthetic Oil-Based Mud) drill cutting and other oily waste have a high calorific value. Therefore, we utilise it instead of disposing to recover material and energy. We have sent ~85,000 MT of hazardous waste to the cement industry for co-processing, reducing landfill burden, minimising GHG emissions via incineration and replacing coal requirements (1-1.5 times) at the cement plant.

Waste reduction initiatives:

We beneficially use more than 90% of total hazardous waste generated from our operations through co-processing, re-processing or registered recyclers.

- ▶ Vertical Cutting Dryer (VCD) treats Synthetic Oil-Based drill cuttings to reduce the oil content from 15% to <4% and recover the mud for reuse in drilling. Our VCD operations have led to a 10% reduction in the volume of drill cuttings, a hazardous waste.
- ▶ 100% of Used Oil is re-processed back into the system
- ▶ Waste Oil is recycled by re-processing back into the system or through registered recyclers
- ▶ 100% of WBM (Water-Based Mud) is utilised for sub-grade activities and backfilling of low-lying areas
- ▶ Off-spec polymer waste is routed to CETP (Common Effluent Treatment Plant), Balotra, for gainful utilisation as a flocculant



Transforming the planet

Yet another milestone in effective waste management

Slop oil: Waste generated through the processes of oil production

Slop oil is crude oil emulsified with water and solids. It is a waste stream that is classified as hazardous due to its potential toxicity, requiring safe disposal.

Routine operations in upstream oil and gas industries, such as well intervention activities, pipeline pigging, vessels' hydro testing, etc., produce slop oil. It is found in evaporation ponds, sludge pits, and storage tanks. The wastewater generated at oil well pads and processing terminals is temporarily stored in open ponds/pits, and transported to ETP for a suitable treatment for reuse and recycling. Gradually, floating oil accumulates over the wastewater surface stored in open pits.

Disposal vs. recycling

Slop oil can be disposed in different ways. It can be done through offsite registered recyclers, or treated to be used as fuel in industrial furnaces, boilers, and permitted hazardous waste incinerators. Recycling and reusing slop oil are preferable to disposal to recover valuable energy leading to significant environmental benefits. Recycled slop oil can be re-refined into new oil, processed into fuel oils, and used as raw material for the petroleum industry.

In-house facility for recycling slop oil

The crude oil of RJON, Barmer, is waxy and congeals quickly, forming a thick layer of floating oil over the surface of the wastewater. Previously, we removed layers of oil mechanically on high ambient temperature days or by adding hot water, resulting in a further increase in wastewater inventory at the well pads. The skimmed oil was then disposed at the offsite through registered recyclers.

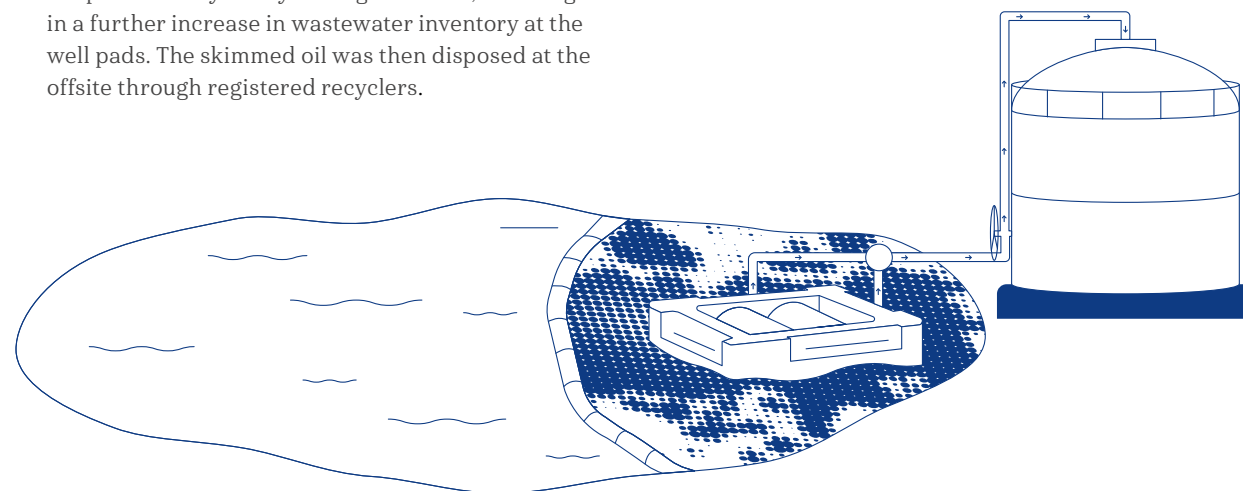
In line with our commitment to reducing waste generation and gainfully utilising waste, we have developed an in-house facility for the collection, storage for sediment removal, heating, and pumping of skimmed oil back into the process through the off-spec tank at the Mangala processing terminal. Parallely, we initiated the collection of slop oil in the form of cake during low ambient temperature days, and continued with mechanised skimming as favoured by the ambient temperature.

Benefits of our waste management

Recycling and reprocessing slop oil makes it a part of the main product—crude oil—and converts it into an energy resource. Through regular skimming and processing of floating oil, there is no waste generation. The result is less wastewater inventory at well pads and no foul smells due to anaerobic conditions created by the oily layers in open ponds/pits. The process has also prevented GHG emissions related to the offsite transportation of skimmed oil to recyclers.

Impact

Through our continuous efforts, we have recovered 19,303 bbls of slop oil in the last 18 months. This is a milestone in achieving our zero waste-to-landfill vision.



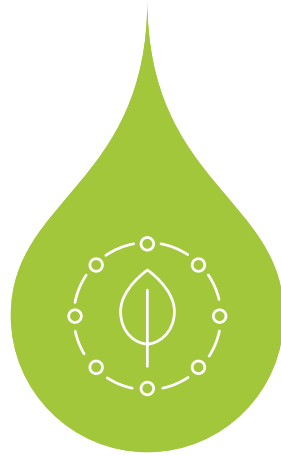
HAZARDOUS WASTE DISPOSAL ROUTES

Type of waste	Disposal routes
Synthetic Oil-Based Mud (SOBM) Drill Cuttings	Co-processing at cement kiln/landfill
SOBM and other drilling waste	Co-processing at cement kiln/landfill
Biomedical waste	Incineration/deep burial/recycled
Used oil	Re-process/sold to authorised recyclers
Waste oil	Re-process/sold to authorised recyclers
Oil-soaked cotton waste, oil rags, oil-soaked filter media, oily filters	Co-processing at cement/incineration
Oily sludge	Co-processing at cement/reprocessing/incineration
ETP sludge and ATF sludge	Co-processing/landfill
Empty barrels/Discarded chemical containers/liners	Registered recyclers
E-waste	Registered recyclers
Lead-acid batteries	Registered recyclers

NON-HAZARDOUS WASTE DISPOSAL ROUTES

Type of waste	Disposal routes
Water-Based Mud (WBM) Drill Cuttings	Used as sub-grade material
Off-spec polymer waste	Reused as coagulant at CETP, Balotra
Canteen waste (organic)	Converted into manure and used in greenbelt
Paper/corrugated boxes	Sold to recyclers
Metal scrap, electrical cables, plastic scrap, rubber scrap, glass	Sold to recyclers
Wooden scrap	Sold to recyclers
Insulation waste (PUF/Thermocol/Mineral wool)	Sold to recyclers/disposed in non-hazardous landfill

Transforming the planet



BIODIVERSITY

We have made great strides in achieving No Net Loss to biodiversity. Taking this initiative further, we strive to make a net positive impact on local biodiversity.






Our Biodiversity Policy focuses on minimising and mitigating biodiversity risks, identifying, assessing, and monitoring the impacts of our operations on biodiversity, and conserving rare and endangered species. At Cairn, we are committed to protecting and enhancing the local biodiversity by planting various local species in large quantities. We have developed green belts as an integral part of the development of our permanent facilities. Phase-wise development of peripheral greenbelt is under implementation and undertakes the Source and Receptor Approach-based plantation around the facilities, to mitigate the impact of fugitive emission. As per the study conducted by an

independent third-party in 2018, the carbon sequestration potential of our plantations is ~42,000 tonnes of CO₂ equivalent.

Further, we have developed and implemented our Biodiversity Management Plan to identify sensitive habitats, important species, and key biodiversity hotspots.

Environmental Impact Assessments have mapped out the biodiversity status of the Rajasthan block area as part of the regulatory approvals and ecological studies conducted by subject area expert agencies such as Arid Forest Research Institute, School of Desert Science and Bikaner University and by M/s Terracon Ecotech Pvt Ltd. All our assets fall under the low biodiversity risk category.

Targets

				
Plantation of 2 million trees by 2030	Revival of Khejari in the Thar Ecosystem with 15,000 plants by 2025	Proliferating globally endangered guggal in RJON block, Barmer, with 1,500 plants by 2025	Reclamation of mangroves in offshore areas	Conservation of an endangered species - the Fishing Cat - in Godavari delta region

Operational site	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organisation, by extinction risk:				
	Critically endangered	Endangered	Vulnerable	Near-threatened	Least concerned
					114 birds Five amphibians and reptiles 10 mammals Five trees Nine herbs
RJON Block	Shrub (Commiphora wightii (Arn.) Bhandari-Gugal)	Bird (Steppe Eagle, Egyptian Vulture)	Bird (Greater Spotted Eagle)	Bird (Black Headed Ibis, Laggar Falcon, Pallid Harrier, River Tern)	
Suvali			Bird (Greater Spotted Eagle)	Bird (Cycas rumphii Miq and Platycladus Orientalisi (Not Native))	23 birds A mammal Five trees
Ravva			Mammal (Smooth Coated otter)	Bird (Black tailed godwit and Painted Stork)	43 birds Three mammals Two trees (Pongamia pinnata L. Pierre and Thuja occidentalis L.)
				Bird (Common Peafowl)	
Barmer Gujrat Pipeline and Terminals	Bird (Whitebeaked Vulture, Red-headed Vulture and Long-billed Vulture)	Mammal (Wild Ass)	Mammal (Chinkara, Grey Wolf, Jungle cat and Jackal)	Reptile (Monitor Lizard)	A mammal and a reptile
			Reptile (Python Molurus, Indian Star Tortoise, Indian Soft Shell Turtle)		

Source of information: Biodiversity study report



Transforming the planet

Mitigation measures

The following mitigation measures to maintain biodiversity and conserve flora and fauna within the Ravva block area:

- ▶ Biodiversity assessment of all the assets and action plan for biodiversity conservation
- ▶ Mangrove development in Ravva's man-made wetland
- ▶ Ravva unit has entered MoU with the Forest Department, Govt of Andhra Pradesh, supporting the ecology and conservation perspectives of the endangered Fishing Cat
- ▶ Drinking water facility for wild animals in Gangali forest area, Barmer
- ▶ Rescue vehicle with required tools and tackles for District Forest Office, Barmer, for the handling and safe transportation of injured wild animals
- ▶ Avifauna protection through the installation of Milli Voltage Cable Cover and Milli Voltage Line Cover at Pole crossing to avoid electrocution of birds. Recently, spikes were installed on double poles across the 140 km OHL network of MBA
- ▶ Developed the Desert Park, a floral biodiversity park at MPT
- ▶ Developed a green shelter belt with gram panchayat on community land
- ▶ Desilting of natural water bodies
- ▶ Promoting plantation of native species within the facility and community as well; developed greenbelt with indigenous floral species, e.g., Khejri, Kumta, Karanj, Neem
- ▶ Carrying out social forestry projects in association with local forest authorities and communities to increase the green cover
- ▶ Installation of warning signages in the block area for wildlife crossing to prevent road incidents

Drinking water facility for wild animals

The RJ Block area has a rich biodiversity with 300+ flora and fauna species and a good distribution of water bodies. However, these water bodies are seasonal and are usually abundant only during the monsoon. Due to low annual rainfall, recurring drought-like conditions, and depleting groundwater table, water availability becomes a challenge for wild animals. They find it hard to survive in the summers, and sometimes even during winter. This acute scarcity has forced wild animals to stray into the villages. Post discussions with the local forest department, we have undertaken an initiative to set up a drinking water facility for wild animals in the protected forest area.

As per the forest department's suggestion and input from our hydrogeological team, we identified a potential area for drilling a bore well.

The first attempt was made at the Juna Patra forest area, but the borewell went dry. The second attempt was made at the Gangali forest area and succeeded in tapping groundwater.

The borewell is fitted with a solar-powered 5HP submersible pump. A small drinking water pond called 'Gajlar' has also been developed ~200 m away from a borewell in the forest area. This facility is in the reserved forest area of Gangali in the Barmer district. The habitat in Gangali is vastly different from the habitats observed in the block area. It is known to support wildlife such as the Indian Gazelle and many other wild animals and birds. Since the commissioning of the drinking water ponds in June 2017, several wild animals and bird species have been spotted at this facility.



Enhancing biodiversity value through the conservation of the endangered fishing cat

Ravva's manmade wetland mangroves cover ~55 acres in the swamp of the Bay of Bengal backwaters. This area is a hotspot for mangroves plantation, providing an excellent roosting site to many avifaunal species, a refuge for the smooth-coated otter. A total of 16 species of trees, a climber, a shrub, and four herbaceous mangrove associates were enumerated from the mangrove habitats. Overall, 33 species were identified in the entire green belt area at Ravva. Recognising the significance of its diversity, we have developed a detailed wildlife management plan. Among various wildlife conservation measures, one of our flagship biodiversity initiatives is to study the Ecology and Conservation prospectus of the fishing cat (*Prionailurus viverrinus*). Fishing cats are small wild cats with a discontinuous distribution in mangroves, wetlands, rivers, and swamps, in parts of South and Southeast Asia. The species was classified as globally endangered in 2008, based on steep population declines (especially in Southeast Asia) over the past several decades (IUCN 2008).

Fishing cats are good swimmers thanks to their semi-webbed paws and relatively short but muscular tail that they use as a rudder in the water. This study focuses on understanding their movement, space use, and diet. It will be the first ever-comprehensive study to understand the species.

The specific outcomes of the study include:

- ▶ Understanding their diet and seasonal variation
- ▶ Home range, movement, and space use
- ▶ Threats faced by the species
- ▶ Conservation planning for the species in Coringa Wildlife Sanctuary
- ▶ Facilitation of the National Conservation Breeding Centre of Fishing cats at EGREE

We have signed an MoU with the Andhra Pradesh Forest Department to implement the project through the Wildlife Institute of India for three years. The total project cost ₹ 74 lakh for three years started in 2020.





Transforming the planet

Boosting biodiversity at the Ravva mangroves

Protecting biodiversity is not just about being environmentally responsible. It is also crucial in shielding the wildlife and their habitat. The mangroves at Ravva is a perfect haven for species of fauna and flora. From a variety of fishes, Ravva is home to various forms of wildlife, such as turtles, snakes, cats, otters, birds, butterflies, insects, and more.

Our attempt towards supporting sustainable conservation efforts began in 2004, and translated our green belt concept into action. In 2009, we initiated our mangrove establishment project, and took a major step towards achieving our vision of supporting a nature-friendly environment at our facility.

Our mangroves and green belt within the plant support 150 species of birds, 52 species of butterflies, more than 15 types of reptiles, and multiple species of insects including bees, bugs, beetles, spiders, and innumerable organisms that are dependent on this complex interdependent ecosystem.

Ravva houses a wide range of wildlife including 150 species of birds, six species of snakes, seven species of amphibians, eight species of mammals, 50 species of butterflies and various insects, such as spiders, bugs, beetles, and flies.

Major bird species include the migratory ducks Northern Pintail (*anas acuta*), Northern Shoveler (*spatula clypeata*), Garganey (*spatula querquedula*), waders, such as Lesser and Greater Sand Plovers (*charadrius mongolus* and *charadrius leschenaultii*), Pacific Golden Plover (*pluvialis fulva*), Eurasian Curlew (*numenius arquata*), Whimbrel (*numenius phaeopus*), Wood Sandpiper (*tringa glareola*),

Common Redshank (*tringa totanus*), and Common Greenshank (*tringa nebularia*), among others.

Ravva also accommodates the breeding population of the near-threatened Painted Stork (*mycteria leucocephala*), Oriental Darter (*anhinga melanogaster*), and other colonial nesting water birds, such as Cormorants, Ibises, Openbills, and Jacanas.

We discovered a family of smooth-coated otters from the man-made mangroves of Ravva on-shore terminal, located in Surasaniyanam, East Godavari district of Andhra Pradesh. Listed as 'Vulnerable' in the IUCN Red list, this species has been affected by pollution, encroachment, and reclamation of water bodies, wetlands for developmental activities and agriculture, and construction of dams.

The mangroves and the smaller water bodies within the plant serve as the primary source of food for the family of otters present here. They were observed foraging on fish at both locations. Lack of disturbances from human activities—especially no threats in the form of poaching—help them thrive in this landscape. The plant premise is surrounded by fish and prawn farms (aquaculture farms), which act as a secondary source of food for these predatory mammals. The presence of these predators in the mangrove ecosystem is a strong indicator of its blooming health. They play a significant role in maintaining the balance between the water and land ecosystems. Our management puts consistent efforts in making sure that their population increases over the years.

Transformation over the years



Early 2000 - Swampy land



Mangrove Nursery during 2001-2002



Fishbone canals made for Mangroves 2002



Mangrove Plantation 2003



2004



2022



2019



2015



2009



2006



Transforming the planet

Ravva Wildlife – A photo journey of a nurtured ecosystem

Our Ravva Terminal and its surroundings are home to an astonishing variety of wildlife and mangroves. The transformation of barren land to a dense mangrove forest has provided nesting ground to several endemic and migratory birds, mammals, and reptiles. This reflects our commitment towards biodiversity conservation. To spread awareness and nurture local diversity, we released a book portraying the uniqueness of the wetlands and coastal ecosystem.

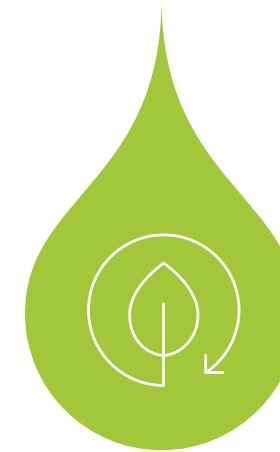
To learn more, refer to: https://efinder.cairnindia.com/SiteAssets/Ravva_Wildlife_Video.mp4

Know Your Flora – A Glimpse of Thar Ecosystem

Low rainfall, intense sunlight, dry winds, a harsh landscape, and massive dunes come to mind when we think about deserts. Even these extreme climatic conditions support numerous xerophytic plants and various fauna.

'Know Your Flora – A Glimpse of Thar Ecosystem' takes people on an insightful journey, highlighting the various roles that desert flora has played over centuries.

To learn more, refer to: <https://heyzine.com/flip-book/477f6bf623.html>



ENVIRONMENTAL COMPLIANCE

Our internal monitoring mechanism across departments clearly outlines our key performance indicators. Our strong internal governance system proactively helps us in reducing our environmental impact.

We believe in going beyond regulatory compliance and legal requirements, while effectively implementing international best practices. Additionally, the work put forth by our committed cells enabled us to ensure zero non-compliance in FY 2021-22.

All our units are ISO 14001:2015 (Environmental Management System) and ISO 45001 (Occupational Health and Safety Management Systems) certified.

NABL Accreditation for Environmental Laboratory, MPT

Our environmental laboratory at Mangala Processing Terminal, Barmer, has received the 'Certification of Accreditation' from the National Accreditation Board for Testing and Calibration Laboratories

(NABL), with an accreditation scope for 139 parameters of Environment Conditioning Monitoring. This has been done under the Standard of ISO/IEC 17025:2017 on general requirements for the competence of testing and calibration laboratories.



Transforming the planet



OIL SPILL MANAGEMENT

Prevention of accidental spillage is of paramount importance to our organisation. All our production and drilling facilities minimise the possibility of oil spills through proper design, installation, and operations.

Oil spill is a unique emergency and it requires individual assessment and development of response actions specific to the conditions encountered during the incident. We have developed an Oil Spill Contingency Plan (OSCP) that contains the guidance and processes that need to be implemented to contain and control any spillage.

We ensure that Oil Spill Response (OSR) equipment display the best operational readiness through planned maintenance, quarterly inspection, and operational

testing by OEM. HSE managers ensure that the OSR equipment are tested, inspected periodically, and are ready to be deployed at any necessary time.

Similarly, the Master of Production Support Vessel ensures the operational readiness of on-boarded OSR equipment including the Oil Spill Dispersant Spray System. All personnel assigned with the task of operating the OSR equipment are adequately trained and subjected to regular offshore oil spill drills.



Our OSCP has been prepared as per the guidelines provided by:

- ▶ NOSDCP of Indian Coast Guard
- ▶ Oil Industry Safety Directorate (OISD), Ministry of Petroleum
- ▶ International Maritime Organisation (IMO)
- ▶ International Petroleum Industry Environmental Conservation Association (IPIECA).

The OSR mechanism is defined based on the quantity of crude oil spillage.

At Cairn Oil & Gas, we ensure requirement of maintaining equipment which are sufficient to handle any spillage up to Tier-1.

Cairn sites also have in place signed MoU with neighbouring industries for assistance during Tier-II oil spill scenarios and tie-ups with International Oil Spill Response Agencies for tackling Tier-III oil spill scenarios.

Tiers	Range	Assistance
Tier I	Up to 700 MT	Operational spillages dealt with using the resources immediately available at Cairn
Tier II	700 MT to 1000 MT	Medium sized spillages requiring district and/or regional assistance
Tier III	More than 10,000 MT	Large spillages requiring national assistance and/or implementation of the NOSDCP



We believe in sustaining a culture of physical and emotional well-being of our people.

Cairn employees at our offshore operations in the east coast of India.



TRANSFORMING THE WORKPLACE

As a socially responsible organisation, we believe in creating a workplace that fosters inclusivity and innovation. We deeply care about the growth of our employees and constantly try to provide our people with the resources needed to help them achieve their full potential. Our values prioritise building an effective and positive work relationship with employees. We make continued efforts to create platforms that lets them express themselves freely, and take their views into account.

Our commitments



Prioritising the **safety and health** of all employees and business partners



Promoting **gender parity, diversity, and inclusivity**



Adhering to **global business standards** of corporate governance

Focus areas linked with UN SDGs





Transforming the workplace



HEALTH AND SAFETY

We uphold a safe working environment that is conducive to the growth of our employees and business partners. Our reporting culture is transparent and readily accessible, and we maintain a remarkable standard of safety.

0.2

LTIFR in FY 2021-22
(Lost Time Injury Frequency Rate)

0.38

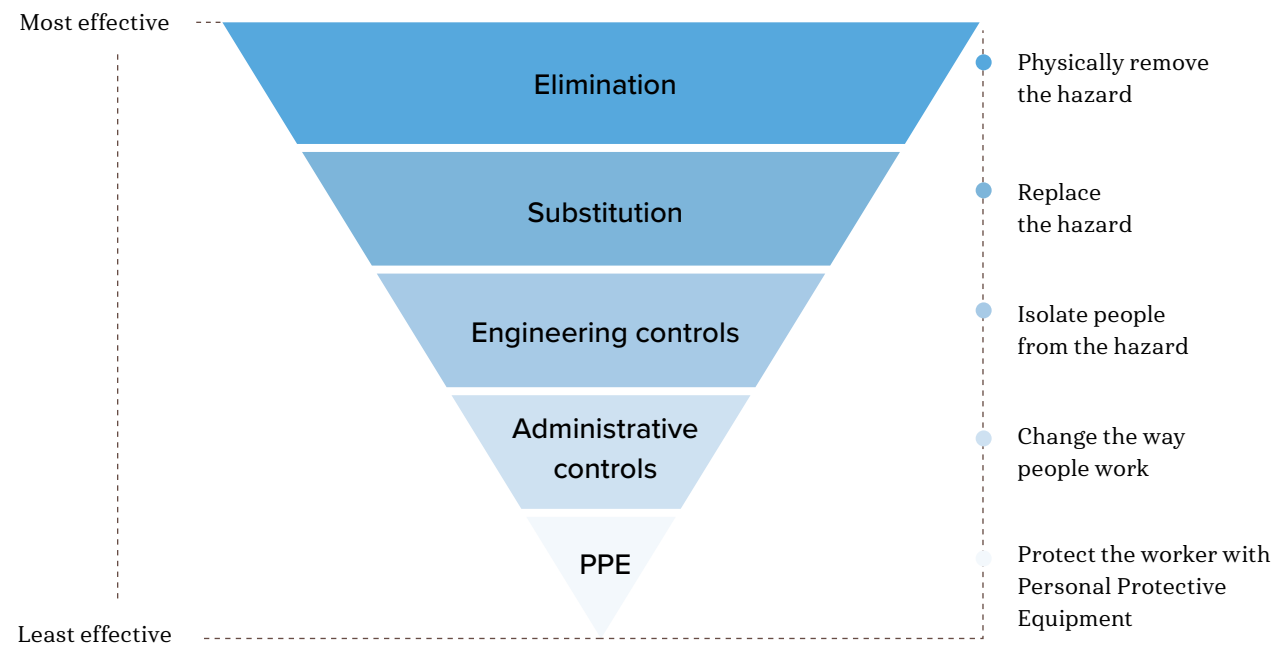
TRIFR in FY 2021-22
(Total Recordable Injury Frequency Rate)

Our HSE management is rooted in a workplace culture that puts its people first. Best and robust industrial HSE practices provide directive in making business decision in line with our operational philosophy of 'Zero Harm'. These involve a robust understanding of our HSE performance trends and analysing areas where there is scope for improvement. It provides an insight into our health and safety focus areas, and acts as a platform to recognise the efforts of our people in making our workplace safer.

As one of the country's largest private oil and gas operators, we play a pivotal role in continuously shaping and strengthening our 'safety culture' in our operations and beyond.

Safety is an inherent part of our planning, right from the conceptual design, construction, and commissioning to the operational phases of any project life cycle through our gated processes. The hierarchy of risk control is adopted through the stages, with the following mentioned components, where elimination of risk is the primary priority, wherever practically possible.

Hierarchy of safety risk controls



Leading and lagging indicators

It is important to note that improving the safety culture in an organisation depends on evolving the standards to evaluate safety performance. Measurement is significant to any safety management process and forms the basis for continuous improvement.

Safety leading indicators are proactive measures for prevention efforts and can be observed and recorded before an injury. These are precursors to likely future outcomes in terms of personal harm or environmental impact.

Some leading indicators are VFL (Visible Felt Leadership), employee perception surveys, safety trainings, and reporting of safety observations. Furthermore, the lagging indicators are equally important as the leading indicators.

While lagging indicators alert you to probable opportunities for improvement in your health and safety programme, leading indicators are paramount in understanding the areas that are excelling. A good health and safety programme uses leading indicators to drive change and lagging indicators to measure effectiveness.

We are focused on driving safety excellence, shifting our efforts towards using leading HSE indicators and conducting programmes that help us improve continuously.

Using leading indicators to find and fix hazards helps us realise direct savings to the bottom-line performance. These include savings in repair costs, production costs, workers' compensation costs, and other legal and regulatory costs that are commonly associated with incidents.



Transforming the workplace

Observing the impact of process safety events on society and the environment

We are consistently trying to strike a balance between socio-economic growth and a safe environment, aligned with international best practices in the oil and gas sector. The hazardous nature of the petroleum industry makes it pivotal to prevent leaks or spills to avoid damage to life or property. Such an event may result in large-scale health and environmental consequences, and directly impact our organisation's reputation.

The impact of such an incident is not just limited to the boundaries of the operating facility but also may have long-term catastrophic impact on the environment and the social surroundings in which we operate. In India, we have many examples of such incidents, including the Bhopal Gas Tragedy, Baghjan Gas leak in 2020, and the Visakhapatnam gas leak, to name a few. All these incidents resulted from a lack of Process Safety Management Framework or its ineffective implementation.

Process safety is a disciplined framework for managing the integrity of operating systems and procedures that handle hazardous substances. It relies on good design principles, strong engineering, healthy operating and maintenance practices.

Our approach is to proactively implement safe and environment-friendly practices that would help us achieve our Zero Harm, Zero Waste, and Zero Discharge goals. In other words, instead of devising ways to respond to crisis and emergency, we take concrete steps that will lead us to early detection, timely mitigation, and prompt decision-making to prevent any setbacks.

We employ several HSEQ (Health, Safety, Environment & Quality) practices such as VFL (Visible Felt Leadership), digitalisation of HSEQ activities and regular review of HSEQ performance indicators (leading and lagging), among others. Our constant endeavour has been to identify new methods that will enhance our existing HSE system.

Another priority for us is that we are intently focused on improving our safety culture. We take significant steps towards this goal by engaging with world leaders in safety. Our baseline study involved the safety perception survey and safety management evaluation. This has helped us find a direction to move forward by aligning all our efforts to achieve our goal of 'Zero Harm'.



Journey towards excelling in road safety

We consider Road Safety critical to our Fatal Risk Controls for HSE. Road Safety Management is considered unequivocally important by our guiding principles, policies, and standards of managing road safety at each of our work locations. To inculcate a sense of active duty towards road safety amongst our employees, business partners, community, and stakeholders, we have implemented various measures. These measures ensure effective road safety management through driver behaviour improvement, performance monitoring, vehicle assurance inspections, training, counselling, road risk reviews, and education of the local community and school and college students on road safety awareness.

Objectives of road safety

- ▶ To prevent road accidents/fatality by imparting defensive driving training to all professional drivers associated with our contractors.
- ▶ To provide regular road safety trainings to employees and contract workforce.
- ▶ We have been moving beyond boundaries and spreading road safety awareness at schools, among college students, at the local community of Barmer, and in surrounding areas of our operations.



LOST TIME INJURY FREQUENCY RATE (LTIFR)

(per million man hours)

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Permanent employees	0	1.3	1.2
Contractor employees	0.22	0.09	0.26
Overall	0.2	0.16	0.30

TOTAL RECORDABLE INJURY FREQUENCY RATE (TRIFR)

(per million man-hours)

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Permanent employees	0	1.3	1.95
Contractor employees	0.41	0.51	0.93
Overall	0.38	0.54	0.96

FATALITIES

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Permanent employees	0	0	0
Contractor employees	0	1	1
FY 2021-22		Permanent employees	Contractor employees
Total injuries		0	13
Work-related fatalities		0	0

Transforming the workplace

Behaviour-based safety programme

Cairn Observation Program (COP) is an exclusive tool implemented across all our operations. This tool aims at developing safe behaviours across our workforce. Launched in 2010, it has defined the focus areas for our annual safety management programmes. The observations help us identify unsafe behaviours and correct them, while also bringing our attention to precarious conditions.

The reported observation of COP is reviewed to understand the areas of improvement and implement specific HSE campaigns and training programmes to mitigate the causes.

A smooth flow between offline and online modes maximises interaction between top management and front-line workers. It ensures easy reporting and encourages our employees to 'stop unsafe work' and 'refuse to work if unsafe.' We try to incorporate these messages into our comprehensive management policy.



HSE management system and the commitment of the leadership

The HSE management framework is governed by policy, guidelines, and technical standards. We have integrated the occupational health and management system into our organisation's overall governance model. Moreover, the annual Vedanta Sustainability Audit Programme ensures proper implementation of our management system with a review by the Board members.

Health, Safety, and Environmental considerations are integral to our core processes and day-to-day activities. As a part of this commitment, we ensure that our business partners are aware of our policies and work standards and comply with them. The business partners, in turn, ensure that all their sub-contractors comply with the mandated HSE requirements.

Key drivers of our HSE management system:

- ▶ HSE and related policies
- ▶ ISO 14001:2015 and ISO 45001:2018 standards
- ▶ Senior management's commitment demonstrated through
 - Robust policies framework
 - Periodic review of HSE performance
 - Safety tours by senior leadership
- ▶ Implementation of 'Zero Tolerance' and 'Life saving behaviours'
- ▶ Significant focus on implementation of 'Fatal risk controls'
- ▶ Cairn Observation Program
- ▶ Visible Felt Leadership
- ▶ Process safety and asset integrity management
- ▶ Employee survey on safety perception and unbiased feedback



Occupational health and well-being services

As a responsible employer, all the activities are risk-assessed to avoid impacts on employees' health. We know that the hazards involved in our day-to-day operations requires self-reliant availability of medical and emergency needs.

The key aspects involve:

- ▶ Ensuring 100% compliance to pre-employment and periodic employment medical check-ups
- ▶ Flexi-time policies for employees to support work-life balance
- ▶ Going beyond the statutory requirements, we provide additional benefits for expecting and returning mothers with the provision of extended leaves and cab facilities
- ▶ Conducting weekly webinars with subject matter experts on health and wellness
- ▶ Wellness committee that organises sporting events and celebrates festivals and milestones

- ▶ Collaborated with Apollo Hospital for services such as tele medicine, air ambulance, and diagnostic labs
- ▶ Participate in industrial hygiene surveys by external experts triennially
- ▶ Medical insurance for all employees (permanent and contractual employees)
- ▶ Established an occupational health centre with doctors and first aid centre
- ▶ Conducting monthly health-related trainings
- ▶ Organising quarterly wellness programmes on various issues, such as eye care, no tobacco day, blood donation, HIV/AIDs awareness, nutrition week, healthy lifestyle awareness, among others
- ▶ Providing heat stress trainings, prevention guidelines, and heat index flag warnings
- ▶ Conducting occupation health campaigns, such as blood donation camps, diabetes awareness session, lifestyle and stress management, and World Yoga Day celebration



Transforming the workplace

COVID-19 preparedness and management

Over the last two years, we have effectively protected our people and ensured business continuity during the COVID-19 pandemic. The first wave of the pandemic gave us the exposure and experience to manage a pandemic of this scale and nature which has helped us tide over the second wave of COVID-19.

We incorporated some of the best practices within our industry to ensure uninterrupted business:

Best practices

Standard operating procedure

- ▶ Workplace protection
- ▶ Resuming work at corporate office, construction, and operational sites
- ▶ Incoming crew travel

Digital initiatives

- ▶ Survey and awareness on social distancing
- ▶ Online self-health declaration
- ▶ In-house contact tracing app
- ▶ Tele-counselling

Medical initiatives:

- ▶ Medical response protocol in place for co-morbid employees across our workforce before detection of COVID-19

- ▶ Assurance of availability of beds in hospitals
- ▶ 24x7 helpline for medical assistance which also covers family members
- ▶ Provision of air ambulance

Preventive measures

- ▶ Thorough sanitisation on a weekly basis
- ▶ Mandatory quarantine for incoming crew
- ▶ Mandatory COVID-19 test negative before onboarding

Beyond work

- ▶ Weekly talk on health and welfare by expert medical practitioners
- ▶ Organised family connect for people on-board
- ▶ Extending help to the communities in which we operate



HUMAN CAPITAL

We envision a workplace culture that welcomes people regardless of their gender, ethnicity, regional affiliations, physical ability, age, and sexual orientation. We proactively reinforce a culture where everyone feels included and respected. We want to create a work environment where differences are valued by providing equal opportunities to everyone.

WORKFORCE SNAPSHOT

Particulars	FY 2021-22		FY 2020-21		FY 2019-20	
	Male	Female	Male	Female	Male	Female
Full-time employees	1,125	226	1,170	235	1,264	259
Contractual employees	5,380	92	5,252	93	6,845	86
Retainers	121	7	142	8	281	13
Total	6,626	325	6,564	336	8,386	358

WOMEN IN WORKFORCE (FTE)

Particulars	FY 2021-22
Full-time employees	226
Managerial positions	59
Leadership positions	17

NEW HIRES

Particulars	FY 2021-22
Male	124
Female	61
Total	185

Cairn employees



Vaccination for our people



1,570+

Fully vaccinated (Both the doses)



Business partners and contractors



Vaccination for our people



8,000+

Fully vaccinated (Both the doses)



CONTINUE TO WEAR MASK, MAINTAIN SOCIAL DISTANCING AND PERSONAL HYGIENE.





Transforming the workplace

Employee learning and development

We promote a culture that allows for flexibility and access to top leadership. We have made several formal and informal forums available for our teams to access any help or assistance from our leadership. We consistently provide internal trainings, which help create a learning culture and improve the skills of our trainers.

We are committed to fostering excellence by providing opportunities for our employees to enhance their knowledge and skills. We have developed a diverse portfolio of learning and development programmes that helps our employees build skills like leadership, technical and operating proficiency.

We have an array of programmes available for professional and personal development of Cairn employees:

- ▶ Behavioural sessions on Vedanta's values and necessary behavioural competencies
- ▶ Business sessions related to the latest oil and gas industry skills
- ▶ Mandatory sessions on mandatory courses (Ethics, POSH, etc.)
- ▶ Techno-functional sessions on necessary technical and functional oil and gas industry skills
- ▶ Internal expert sessions on key Oil & Gas industry concepts and Cairn-related functional aspects
- ▶ HSEQ sessions on key oil and gas industry related health, safety, environment, and quality concepts

Various internal and external experts undertake these programmes through classroom trainings and providing employees with hands-on experience. Our training system identifies individual employee's competencies and provides a comprehensive learning experience.

Our cohort-based training development programmes include:

- ▶ Cairn Leadership Initiative for Managerial and Business excellence (CLIMB-e)
- ▶ Cairn Accelerator Programme for emerging leaders (CAP-el)
- ▶ Barrel of Learning per Day (BOLD)
- ▶ 360-degree feedback
- ▶ Career and Leadership Mentoring (CALM)
- ▶ Project Management essentials
- ▶ LIFE – Women Leadership Development Programme
- ▶ V-Lead – Mentorship for women employees
- ▶ First – Time manager journey

93%

Unique coverage of learning in FY 2021-22

AVERAGE HOURS OF TRAINING PER YEAR PER EMPLOYEE

Particulars	FY 2021-22	FY 2020-21
Male	27.19	34.16
Female	44.81	33.96

Code of Conduct trainings are provided to all employees through a mandatory virtual training module. These trainings are also conducted for all employees periodically with 100% coverage.

ATTRITION AND TURNOVER RATE

FY 2021-22	Male	Female
Employee turnover rate (%)	15	30
Attrition rate (%)	11	25

MINIMUM AND ENTRY LEVEL WAGE

FY 2021-22	Local minimum wage (₹/day)	Entry level wage (₹/day)
Male	724	1,857
Female	724	1,781

Our leaders reach out to people proactively through institutionalised methodologies and tools. At the same time, employees have access to several forums to reach out to the leaders. Regular employee engagement surveys are conducted to map out employee satisfaction.

Some of our best practices in leadership communication and employee engagement are:

- ▶ Periodic communication from top management
- ▶ Employee connect: Site visits and town halls
- ▶ Workshops
- ▶ Monthly rewards
- ▶ Business partner rewards
- ▶ Wellness activities for employees
- ▶ Revision of employee comfort policies

We conduct different engagement activities throughout the year for our employees.

Engagement initiatives

ATOM

ATOM is a series of short module courses in strategic and business leadership for our aspiring high-potential employees. Senior business leaders deliver it through short learning experiences. It aims to help employees build a deeper connection with our organisational purpose, sharpen their strategic perspective, develop business understanding and inculcate greater personal effectiveness.

More Than Coffee

More Than Coffee is a programme to connect with employees in smaller groups. It is a platform for our employees to connect with senior leaders, get to know each other better and share their interests. The platform works as a session to break the ice and give personal attention to every employee.

Lunch and Learn

Our Lunch and Learn sessions are an alternative to traditional top-down or classroom-based learning and are sociable and collaborative. These sessions help us stay updated with the latest trends, thoughts, practices, and technologies.

These sessions revolve around functional topics including structural geology, stratigraphy, geophysics, safety, asset optimisation, artificial lifts, and many more.

Innovation Centre

An innovation team has been put in place to help us advance in our transformation towards adoption and deployment of the new-age technology, digitisation, and benchmarking. The team identifies new opportunities for innovation and creativity. It has a strong talent pool, including technocrats, out-of-the-box thinkers, and bright young minds. The team streamlines and integrates efforts in all aspects, ensuring robust implementation of action points, channelisation of ideas into high-impact business initiatives and realising the goals of production and cost productivity, among others.

Leader Connect

BOLD Leader & You is a series of moderated virtual interactions between Cairn leaders and the incoming campus hires. Conceptualised in FY 2021- 22, the series has so far conducted three sessions with eminent Cairn leaders.

Great Place to Work

Cairn was certified as a Great Place to Work for the third consecutive year. This assessment puts us on the list of India's Top 100 Best Companies to work with.

BetterTogether

We launched our internal employee engagement survey BetterTogether in June 2022 to gauge how employees perceive various measures.





Transforming the workplace

Performance management system

We are committed to fostering a high-performance culture by rewarding and recognising our employees and encouraging them to perform beyond their defined roles and responsibilities. Our compensation strategy lays the foundation of reward and recognition through a competitive assured salary and best-in-class benefits supplemented by an aggressive performance bonus and stock options plan.

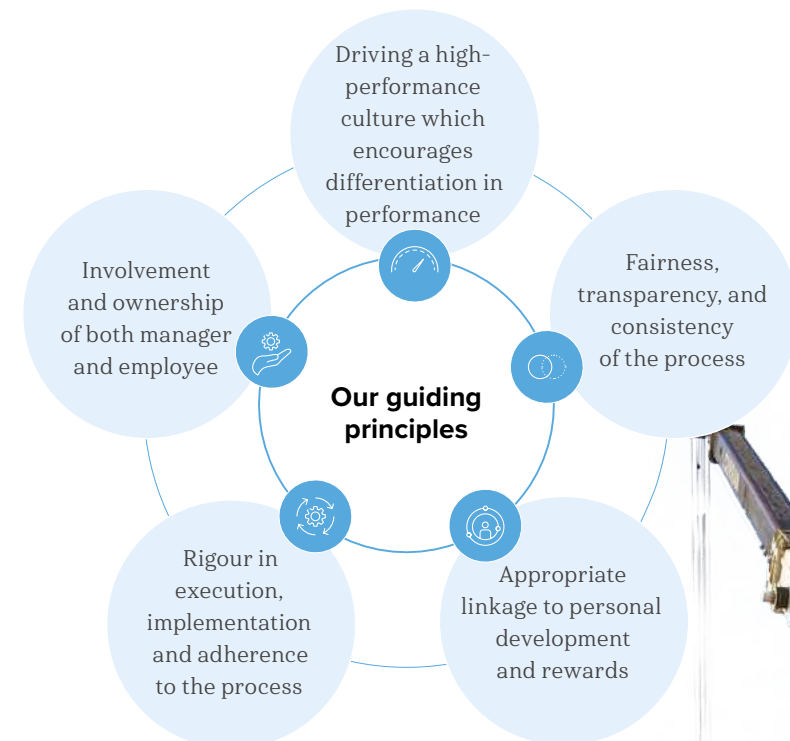
We ensure transparency and consistency in our performance management system. We put in conscious efforts to create a performance-driven culture conducive to individual growth and organisational development to achieve results within targeted and realistic time frames.

The key focus areas of the Performance Management System within our organisation:

- ▶ Goal setting aligned to business targets which are outcome-focused (Project Lakshya)
- ▶ Periodic reviews to ensure breakthrough performance via quarterly, half-yearly, and annual reviews
- ▶ All round development through regular feedback and individual development action plans
- ▶ Driving a high-performance culture by differentiated rewards

100%

Employees receive regular performance and career development reviews

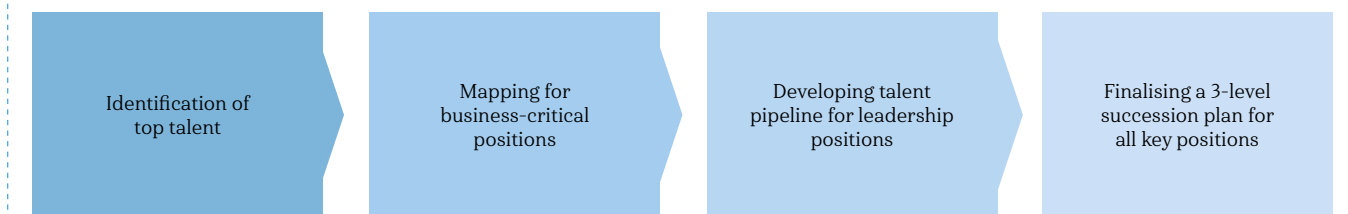


Succession planning

We have a robust succession planning practice in place with the following key objectives:

- ▶ Strong Management in Place (MIP) with right people in right roles
- ▶ Groom top talent for future leadership roles
- ▶ Create a robust leadership pipeline with successors for all key positions

Our succession planning framework



The identified successors are taken through a detailed development journey to enable their role readiness.

Diversity and inclusion

We believe in promoting a diverse and inclusive work environment. We recruit people from different backgrounds based on merit and competence, regardless of gender, age, religion, and sexual identity. A diverse workforce brings a set of unique perspectives to the table, which play a significant role in helping us achieve our business objectives and grow as an organisation. Our culture and values encourage our employees to thrive and succeed. Transforming our Workplace by promoting diversity, inclusivity, and gender parity is the byword for all talent strategies.

We have undertaken various initiatives to identify, nurture, and develop our internal pool of female talent and transform them into future leaders. Our commitment to building a safe, inclusive, and equitable workspace for our women employees is underpinned by following policies:

226
Female employees (FTE)

43%
Women on the Management Committee (ManCo) as on March 31, 2022

We have set ourselves a target to achieve 50% gender diversity by 2050. Our 2030 goals are

30%
Women in overall workforce by 2030


40%
Women in leadership roles by 2030

50%
Women in decision making roles by 2030




Transforming the workplace


Ensuring diversity and inclusivity




Ensuring equal opportunity to diversify talent in all recruitment drives



GIL and LIFE programmes to enable women in leadership roles and remove unconscious bias



Internal growth workshops (ACT-UP and V-Build)



Hiring commitments for hiring women in strategic business functions

We have a structured Diversity and Inclusion (D&I) roadmap with a detailed D&I journey with an end-to-end gender diversity chapter. Aligned with our vision to achieve gender diversity across the Group, we have launched a project to onboard diversity leaders across technical, operations, and enabling functions. It will help us strengthen the representation of women leaders in business and Sub Business Unit (SBU) ExCo. Through this project, we are trying to hire women professionals across various business verticals and locations in leadership positions.

RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN

Particulars	FY 2021-22	FY 2020-21
Basic salary	0.87	0.82
Remuneration	0.89	0.80

Our policies around work-life integration are one of the best in the sector and are framed after extensive discussions with impacted groups. As a responsible company, we have the best practices regarding maternity, paternity, and adoption-related leave and best-in-class compensation policies. We also offer options for parental leave and career break (sabbatical) to fulfil the requirements of all our employees.

98%
Return to Work ratio (12 months after returning from parental leave)

88%
Return to Work ratio of female employees (12 months after returning from parental leave)

100%
Return to Work ratio of male employees (12 months after returning from parental leave)

Case study: 'Durga Vahini' Cairn's all-women security warriors

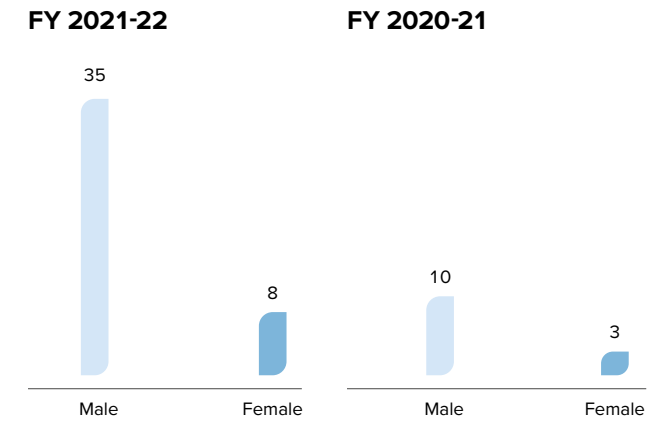
Quick Response Teams (QRT) are the first responders in a developing threat/incident and are responsible for quickly assessing an evolving situation. We have introduced an all-women QRT—Durga Vahini at Mangala Processing Terminal at Barmer, Rajasthan.

This QRT will be part of the security team and responsible for patrolling and responding to developing situations.

We have made it a standard practice to introduce women security guards in our facilities in the district since last year. Through this initiative, we have been inspiring women from rural districts to step into male-dominated professions.



PARENTAL LEAVE DISTRIBUTION



We are continuously enhancing our policies to include multiple policies for employee well-being like medical policy, sabbatical policy, flexi time policy, fitness wellness policy, group mediclaim policy etc.

Employee grievance mechanism

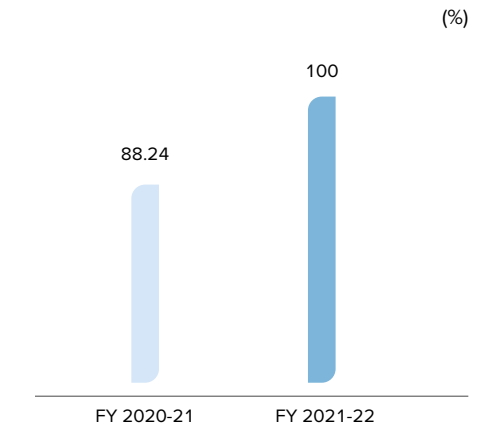
Our employee grievance mechanism system manages employee concerns and complaints in a planned, timely and respectful manner. We partner with all our stakeholders to ensure proper solutions aligning with company's needs. We also ensure that the identity of employees remains undisclosed unless consent for the same is given. The aggrieved employee can lodge grievance by reaching out to a common grievance redressal ID. The employee can then elaborate the details of the type of grievance and prior action taken for resolution, if any, with additional information.

Protection of human rights

We are determined to uphold the fundamental rights of all individuals across our operations. By benchmarking our performance to that of international peers and best practices, we continue to improve our human rights management systems and procedures. Our human rights policy prohibits child or forced labour across our supply chain.

This group-wide human right policy nurtures fair working conditions, equal opportunity, and respect for the cultural heritage of local communities. We conduct routine evaluations and risk assessments to detect human rights, forced labour, and child labour concerns.

SECURITY PERSONNEL TRAINED (%)

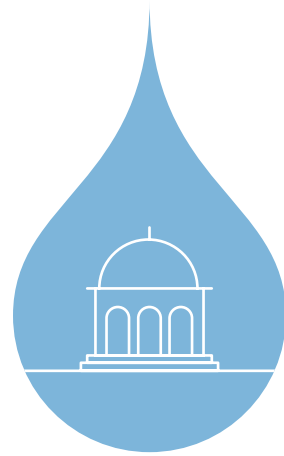


Our human rights policies are aligned to

- ▶ United Nations Declaration on Human Rights
- ▶ UN Guiding Principles of Business and Human Rights (the 'Ruggie Principles')
- ▶ Universal Declaration of Human Rights (UDHR)
- ▶ International Covenant on Civil and Political Rights (ICCPR)
- ▶ International Covenant on Economic, Social, and Cultural Rights (ICESCR)
- ▶ International Bill of Rights
- ▶ International Labour Organisation



Transforming the workplace



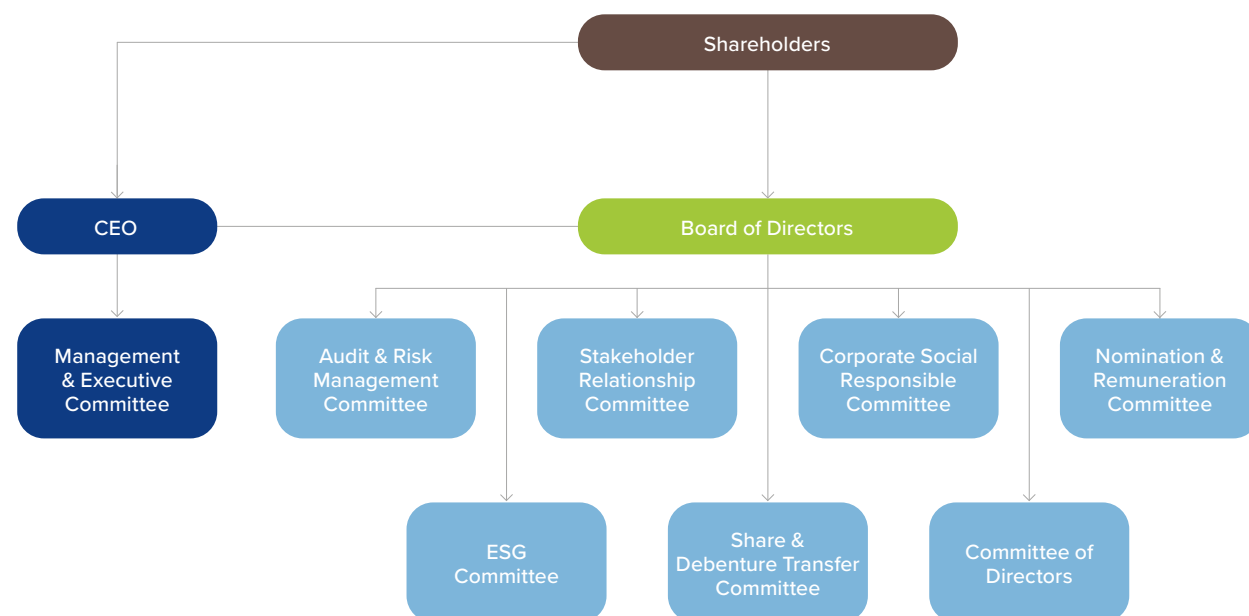
CORPORATE GOVERNANCE

Robust governance standards form the basis for effective leadership and long-term value creation. We believe in incorporating the highest degree of ethics, transparency, accountability, and superior governance mechanisms to sustain long-term relationships with our stakeholders. We have a comprehensive set of policies and management systems in place to effectively analyse and manage risks, including growing threats from climate change. These are reinforced by our basic principles, business principles, and general standards which are acknowledged and followed throughout the Group.

Our governance framework

All our operational facilities have EMS (Environmental Management System) certification ISO 14001:2015 and OHS (Occupational health and safety) management system certification ISO 45001:2018.

The Board, Board Committees, the Group Management Committee (ManCom), and the Group Executive Committee (ExCo) comprise the Group's Corporate Governance framework.



Executive Committee

Chaired by Group Chief Executive Officer, Mr. Sunil Duggal

The Committee meets monthly and oversees the execution of the Board's strategic initiatives, allocation of resources in accordance with given authority, and reviews the Group's operational and financial performance.



Group Management Committee

A Group Management Committee comprised of the Chief Financial Officer, Chief Executive Officer, Chief Human Resource Officer Head, and Chief Commercial Officer has been formed and in effect since April 1, 2020. The Committee is collectively responsible for all critical decisions made under the Chairman's and Board's leadership. The Board of Directors empowers this Committee to spearhead all major initiatives.



ESG Committee

The ESG Committee, together with our Group Sustainability and ESG function, will be responsible for activating, mainstreaming and monitoring initiatives under the 'Transforming for Good' agenda. We have also established dedicated forums for regular management oversight at all levels and ESG-themed communities at each BU and SBU to own projects and drive their timely implementation.

BOARD DIVERSITY AND COMPOSITION

Age group	Between 30-50 years	Above 50 years
Number of Directors	02	06

Age group	Male	Female
Number of Directors	06	02

To read more about our Board Profile, please refer to Vedanta Limited FY 2021-22 Annual Integrated Report

The Board of Directors oversees the Company's strategic goals. The Board provides the necessary guidance and morale to the management in meeting the commitments made to various stakeholders while adhering to ethical business behaviour that helps foster progress that is sustainable.

- ▶ Vedanta Sustainability Framework
- ▶ Process for Assuring Sustainability (VSAP-Vedanta Sustainability Assurance Process)
- ▶ Code of Business Conduct & Ethics
- ▶ Group policies and practices

The Board is assisted in carrying out its duties by:

- ▶ Established committees
- ▶ Risk management structure

For additional details about our Board structure and our corporate governance, please refer to Vedanta Limited's FY 2021-22 Annual Integrated Report.

Transforming the workplace

Risk management

Since we operate on a global scale, our operations are vulnerable to a wide range of hazards. Robust corporate governance and effective risk management are essential for the successful and long-term execution of our approach. We accomplish this through our multi-layered risk management system.

We identify risks at the individual business-level for existing operations as well as for ongoing projects through a well-crafted methodology. Business-level review meetings, undertaken at least once every quarter, formally discuss risk management. Each business division of the Group has evolved its own risk matrix, which is reviewed by the Business Management Committee. In addition, business divisions have developed their own risk registers.

Respective businesses review the risks, changes in the nature and extent of major risks since the last assessment. They are tasked with controlling measures and deciding on further action. Control measures stated in the risk matrix are also periodically reviewed by the business management teams to verify their effectiveness and continued relevance.

These meetings are chaired by the CEOs of the respective businesses and attended by CXOs, senior management, and functional heads concerned. The role of Risk Officers at each business level and at the Group level is to create awareness regarding risks among the senior management, and to develop and nurture a risk management culture within these businesses. The Company's risk mitigation plans are integral to the KRAs/KPIs of process owners. Leadership teams of the businesses are responsible for the governance of the risk management framework.

The Audit & Risk Management Committee aids the Board in the risk management process by identifying and assessing any changes in risk exposure, reviewing risk control measures, and approving remedial actions wherever appropriate. The Committee is, in turn, supported by the Group Risk Management Committee (GRMC), which helps it evaluate the design and operating effectiveness of the risk mitigation programme and the control systems.

[Read more in the risk management section of IR 2021-22](#)



Business ethics

We prioritise ethical business practices, the prevention of corruption, and illicit disclosure of inside knowledge in our risk management approach. These guiding values, in addition to our respect for human rights, are our fundamental operating principles. No corruption or bribery cases were reported to the Board Committee during the fiscal year under review.

Our priority is to create a positive feedback culture in which workers feel comfortable expressing their concerns. If workers become aware of any anomalies or discrepancies, they may report them anonymously through our Whistle-blower mechanism in place. Our established vigil method is supported by our Whistle-blower Policy, which offers necessary protections against victimisation of employees who choose to use it. It also provides the complainant with immediate access to the Audit Committee's Chairperson. The policy expresses our commitment to a 'policy against retribution' and our commitment to preserving confidentiality.

Implementation and monitoring of our Code of Conduct and Business Ethics is overseen by the Management & Assurance Services (MAS) team. It seeks to ensure that businesses, departments, employees, and business partners remain aligned with the Company's ethical business conduct requirements through independent, third-party audits. To stay aligned with global best practices and lessons learnt via implementing these policies, the Company Secretary along with the MAS team reviews and benchmarks the Code of Business Conduct & Ethics. Our company also adheres to UKBA and FCRA regulations.

Code of Business Conduct and Ethics (CBCE)

The code consists of general guidelines for conducting the Company's business with best-in-class standards of business ethics. This Code necessitates a higher standard than required by commercial practice or applicable laws, rules, or regulations. The implementation of CBCE is supported by additional policies and guidelines:

- ▶ The Whistle Blower Policy
- ▶ The Insider Trading Prohibition Policy
- ▶ Anti-trust Guidance Notes
- ▶ The Supplier Code of Conduct

In FY 2021-22, 100% of our new hires undertook training on the code of conduct and employees also took a yearly refresher course on the code of conduct.

Breaches of code of conduct

We take stringent action in order to resolve the identified cases across all our BUs. These preventive measures include strict measures taken against errant vendors, vendor workers, and employees. Corrective measures include judicial questioning, penalties, rotation, warnings, and dismissal from the company.

Particulars	Resolved cases	Open cases
Employee misconduct	0	0
Business integrity breach	1	0
Workplace harassment and discrimination	0	0
HSE breach	0	0
Data and privacy breach	0	0
Financial misconduct	0	0
Others	1	0
Total	2	0



Responsible business

PRINCIPLES DRIVING CONSISTENT GROWTH

Sustainability across the supply chain

In line with Vedanta’s sustainability policies, we have a ‘Supplier and Business Partner Sustainability Management Policy’ that guides our interactions with our vendors and suppliers. All vendors are required to follow this code of conduct which helps us implement human rights practices across the supply chain.

Under the purview of our code and policy, we ensure that our suppliers follow all the applicable laws, including labour and human rights laws. Suppliers are essential to our organisation and assist us in maintaining productivity and ethical behaviour by establishing trustworthy and sustainable supply chains.

We rolled out our green procurement roadmap in February 2020 and are releasing our Green Procurement Guideline in FY 2022-23 for high-impact categories. The guideline will enable us to lead the ESG transformation journey by establishing a sustainable supply chain. The Senior Management conducts in-person meetings with key business partners wherein business partners are provided with a forum to highlight their concerns.

Our Supplier Code of Conduct embodies Vedanta’s commitment to adhering to internationally recognised standards, including the Core Conventions of the International Labour Organisation and United Nations’ Universal Declaration of Human Rights. It covers the following aspects:

- ▶ Labour and human rights including compliance with slavery and human trafficking laws
- ▶ Health, safety, and environmental sustainability
- ▶ Business integrity aspects such as anti-bribery, fair trade practices, reporting unethical practices and grievance-addressal mechanism, intellectual property, third-party representation, prohibition on insider trading, etc.

As a condition of doing business with Vedanta, suppliers must comply with this Code and agree to uphold such values in their business associations.

Suppliers can lodge complaints regarding any violation of Vedanta’s Code of Conduct at: sgl.whistleblower@vedanta.co.in or on www.vedanta.ethicspoint.com



PROCUREMENT SPENT

Particulars	₹ cr	% spent
Total procurement spent	11,329	100
Total procurement spent on suppliers belonging to the same country	9,631	85
Total procurement spent on suppliers belonging to the same state	5,771	51
Total procurement spent on suppliers belonging to the same district	1,779	16

Value conversion rate from USD to ₹ is 74.94 as on Mar'22

Compliance with Plastic Waste Management (Amendment) Rules, 2021

We aim to prohibit single-use plastic items on our premises and achieve the targeted Zero Usage across our supply chain, in compliance with the latest Plastic Waste Management (Amendment) Rules, 2021 from the Ministry of Environment, Forest, and Climate Change (MoEF&CC).

Beginning July 2022, we prohibited using Single Use Plastic items and have restricted plastic bags with thickness less than 120 microns from December 2022. To ensure effective compliance, we carried out an email campaign with our vendors.

ESG transformation journey with business partners

We conducted an ESG Transformation workshop with key business partners to communicate our ESG purpose and commitments. The workshop encouraged business partners to collaborate with us in our ESG journey by sharing ideas and submitting proposals for collaborating on ESG projects in line with their sustainability priorities and commitments. Further, our ESG team has also launched a portal wherein business partners can submit their ideas and proposals to partner with us.



Supply chain risk

We use a systematic approach to identify possible sustainability risks in our supply chain. Human rights and HSE risks are deemed significant, given their potential to influence business continuity. We demand that our vendors certify their adherence to the Modern Slavery Act at the time of onboarding, and we seek annual declarations from vendors with active contracts.

967

Total suppliers

71

Critical total suppliers

53%

Share of total procurement spent on critical Tier-1 suppliers



To read more about our supply chain risk, refer to Vedanta Sustainability Report FY 2021-22: Page 124-127



Responsible business

Digitalisation and IT

We believe in leveraging digitalisation to develop a competitive edge and create substantial operational and financial impact at scale. We have introduced digital transformation across our entire value chain at various levels, from exploration and production to distribution. We are doing this to create a better future for our employees, customers, and society.

We have been pioneering the adoption of new-age technology to our advantage. We started our digital journey in 2018 to adopt and democratise technology across our value chain to achieve production efficiency, cost reduction, and a significant ESG impact.

Key objectives of our digital programme

 Advancement in exploration to reduce cycle time	 Higher recovery and additional reserves	 Optimising surface and subsurface operations
 Simplify enabling functions	 Capability building of workforce	 Secure and robust systems



Our strategy

At Cairn, our vision is to transform ourselves into a digital-first organisation. To achieve this we have created a strategy based on three pillars.

Digital engagement execution

These projects have specific KPIs and impact the following areas in terms of execution:

Volume

Projects such as model predictive control for artificial lifts, digital twin for production optimisation, smart well surveillance, and AI-based data-driven reservoir management contribute to additional recovery.

Operating expenditure

Initiatives like predictive analytics of surface critical equipment, model predictive control for artificial lift and polymer facility, and drone-based inspection resulting in cost reduction.

Ways of working

Implementation of integrated petro-technical cloud, paperless office, and digitalisation of logbooks resulting in improvement of productivity and reduction in the decision cycle.

ESG HSE

Execution of projects such as Augmented Reality / Virtual Reality based HSE training, Video Analytics for safety and security violations, and Central HSE console which helps in increasing the compliance for health, safety, and environment metrics.

Digital culture and organisation

We follow a value-oriented and agile methodology to deploy solutions. New digital roles are created as part of the ACT UP programme with each SBU having dedicated digital roles in their organogram. These roles help in planning, executing, and delivering digital programmes. We have conducted hackathons and innovation workshops to engage teams and deliver digital use cases.

Digital start-up ecosystem

We have introduced 'Vedanta Spark', a global corporate innovation and ventures programme, to partner up with and support the growth of digital tech start-ups. Under this programme, more than 2,000 start-ups were registered and over 50 were evaluated across Vedanta. Of these, seven start-up-based projects were implemented in Cairn in FY 2021-22.





Responsible business

Digitalisation: Key enabler in our growth journey



Pipeline Intrusion Detection System (PIDS) and Overhead power transmission lines (OHL) inspections

To detect interference, illegal tapping, unauthorised excavation along buried pipelines and monitor OHL through drones.



Well test validation and production allocation system

Actively manage the difference between theoretical and actual production rates.



Digital oil field

Real-time production monitoring system and decision making.



Digital logbook with mobility

Electronic forms and workflows to reduce the time spent on shift handover.



Model predictive control and asset optimisation

Production optimisation and better asset availability.



Optimised rig and rig-less scheduling

Production enhancement through schedule optimisation of workover rigs.



Data-driven reservoir management

Incremental oil gain through injection and production optimisation.



Collaborative 3D technology

Enhanced understanding by 3D visualisation of subsurface model.



Interactive smart dashboard

Automated interactive and immersive mobile dashboards for faster decision-making enabled by cloud and data factory.



Cloud-based solution to reduce time to first oil

Cloud movement of petro technical data and application.



Video analytics

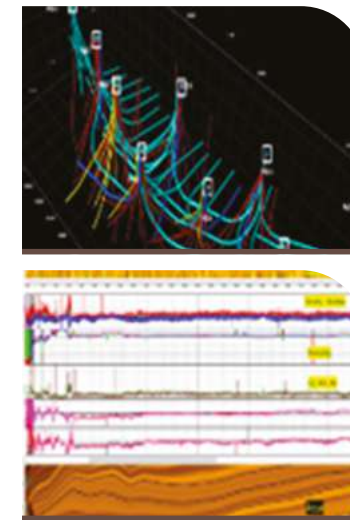
Real-time alerting, video search, reporting, optimised operations.



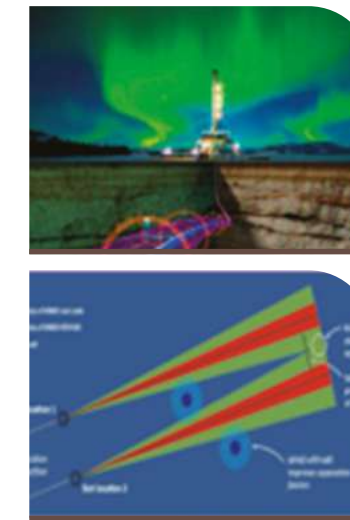
Technological applications: Access to the best-in-class technology and global geo-scientists



Well placement in low permeability reservoir



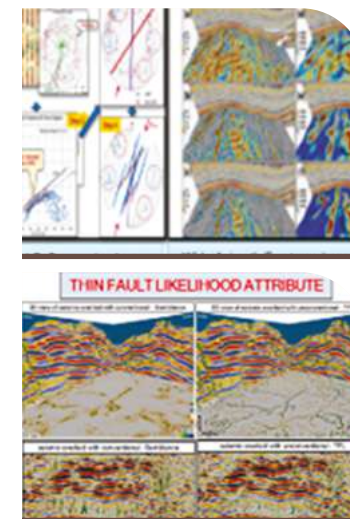
In field magnetic reference



Secondary and tertiary recovery techniques



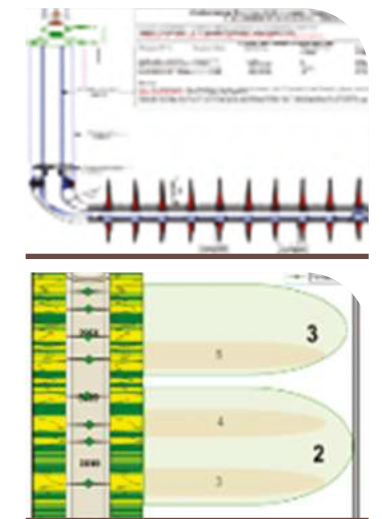
Advance reservoir characterisation



Artificial lift system



Limited entry frac technique and broadband precision





Responsible business

We initiated multiple projects across the value chain, keeping technology, platform, and approach as the basic lever. We aligned the AS, IS and TO BE approach with the digital vision and implemented multiple key and small projects.

- **Exploration:** In exploration, our focus is to adopt cloud storage and use high computation to reduce our cycle time. Increasing collaboration between multiple teams is another key to achieving this. We use high-end computing resources in the cloud using renewable resources at the data centre for carrying out simulations, thus lowering our energy consumption.

110 tonnes of CO₂e

Saved each year due to cloud adoption

- **Production optimisation:** We are implementing solutions to optimise production using initiatives such as Digital Twin. Under the scope of this initiative, we are creating a virtual representation of the physical process that serves as the real-time digital counterpart, enabling us to allocate resources in a more optimised manner.
- **Decline and reservoir management:** The approach in reservoir management is building capability and moving towards AI/ML. With initiatives like model predictive

control where the equipment runs in an optimum condition without manual interventions, utilising the appropriate number of resources and avoiding wastage help us achieve enhanced volumes.

- **Enabling functions:** We have launched initiatives like paperless office and approvals to declutter our processes, streamline operations, and reduce carbon footprint. We have also worked on digitalising the entire HSE, HR and procure to pay process which has helped in centralised technology platform, single source of truth and improving productivity of employees.
- **ESG:** Digitalisation plays a significant role in ensuring the implementation of safety measures in our day-to-day operations. With drone-based safety monitoring, we have observed a 4x increase in safety reporting due to the use of Artificial Intelligence and image analytics coupled with autonomous drone-based inspections.
- **People:** Pratham Python Bootcamp enabled our employees to use the power of Machine Learning and data interpretation. There has been active engagement from frontline workers to explore digital solutions and we are providing the necessary support to ensure seamless digital integration.

Revolutionising the way we work

The oil and gas industry's exploratory services are heavily dependent on data crunching, resulting in terabytes of data creation. We are changing the way we work by moving 80% of our workload to the cloud and adopting a cloud-first strategy to drive efficiency, optimise and improve costs.

Our cloud journey dates back to 2018 when the organisation experienced a requirement for visibility through dashboards from business users. To fulfil that demand, we adopted the Power BI tool. In 2019, the Company created its first Azure data link and connected Historian—a database software service. With the usage of these systems and dashboards, real-time production tracking was enabled. Gradually, we started linking this dashboard with other data sources. We linked data sources such as LIMS, SAP, and geological data to Azure data link in 2021.

From a multi-cloud perspective, the Company is predominantly using Azure, and therefore, a part of the workload is on AWS. From a hybrid strategy perspective, our Company's workload is both on-premises as well as on the public cloud. We are also planning to move our SAP onto the cloud.

Moving the data and the applications over to the cloud has helped our employees to easily access and analyse the data, reducing our first time to oil (time taken to analyse and discover oil).

We have also been using various AI/ML based platforms such as automatic fault extraction for de-risking prospects, drone-based inspections of power grid lines through image capturing, using predictive analysis or surface critical equipment to increase the availability and mean time between failure of equipment, among others.

We have also piloted the usage of edge computing for our remote oil fields. Using this, we capture data from critical equipment and send it to the cloud to analyse and operate.

“ It's not just moving the data and the applications over to the cloud. It is more about fundamentally changing the way business is conducted. ”

—Sandeep Gupta,
Chief Digital & Information Officer

Project Pratham 'Spotlight'

Problem statement

- Maximise production by operating pumps closer to limit without violating constraints
- Trip due to constraints violation
- Silo-ed E&P data and manual processing workflows
- Limited data computing and infra scalability
- Manual surveillance
- Disjointed asset modelling
- Excel-based analysis for data
- Non-integrated data analysis

Solution executed

- AI/ML based digital solution to operate system and process smartly
- Reduce variability of key process variables through model-based controls, and feed forward disturbance rejection
- AR-VR based safety trainings
- APC for artificial lifts and conditioning tower
- Digital Twin and integrated operating center supporting operations
- Polymer consumption optimisation
- Smart Well monitoring-avoid liquid loading
- Drone-based critical asset inspection
- Edge/IOT (Internet of Things) based monitoring and operation
- Disha dashboards
- Robotic process automation

Impact observed

- Reduced process variability
- Improved quality
- Enhanced efficiency and recovery
- Enhanced employee value
- Reduced time to first oil
- Enhance production
- Reduce operational expenditure
- Increased collaboration
- Data-driven decision making
- Reduce carbon footprint



Pursuit of excellence is a major underlying factor
across all functions at Cairn.

Cairn employees at an offshore platform
in the Ravva block, S'Yanam, Andhra Pradesh





Responsible business

AWARDS AND RECOGNITION

We are dedicated towards ensuring sustainability on all our fronts and our efforts were recognised by leading organisations during the year under review.



Corporate

- ▶ Oil & Gas Production Company of the Year >1MMTOE at the FIPI Oil & Gas Awards 2021



Sustainability

- ▶ Leaders' Award Under Mega Large Business Sector at Frost & Sullivan and TERI Sustainability 4.0 Awards 2021



Operations

Gold Award to Ravva at the Quality Circle Forum of India 21st Chapter Convention



HSE

- ▶ Department of Transport-Government of Rajasthan 'Appreciation Certificate for Road Safety Awareness' under the category of Outstanding contribution for spreading Road Safety Awareness amongst Local Community
- ▶ Ravva Onshore Terminal received Inter Tek's certification for 'Conforming to 5S' under the category of Occupational Health and Safety

- ▶ Ravva received CII's 'Five Star' rating for excellence in EHS practices in the large-scale industries in the CII-SR EHS Excellence Awards 2020
- ▶ FICCI awarded RJ Gas Gold Prize in Mining Sector at the 9th FICCI Safety System Excellence Awards
- ▶ British Safety Council provided Five Star Rating to Mangala Bhagyam Aishwariya Mines under the category of occupational health and safety
- ▶ Greentech Foundation acknowledged Suvali Terminal CB/OS-2 as the runner up for 'Mines National Safety Awards' under the Occupational Health and Safety category
- ▶ Golden Peacock Occupational Health & Safety Award for Occupational Health conferred to Suvali Terminal
- ▶ Apex India Foundation Limited awarded Midstream facility the Apex India Safety Award 2021 under the Gold Category for Occupational Health and Safety
- ▶ CII recognised Suvali Terminal CB/OS-2 as the Winner at 16th CII SHE Excellence and Innovation Award 2021 under the Occupational Health and Safety category

- ▶ Greentech Foundation recognised Suvali Terminal CB/OS-2 as the winner: Greentech Annual Safety Award 2021 under the Occupational Health & Safety category
- ▶ 20th Annual Greentech Safety India Summit 2021 recognised RJ Oil-MBA & Midstream as the winner under Safety Excellence and Road Safety category
- ▶ 20th Annual Greentech Safety India Summit 2021 recognised Mandeep Narang as a safety leader
- ▶ Greentech Foundation awarded the Midstream facility with Greentech Annual Safety Awards 2021 under the category of Safety Excellence

- ▶ In the 34th Directorate General of Mines Safety (DGMS) National Safety Week
 - MPT was awarded 'First Prize' in the Overall Performance Category and 'Second Prize' in the category Statutory Records
 - Aishwariya Oil & Gas Mines won the 'Third Prize' in the category of Statutory Records
 - RJ Gas won 'First Prize' under Safe Operations and Maintenance category
 - RGT Gas well pad-9 won the 'Second Prize' in field of Publicity of Safety Awareness
 - Bhagyam Oil & Gas Mines won the 'Third Prize' in the category of O&M



Responsible business



HR

- ▶ Cairn Corporate was awarded JobsForHer's 'Top 5 Most Innovative Practices' under the category Most Innovative Practices—Women Leadership Development and 'Top 20 Most Innovative Practices' under the category of Most Innovative Practices—Women L&D Programmes
- ▶ CII awarded Cairn Corporate with the 'HR Excellence Award'
- ▶ Percipio awarded Cairn Corporate the Leader Award-Future of work under the category Digital Learning
- ▶ Economic Times awarded Mr. Pushkar Singh Kataria, CHRO Gold Winner as the 'HR Leader of the Year—Large Scale Organisations at ET Human Capital Award 2021
- ▶ FIPI awarded Young female achiever to Neha Shah and Young male achiever to Manu Khanna under the Individual Achievement Category
- ▶ Frost and Sullivan recognised Cairn Corporate as the winner for Human Capital Management under the Project Evaluation and Recognition Program—Human capital leadership category
- ▶ PeopleFirst recognised Cairn Corporate for Leading practices in Talent Management, Leading practices in HR Transformation, Leading practices in HR Business Partnership and CHRO of the year at the PeopleFirst HR Excellence Awards 2021
- ▶ CII awarded Cairn Corporate with DX award for Project Spact under the Innovate Category
- ▶ Ask Insights recognised Cairn Corporate as the First Runners-up in Gender Diversity category under The Global DEI Summit 5.0—DICE
- ▶ GPTW certified Cairn as Great Place to Work
- ▶ Great Manager Awards by the People Business recognised Cairn Corporate as the Company with Great Managers 2021 and recognised Biswanath Ghosh among the top 75 Managers in India to receive the 'Great Manager Awards 2021'.



CSR

- ▶ Yuva Unstoppable Changemaker Award 2021 under the category of Outstanding efforts to empower lives of children especially during the pandemic
- ▶ Integrated Health & Wellbeing Council's 'Best Rural Health initiative' under the Gold category for Health initiatives at the 5th CSR Health Impact Awards
- ▶ District level recognition for support extended during COVID-19 by Government of Rajasthan
- ▶ District hospital and National Health Mission, CHMO recognised Cairn employees for extending individual support during COVID-19
- ▶ District Administration, Barmer awarded Cairn CSR Tableau Dashboard the First prize for mass awareness creation during COVID-19
- ▶ Government Engineering College, Barmer recognised CAIRN as the Best Knowledge Partner for the support extended by Cairn Engineers to their students and research scholars
- ▶ Paralympic Committee of India's 'Certificate of Appreciation for Promoting para-athletes and supporting Tokyo Olympics' under Project Divyang
- ▶ CSRBOX and Dalmia Bharat Foundation awarded Cairn Corporate CSR Project of the Year Award for E-Kaksha at the 7th CSR Impact Award
- ▶ Frost & Sullivan and TERI Sustainability 4.0 Awards 2021 felicitated Cairn Oil & Gas with Jury Special Mention Award (Certificate of appreciation) for E-Kaksha-A unique digital education initiative
- ▶ Recognised in the World Book of record's 'Certificate of Participation for Largest virtual marathon' for the Cairn Pink City Half Marathon
- ▶ ICDS Indira Mahila Shakti Protsahan and Samman; Maata Yashoda Award; 3 Beti Bachao, Beti Padhao Awards under the Integrated Child Development Services (ICDS) - Women and Child Department.
- ▶ World CSR Congress Forum recognised Cairn Corporate as having The Best Rural Health Initiative under the Global CSR Excellence and Leadership Award category
- ▶ FICCI recognised Cairn for Smart Education for E-Kaksha at the 3rd edition of FICCI Smart Urban Innovation Awards 2022



Legal

Biz Integration, Society of Indian legal firms & Singapore International Arbitration Society awarded Cairn Corporate 'Legal team of the year' at Indian Legal Awards 2021



Annexures



Ernst & Young Associates LLP
22, Camac Street, Block-C, 3rd
Floor, Kolkata - 700016
West Bengal, India

Tel: +91 33 6615 3400
Fax: +91 33 2281 7750
ey.com

Independent Assurance Statement

The Management and Board of Directors

Cairn Oil & Gas, Vedanta Limited
ASF Center Tower A, 362-363, Jwala Mill Road, Phase IV, Udyog Vihar
Sector 18, Gurugram, Haryana 122016

Scope

We have been engaged by Cairn Oil & Gas, Vedanta Limited (hereafter "Cairn Oil & Gas") to perform a 'limited assurance engagement,' as defined by International Standards on Assurance Engagements, hereafter referred to as the engagement, to report on Cairn Oil & Gas's sustainability performance as included in their Sustainability Report 2022 (the "Subject Matter") for the period 1st April 2021 to 31st March 2022.

Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

Criteria applied by Cairn Oil & Gas

In preparing the Sustainability Report 2022, Cairn Oil & Gas applied the Global Reporting Initiative (GRI) Standards, in accordance with Core Criteria. GRI Standards - Core Criteria were specifically designed for Sustainability Report 2022; as a result, the subject matter information may not be suitable for another purpose.

Cairn Oil & Gas's responsibilities

Cairn Oil & Gas's management is responsible for selecting the Criteria, and for presenting the Sustainability Report 2022 in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records, and making estimates relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibilities

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

We conducted our engagement in accordance with the *International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* ('ISAE 3000'), and the terms of reference for this engagement as agreed with Cairn Oil & Gas on 22nd April 2022. Those standards require that we plan and perform our engagement to obtain limited assurance about whether, in all material respects, the Subject Matter is presented in accordance with the Criteria, and to issue a report. The

nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

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

Our Independence and Quality Control

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

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

Description of procedures performed

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

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

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Sustainability Report 2022 and related information and applying analytical and other appropriate procedures.

Our procedures included:

- Review of the standard disclosures as per GRI Standards regarding Cairn Oil & Gas's material sustainability aspects contained in the report;
- Review of consistency of data / information within the report;

Annexures

- Undertake assurance review of the data and information reported in the subject matter physically for the following sites and indicators

S. No.	Sites	Geography
1	RJ Oil asset (MBA Fields and Mangala Processing Terminal)	Rajasthan
2	RJ Gas asset (Raageshwari Gas Terminal and Associated Well Pads & South Satellite Fields)	Rajasthan

- Undertake assurance review of the data and information reported in the subject matter virtually for the following sites and indicators

S. No.	Sites	Geography
1	CB/OS 2 Block - Cambay, Suvali	Gujarat
2	PKGM-1 Block, Ravva	Andhra Pradesh
3	Midstream (Pipeline Operations)	Rajasthan and Gujarat
4	Corporate Office	Gurugram, Haryana

Indicators	
General disclosures	Organizational Profile (2-1 to 2-8), Governance (2-9 to 2-21), Strategy (2-22 to 2-29), Stakeholder Engagement (2-29 to 2-30),
Topic specific	<ul style="list-style-type: none"> Material Topics (3-1, 3-2, 3-3) Market Presence (202-1, 202-2) Anti-corruption 2016 (205-1, 205-2, 205-3) Production (OG-1) Energy (302-1, 302-2, 302-3, 302-4) Renewable energy (OG-2, OG-3) Water (303-1, 303-2, 303-3, 303-4, 303-5) Produced water (OG-5) Biodiversity (304-1, 304-2, 304-3, 304-4, OG-4) Emissions (305-1, 305-2, 305-4, 305-5, 305-6, 305-7, OG-8) Flared and vented hydrocarbon (OG-6) Waste (306-1, 306-2, 306-3, 306-4, 306-5) Drilling waste (OG-7) Supplier Environmental Assessment (308-1) Employment (401-1, 401-2, 401-3) Labor/Management Relations (402-1) Occupational Health and Safety (403-1, 403-2, 403-3, 403-5, 403-9) Decommissioning of sites (OG-11) Process safety events (OG-13) Training and Education (404-1, 404-2, 404-3) Diversity and Equal Opportunity (405-1, 405-2) Non-Discrimination (406-1) Security Practices (410-1) Rights of Indigenous People (411-1, OG-9, OG-10) Human Rights Assessment (412-2)

<ul style="list-style-type: none"> Local communities (413-1) Supplier Social Assessment (414-1)

- Review and execution of an audit trail of claims and data streams, on a selective test basis, to determine the level of accuracy in collection, transcription and aggregation processes followed;
- Conduct interview of select representatives of Entity's management to understand the current processes in place for capturing sustainability performance data as per GRI Standards, Cairn Oil & Gas's sustainability vision and the progress made during the reporting period;
- Review of Cairn Oil & Gas's plans, policies, and practices, pertaining to their social, environment and sustainable development, to be able to make comments on the completeness of the reporting.

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

The assurance scope excludes:

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


Conclusion

- Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the Sustainability Report 2022 for the period of 1st April 2021 to 31st March 2022 in order for it to be in accordance with the Criteria.

Restricted use

This report is intended solely for the information and use of Cairn Oil & Gas, Vedanta Limited and is not intended to be and should not be used by anyone other than Cairn Oil & Gas, Vedanta Limited.

For and on behalf of Ernst & Young Associates LLP.

Saunak Saha
Partner
23 November 2022
Kolkata, India

Annexures

GRI INDEX

GRI Standards	Ref No.	Disclosure	Page No.
GRI 1: Foundation 2021			
GRI 2: General disclosures			
GRI 2: General disclosures 2021	The organisation and its reporting practice		
	2-1	Organisational Details	Cairn Oil & Gas, a division of Vedanta Limited
	2-2	Entities included in the organisation's sustainability reporting	8
	2-3	Reporting period, frequency and contact point	Fiscal Year- 2022 (1 st April 2021 to 31 st March 2022)
	2-4	Restatement of information	There has been no restatement of information.
	2-5	External Assurance	132-135
	Activities and workers		
	2-6	Activities, value chain and other business relationships	8, 14-15
	2-7	Employees	107-113
	2-8	Workers who are not employees	107
	Governance		
	2-9	Governance structure and composition	114
	2-10	Nomination and selection of the highest governance body	114-115
	2-11	Chair of the highest governance body	28
	2-12	Role of the highest governance body in overseeing the management of impacts	114-115
	2-13	Delegation of responsibility for managing impacts	114-115
	2-14	Role of the highest governance body in sustainability reporting	36-37
	2-15	Conflicts of Interest	Vedanta IR (Page 268)
	2-16	Communication of critical concerns	Vedanta SR (Page 108-109)
	2-17	Collective knowledge of the highest governance body	Vedanta IR (Page 58-61)
	2-18	Evaluation of the performance of the highest governance body	Vedanta IR (Page 58-61)
	2-19	Remuneration Policies	Vedanta IR (Page 262)
	2-20	Process to determine remuneration	Vedanta IR (Page 262)
	2-21	Annual total compensation ratio	Vedanta IR (Page 262)
	Strategy, policies and practices		
	2-22	Statement on sustainable development strategy	31
	2-23	Policy commitments	35, 117
2-24	Embedding policy commitments	117	
2-25	Processes to remediate negative impacts	113	
2-26	Mechanisms for seeking advice and raising concerns	117	
2-27	Compliance with laws and regulations	93	
2-28	Membership associations	Vedanta SR (Page 115)	
Stakeholder engagement			
2-29	Approach to stakeholder engagement	38-39	
2-30	Collective bargaining agreements	Not Applicable for Cairn	
GRI 3: Material topics			
GRI 3: Material Topics 2021	3-1	Process to determine material topics	40-41
	3-2	List of Material Topics	42
	3-3	Management of material topics	43
GRI 201: Economic performance			
GRI 3: Material Topics 2021	3-3	Management of material topic	42-43
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	3, 17

GRI Standards	Ref No.	Disclosure	Page No.
GRI 202: Market presence			
GRI 3: Material Topics 2021	3-3	Management of material topic	42-43
GRI 201: Market Presence 2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	108
	202-2	Proportion of senior management hired from the local community	6% (11 out of 179)
GRI 202: Indirect economic impacts			
GRI 3: Material Topics 2021	3-3	Management of material topic	46-61
GRI 202: Indirect Economic Impacts	203-1	Infrastructure investments and services supported	46-61
GRI 205: Anti-corruption			
GRI 3: Material Topics 2021	3-3	Management of material topic	114-117
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	116-117
	205-2	Communication and training about anti-corruption policies and procedures	116-117
	205-3	Confirmed incidents of corruption and actions taken	116-117
GRI 206: Anti-competitive Behavior			
GRI 3: Material Topics 2021	3-3	Management of material topic	114-117
GRI 206: Anti-competitive Behavior 2016	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	116-117
GRI 207: Tax			
GRI 3: Material Topics 2021	3-3	Management of material topic	114-117
GRI 207: Tax 2019	207-1	Approach to tax	<p>Cairn is committed to doing business ethically. We are committed to comply with existing laws and regulations and have a policy of zero tolerance to non-compliance, which is an integral part of our culture and operating philosophy.</p> <p>Our tax approach is guided by the following principles:</p> <ul style="list-style-type: none"> Maintain high standards of integrity with respect to tax compliance and reporting Transparency in tax reporting's Develop and maintain an open, honest, transparent and constructive relationship in all our dealings with all our stakeholders including tax authorities, government bodies and industry associations Work with Industry chambers wherever possible to contribute in development of tax laws Claim tax incentives and exemptions in accordance with the relevant tax legislation Develop and enhance our people through training, experience and opportunity as part of a world-class tax team <p>To guide its various business divisions, Vedanta has also formed an internal 'Tax Council' which acts as an overarching governing body to the tax function as a whole.</p>

Annexures

GRI Standards	Ref No.	Disclosure	Page No.
GRI 207: Tax 2019	207-2	Tax governance, control, and risk management	At Cairn, we strive to be fair, honest, accountable and ethical in our conduct. We are committed to complying with tax laws in a responsible manner, paying and reporting taxes on time. In line with our tax governance model of being tax transparent, the focus begins with employees who are regularly sensitised on the need to comply and educated about the compliance requirements of their roles. Department heads ensure regular updates are provided on recent tax related developments through trainings and focused sessions.
			We also maintain internal controls in the form of compliance calendars, internal audit process by MAS (Management Assurance Services) teams, authorisation matrix under maker- checker concept. These systems, processes and controls enable us to fulfill our tax compliance obligations and mitigate associated risks.
GRI 207: Tax 2019	207-3	Stakeholder engagement and management of concerns related to tax	Keeping with the spirit of Vedanta's core values, we treat all our stakeholders as partners in long-term value creation. Operating responsibly and ethically is an integral part of Cairn's core values which help us to deliver on our commitments to all internal and external stakeholders.
			To fulfill our duties towards them, we have established and implemented responsibly designed tax principles focused on strong governance practices. Our dealings are based on mutual trust in line with Vedanta's Code of Business Conduct and Ethics.
G-4	OG-1		17
GRI 302: Energy			
GRI 3: Material Topics 2021	3-3	Management of material topic	66-73
GRI 302: Energy 2016	302-1	Energy Consumption within the organisation	72
	302-2	Energy consumption outside of the organisation	72
	302-3	Energy Intensity	72
	302-4	Reduction of energy Consumption	5033 GJ
G-4	OG-2	Amount invested in renewable energy	₹21. 62 Mn
G-4	OG-3	Renewable Energy	72
GRI 303: Water and effluents			
GRI 3: Material Topics 2021		Management of material topic	76-80
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	76-80
	303-2	Management of water discharge-related impacts	76-80
	303-3	Water withdrawal	78
	303-5	Water Consumption	78
G-4	OG-5	Volume and disposal of formation or produced water	78
		% of Produced Water reinjected/recycled	76
	Additional disclosure	Overall water reuse/ recycling rate	143

GRI Standards	Ref No.	Disclosure	Page No.
GRI 304: Biodiversity			
GRI 3: Material Topics 2021	3-3	Management of material topic	86-92
GRI 304: Biodiversity 2016	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	86-92
	304-3	Habitats protected or restored	86-92
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	87
G-4	OG-4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored	86-92
GRI 305: Emissions			
GRI 3: Material Topics 2021	3-3	Management of material topic	70-75
GRI 304: Emissions 2016	305-1	Direct (Scope 1) GHG Emissions	70-71
	305-2	Energy indirect (Scope 2) GHG Emissions	70-71
	305-3	Other indirect (Scope 3) GHG Emissions	142
	305-4	GHG Emissions intensity	70
	305-5	Reduction of GHG Emissions	2
	305-6	ODS	143
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	74
G-4	OG-6	Volume of flared and vented hydrocarbon	72-73
G-4	OG-8	Benzene, lead and sulphur content in fuels	Not applicable to Cairn
GRI 306: Waste			
GRI 3: Material Topics 2021	3-3	Management of material topic	81-85
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	81-85
	306-2	Management of significant waste-related impacts	81-85
	306-3	Waste generated	82
	306-4	Waste diverted from disposal/ recycled	82
	306-5	Waste directed to disposal	82
G-4	OG-7	Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal	144
GRI 308: Supplier environmental assessment			
GRI 3: Material Topics 2021	3-3	Management of material topic	118-119
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	450 vendors
GRI 401: Employment			
GRI 3: Material Topics 2021	3-3	Management of material topic	107
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	107
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Life Insurance, Health Care, Disability and Invalidity coverage, Retirement provision, Stock ownership, Parental Leave, Sabbatical, Education assistance, BYOD, Long Service Awards, Gifts for Special Moments, etc.
	401-3	Parental leave	113

Annexures

GRI Standards	Ref No.	Disclosure	Page No.
GRI 402: Labour/management relations			
GRI 3: Material Topics 2021	3-3	Management of material topic	113
GRI 402: Labour/Management Relations 2016	402-1	Minimum notice periods regarding operational changes	Mechanism to bring awareness to all employees on any significant operational change like restructuring, mergers, acquisitions, expansions etc. is in place. Employees are notified 21 days (3 weeks) prior to the implementation of significant operational changes that could substantially affect them.
GRI 403: Occupational health and safety			
GRI 3: Material Topics 2021	3-3	Management of material topic	100-105
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	100-105
	403-2	Hazard identification, risk assessment, and incident investigation	100-105
	403-3	Occupational health services	100-105
	403-5	Worker training on occupational health and safety	103
	403-9	Work-related injuries	103
G-4	OG13	Number of process safety events, by business activity.	144
GRI 404: Training and education			
GRI 3: Material Topics 2021	3-3	Management of material topic	108-109
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	108
	404-2	Programs for upgrading employee skills and transition assistance programs	Internal training programs: 138 External training programs: 52 Other programs: 47
	404-3	Percentage of employees receiving regular performance and career development reviews	100%
GRI 405: Diversity and equal opportunity			
GRI 3: Material Topics 2021	3-3	Management of material topic	111-112
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	111, 115
	405-2	Ratio of basic salary and remuneration of women to men	112
GRI 406: Non-discrimination			
GRI 3: Material Topics 2021	3-3	Management of material topic	114-117
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	116-117
GRI 407: Freedom of association and collective bargaining			
GRI 3: Material Topics 2021	3-3	Management of material topic	Not Applicable for Cairn
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Not Applicable for Cairn

GRI Standards	Ref No.	Disclosure	Page No.
GRI 408: Child labour			
GRI 3: Material Topics 2021	3-3	Management of material topic	113
GRI 408: Child Labour 2016	408-1	Operations and suppliers at significant risk for incidents of child labour	113
GRI 409: Forced or compulsory labour			
GRI 3: Material Topics 2021	3-3	Management of material topic	113, 118-119
GRI 409: Forced or Compulsory Labour 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	113, 118-119
GRI 410: Security practices			
GRI 3: Material Topics 2021	3-3	Management of material topic	113
GRI 410: Security Practices 2016	410-1	Security personnel trained in human rights policies or procedures	113
GRI 411: Rights of indigenous people			
GRI 3: Material Topics 2021	3-3	Management of material topic	48-61
GRI 411: Rights of Indigenous People 2016	411-1	Incidents of violations involving rights of indigenous peoples	Not Applicable for Cairn
G-4	G4-OG9	Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place.	Not Applicable as none of our operating mines for the oil & gas business are operating in or adjacent to indigenous people territory.
	G4- OG10	Number and description of significant disputes with local communities and indigenous people	None. There were no significant disputes with local communities in the reporting period
GRI 412: Human rights assessment			
GRI 3: Material Topics 2021	3-3	Management of material topic	113
GRI 412: Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	113
	412-2	Employee training on human rights policies or procedures	26.79%
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	100%, 118-119
GRI 413: Local communities			
GRI 3: Material Topics 2021	3-3	Management of material topic	46-61
GRI 413: Local communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	46-61
GRI 414: Supplier social assessment			
GRI 3: Material Topics 2021	3-3	Management of material topic	118-119
GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	742 vendors (all Tier-1 suppliers)
GRI 415: Public policy			
GRI 415: Public Policy 2016	415-1	Political Contributions	Vedanta IR (Page 393)
G-4	OG-11	Numbers of sites that have been decommissioned and sites those are in the process of being decommissioned.	No site has been decommissioned or are in the process of decommissioning

Annexures

PERFORMANCE TABLE

SCOPE EMISSIONS

Indicator	(tonnes of CO ₂ e)		
	FY 2021-22	FY 2020-21	FY 2019-20
Direct (Scope 1) GHG emissions	20,75,801	19,70,766	18,41,600
Energy indirect (Scope 2) GHG emissions	2,54,145	1,42,325	1,34,987
GHG Emissions intensity Scope-1 & 2 (tonnes of CO ₂ e/MT of HC produced)	0.256	0.232	0.203
GHG emission intensity (tonnes of CO ₂ e/Gross Revenue in ₹ Mn)	7.08	11.44	7.73

SCOPE 3 EMISSIONS

Indicator	(tonnes of CO ₂ e)		
	FY 2021-22	FY 2020-21	FY 2019-20
Use of sold products			2,49,49,853
Purchased goods & services			1,67,556
Processing of sold products			39,421

GHG EMISSIONS

FY	(tonnes of CO ₂ e)					
	Gas combustion	Flaring-venting	Grid electricity	Diesel	LPG/propane	Total GHG emission
FY 2021-22	14,84,068	5,46,757	2,54,145	44,618	358	23,29,946
FY 2020-21	13,77,382	5,49,715	1,42,325	43,021	647	21,13,091
FY 2019-20	13,26,766	4,42,126	1,34,987	72,199	510	19,76,587

ENERGY CONSUMPTION

Indicator	(GJ)		
	FY 2021-22	FY 2020-21	FY 2019-20
Energy consumption within the organisation	2,25,78,186	1,98,40,711	1,93,62,613
Energy consumption outside the organisation	11,58,127	6,24,841	5,92,627
Energy intensity (GJ/MT)	2.24	2.05	2.61

RENEWABLE ENERGY CONSUMPTION

Indicator	(GJ)		
	FY 2021-22	FY 2020-21	FY 2019-20
Renewable energy consumption	1811	2353	2284

FLARING AND VENTING

	Flaring (mmscm)	Venting (mmscm)
	FY 2021-22	230.22
FY 2020-21	222.31	0.760
FY 2019-20	174.73	0.744

GAS FLARING

Indicator	UoM	FY		
		2021-22	2020-21	2019-20
Potential gas flaring	mmscm/day	0.16	0.26	0.27
	mmscf/day	5.70	9.02	9.52
	Tonnes/day	120.41	193.16	213.04
GHG emission: Potential gas flaring	Tonnes of CO ₂ e/annum	1,57,723	2,51,417	2,66,743
Non-potential gas flaring (from Aish-ABH including dry gas used for ensuring 100% combustion)	mmscm/day	0.47	0.35	0.21
	mmscf/day	16.57	12.49	7.34
	Tonnes/day	618.11	485.88	293.71
GHG emission: Non-potential gas flaring (from Aish-ABH including dry gas used for ensuring 100% combustion)	Tonnes of CO ₂ e/annum	3,76,240	2,84,758	1,62,210

STACK EMISSIONS FY 2021-22

Indicator	(MT/annum)		
	FY 2021-22	FY 2020-21	FY 2019-20
PM			42
SOx			137
NOx			722
VOC			0.08

ODS

Particular	(Kg)		
	FY 2021-22	FY 2020-21	FY 2019-20
R-22 Refrigerants	29.67	24.64	14.45

*R-22 Refrigerant actual consumption multiplied with R-22 ODS potential (CFC-11 equivalent) 0.055
FY 2022: 539 Kgs, FY 2021: 448 Kgs, FY 2020: 263 Kgs

FRESH WATER INTENSITY

	(KL/1000 tonnes of HC produced)		
	FY 2021-22	FY 2020-21	FY 2019-20
Fresh Water Absolute (kL)			88,040
Sp. water (fresh water) consumption intensity (kL/1000 tonnes of HC produced)			9.67

*Fresh water defined as TDS <2000 ppm

WATER WITHDRAWAL

Indicator	(kL)		
	FY 2021-22	FY 2020-21	FY 2019-20
Ground water	1,16,05,301	1,06,19,818	1,09,87,439
Surface water (River)- PHED	46,468	49,878	26,006
Water tankers (third party supply)	1,11,259	79,858	1,01,068
Produced water generated	4,07,75,601	4,05,64,902	37,451,655
Total water withdrawal (A)	5,25,38,629	5,13,14,456	4,85,66,168

WATER CONSUMPTION

Indicator	(kL)		
	FY 2021-22	FY 2020-21	FY 2019-20
Mineral water purchased	10,153	8,246	7,960
Water consumption (B) (Withdrawal (A)+ mineral Water purchased)	5,25,48,782	5,13,22,702	4,85,74,128

VOLUME AND DISPOSAL OF FORMATION OR PRODUCED WATER

Indicator	(m ³)		
	FY 2021-22	FY 2020-21	FY 2019-20
Produced Water generated	4,07,75,601	4,05,64,902	3,74,51,655
Produced Water recycling rate	96.1%	96.8%	95.6%

OVERALL WATER REUSE-RECYCLING RATE

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Reuse-recycling rate	75%	77%	75%

HAZARDOUS WASTE GENERATED

Indicator	(MT)		
	FY 2021-22	FY 2020-21	FY 2019-20
Waste generated	25,777	24,729	47,700
Waste diverted from disposal (Gainful utilisation)	20,642	21,628	43,240
Waste directed to co-processing for energy recovery	3,376	2,973	4,256
Waste directed to disposal (landfill/Incinerator)	1,666	57	124



Annexures

AMOUNT OF DRILLING WASTE

Indicator	(MT)		
	FY 2021-22	FY 2020-21	FY 2019-20
Synthetic oil based mud and SOBM drill cuttings	21,860	21,628	43,240
Water based mud and WBM drill cuttings	2,255	1,575	20,267

LOST TIME INJURY FREQUENCY RATE (LTIFR)

Particulars	(per million man-hours)		
	FY 2021-22	FY 2020-21	FY 2019-20
Permanent employee	0	1.3	1.2
Contractor employee	0.22	0.09	0.26
Overall	0.2	0.16	0.30

TOTAL RECORDABLE INJURY FREQUENCY RATE (TRIFR)

Particulars	(per million man-hours)		
	FY 2021-22	FY 2020-21	FY 2019-20
Permanent employee	0	1.3	1.95
Contractor employee	0.41	0.51	0.93
Overall	0.38	0.54	0.96

FATALITIES AND WORK-RELATED INJURIES

Particulars	FY 2021-22	FY 2020-21	FY 2019-20
Permanent employee	0	0	0
Contractor employee	0	1	1

FY 2022	Employees	Contractual employee
Total injuries	0	13
Work-related fatalities	0	0

NUMBER OF PROCESS SAFETY EVENTS, BY BUSINESS ACTIVITY

Particulars	(per million man-hours)		
	FY 2021-22	FY 2020-21	FY 2019-20
Tier 1	1	2	2
Tier 2	2	5	5
Total	3	7	7

WORKFORCE SNAPSHOT

Particulars	FY 2021-22		FY 2020-21		FY 2019-20	
	Male	Female	Male	Female	Male	Female
Full-time employees	1,125	226	1,170	235	1,264	259
Contractual employees	5,380	92	5,252	93	6,845	86
Retainers	121	7	142	8	281	13
Total	6,626	325	6,564	336	8,386	358

WOMEN IN WORKFORCE (FTE)

Indicator	FY 2021-22
Total women workforce	226
Women in management positions	59
Women in senior management	17

NEW HIRES

Particulars	FY 2021-22
Male	124
Female	61
Total	185

AVERAGE HOURS OF TRAINING PER YEAR PER EMPLOYEE

Particulars	FY 2021-22	FY 2020-21
Male	27.19	34.16
Female	44.81	33.96

ATTRITION AND TURNOVER RATE FY 2021-22

Employee Turnover	Male	Female
Employee turnover rate (%)	15	30
Attrition rate (%)	11	25

MINIMUM AND ENTRY LEVEL WAGE

FY 2021-22	Local minimum wage (₹/day)	Entry level wage (₹/day)
Male	1,857	2,192
Female	1,918	1,781

RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN

Indicator	FY 2021-22	FY 2020-21
Basic salary	0.87	0.82
Remuneration	0.89	0.80

PARENTAL LEAVE DISTRIBUTION

Particulars	FY 2021-22	FY 2020-21
Male	35	10
Female	8	3

RETURN TO WORK RATIO FY 2021-22

Indicator	FY 2021-22
Return to work ratio	98%
Return to work ratio of female employees	88%
Return to work ratio of male employees	100%



CORPORATE - OFFICE:

Cairn Oil & Gas (Vedanta Limited)

ASF Center Tower A, 362-363,

Jwala Mill Road, Phase IV, Udyog Vihar,

Sector 18, Gurugram, Haryana 122016

corporate.communication@cairnindia.com

Contacts : +91 1244594454