



CHEMFAB ALKALIS LIMITED

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SUSTAINABILITY REPORT

2023-2024

Green Horizons
**Advancing with Purpose
and Responsibility**

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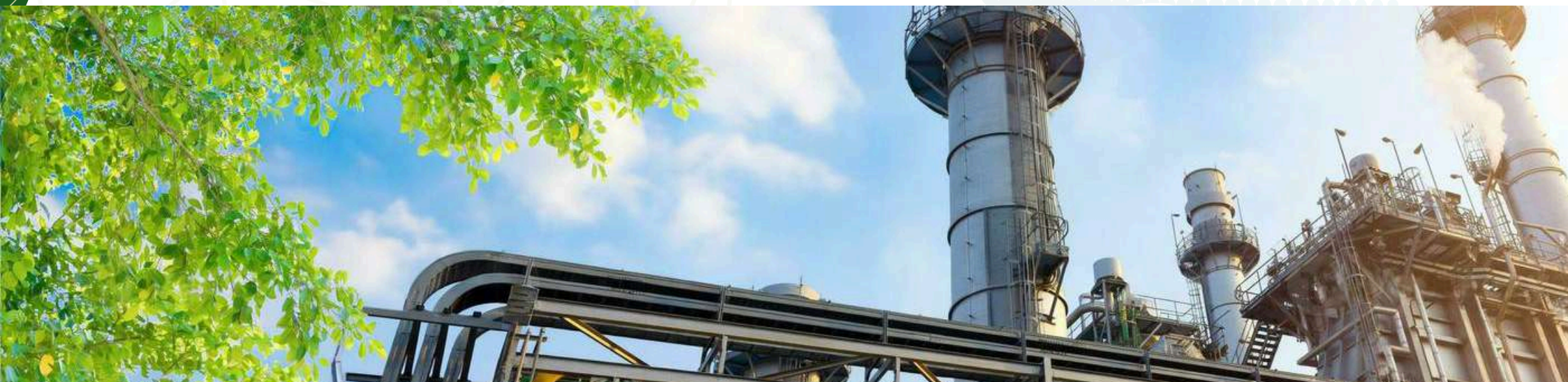


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Our Vision

To achieve leadership through highly efficient operations, best practices and environment friendly technology, thereby generating significant value to all the stakeholders.



Our Motto

Technological dynamism with environment commitment.



MESSAGE FROM THE CHAIRMAN



Dear Stakeholders,

As we look back on the fiscal year 2023-24, it has been a period of both challenges and significant opportunities for Chemfab Alkalis. While our chlor-alkali division faced market pressures due to a decline in commodity prices, we are pleased to report considerable progress and growth in our PVC-O segment.

On a global scale, businesses worldwide have faced various challenges this year, driven by factors such as geopolitical tensions in the Middle East and Red Sea, the escalating climate crisis, supply chain disruptions, and rising fuel costs. Despite these challenges, the Indian economy has demonstrated notable resilience, supported by sound monetary policies, strong consumer demand, and a stable macroeconomic environment.

At Chemfab Alkalis, we maintain a positive outlook and are confident about our continued growth.

Chlor-Alkali Division

The cyclical downturn in commodity prices has had an impact on our chlor-alkali business, affecting profitability. However, we remain optimistic about the future and have taken proactive steps to mitigate these challenges and set the stage for future growth. This includes optimizing our product mix and refining our supply chain, particularly by sourcing raw materials like salt more strategically to reduce costs and improve operational efficiency.

We are also pleased to announce the successful commissioning of our Aluminium Chloride project under Chemfab Alkalis Karaikal Limited, a wholly owned subsidiary, in February 2024.

The product has received a positive response from customers, and we are on track to scale up production to full capacity in the coming year.

While we have deferred our planned 250 TPD Caustic Soda project in Karaikal due to a drop in global caustic soda prices, we will continue to monitor market conditions and pursue this opportunity when the timing is right.

PVC-O Pipes Segment

Our presence in the PVC-O pipes segment continues to grow steadily. We have successfully replaced traditional metal and ductile iron pipes with our advanced PVC-O products.



MESSAGE FROM THE CHAIRMAN

The market outlook for PVC-O pipes remains strong, with increasing acceptance from state government boards, signaling a positive shift toward the use of these products in various infrastructure projects. To meet growing demand, we are planning significant capacity expansions.

By the second quarter of FY 2024-25, we will double our production capacity from two lines to four, with one of the new lines focused on manufacturing larger diameter pipes. This expansion will broaden our product range from 110 mm to 400 mm to a more extensive range of 110 mm to 630 mm. Furthermore, we plan to add three more lines by FY 2025-26, bringing our total capacity to seven lines by the end of 2025-26, in anticipation of increasing demand driven by government initiatives like the Jal Jeevan Mission.

Sustainability Initiatives

Sustainability remains a core priority at CCAL. We are focused on expanding our use of renewable energy sources to align with our commitment to responsible business practices. This shift is expected to lower our power costs and provide additional value to our bottom line.

We are also dedicated to recycling non-hazardous solid sludge, and I am proud to announce that we have become the first company in India to convert sludge into bricks—a process we have patented. These bricks are gaining market traction, and we are scaling up operations with a long-term goal of achieving complete recycling. Additionally, we are committed to creating a great work environment for our employees, promoting skill development and overall satisfaction.

I am delighted to share that Chemfab Alkalys has again been certified as a "Great Place to Work."

Looking Ahead

As we move forward, our focus on sustainable growth and innovation will continue to shape our strategic plans. I would like to express my sincere gratitude to the Government, our dedicated team at CCAL, and all our stakeholders for your continued support and trust in our company. I also extend my heartfelt thanks to the Board of Directors for their invaluable guidance and input.

I wish everyone continued health and success in the year ahead.



ABOUT THE REPORT

Chemfab Alkalis Limited (CCAL) embarked on its sustainability reporting journey in 2014-15, demonstrating a commitment to transparent and thorough communication with stakeholders. Guided by the GRI Reporting Standards and the SEBI BRSR Frameworks, we have consistently strived to provide accurate and comprehensive information.

Our approach involves a series of reports to convey our triple-bottom-line performance. Our sustainability report is prepared in accordance to the Global Reporting Initiatives (GRI). It encompasses various sections detailing our performance, with additional backup data provided in the Annexure for specific standard disclosures. Continuously improving, we are focusing on specific disclosures from our Annual Report to showcase our progress in 2023-2024 and beyond.

We believe this approach allows for a thorough yet succinct coverage of CCAL's value creation and dissemination. The report aims to meet the information needs of all stakeholders.

Framework and Guidelines

The report aligns with both GRI and BRSR frameworks, encompassing key performance indicators consistent with the GRI Standard's "Core" option. It also assesses our performance against the United Nations Sustainable Development Goals (UN SDGs).

Financial data sourced from the Annual Report ensures compliance with the requirements of the Company's Act, 2013, and Indian Accounting Standards, including Ind AS. This chapter reflects the state of the company's affairs as of March 31, 2024.

Scope and Boundary

The report covers information pertaining, Chemfab Alkalis Limited (CCAL) – Chlor-alkali Division/OPVC/SD1 /SD2. Chlor-alkali division is located at Gnanananda Place, Periyakalapet, Puducherry, and manufactures Chlor-alkali Chemicals. The report contains disclosures that pertain to the period 01/04/2023 to 31/03/2024 unless stated otherwise.

Responsibility Statement

The Governance Body, CCAL Board, and Management have evaluated the contents presented in the report and assure its integrity, to the best of their knowledge. The Management has approved the publication of this report in March 2025.

Independent Assurance

The report has been assured by independent assurance provider Intretek India Private Limited.

HIGHLIGHTS OF 2023-2024

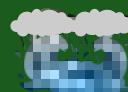


No Major Incidents
in the Last 10 years



Quantity of
wastewater recycled
through membrane
treatment plants

89,852 cu.m



2,06,547
m3 of rainwater
harvested



1,79,56,548
units of solar power
has been procured
through LTOA



15%
Reduction in the
carbon footprint
compared to last
financial year



51
hours of Training for
every 10 CCAL
employees



Nurturing Miyawaki
forest for carbon
offsetting



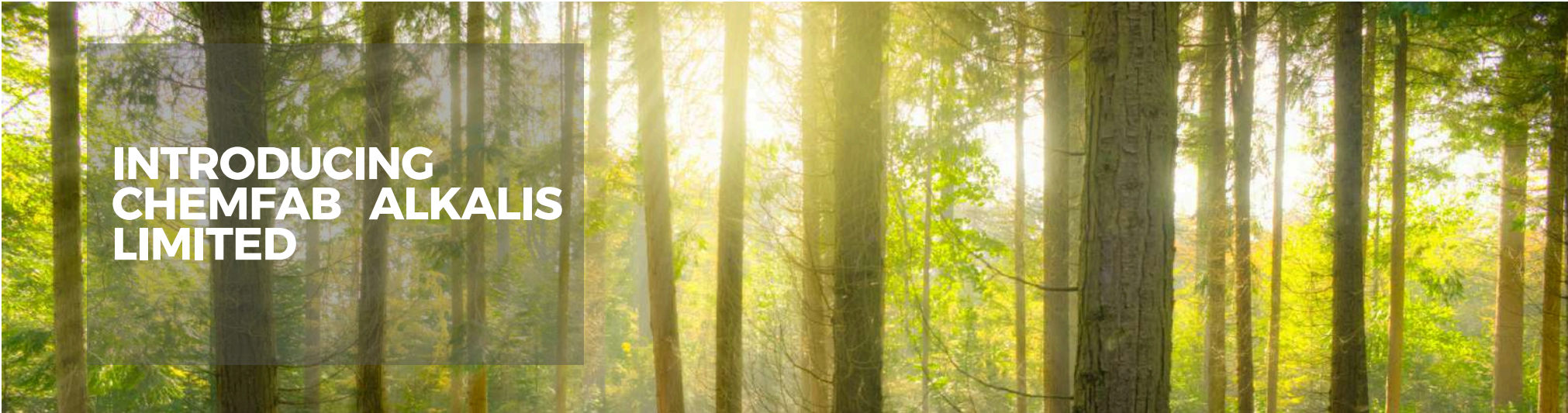
13%
Sludge generated is
converted to bricks



Regular On- Site and
Off - Site Mock Drills



Energy savings of
12.54 lakhs units in
reporting period



INTRODUCING CHEMFAB ALKALIS LIMITED

About The Company

Chemfab Alkalis Limited (CCAL), incorporated under the Companies Act, 1956, has its registered office in Chennai, India. The company is publicly listed on both the National Stock Exchange and the Bombay Stock Exchange. The company operates its Chlor-alkali Division at Gnanananda Place, Kalapet, Puducherry, specializing in the production of Chlor-alkali chemicals.

Since its inception in 1985, CCAL has led the way in adopting advanced and environmentally sustainable technologies. It was the first plant in India to eliminate the mercury cell process by implementing Ion Exchange Membrane Cell technology marking a major step toward safer, cleaner manufacturing.

In 2014, CCAL set another benchmark by becoming the first in the country to adopt BiTAC® electrolyzers.

The sustainability initiatives, along with health, environmental, and safety measures undertaken at the Kalapet Plant, have consistently surpassed industry standards in India.

CCAL holds the distinction of being the first chlor-alkali plant in the country to fully implement all the fourteen elements of Process Safety Management in accordance with OSHA guidelines. Additionally, it was the first Chlor-Alkali plant in India to achieve ISO certification 14001 and ISO 45001.

The Quality Assurance Department of CCAL is accredited by NABL, with its scope covering the entire range of its products. Moreover, the caustic soda produced by the company is certified by the Bureau of Indian Standards.

CCAL established India's first Membrane Cell Caustic Soda Plant, known for its pollution-free and energy-efficient technology. It began operations with a capacity of 25 TPD (tons per day), which has since grown to an installed capacity of 180 TPD.

As part of its strategic diversification program, CCAL has launched a PVC pipe manufacturing plant in Sri City, Andhra Pradesh. The operations of this plant have shown promising initial results, marking it as one of our primary focus areas. This business is anticipated to hold significant potential for growth in the foreseeable future.

ABOUT THE COMPANY

OUR VALUE CHAIN & MAJOR PRODUCTS

Chemfab Alkalies Limited

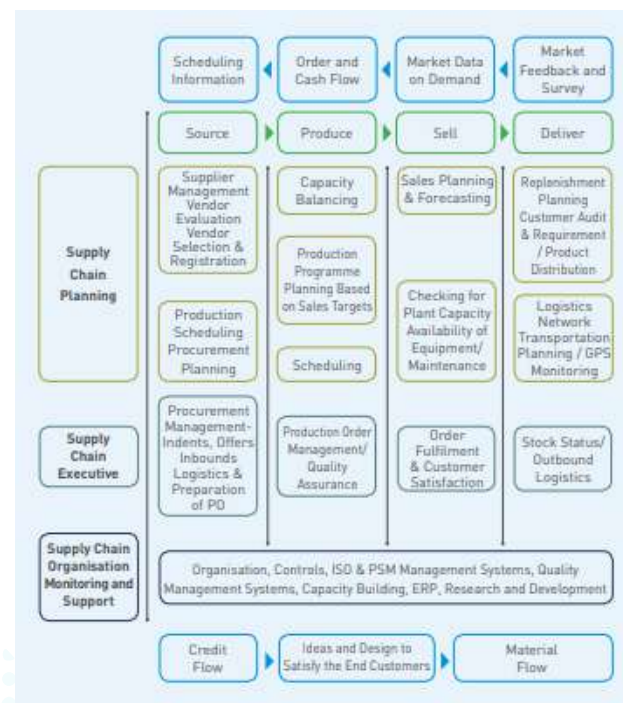
CCAL is a prominent industry primarily focused on manufacturing various inorganic basic chemicals and caustic soda within India. The company's product portfolio includes caustic soda lye (in 33% and 48% concentrations, as well as flakes), liquid chlorine, hydrogen gas, hydrochloric acid, sodium hypochlorite (bleach liquor), and soda ash.

CCAL holds licenses for specific production quantities of each product: Caustic soda lye (65700 TPA), liquid chlorine (58600 TPA), hydrochloric acid (36500 TPA), sodium hypochlorite (3650 TPA), hydrogen gas (6.75 MCM [million cubic meters]), soda ash (2190 TPA), Bricks & Blocks (23570 Nos per day).

Situated in Kalapet, Puducherry, CCAL's chlor-alkali facility operates within an industrial area designated by the Puducherry government, located approximately 12 km from Puducherry city center. The manufacturing plant occupies around nine acres of the total 37-acre site. With lush vegetation surrounding the entire facility, more than 70% of the land area is covered by an expansive green belt comprised of shrubs, trees, herbs, and grass, contributing to a visually pleasing and environmentally sustainable setting (Trees, shrubs).

The primary inputs for CCAL's production process include salt, and energy.

To enhance operational efficiency, CCAL implemented backward integration by establishing a salt field approximately 30 kilometers away from its chlor-alkali plant. This strategic move ensures a convenient and cost-effective source of high-quality salt for the membrane cell electrolyzer, thereby reducing transportation expenses. CCAL procures raw materials from various suppliers, ensuring thorough examination and adherence to the company's sustainability and safety standards.



CCAL manufactures the following Products:

- Caustic soda lye (33%, 48% lye, & Flakes)
- Liquid Chlorine
- Hydrogen
- Hydrochloric acid
- Sodium Hypochlorite
- Bricks & Blocks

CCAL requires its vendors to adhere to rigorous standards encompassing quality, statutory compliance, and safety regulations. This includes ensuring vehicle safety, possessing necessary fitness certificates, and obtaining emission control certificates issued by government authorities. Compliance with labor laws such as Provident Fund (PF), Employee State Insurance (ESI), adherence to minimum wage laws, age verification, insurance coverage under workmen's compensation, and mandatory use of personal protective equipment (PPE) is also mandatory.

Furthermore, vendors are expected to uphold environmental practices such as efficient utilization of natural resources, proper waste disposal methods, pollution prevention, and implementation of safe working practices. Participation in training programs to enhance skills and knowledge is also encouraged as part of the overall commitment to excellence in vendor performance.

ABOUT THE COMPANY

OUR VALUE CHAIN & MAJOR PRODUCTS

Salt Division 1 & 2

Chemical free Industrial grade salt is produced by Chemfab Alkalis Ltd (CCAL) through natural solar evaporation at a land parcel of approx. 2500 acres is in three locations in Tamil Nadu Viz., Villupuram, Chengalpattu, and Sayalkudi. The main salt works is located just 30km from CCAL, Puducherry, and spreads across two large salt fields in Kanthadu, Villupuram District, and Chunampet in the Chengalpattu District. Kanthadu covers a vast portion of 1,223 acres, and Chunampet spreads across 450 acres.

In addition, CCAL recently developed salt pans in about 700 acres at Mariyur village in Sayalkudi District. These prime coastal properties in mainland India's southernmost state are ideal for salt production.

We adopt the oldest method of salt production and adopt conventional manual processes. Over time, the seawater, moves through the sequence of ponds that allows water evaporation to create brine solutions until the most saturated brine evaporated to form salt crystals. This production method produces high-quality, high-purity salt. Any impurities that may be present in the brine are effectively recycled and harvested.

Oriented PVC Pipes Plant



CCAL is pioneering a new era in water infrastructure with the launch of its state-of-the-art PVC-O pipes plant. This facility, located at Sri City, Andhra Pradesh, is a testament to our commitment to technological innovation and sustainability. Oriented Poly Vinyl Chloride (PVC-O) pipes are revolutionizing high-pressure water delivery. With their superior strength, durability, and cost-effectiveness, these pipes offer a compelling alternative to traditional materials like ductile iron.

Our PVC-O plant utilizes the latest technology from Molecor Technologia, Spain, the global leader in orientation technology. This continuous sequential two-stage extrusion process ensures the production of high-quality pipes that meet the highest industry standards. The plant currently operates in two lines, producing 6,000 MTA of PVC-O pipes. We are strategically expanding to six lines, meeting the growing demand for this innovative product. We manufacture PVC-O pipes ranging from 110mm to 400mm in diameter, serving a wide range of water delivery applications. CCAL is committed to environmental responsibility. The PVC-O plant operates as a zero-discharge facility, minimizing our environmental footprint.

ABOUT THE COMPANY

OUR ASSOCIATIONS

CCAL maintains strong affiliations with various trade bodies, including prominent organizations like the Chlorine Institute in the USA and research institutions like the Central Electrochemical Research Institute (CECRI) in Karaikudi under CSIR. Additionally, CCAL participates in the Industrial Associateship Scheme of the Center for Industrial Consultancy and Sponsored Research at IIT Chennai.

It is also affiliated with key industry associations such as the Confederation of Indian Industries (CII), the Indian Chemical Council (ICC), and the Alkali Manufacturers Association of India (AMAI), among others.

CCAL leverages partnerships with CII and ICC to understand industry competitiveness, trends, and productivity enhancement. They also provide information on government regulations and networking opportunities with major corporations. These partnerships help CCAL expand business prospects and explore new markets.

Additionally, CCAL follows the updates from the Chlorine Institute in the USA. This institute provides technical expertise, consensus-building, and standards development for chlorine usage, including protocols, equipment, and training. It also develops emergency response strategies for chlorine-related incidents & grants access to essential resources for safe and efficient operations in the chlorine industry.



Confederation of Indian Industry



ABOUT THE COMPANY

CCAL's Key impacts on environment & society

The key impacts of CCAL's operations on the environment are summarized in the table below:

Material Issues	FY 23-24	FY 22-23	FY 21-22
GHG Emissions (Metric Tons of CO2 equivalent)	Scope 1 = 12550 Scope 2 = 113281 Scope 3 = 2.98	Scope 1 = 9634 Scope 2 = 96122 Scope 3 = 6.37	Scope 1 = 5247 Scope 2 = 98715 Scope 3 = 2.76
Air emissions (SOx, NOx, PM) (µg/cu.m)	NOx = 7.92 SOx = 13.65 PM = 64.43	NOx = 15.23 SOx = 16.25 PM = 65.23	NOx = 12.56 SOx = 15.19 PM = 67.85
Specific Water consumption (KI/MT of caustic)	4.09	4.19	4.41
Effluent Discharge (kL/MT of caustic)	0.0247	0.0250	0.0331
Solid waste discharged (MT)	Hazardous = 3.27 Non-hazardous = 2683	Hazardous = 2.52 Non-hazardous = 2391	Hazardous = 2.48 Non-hazardous = 2081
Specific Energy consumption (TOE/MT of Caustic)	0.2697	0.2749	0.2664

The key impacts of CCAL's operations on the Society & employees are shown in the table below:

Particular	FY 23-24	FY 22-23	FY 21-22
Spend on CSR (INR Lacs)	93.20	26.52	98.7
Employee Satisfaction	Certified as "Great Place to work"	Certified as "Great Place to work"	Certified as "Great Place to work"
Accidents in the operations (Major)	No accidents	No accidents	No accidents
Number of Fatalities	NIL	NIL	NIL
Total number of training hours for every 10 employees	51	49	48



ABOUT THE COMPANY

GOVERNANCE

CCAL's vision is to attain leadership by operating with high efficiency, adhering to best practices, and employing environmentally friendly technology, thereby creating substantial value for all stakeholders. We are deeply committed to realizing this vision.

Accordingly, our policies and procedures are designed to create value for all stakeholders. Throughout its existence, CCAL has maintained fair and ethical business practices, transparency in transactions, and rigorous adherence to regulatory requirements. Moreover, the company has embraced the principles of good corporate governance, which include accountability, ethical conduct, compliance with regulations, consideration of stakeholder interests, transparency, and timely disclosure. Our aim is not only to comply with regulations but also to embed corporate governance practices into our organizational culture.

We actively manage stakeholder relationships through our Board committees, ensuring that the firm operates with the utmost ethical standards and effectively implements essential risk mitigation strategies. Our strategy revolves around the development of environmentally sustainable technologies while prioritizing the well-being of our employees and the communities we serve. This commitment remains central to our strategic planning and execution.

Timely and accurate disclosure of information regarding the financial, economic, social and governance performance of the Company are integral parts of Corporate Governance. Chemfab Alkalis Limited is in full compliance with the requirements under Regulation 34 read with Schedule V of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015. The details of the Directors and the Key Managerial Personnel (KMP) as on 31st March 2024 were as follows:

Mr. Suresh Krishnamurthi Rao
Chairman

Mr. C. S. Ramesh
Non-Executive Director

Mr. R. Mahendran
Non-Executive Director

Mrs. Sujatha Jayarajan
Independent Director

Mrs. Drushti Desai
Independent Director

Mr. A. Janakiraman
Independent Director

Mr. T. Ramabadran
Independent Director

Mr. V. M. Srinivasan
CEO

Mr. S. Prasath
CFO

Mr. B. Vignesh Ram
Company Secretary

ABOUT THE COMPANY

BOARD COMMITTEE

Risk Management Committee



CCAL has established a Risk Management Committee to assist the Board in formulating, implementing, supervising, and assessing the risk management strategy. The Committee is tasked with ensuring that executive management effectively manages risks within a defined framework. It sets forth procedures for risk assessment and mitigation, which are regularly reviewed to ensure their effectiveness.

Audit Committee



In compliance with Section 177 of the Companies Act, 2013 and Clause 49 (III) of the Listing Agreement with the Stock Exchanges, the Board has established the Audit Committee. The actions of the Audit Committee are governed by the terms of reference outlined in Section 177(4) of the Act and Clause 49 (III) (D) of the Listing Agreement. Comprised of Non-Executive Directors, the Committee oversees the financial and operational aspects of the Company and monitors its systems. Additionally, it is tasked with managing the vigilance system and must undertake appropriate measures. The company has established a whistleblower policy, allowing the Board of Directors and employees to report concerns about unethical

behavior, suspected fraud, or violations of the company's code of conduct or ethics policy. This mechanism ensures appropriate action is taken, including disciplinary measures if necessary.

For more information, please refer to page 37 of the Annual Report 2023-24.

Nomination and Remuneration Committee



The Company has formed a Nomination & Remuneration Committee as per the requirements of Section 178 of the Companies Act, 2013 and the Rules outlined therein. The Nomination and Remuneration Committee also abides by the terms of reference as specified under Part D of Schedule II of the SEBI (LODR) Regulations, 2015. This committee is responsible for establishing criteria to assess a director's qualifications, attributes, and independence. For more information, please refer to page 38 of the Annual Report 2023-24.

Stakeholders' Relationship Committee



The Board of Directors has instituted a Grievances Committee for Shareholders and Investors, which is tasked with overseeing the company's interactions with its stakeholders. This committee addresses and resolves shareholder grievances related to delayed share transfers, non-receipt of dividend warrants, and annual reports.

It also monitors the performance of registrars and transfer agents and provides recommendations for overall improvements to the quality of investor relations and services. For more detailed information, please refer to page 42 of the Annual Report 2023-24

Corporate Social Responsibility (CSR)



The Board has constituted the Corporate Social Responsibility Committee in accordance with Section 135 of the Companies Act, 2013. The Company is committed to operating in a socially responsible manner in terms of protecting the environment and conserving water resources and energy.

Details of the CSR Policy drawn up by the Company and the CSR expenditure and initiatives taken during the year 2023-24 are given in Annexure – E from page 27 of the Annual Report 2023-24.

SUSTAINABILITY PRIORITIES & AREAS OF ACTION

Since its establishment, CCAL has consistently fostered meaningful, trustworthy, and transparent relationships. The Company's stakeholders have played a pivotal role in its growth trajectory. CCAL is committed to being an inclusive organization by actively engaging with stakeholders, understanding their concerns, and addressing their needs effectively. Materiality serves as a cornerstone of CCAL's strategy, enabling the prediction, identification, and proactive addressing of sustainability-related concerns.

By prioritizing materiality, CCAL gains insights into stakeholder expectations and adapts its business practices accordingly. The Company acknowledges that environmental and social issues hold precedence over mere business interests and endeavors to uphold high standards in every aspect.

CCAL believes in transparent communication with all stakeholders, ensuring that its actions align with the code of conduct established by the Board of Directors, applicable to both board members and employees. The Compliance Officer oversees adherence to the code of conduct in all organizational decisions.

Furthermore, CCAL regularly updates its website with ongoing achievements, demonstrating its commitment to transparency and accountability.

The CCAL Corporate Sustainability team is led by a Steering Committee constituted with
Mr. V. M. Srinivasan, CEO (Chair)
Mr. S. Prasath, CFO
Mr. J. Sridhar, Vice President - Operations
Mr. V. R. Raguraman, Vice President - Corporate
Mr. S. Anand, Vice President - Marketing
Mr. K. Venugopal, GM - Technical Services
Mr. J. Nopalan, GM - Process

Stakeholders Engagement

Stakeholder engagement at CCAL is a systematic and ongoing process overseen by the Sustainable Management Team, aimed at identifying, assessing, understanding, monitoring, and meeting the needs of all stakeholders. CCAL views its stakeholders as invaluable contributors, vital in shaping the company's plans and actions to generate long-term value, thereby cultivating a partnership for success.

Over the years, CCAL has cultivated a robust network of stakeholders, recognizing them as the true assets of the company. We actively engage with our stakeholders to exchange views and opinions through various means such as meetings, conferences, awards, and other forms of interaction.

Additionally, CCAL conducts a range of CSR activities and social development initiatives to strengthen relationships and deliver better outcomes. Any grievances raised by stakeholders are promptly addressed and resolved by the dedicated team at CCAL. We remain steadfast to providing sustainable value to our stakeholders.



SUSTAINABILITY PRIORITIES & AREAS OF ACTION

Stakeholders Engagement

Stakeholders	Expectations	Mode of Engagements	Strategy	Materiality
Customers	- Assured quality of products - Timely delivery - Support to enhance safety at operations - Reduction or elimination of accidents during gas handling	- Customer surveys - Site inspection - Communication mediums - Online grievance redressal - Customer helpline	Engaging Customers and the Supply Chain	- C1- Customer education and stewardship - C2-Safety during transportation and at customer end
Regulators	- Submission of required documents for approvals on environmental pollution, social compliance and plant capacity enhancements - Legal compliance in operations	- Environmental monitoring and impact assessment statements - Regulatory compliance reports	Adhering to all regulatory requirements	- R1-Emergency preparedness - R2- Occupational health and safety
Employees	- Competitive remuneration - Career and professional development - Personal development - Performance recognition	- Staff consultation and interaction - Departmental meetings and surveys - Annual performance appraisal - Skills training, people development, career guidance - Staff development program - Two representatives from Union in canteen, safety, PSM Sub committee for inputs and suggestions	Learning and Developmental programs employee survey tool	- E1 -Employee engagement - E2- Occupational health and safety
Business Partners, Contractors and Suppliers	- Contract opportunity for supply of raw materials - Continued partnering activities	Partnering programs, contract and site meetings, seminars	- Supplier assessments - EHS training for contractors and suppliers	S1-Safety during transportation and at customer end
Environment	- Sustainable management of the environment - Optimising of natural resource use - Innovation to protect natural environments and biodiversity - Restoration of key natural resources impacted by operations	- Protective measures and equipment - Risk assessments - Energy saving measures in operations	Innovation and Environmental Excellence benchmarking of sustainability performance	- Ev1-Technological sustainability - Ev2-Energy sustainability - Ev3-GHG emissions and Carbon sink - Ev4-Water conservation
Local Communities	Opportunities for livelihoods	Workforce sourcing from local community	Community developmental programs	LC1-Corporate Social Responsibility
Lenders and Shareholders	- Completion of projects as per the schedule - Achieve operational efficiency - Sustainability in operations - Increase in production capacities and diversification - Appreciation in share price - Effective governance	- Interim assessments - Report submission for financial and physical progress - Quarterly progress report - Continuous monitoring - Quarterly financial reports - Shareholders feedback	- Investments in Education and Training, Environment, R&D/Innovation - Integration of sustainable development goals (SDGs) with the business practices	- L1- In house R&D - L2- Technological sustainability - L3-Energy sustainability

SUSTAINABILITY PRIORITIES & AREAS OF ACTION

RISK AND MITIGATION STRATEGIES

CCAL has identified key risks derived from stakeholder concerns and has formulated effective strategies to address each of them.

Energy



The production of caustic soda involves an energy-intensive electrolysis process, which accounts for approximately 63-68% of total variable costs. The company relies on a range of energy sources, including diesel, furnace oil, hydrogen generated from production processes, and grid electricity. The rising cost of grid electricity is exerting upward pressure on variable costs, thus impacting overall business margins.

To mitigate the effects of increasing energy costs, CCAL is actively working to incorporate renewable energy sources into its energy mix. The company is in discussions to establish long-term power purchase agreements with solar power providers, promoting a mutually beneficial collaboration. As of FY 2023-24, renewable energy accounts for a significant percentage of the company's total energy consumption.

Furthermore, CCAL has strengthened its supply chain for diesel and furnace oil and has invested in LNG storage facilities, auxiliary heating systems, and related infrastructure to transition towards cleaner fuels.

The LNG facility is ready for operation pending state government approvals, and the transition is expected to reduce fuel consumption, minimize greenhouse gas emissions, and lower operational costs. With LNG infrastructure in place, CCAL aims to phase out the use of furnace oil, further enhancing its sustainability efforts.

Climate Risk



Details related to climate risks and opportunities are covered in the 'Natural Capital' section of this report.

Risk to plant and machinery



CCAL maintains an Industrial All Risk Policy and Package Insurance for plant and machinery, with coverage of INR 214 Crores for FY 2023-24.

Raw Material



CCAL has developed a robust and resilient supply chain, sourcing approximately 32% of its materials locally from Puducherry, with the remainder obtained from other states. In response to potential supply disruptions, CCAL has strategically diversified its procurement of industrial-grade salt, sourcing it from Gujarat. This proactive measure strengthens the supply chain and mitigates regional supply risks.

Health & Safety



CCAL holds ISO 45001 certification and has implemented comprehensive training programs, permit systems, and an Emergency Preparedness Program to ensure workplace safety. The company has a Process Safety Management System, an Emergency Control Centre (ECC), and conducts both on-site and off-site mock drills. Additionally, CCAL has established a Chlorine Emergency Response Network to enhance safety measures.

CCAL maintains rigorous standards for the safety of drivers and vehicles involved in product transportation. The company provides Supplier Assessment EHS Training for Contractors and Suppliers and conducts safety audits at customer premises. CCAL's emergency response system is regularly audited and aligns with "Responsible Care" standards.

CCAL has also equipped all 79 of its transport vehicles with GPS systems to monitor factors such as speed, unscheduled stops, and delivery tracking. Deviations from established norms are reviewed in monthly meetings, and corrective actions are taken where necessary.

SUSTAINABILITY PRIORITIES & AREAS OF ACTION

RISK AND MITIGATION STRATEGIES

Legal Risks



CCAL's operations require securing various approvals, consents, licenses, and permits, which expose the company to legal and regulatory risks. To manage these risks, CCAL has instituted a process for regularly assessing critical legal cases, evaluating potential financial and reputational impacts.

In addressing legal matters, the company selects top-tier external legal counsel based on associated risks, factoring in litigation costs. Furthermore, CCAL conducts training sessions on Ethical Business Conduct and Fair Competition, focusing on key areas such as sales, marketing, and procurement. Various training programs on social and environmental issues are also provided to employees to raise awareness.

Market Competition



During the reporting period, the caustic chlorine industry experienced low demand, both in terms of price and volume. However, CCAL successfully ramped up its production capacity by 30 MT/day and maintained a capacity utilization rate of over 80%, despite severe competition driven by excess capacity and new entrants into the market.

CCAL benefits from an advanced Quality Control and Assurance Laboratory, certified by NABL and operating under stringent guidelines. This certification enhances the company's ability to maintain high-quality standards, which are widely recognized by customers.

Cyber Security



With the increasing use of Information Technology, the risk of cyber threats has grown significantly. The expansion of business data beyond traditional data centers to the cloud, social media, and digital platforms necessitates enhanced cybersecurity measures. In addition to data breaches, cyber-attacks can disrupt operations, damage machinery, and create legal and regulatory liabilities.

Recognizing these risks, the Indian government has introduced stricter cybersecurity regulations, placing responsibility on company directors to ensure cybersecurity compliance.

In response, CCAL has implemented appropriate technological and governance controls to mitigate the potential impacts of cybersecurity threats. The company's cybersecurity framework aligns with industry standards and regulations, with essential safeguards, such as anti-virus software and regular updates to data centers, in place. The Risk Management Committee of the Board is regularly briefed on cybersecurity risk mitigation steps.



SUSTAINABILITY PRIORITIES & AREAS OF ACTION

MATERIAL TOPICS

Materiality assessments are the building block of our sustainability. Our sustainability team rigorously examine each and every inflow and outflow of materials and by in-depth discussion with several departmental personnel, the team declares the materiality matrix. The sustainable performance is evaluated periodically and modified as per the requirements.

Objectives	CCAL's Areas of Actions	Performance Indicators		CCAL's performance over the years				
		Description	Unit	2019-20	2020-21	2021-22	2022-23	2023-24
Ev1, Ev2, Ev3 - Reducing the carbon footprint	Energy sustainability GHG emissions and carbon sink	Emission intensity by production	GHG intensity per MT of caustic	2.672	2.26	2.35	2.72	2.321
Ev1, L1,L2, L3- Development of innovative technologies	Technological sustainability, In house R&D, Innovation and Environmental Excellence, Water conservation including zero discharge	Specific water consumption by production	kL of water per MT of caustic	3.38	3.08	4.41	4.19	4.09
C1, C2- Customer satisfaction by providing quality products	Safety during production, transportation and at consumer end customer education and stewardship	Number of non-compliance of safety requirements by customers reported annually	Numbers	8	7	5	8	8
R1-Sustainable procurement practices	Risk management	Number of EHS trainings for contractors	Numbers	21	26	46	13	15
R2, E2- Safe work culture	Ensuring safety and environment while product handling and emergency preparedness	Number of participants in EHS trainings for employees	Numbers	1539	2047	2320	2331	1276
E1, LC1- Employee participation in all initiatives to sustain industrial harmony	Employee	Total hours of training to employees for every 10 CCAL employees	Numbers	58	48	52	49	51
Community	Corporate Social Responsibility	Need based assesment	Rs. in Lakhs	68.93	78.57	96.52	73.8	93.2

SUSTAINABILITY PRIORITIES & AREAS OF ACTION

MATERIAL TOPICS

Identification of the boundary of material issues for CCAL was undertaken by numerous consultations with the Core Team of the corporate sustainability team, under guidance of the Steering Committee. The identified material issues take into cognizance the business risks for CCAL and the sustainability imperatives.

Capital	Material Issues	GRI Standards Corresponding to Topics	Topic Boundary	
			Within CCAL boundary	Outside CCAL
Natural	Technological sustainability	Materials Compliance	Yes	No
	Energy sustainability	Energy	Yes	No
	GHG emissions and Carbon Sink	Biodiversity, Emissions	Yes	No
	Water conservation	Water, Effluents and Wastes	Yes	In operational communities
	Emergency Preparedness	Occupational Health and Safety	Yes	In operational communities
Social	Corporate Social Responsibility	Local Communities, Grievance Mechanism for impacts on Society	Yes	In operational communities
Human	Occupational Health and Safety	Occupational Health and Safety	Yes	No
	Employee Engagement	Employment, Labour/Management Relations, Training and Education, Labour Practices Grievance Mechanisms, Freedom of Associations and Collective Bargaining, Child Labour, Forced or Compulsory Labour	Yes	No
Innovation and Environmental Excellence	In house R&D	Materials, Water	Yes	No
Supply Chain	Customer Education and Stewardship	Product and Services, Anti-Competitive Behaviour, Customer health and Safety, Customer Privacy, Product and Service Labelling	Yes	Customers
	Safety during Transportation and at Customer end	Transport, Supplier Assessment for Labour Practices, Supplier Assessment for Impacts on Society	Yes	Customers, Transporters

SUSTAINABILITY PRIORITIES & AREAS OF ACTION

OUR RESPONSE

Verification and Transparency of CCAL Reporting

- Application of the GRI Standards In 'accordance with core criteria' of GRI Standards.
- Applies elements of the International Integrated Reporting Framework.
- Provides information on the company's profile and context of operation.

Strategy, Governance, and Engagement

Strategy

- CCAL communicates policies and expectations to suppliers and other relevant business partners.
- CCAL has implemented monitoring and assurance mechanisms (e.g., audits/screenings) for compliance within the company's sphere of influence, i.e., customers as well as suppliers.
- CCAL undertakes awareness-raising, training, and other types of capacity building with suppliers and business partners.
- CCAL follows the industry's best practices, which are already explained under various capitals.
- CCAL has explained in tabular format how it complies with UNGC principles.
- CCAL has transparently reported the responsibility for executing sustainability strategy in relevant corporate functions (Financial, procurement, government affairs, human resources, legal, etc.). It is evident that the functions are not in conflict with company sustainability commitments and objectives.

- The report describes in detail the cascading and deployment of the Sustainability strategy across all stakeholders and levels of the organisation.
- CCAL strategies, goals are inclusive of the Environmental and social strategy, in addition to the Economic strategies. The disclosure of the long term 2030 targets is part of the present sustainability report.

Human Rights

- CCAL HR Policies are aligned with global best practices. CCAL has a process to ensure that human rights are respected.
- Operational-level grievance mechanisms are in place for those potentially impacted by the company's activities.
- CCAL has imparted awareness-raising and training on human rights for management and employee.
- Grievance mechanisms that are legitimate, accessible, predictable, equitable, transparent, rights-compatible, a source of continuous learning, and based on engagement and dialogue.

Topic (UNGC Principles)

- Business should support and respect the protection of internationally proclaimed human rights.
- Make sure that they are not complicit in human right abuses.

CCAL Actions

- CCAL HR policies are robust, and there is complete protection of human rights for each employee.

- There is a Redressal mechanism in place, which provides a voice to each employee to register feedback.
- During the reporting year, there were no cases of human rights abuses or complicit behaviour. There are no pending cases or registered cases on labour right violation.

Environment

- Internal awareness-raising and training on environmental stewardship for management and employees were engaged
- The report explains various living examples of environmental stewardship of CCAL
- Environmental risk and impact assessments are covered in this report
- CCAL has already performed the assessments of the lifecycle impact of the process to derive a roadmap for environmentally sound management policies
- CCAL demands the performance of efficient and responsible use of the natural capital as part of its contracts with suppliers and other relevant business partners
- CCAL has defined specific long term commitments and goals for 2030 as part of its commitment.
- CCAL has allocated responsibilities and accountability within the organization for efficient utilization of the resources.

SUSTAINABILITY PRIORITIES & AREAS OF ACTION

OUR RESPONSE

Natural Capital

- CCAL has implemented appropriate systems to track and measure performance based on standardized performance metrics
- Top Management is involved in the review of monitoring and improvement results
- CCAL is planning to make assessments and take steps to monitor and improve the environmental performance of companies in the supply chain
- Recognitions and awards are received by CCAL for its environmental excellence and superior and efficient plant performance.

Topic (UNGC Principles)

- Businesses should support a precautionary approach to environmental challenges
- Undertake initiatives to promote greater environmental responsibility
- Encourage the development and diffusion of environmentally friendly technologies

CCAL Actions

CCAL's theme of the business stems from sustainable measures. CCAL has always prioritized environmental considerations as the theme of their business. The bullet point explanation is evident from the message by the Top Management and Chapter pertaining to Environmental Disclosures.

Labour

- CCAL has imparted internal awareness-raising and training on the labour principles for management and employees
- There is allocation of responsibilities and accountability within the organization
- Dialogue mechanism with trade unions to regularly discuss and review company progress in addressing labour standards
- Grievance mechanisms, communication channels and other procedures (e.g., whistle blower mechanisms) available for workers to report concerns, make suggestions, or seek advice, designed and operated in line with the representative organization of workers
- CCAL has established active engagement with suppliers to address labour-related challenges. CCAL also undertakes an audit on the suppliers on sample basis.

Topic (UNGC Principles)

- Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining
- The elimination of all forms of forced and compulsory labour
- The effective abolition of child labour
- The elimination of discrimination in respect of employment and occupation

UN Sustainable Development Goals

Explained under Chapter "Linking SDG's and GRI".

CCAL Actions

CCAL upholds freedom of association and collective bargaining, prohibiting forced and compulsory labor, child labor, and discrimination. Collective bargaining agreements are in place for all CCAL workers, and no cases of discrimination have been reported in the past or present.

Anti-Corruption

- Publicly stated formal Code on Conduct in place to declare zero-tolerance for corruption
- Commitment to comply with all relevant anti-corruption laws, including the implementation of procedures to know the law and monitor changes
- Detailed policies for high-risk areas of corruption
- Communications (whistleblowing) channels and follow-up mechanisms for reporting concerns or seeking advice

Topic (UNGC Principles)

Businesses should work against corruption in all its forms, including extortion and bribery

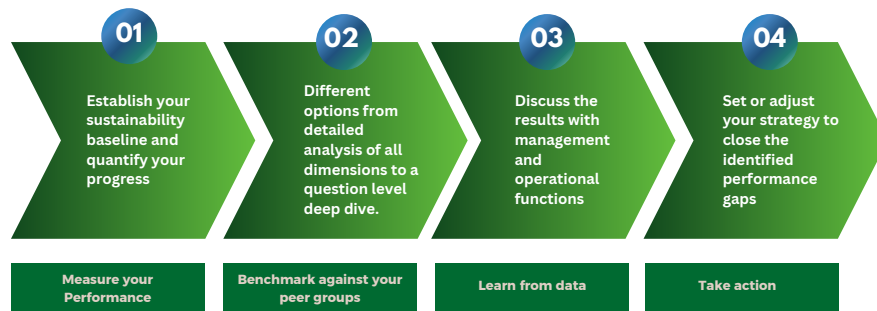
CCAL Actions

The Code of Conduct is established and followed by the CCAL group. There are no incidents/cases of corruption against CCAL.

SUSTAINABILITY PRIORITIES & AREAS OF ACTION

Benchmarking of Sustainability Performance

CCAL conducted a benchmarking analysis to assess and improve its sustainability plan. DJSI (Dow Jones Sustainability Index) was first utilized by CCAL in 2016 and 2017 to calibrate its performance. From that point on, the sustainability measures were used to evaluate CCAL's annual performance. As seen below, CCAL has been evaluating its sustainability performance by adhering to the DJSI stages:



Through the use of corporate governance, ethical business practices, transparency, innovation management, risk and crisis management, and other strategies, CCAL is improving its sustainability performance. The business shows advances in climate strategy, operational efficiency, human capital development, innovation management, and customer relationship management when compared to the economic, environmental, and social dimensions.

Our 2030 Targets

1. 10 % reduction in energy consumption



TOE - Reduction in energy utilization through upgradation and optimization of energy usage.

2. Achieve water + ve



WATER CONSUMPTION - Implement the STEW water RO project of 2 MLD and stop drawl of ground water.

3. 25% reduction in CO2 emissions



Carbon dioxide EMISSIONS - Reduction in fossil fuels and switching over to renewable energy.

4. Circular economy



100 % Waste Recycling - Recycle all the wastes generated by converting them to saleable or usable products.

5. Training – 14 hrs. of training per employee



Technical Training - Sharing knowledge & best practices. Intranet portal newsletter. Plan for at least 4 training per employee.

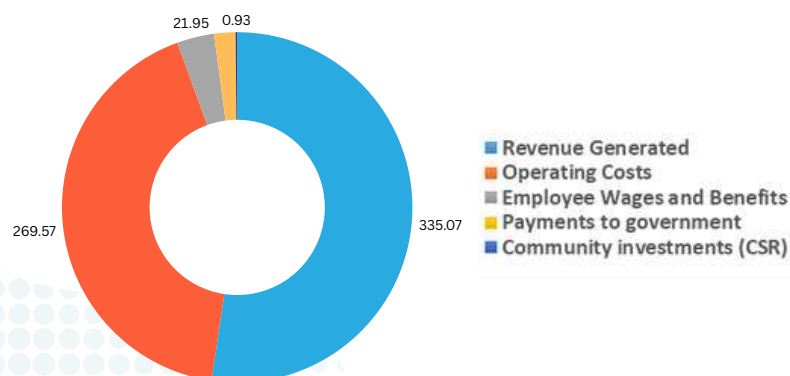
- Reduce LTIFR to Zero - Implementation of PSM and management systems effectively.
- Reduce TRIFR by 50 % - Implementation of PSM and management systems effectively

FINANCIAL CAPITAL PERFORMANCE

Economic Growth of CCAL during 2023-24

In 2023-24, CCAL achieved a net revenue of **INR 327.297 Crores** from its operations, marking a net profit of **INR 26.32 Crores**. The direct economic effects of CCAL's operations are illustrated in the following diagram:

2023-24 Economic Value Generated and Retained (₹ in Crores)



Long-Term Growth Strategies



The Company is committed to achieving sustained growth by strengthening its core expertise and expanding its presence in the PVC-O segment. This approach will ensure long-term business viability and enhance its competitive position in the industry. The following outlines the key strategic initiatives for continued business growth:

1) Caustic Soda Business:

- **Objective:** Maximize operational efficiency and minimize costs.
- **Strategy:** The company aims to operate the Caustic Soda plant at full capacity, which will help optimize both operating and fixed costs. In order to further reduce operational expenditures, the management is evaluating the feasibility of installing a state-of-the-art electrolyser to replace the existing 30-year-old unit. This replacement is expected to enhance production efficiency, lower energy consumption, and reduce maintenance costs.
- **Expected Outcome:** By maximizing plant capacity and implementing more efficient technology, the company will significantly reduce costs, improving profitability and operational sustainability.

2) Aluminium Chloride Plant:

- **Objective:** Optimize chlorine utilization and reduce market exposure.
- **Strategy:** CCAL successfully commissioned its 30 MT Aluminium Chloride ($AlCl_3$) plant in Karaikal, located approximately 120 km from Puducherry, on February 19, 2024. The facility consumes 25 MT of chlorine per day, sourced directly from the in-house Caustic Soda plant. This integration enables efficient utilization of chlorine, reduces dependence on external sales of excess chlorine, and strengthens internal operational efficiency and resource sustainability.
- **Expected Outcome:** The integration of chlorine production with the $AlCl_3$ plant will help stabilize the company's supply chain, optimize resource usage, and reduce market-related pressures on chlorine sales.

3) PVC-O Expansion:

- **Objective:** Capitalize on government-driven infrastructure development.
- **Strategy:** The Indian government's initiative to provide tap water to every household in the country presents a significant growth opportunity for the company's PVC-O product line, particularly for long-distance water transportation. To meet the anticipated demand, the company is investing in two additional machines to boost production capacity.

FINANCIAL CAPITAL PERFORMANCE

Long-Term Growth Strategies

- Furthermore, plans are in place to invest in two more machines for producing larger diameter pipelines to cater to the growing infrastructure needs.
- Expected Outcome: These investments will position the company to meet the increasing demand for PVC-O products, reinforcing its market leadership in the growing water

4) Power Supply Strategy:

- Objective: Secure a stable, cost-effective, and sustainable power supply.
- Strategy: The company is actively exploring long-term hybrid power supply agreements for its Puducherry manufacturing plant, which is heavily reliant on power for production. In addition, the company aims to increase the share of renewable energy in its total energy consumption to 20%. By securing a reliable and cost-effective power supply, the company will be able to mitigate the impact of rising energy costs and contribute to sustainability goals.

Expected Outcome: The hybrid power supply will lower the overall energy cost structure, while increasing the proportion of renewable energy will contribute to environmental sustainability and enhance the company's energy security.

5) Water Supply Strategy:

- Objective: Ensure a reliable and sustainable water supply for operations.
- Strategy: In alignment with environmental sustainability and corporate responsibility, the company is securing all necessary regulatory approvals from both state and central authorities to install an 11 km pipeline to transport secondary treated sewage water to its plant. This initiative will eliminate the company's dependence on groundwater for industrial production, reducing the environmental impact and preserving local water resources.

- Expected Outcome: By transitioning to secondary treated sewage water, the company will significantly reduce its environmental footprint and contribute to national water conservation efforts, while ensuring a reliable water supply for its operations.



FINANCIAL CAPITAL PERFORMANCE

Employee Benefits



CCAL prioritizes employee welfare and provides a wide range of benefits:

1. **Workforce:** CCAL directly employs 163 people, offering them benefits such as superannuation, provident funds, and gratuities.
2. **Wages:** Employee wages and benefits amounted to INR 21.95 Crores in 2023-2024.
3. **Insurance:** The company offers group personal accident, medical, and life insurance coverage.
4. **Industrial Insurance:** CCAL holds an Industrial All Risk & Package Insurance Policy valued at INR 214 Crores to cover its plant and machinery.
5. **Wage Compliance:** The company adheres to the Minimum Wages Act and the Certified Industrial Employment Standing Order.

Indirect Economic Impacts



CCAL's corporate social responsibility (CSR) initiatives contribute to social inclusion, livelihood creation, and indirect employment:

1. **Indirect Employment:** 200 individuals were employed indirectly in the reporting period.
2. **Community Development:** An allocation of 93.2 lakhs has been spent on infrastructure development and community-oriented projects benefiting the Puducherry area during 2023-24.



PROTECTING THE NATURAL CAPITAL

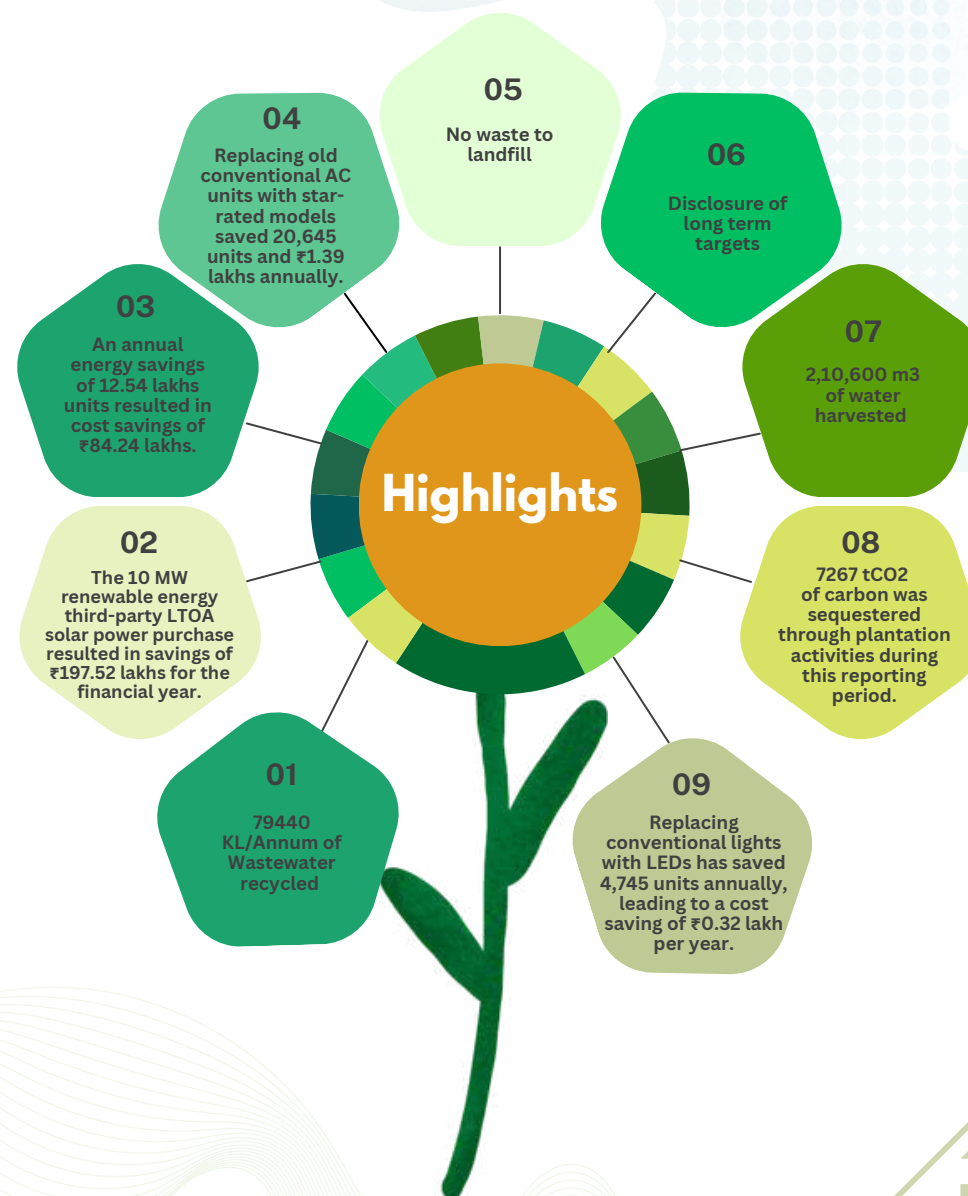
CCAL is addressing environmental concerns, including GHG emissions, water management, energy efficiency, resource preservation, and biodiversity, through a collaborative materiality assessment involving stakeholders. Climate change risks are managed by the company's Risk Management Committee, which adjusts risk management protocols accordingly. CCAL adheres to the Puducherry State action plan and the Green Protocol, with a focus on adopting renewable energy sources such as solar panels.

Efforts also include water conservation in regions facing scarcity and the utilization of technology and innovation to enhance energy efficiency, water management, waste disposal, and compliance with environmental standards. CCAL remains committed to aligning with UNSDGs and regularly evaluates its performance against the principles of Green Chemistry, Science Based Targets Initiative, and recommendations from the Task Force on Climate-related Financial Disclosures.

CCAL Focus Areas

CCAL's Risk Management Committee oversees the company's risk strategies, while its Sustainability Steering Committee advises on climate risks. CCAL innovates, like creating a brick pilot plant from brine sludge and optimizing iron sludge to ferric sulphate. Clear target disclosure aids stakeholder tracking. GHG inventory, including Scope 1, 2, and 3 emissions, is measured, with greenery for carbon sequestration. GHG intensity is part of sustainability KPIs.

In 2017-18, GHG inventory validation and water recharging initiatives were undertaken. SOPs for GHG emission calculation and rainwater harvesting were developed. Regular onsite and offsite mock drills ensure disaster readiness, with insurance coverage extended to employees' families due to seaside location.



PROTECTING THE NATURAL CAPITAL

Environmental Management

1. ISO Certifications and Environmental Management System:

- CCAL holds ISO 45001 (Occupational Health and Safety Management) and ISO 14001 (Environmental Management) certifications, which help the company assess and manage the environmental impacts of its operations.
- The Environmental Management System (EMS) plays a key role in the company's resource conservation efforts and helps convert waste materials into valuable products, enhancing both competitiveness and stakeholder trust.

2. Recycling waste sludge:

- CCAL has started producing Cement Concrete blocks (23 Kgs/Piece) from clarifier sludge since 25th May 2022. This initiative not only helps in reducing waste but also contributes to construction materials.
- A complete concrete wall has been constructed across a 65-acre area in Karaikal, which serves as both a demonstration project and a first application of this sustainable approach.
- Builders have shown interest in using these blocks in their construction portfolios due to the environmental and cost benefits.
- The company is also investing in a machine to produce smaller 3.3-3.5 Kgs bricks for general construction purposes.
- CCAL's goal is to convert 100% of its generated sludge into usable materials, positioning itself as a pioneer in eliminating the dumping of solid sludge into the ground.

3. Water Treatment and Desalination:

- The desalination plant at CCAL has been repurposed into a secondary treated sewage processing facility at the Puducherry government sewage treatment plant.
- This plant, operational since April 22, 2021, now provides 43% of the water requirements for the CCAL facility, gradually reducing the reliance on groundwater for industrial processes.
- This initiative is part of the company's broader water conservation efforts and supports the reduction of the environmental impact of groundwater usage.

Particulate Matter Reduction with LNG Transition:

- CCAL is investing in a Particulate Matter (PM) reduction program by transitioning to Liquefied Natural Gas (LNG) as the primary fuel for its core manufacturing operations.
- This shift eliminates the use of furnace oil/diesel, reducing particulate emissions and SO₂ levels, thereby improving air quality and enhancing thermal efficiency in its operations.
- The project, expected to be commissioned in 2024-25, will significantly contribute to the company's long-term sustainability goals and improve overall environmental performance.



PROTECTING THE NATURAL CAPITAL

Environmental Compliance

The company takes a proactive approach in ensuring that all its activities comply with the applicable laws, further demonstrating its dedication to environmental stewardship and corporate responsibility.

Responsible Care Initiative:

- Through its "Responsible Care" voluntary initiative, CCAL strives for excellence in environmental, health, safety, and security performance. This initiative encourages continuous improvement in managing potential risks and ensures a safe and sustainable work environment.

Compliance Tracking and Zero Violations:

- The company meticulously tracks compliance across all its programs and operations to ensure zero environmental violations. By maintaining a clean compliance record, CCAL effectively avoids fines or legal repercussions related to environmental non-compliance.

Sustainability Targets Alignment:

- CCAL actively monitors its operations to ensure alignment with its sustainability targets, making it a priority to meet environmental goals and continuously raise the bar in performance.

Best Practices and Future Goals:

- CCAL endorses and implements best practices in environmental management and sustainability. The company is dedicated to expanding its efforts by establishing additional objectives aimed at environmental excellence and climate change mitigation, positioning itself as a forward-thinking leader in the sector.

LCA highlights were

CCAL's Cradle to Gate Study Approach

1. CCAL adopted a Cradle to Gate approach for Life Cycle Assessment (LCA) studies from 2016-17.
2. Electricity consumption was identified as the primary driver of environmental impact, notably influencing acidification potential through emissions from fossil fuel energy sources.
3. Therefore CCAL aims to reduce the conventional electricity with renewable alternatives like solar and wind power.
4. Environmental Management program identifies and addresses operational impacts of CCAL.
5. Emphasizes on increasing utilization of renewable energy sources to minimize environmental footprints.

Energy remains crucial for caustic soda manufacturing, and despite the stability of Puducherry's power status, reliance on the grid poses potential risks. In line with the Paris Agreement, CCAL is actively striving to mitigate greenhouse gas emissions.

CCAL prioritizes carbon emission reduction and enhanced energy efficiency, continuously investing in technology advancements to address the challenges posed by dwindling non-renewable resources. Specific Standard Operating Procedures (SOPs) have been integrated into the procurement process, with energy efficiency being a key criterion for all new procurements.



PROTECTING THE NATURAL CAPITAL

Employee Involvement

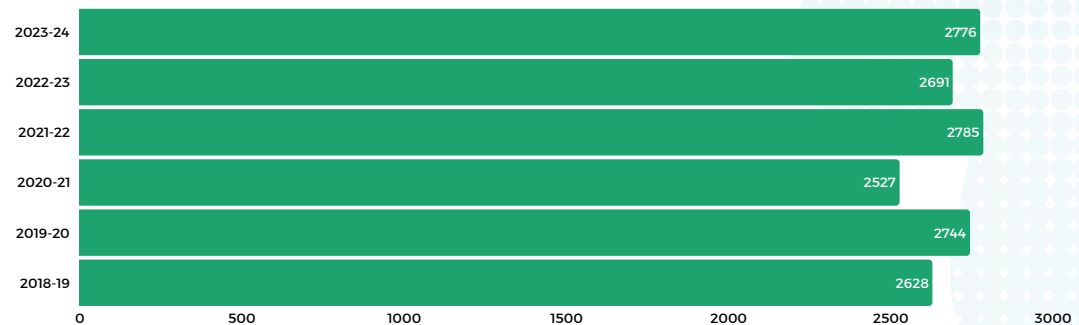
Our employees have generously volunteered their time to raise awareness about the importance of energy conservation across the entire supply chain. CCAL has proactively shared its expertise in energy saving techniques with peers and suppliers, demonstrating our commitment to fostering a culture of sustainability and environmental responsibility.

Energy efficiency measures

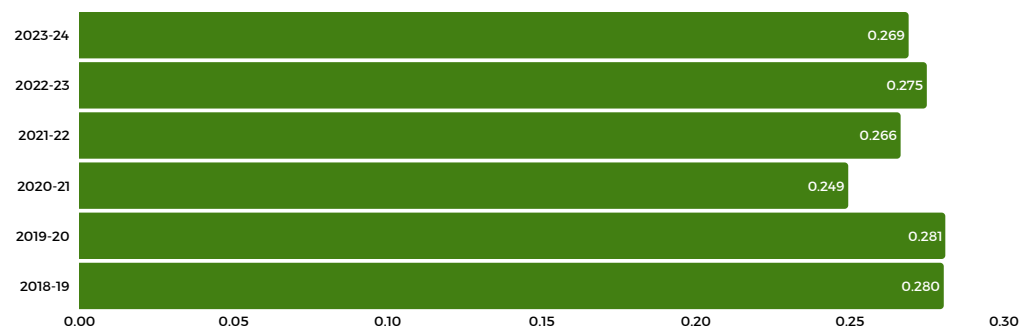
Condition Monitoring & Predictive Maintenance practices at CCAL:

To enhance equipment reliability and health, CCAL employs predictive maintenance and condition monitoring procedures. These encompass various measures such as daily energy monitoring utilizing the Energy Management System (EMS), periodic monitoring of mV drop in the rectifier cubicle/bus bar system, routine replacement of membranes, and re-coating of anode and cathode elements. Maintaining a power factor (PF) above 0.995, utilizing thermal imaging devices for electrical installations, and conducting regular vibration analysis of rotating equipment are also part of the regimen. Any required corrective actions are implemented gradually to ensure optimal equipment performance and longevity.

Specific Electrical Energy Consumption (kWh/MT of Caustic)



Specific Energy Consumption (TOE/MT of Caustic)

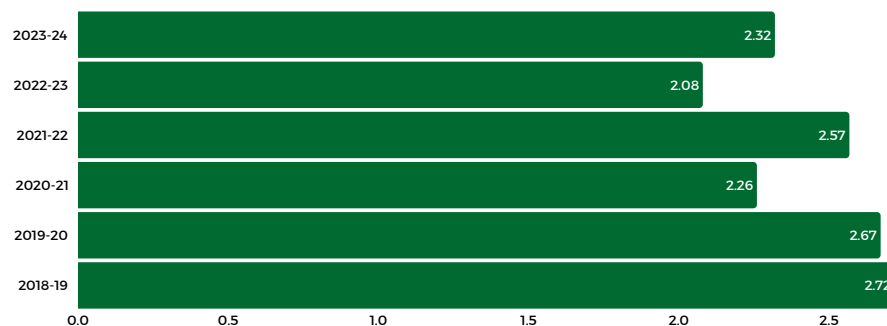


Key development & project highlights:

- **110 KV Parallel Bay Expansion with 25 MVA Transformer:** Expanding the 110 KV system with an additional 25 MVA transformer to ensure business continuity and mitigate power supply risks.
- **Strengthening Harmonic Filter Banks:** Upgrading/replacing harmonic filter bank system to maintain a stable power factor and ensure system sustainability.

PROTECTING THE NATURAL CAPITAL

Carbon footprint (MTCO₂e/MT of caustic)



Renewable Energy

RE Integration: The facility is partly powered by renewable energy sources and aims to achieve the lowest power consumption in the region.

Solar Power Consumption & Generation:

- The plant consumes 179.6 lakh units (12.97%) of solar power via 10 MWp through Long Term Open Access agreement.
- It also generates 2.91 lakh units (0.21%) of onsite solar power (220 kWp) through a Boot Model basis.

Encon Practices:

- **LED Light Fittings Conversion:** Replacing conventional light fittings with LED lights, saving 13 kWh per day (4745 units annually), leading to a cost saving of Rs. 0.32 Lakhs and achieving 100% LED conversion.
- **Energy Conservation through VFD operated Equipment:** Implementing continuous monitoring and energy-saving measures through VFD-operated equipment, saving 12.53 Lakh kWh annually, resulting in a cost saving of Rs. 84.24 Lakhs.
- **Energy Efficient AC Units:** Replacing age old conventional AC units with energy-efficient, star-rated models, saving 20,645 kWh annually, leading to a cost saving of Rs. 1.39 Lakhs.

Way Forward plan for FY 24-25:

- 1) Plant uptime of 99 Percent by effectively implementing preventive maintenance and condition monitoring.
- 2) Commissioning of 110 KV parallel bay with 25 MVA transformer and allied EHV equipment's.
- 3) Implementation of a Wet cooling tower in place of a dry cooling tower which will serve the purpose of continuous design capacity operation of Caustic concentration unit and power savings.
- 4) Government clearance for furnace oil conversion to LNG for fuel application in the plant. This should eliminate the particulate emission from the stacks and help the plant's downstream operation effectively.
- 5) Making the brick plant more effective in converting maximum sludge to use full construction material.
- 6) Maintaining brine specification as per membrane requirement.

PROTECTING THE NATURAL CAPITAL

Emissions

Climate change presents a significant sustainability challenge for CCAL. To address this, the company is aligning with a climate scenario aiming to limit global temperature rise to below 2°C. Measures include reducing direct emissions through energy-efficient equipment, optimizing energy use, increasing renewable energy adoption, and implementing carbon offsets such as tree planting. CCAL also manages air pollutants like SO₂, NO_x, and particulate matter, ensuring compliance with permissible limits and setting CO₂ reduction goals using Science Based Targets (SBT). The company integrates Board-level reviews and risk management with the Task Force for Climate-Related Financial Disclosures (TCFD) recommendations.

Additionally, CCAL has invested in Liquefied Natural Gas (LNG) infrastructure to use cleaner fuel in its thermic fluid heater, flaker, and boiler, reducing emissions. The company also launched recycling projects, including a plant that produces 23,570 bricks and blocks per day from non-hazardous sludge. This plant was commissioned in 25th May 2022 and holds a patent for the process (Patent No.435837).

CCAL demonstrates its commitment to environmental stewardship at every stage. Constructing a compound wall around its new 65-acre project site in Karaikal, utilizes bricks and blocks (A green product), produced at its Puducherry plant, reinforcing sustainability in its operations

Green belt development

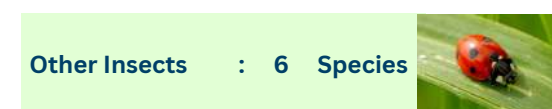
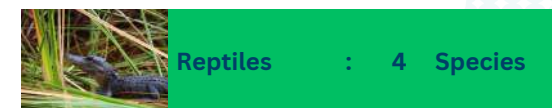
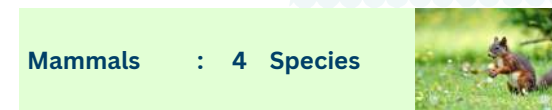
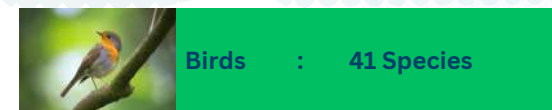
The CCAL campus spans 37 acres, with a 25-acre green belt featuring a variety of elements such as grass lawns, flowering plants, ornamental plants, shrubs, and trees. As of December 23, the total number of trees reached an impressive 54,026. Careful consideration was given to selecting tree species that are drought-resistant, well-suited to the local climate, and effective in preventing soil erosion through their root systems. The majority of these trees are hardwoods, known for their strong carbon sequestration capabilities.

Additionally, to further enhance the campus's greenery, over 2,000 tree seedlings are planted annually, ensuring that all available spaces are filled with vibrant vegetation, enriching the campus's ecological environment.

Protected Species

FAUNAL DIVERSITY STUDY BY SALIM ALI CENTRE FOR ORNITHOLOGY AND NATURAL HISTORY (SACON), Coimbatore [A Centre of Excellence under the Ministry of Environment, Forest and Climate Change, GOI (2018)

108 faunal species recorded inside the CCAL campus



Avian density : 25.88 individuals/acre
Avian Shannon Diversity Index : 2.51
Butterfly density : 72.41 individuals/acre
Butterfly Shannon Diversity Index : 2.87

PROTECTING THE NATURAL CAPITAL

Water Management

Puducherry, experiencing water stress, recognizes CCAL as the first company to establish a desalination plant capable of treating both saltwater and sewage. As a responsible corporate entity, CCAL contributes its expertise and technical knowledge to promote broader participation in water management initiatives.

Installation of a 2 MLD seawater desalination plant

In line with its goal to become water positive, CCAL installed a 2 MLD desalination plant designed to process 1 MLD of RO water, with the potential to expand to 2 MLD with further investment. This capacity is integrated into the company's major infrastructure.

After encountering significant challenges in the installation of the seawater intake system and navigating an extensive regulatory approval process, CCAL strategically opted to transition to a secondary treated sewage water system, ensuring a more efficient and sustainable approach. As a result, the plant, was successfully commissioned in March 2021, now uses secondary treated sewage water instead of seawater. The chemistry of the water's impurities was managed using simpler chemical methods.

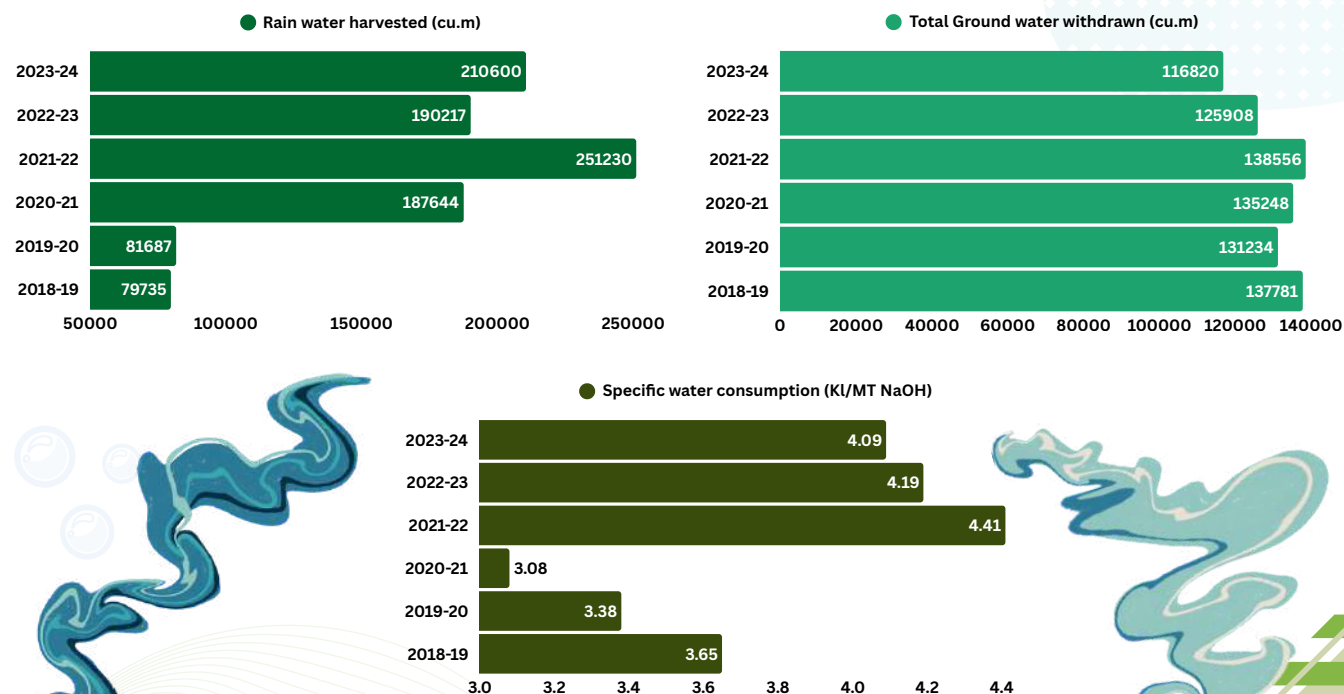
To ensure a steady and secure supply of effluent water, CCAL is working with the government and PWD to construct an 11 km pipeline.

The transportation of water through the road tanker will be withdrawn once the pipeline is laid.

This measure will reduce the dependence of ground water for the manufacturing operation. The subsequent year data will reveal the usage of this water and its impacts. The management is committed to discontinue the usage of ground water for process requirement once the 11 KM pipeline is completed.

Rainwater Harvesting

Since its establishment in 2002, the CCAL Rainwater Harvesting System has grown from 70 to 92 pits. The current system includes 90 collection pits, two recharge wells, and three check dams. The quantification of harvested rainwater is standardized through a Standard Operating Procedure (SOP), which relies on rainfall data gathered from the weather monitoring station.



PROTECTING THE NATURAL CAPITAL

Waste Management and circular economy

At CCAL, we're committed to improving waste management procedures throughout each of our production sites by:

- Waste reduction,
- waste recovery, and
- Environmentally responsible waste disposal.

Brine mud, a major non-hazardous waste produced by our operations, is derived from various salt sources. We apply treatment and separation processes to its components, including Ca/Mg and residue. Additionally, used oil, another significant hazardous waste, is responsibly sold to licensed recyclers. These waste materials are handled appropriately, as our vendors hold the necessary approvals for their treatment and disposal.

Composting



Composting is a natural process where organic matter decomposes under controlled conditions by microorganisms. At CCAL, organic materials like dried leaves and tree twigs are used to create valuable fertilizers. Around 40 kg of dried leaves are collected daily, amounting to 14 tons annually. The waste is layered in pits, moistened with water or cow dung slurry, and filled to a height of 0.5 meters above the surface. The composting process takes about five to six months to complete.

Conversion of the brine sludge to bricks or blocks under the "Wealth out of Waste" initiative.

Rapid industrialization in India has spurred economic growth but also brought environmental challenges, particularly in solid waste disposal. Chlor-alkali industries produce non-hazardous sludge containing dissolved metals and impurities, which can pose risks to ecosystems. To address this, CCAL developed and patented a method that uses brine mud to produce solid cement blocks, offering a solution to waste management while creating marketable products. These blocks are of superior quality compared to traditional clay bricks and commercial cement blocks. The pozzolana materials in the mud react with binders, forming a strong matrix that encapsulates waste particles, preventing leaching. By using brine sludge in construction materials, CCAL provides an eco-friendly alternative to disposal, reducing land pollution and greenhouse gas emissions. The conversion of brine sludge into bricks and blocks has begun, with the company producing blocks weighing 23 kg. These blocks have been tested for compressive strength and water absorption, surpassing IS standards. CCAL has used these bricks to construct a 65-acre compound wall, a small control room, and dyke walls. The company has produced 1,06,929 blocks since the commissioning of the plant to process brine mud.

The company is also investing in machines to producing Cement Masonry Bricks of weight (3.3-3.5 Kgs). This Machine will start its commercial production in the month of May 24.

CCAL's waste management program helps prevent soil contamination and reduces greenhouse gas emissions linked to traditional brick production, supporting climate resilience. The transformation of brine sludge into marketable cement blocks represents a significant shift from waste to valuable products, highlighting CCAL's dedication to environmental stewardship.



PROTECTING THE NATURAL CAPITAL

Emergency Preparedness

CCAL implements a comprehensive onsite and offsite mock drill program, conducting onsite drills twice a year and offsite drills annually. These drills are closely monitored by the Government of Puducherry and disaster management teams at our facility, with NDRF participating in the offsite drills. Leveraging certified management systems, CCAL has effectively reduced incident rates and continuously improved its emergency response procedures. Recognized as a best practice by both regulatory authorities and customers, it includes strategies to mitigate risks such as chlorine gas leaks and hydrogen fires. To further strengthen emergency response, safeguard systems such as fully enclosed negative suction pressure chambers, online respirators, and fire protection mechanisms are implemented, ensuring redundancy and comprehensive preparedness to handle any crisis.

Process Safety Management System



CCAL is recognized as India's pioneer Chlor-alkali plant to implement Process Safety Management (PSM), a proactive approach designed to manage hazards and minimize incidents related to chemical releases. PSM focuses on preventing catastrophic accidents, such as explosions, fires, and toxic releases, within the Major Accident Hazard (MAH) industry.

It involves the systematic identification, assessment, and mitigation of risks associated with chemical releases due to process failures. CCAL's structured framework, combining engineering expertise with effective management, ensures the integrity of systems and processes that handle hazardous materials. The 14 elements of PSM are as follows:



PROTECTING THE NATURAL CAPITAL

Product Stewardship

Raw Material

As resource depletion and urbanization continue to grow, material costs are expected to rise, leading communities to prioritize access to resources. This creates an opportunity to reassess production methods and find sustainable solutions. In line with its Environment Policy, CCAL is committed to conserving natural resources by maximizing their use and minimizing waste.

Technology Sustainability

CCAL has earned recognition for its commitment to environmental and energy conservation efforts. The company's pioneering use of the membrane cell process has had a significant impact on the Chlor-alkali industry. CCAL's eco-friendly practices have garnered various accreditations and accolades, including the prestigious "Greenest Plant" title from the Centre for Science and Environment. The adoption of membrane cell technology provides both economic and environmental benefits over previous technologies, which are now banned in India.

This innovation results in reduced mercury and energy consumption, while being more environmentally safe compared to traditional mercury cell technology.

CCAL's innovative technologies reduce water usage, raw material consumption, toxic gas exposure, and solid waste. The 2014-15 Sustainability Report highlights CCAL's progress since 1985 and its leadership in sustainability strategies. Pursuing projects for technical sustainability keeps CCAL ahead.

Ranging with Green Chemistry Principles:

Prevention: By adopting circular economy principles, we eliminate waste generation and optimize resource use. Additionally, we have implemented continuous monitoring procedures to prevent the release of hazardous materials.

Energy Efficiency: Our membrane process, recognized as the most efficient facility in the country, has received a national award for its exceptional energy-saving performance.

Other Product Stewardship Initiatives

The preceding sections have already discussed various additional measures that can be implemented to mitigate environmental impacts throughout the production process. CCAL is responsible for organizing both off-site and on-site simulated drills, as detailed in the "Valuing the Human Capital" section.

Product Stewardship Initiatives Life Cycle



PROTECTING THE NATURAL CAPITAL

Chlorine Emergency Response Network

CCAL actively participates in the Chlorine Emergency Response Network (CERN), established by the Alkali Manufacturers' Association of India (AMAI) in 2012. This nationwide network connects chlor-alkali units across India, enabling swift responses to chlorine emergencies during transportation and at consumer sites. The network's scope has expanded to include emergencies involving hydrogen, caustic soda lye, hydrochloric acid, and sodium hypochlorite.

Emergencies can be reported through the toll-free number 1800-11-1735, which automatically directs calls to the nearest chlor-alkali plant's control room. CCAL has a mutual aid agreement with AMAI and Strides Shasun Limited in Puducherry to effectively manage such emergencies.

Additionally, CCAL has installed GPS systems in its chlorine transport vehicles to enhance safety during transit, enabling real-time monitoring of vehicle speed, route adherence, and unscheduled stops.



RESPONSIBLE CARE

CCAL has been granted to use the Responsible Care logo Indian Chemical Council, Mumbai.



INVESTING IN SOCIAL CAPITAL

Community Development

CCAL undertakes a range of activities as part of its Corporate Social Responsibility (CSR), which are overseen by a committee established in compliance with Section 135 of the Companies Act, 2013. During the reporting period, CCAL has incurred a total expenditure of INR 93.2 lakhs on CSR initiatives. The spending includes various programs and schemes such as:

- 1.Provision of safe drinking water,
- 2.Education & training
- 3.Eco friendly & Environment sustainability
- 4.Rural development initiatives
- 5.Eradication of Poverty and Hunger

CCAL is deeply committed to enhancing the well-being of society and consistently strives to improve the overall social impact through its efforts and aims to create long-term positive change. Furthermore, the company encourages employee participation in social responsibility projects, fostering a culture of giving back to society. Through these initiatives, CCAL seeks to contribute to the holistic development of society and ensure a brighter, more sustainable future for all.



INVESTING IN SOCIAL CAPITAL

Corporate Social Responsibility

CCAL is dedicated to integrating its CSR programs with a focus on education, health, sanitation, and the environment, reflecting the company's core values. As a community-oriented organization, CCAL strives for strong socio-environmental-economic performance. One of our fundamental principles is the preservation and enhancement of social capital and the environment.

By promoting sustainable social capital, we contribute to the well-being of the community, making it easier to achieve responsible consumption and production, in alignment with the Sustainable Development Goals (SDGs). Our commitment to building better communities drives our CSR efforts, ensuring that our initiatives have a meaningful impact. During the reporting period, we allocated INR 93.2 lakhs toward these efforts, with a dedicated committee overseeing our CSR operations.



We closely monitor our value chain, ensuring that each component, including Suppliers, Distributors, and Customers, is managed with care for mutual benefit. CCAL actively conducts sensitization and awareness programs on safety and environmental issues in nearby schools, villages, and the local community.

Through various awareness-raising initiatives, CCAL assesses the social and environmental impacts of its activities. Topics such as road safety, LPG safety, emergency preparedness, and water chlorination are covered in these sensitization workshops, helping to foster a safer and more informed community.

Composition of CSR committee

Mr. C.S. Ramesh

Chairperson, Non-Independent Director

Mr. T. Ramabadhran

Member, Independent Director

Mr. A. Janakiraman

Member, Independent Director

Mrs. Sujatha Jayarajan

Member, Independent Director

Mr. R. Mahendran

Member, Non- Independent Director

CCAL believes that an organization's growth is closely linked to its relationship with society. With this in mind, we organize a variety of events, initiatives, and training programs within our operational region. The primary goal of our CSR initiatives is to improve the quality of life for rural communities. To achieve this, CCAL provides a range of services, including supplying Civil Defence track kits for volunteers of the Disaster Relief Management team, ensuring access to safe drinking water for villagers at the Kandamangalam Community-Based Unit (CBU), conducting maintenance for the herbal garden at PHC Kalapet, offering assistance at the airport, and supporting educational projects in collaboration with the Rotary Club of Madras South Charitable Trust.



INVESTING IN SOCIAL CAPITAL

Activities under CSR

Details of CSR amount spent against other than ongoing projects for the financial year 2023-2024 (As on 31.03.2024):						
Sl.No	CSR Project or activity identified	Area of beneficiaries	Proposed			
			Amount in Lakhs	Amount spent as on 31.03.2024	Beneficiary	Remarks
1	Providing Safe Drinking water, Health Care	Local area of Puducherry/TN	0.16	0.16	Villagers	PHC kalapet - providing chairs
			5.31	5.31	Students	RO plant to Village, GCK primary school, PHC chunampet
			5.01	5.01	Villagers	Nikshay Mitra, Food to TB patients
2	Education and Training	Local area of Puducherry/TN	1.00	1.00	Students	Education funds in connection to school for villipakkam schools 1.L, .
			0.25	0.25	Pondicherry University	Education development by seminar - synopsis programme for MBA students
			16.00	16.00	Atchaya - Students	Education Skill Training and Community development Welfare projects by Atchaya Agro Educational Development and Charitable Trust - MLA project
			1.00	1.00		Nandella Seva Trust, for education development
			0.19	0.19	Students	Education development & Awareness programme for Har Tiranga 2023 campaign
			3.00	3.00	Students	Disha Foundation for KKL - Learn to read English programme for primary school at KKL
			0.46	0.46	Students	School toppers for kuppam students, PEC Colleges, Universities
3	Eco Friendly & Environment Sustainability	Local area of Puducherry/TN	2.33	1.80	Public	Herbal garden Maintenance work at Airport
				0.53	Public	Herbal garden Maintenance work at PHC kalapet
			2.19	2.19	public	Miyawaki forest at Pillaichavady shool
4	Rural Development Project	Local area of Puducherry/TN	25.98	25.98	Public	LED flood light for local village - MLA Project
			0.22	0.22		RO Plant AMC
4	Eradication of Hunger and Poverty	Puducuhery	9.38	9.38	Public	Farmers Revitalization project - 3 phase
6	CSR fund - carry forward		20.72	20.72		Last year carry forward
Total Amount (in Lacs)			93.20	93.20		

VALUING THE HUMAN CAPITAL

Human Resource Management

CCAL's reputation as a leading innovator in the country is driven by its highly skilled, progressive, and customer-focused workforce. Adopting the principle of "unity in diversity," CCAL's management oversees a team with diverse age groups, skill sets, and educational backgrounds.

The company's employees are dedicated to delivering value to stakeholders, ensuring the continued success of CCAL. Recognizing Human Capital as its most valuable resource, CCAL prioritizes the development of a high-performing management team to achieve its ambitious sustainability goals. By fostering a people-centric culture, CCAL reaffirms its commitment to the essential role of Human Capital in driving long-term success.

Our workforce reflects the diverse talent and cultural richness of our nation, blending a wide array of skills and expertise under the guidance of our esteemed leadership.

Throughout the reporting period, CCAL employed 166 dedicated individuals, regularly assessing their performance to drive excellence and help them reach their full potential.

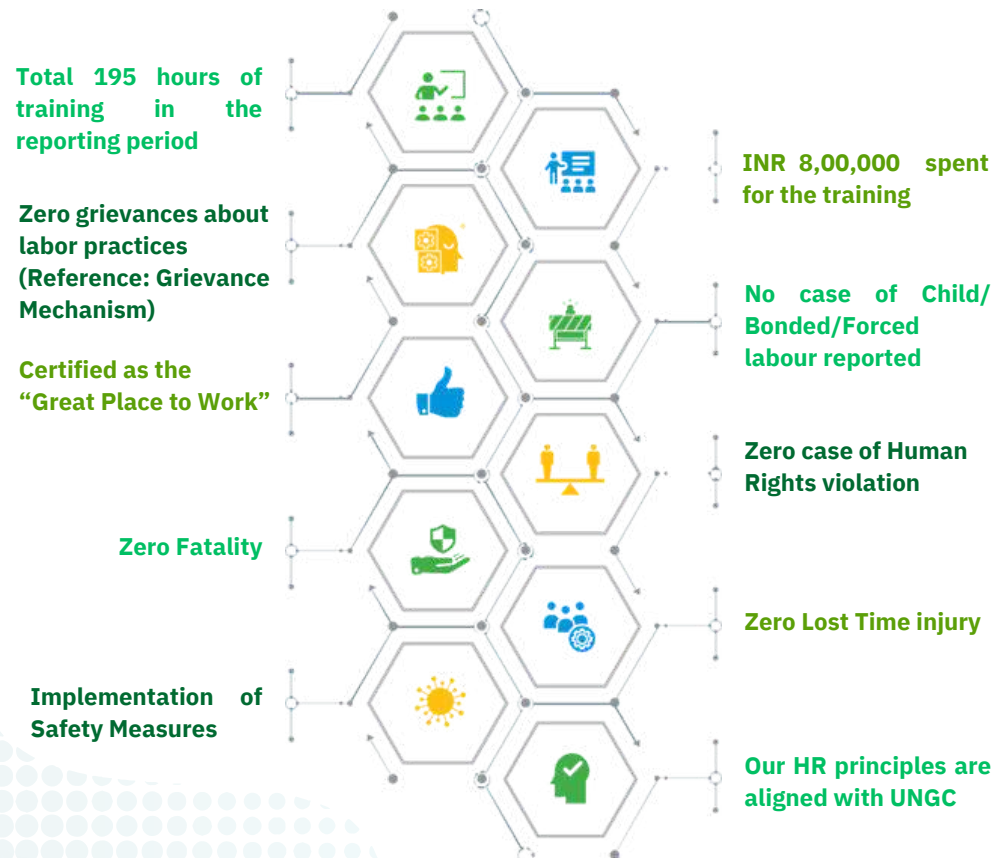
Human Capital has been instrumental in enhancing various other forms of capital within the organization. Innovative waste management practices have contributed to strengthening our Intellectual Capital. Initiatives like the establishment of the Desalination plant have added value to our Natural and Social Capital, while efforts

to improve resource efficiency and operational safety demonstrate our commitment to modernization and sustainability.

To strengthen the foundations of sustainability and preserve our dynamic work culture, which is rooted in inclusivity, engagement, and pride, CCAL is dedicated to continually enhancing and nurturing its human capital moving forward. Every employee is seen as an ambassador, representing the values of a great workplace through their personal contributions and collective efforts.

VALUING THE HUMAN CAPITAL

Achievements



Governance body

To uphold the "Code of Conduct" and ethical values, CCAL operates under a robust governance framework characterized by independence, responsibility, transparency, professionalism, and accountability. This approach enhances operational efficiency and ensures that decision-making aligns with our long-term goals and vision.

The governance body of CCAL consists of eleven members, two of whom are women, underscoring the company's commitment to diversity and inclusivity. The board oversees the company's growth across various areas, including supply chain, finance, management, production, quality assurance, research and development, and human resources. Furthermore, the Board mandates that at least three members possess financial literacy, with at least one member having expertise in accounting or a related financial management discipline, ensuring a well-rounded and knowledgeable team to guide the company's strategic direction.



VALUING THE HUMAN CAPITAL

Code of Conduct

CCAL's Code of Conduct (CoC) extends its principles to a wide range of stakeholders, including employees, clients, communities, partners along the value chain, investors, government bodies, and affiliated companies. This comprehensive document outlines guidelines on various issues such as human rights, equal opportunities, anti-corruption, and ethical behavior. All operational decisions at CCAL are guided by the ethical standards set forth in the CoC, ensuring a balance between the company's interests and those of its stakeholders.

The CoC also provides a platform for stakeholders to raise inquiries or concerns in a transparent and accountable manner, fostering trust across all interactions. Regular reviews are conducted to ensure the CoC remains aligned with changing laws and regulations, maintaining its relevance and effectiveness. CCAL further ensures transparency by making the CoC publicly accessible through its website.

Dedicated to upholding corporate governance standards, CCAL firmly opposes corruption and complies strictly with labor laws, including the Industrial Employment Act of 1948 and the Certified Industrial Employment Standing Orders established in February 2014. These measures reinforce CCAL's commitment to ethical business practices and responsible engagement with stakeholders.



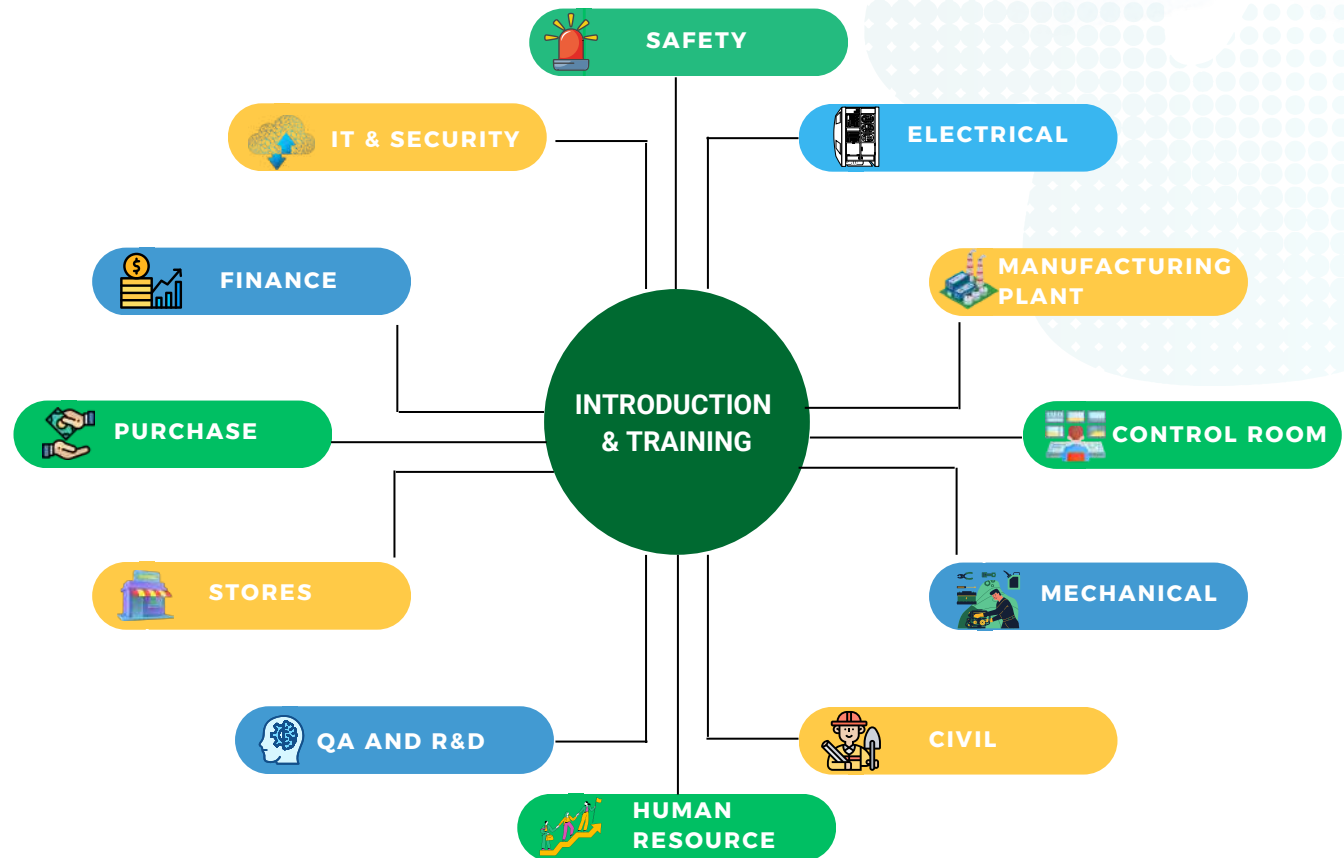
VALUING THE HUMAN CAPITAL

Developmental efforts

Functional Induction: In addition to the standard HR induction, all new hires at CCAL undergo a Functional Induction. This ensures that each employee gains a thorough understanding of the company's business, products, and operations, fostering alignment with our vision and goals. By offering in-depth knowledge of each product, we empower employees to enhance their skills and contribute to the company's growth.

CCAL's mandatory induction program spans across various departments, giving new employees a comprehensive view of the company's operations. Through targeted training sessions, we identify each employee's strengths and areas for improvement, which helps us create tailored development plans. We believe that these training sessions are essential for boosting employee performance and enhancing our human capital.

The induction program covers critical areas such as manufacturing plants, including the brine plant, boiler-house, concentration plant, sodium hypo plant, HCL plant, cell houses, hydrogen bottling, and liquid chlorine & chlorine filling plant. New hires also receive information on ISO, OHSAS, and PSM certifications. At CCAL, we prioritize nurturing leadership skills in all employees, fostering an inclusive and supportive work environment.



VALUING THE HUMAN CAPITAL

EHS Training Programs

Functional Induction: At CCAL, we emphasize a thorough understanding of our business and products for all new hires through our Functional Induction program, complementing the standard HR induction. This ensures alignment with our goals and helps build confidence in both personal and organizational growth.

Our mandatory induction program provides an overview of each department's role in promoting sustainable business practices. Through customized training sessions, we assess employees' strengths and areas for improvement, fostering effective collaboration. Training is a key driver of employee performance and human capital development at CCAL.

The induction program spans various departments, including manufacturing plants such as the brine plant, boiler-house, concentration plant, sodium hypo plant, HCL plant, cell houses, hydrogen bottling, and liquid chlorine & chlorine filling plant. New hires also receive information on ISO, OHSAS, and PSM certifications. We prioritize leadership development for all employees, reinforcing our commitment to an inclusive and supportive work environment.

Training (Internal & External)

At CCAL, we identify training needs by evaluating employee performance and assessing their understanding of job responsibilities. Our training and development approach is methodically planned. After identifying individual training requirements, we develop a detailed training calendar and structured programs to ensure all employees have the opportunity to enhance their skills. The CCAL Mate system plays a crucial role in this process, consistently receiving positive post-training feedback, which reflects the high quality of our training programs.



Leadership Development

CCAL prioritizes the development of leadership learning agility through a variety of initiatives, such as one-on-one discussions and focused interventions. The recent SLIC conference was organized to facilitate strategic leadership interactions, offering key personnel a platform to address challenges, formulate new strategies, and enhance leadership quality. This, in turn, positively influenced strategic management processes. CCAL's proactive approach to leadership has driven significant progress across all areas during the reporting period, demonstrating its commitment to sustainable performance and effective leadership development.



VALUING THE HUMAN CAPITAL

Employee benefits

In the reporting period, INR 21.95 Crores was spent on employees wages and benefits. Employee remuneration is based on merits and governed by a pay scale of that particular grade. All statutory benefits such as a pension, gratuity, insurance, and health-related benefits are extended to employees.

External Training Programs

CCAL offers sponsored programs that enable individuals to enhance their abilities. There are three dimensions to these programs: technological, managerial, and behavioral. During the reporting period, workers 41 and 23 received technical and behavioral/safety-related training.

Sustainability Performance Indicator

Total hours of training and engagement for every 10 CCAL employees

Sustainability Performance Indicators		Performance in the reporting year						
Description	Unit	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Total hours of training and engagement for every 10 CCAL employees	Hours	48	40	58	45	46	49	51

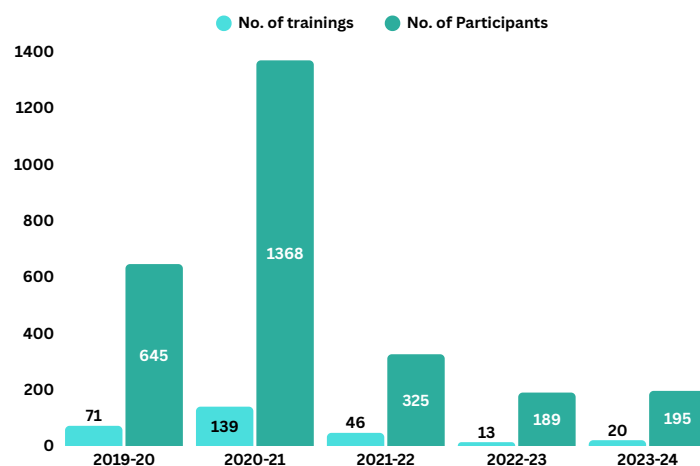
Total hours of training provided

Employee category	2020-21	2021-22	2022-23	2023-24
Senior management	176	879	181	190
Middle management	246	652	523	574
shop floor personnel	204	425.5	568	628
Contract	-	-	-	-

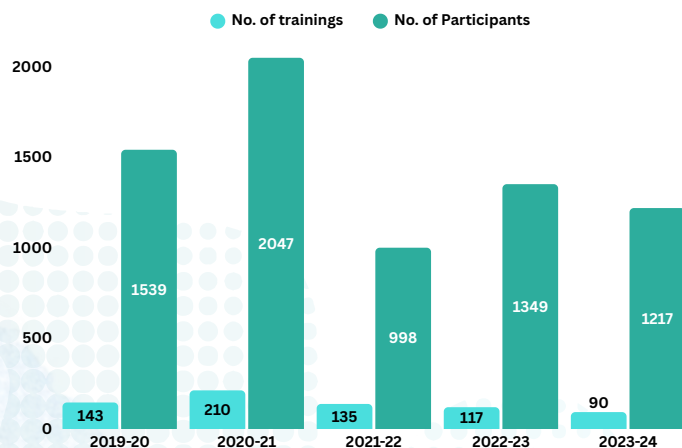


VALUING THE HUMAN CAPITAL

EHS training for contractors



Total numbers of EHS training



Amount spent on training and education

Training and education	2020-21	2021-22	2022-23	2023-24
Amount spent on training (INR)	1,96,000	4,20,518	21,35,294	8,00,000

Number of employees availed the benefits of External training and education programs

Nature	2020-21	2021-22	2022-23	2023-24
Technical	83	22	0	13
Managerial	9	116	159	126
Behavioural /Health	3	11	0	4

Insurance

All full-time CCAL personnel has an entitlement to Life Insurance. In the reporting period, CCAL has taken Industrial All Risk Policy & Package Insurance Policy for INR 214.11 Crores. Insurance for Plant & Machinery is covered under this policy.

VALUING THE HUMAN CAPITAL

Process Safety

CCAL has pioneered the implementation of all 14 elements of Process Safety Management (PSM) principles in line with 29 CFR 1910.119, becoming the first Chlor-Alkali plant in India to adopt this comprehensive approach.

The implementation of PSM at CCAL has provided several key benefits:

1. A systematic approach to identifying hazards through Process Hazard Analysis.
2. Maintenance of up-to-date process documents and Safe Operating Procedures for easy access by employees.
3. Risk assessment and review prior to implementing any changes through the Management of Change process.
4. Establishment of an asset integrity program to ensure plant integrity, availability, and performance.
5. Conducting Pre-Startup Safety Reviews to ensure safety before facility start-up.
6. Comprehensive training and competency assurance for the workforce.
7. A well-structured process for selecting, training, and evaluating contractors.
8. Reporting and investigation of Process Safety Incidents to prevent recurrence and drive continuous improvement.

Enhanced Emergency Preparedness and Structured Drills:

CCAL has implemented comprehensive emergency preparedness measures, supported by structured drills, to ensure a quick and efficient response to any emergency situations.



These drills are a key component in fostering a culture of safety across the organization.

Effective Measurement and Feedback Mechanisms for Process Safety Performance:

CCAL continuously measures and evaluates process safety performance, utilizing feedback mechanisms to drive improvements and ensure the highest standards of safety across operations.

Promotion of a Robust Process Safety Culture Across All Functions:

CCAL is committed to cultivating a strong process safety culture throughout the organization, with a focus on safety practices in every department and function, reinforcing the importance of proactive safety measures.

PSM Implementation to Ensure Employee Safety:

The primary objective of implementing Process Safety Management (PSM) at CCAL is to prevent catastrophic accidents involving hazardous chemicals. It is also driven by the overarching goal to ensure that every employee returns home safely, as they arrived—healthy and unharmed.

VALUING THE HUMAN CAPITAL

Certifications

During the reporting year, CCAL was recognized by the Indian Chemical Council (ICC) with an award for excellence in health and safety management. Our innovative efforts in technical breakthroughs have played a key role in the improved performance concerning health and safety. The following is a list of the actions that CCAL has taken:

- Eco-friendly and clean technology
- PSM: The first to apply each of the 14 elements in the sectors of chloro and alkali
- PSM, ISO, and safety audits conducted by other external agencies
- Whole plant coverage for a fire prevention system
- Safety Management for Contractors (Prequalification, Performance Evaluation)
- For all hot work activities, a fire watcher is available.
- For the designated sites, more hydrogen and chlorine sensors have been put.
- Implementing the LOTO system in Puducherry was the first offsite emergency plan.

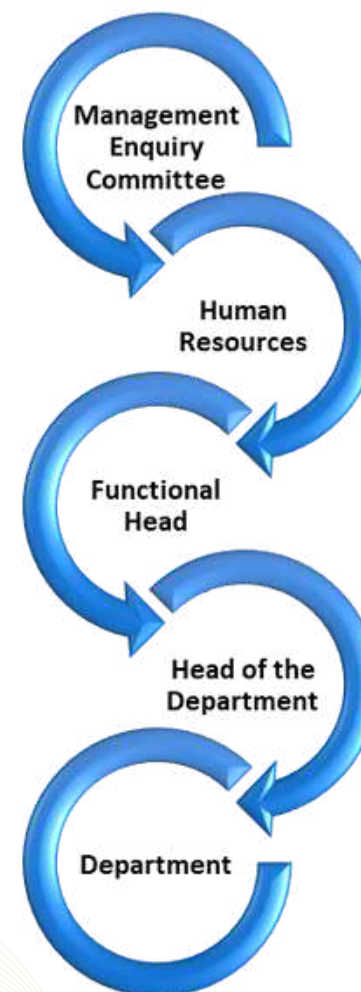
Management Enquiry Committee

The Management Enquiry Committee (MEC) operates with the objective of conducting transparent and impartial investigations. It thoroughly examines major incidents those that result in damage to company property/assets or involve human fatality—occurring either within or outside the CCAL premises.

Generally, the Safety Department investigates all incidents within 24 hours of occurrence and submits its report within 48 hours. However, in the case of major incidents, following the submission of the detailed report by the Safety Department, the MEC is activated to conduct a further extensive investigation in alignment with its mandate.

The committee is responsible for carrying out an unbiased enquiry, establishing the facts, identifying the root cause, and submitting its findings to the management along with recommendations for appropriate corrective and preventive actions. The MEC strives to enhance organizational safety standards and strives to achieve zero major incidents through its recommendations.

The Management Enquiry Committee (MEC) is headed by Mr. V. R. Raguraman Vice President (Corporate).



VALUING THE HUMAN CAPITAL

Grievance Redressal Mechanism

CCAL's grievance mechanism, outlined in accordance with point 41.0 of the Certified Standing Orders under the Industrial Employment (Standing Orders) Act, 1946, entails lodging a complaint with one's immediate superior. If the matter remains unresolved after a reasonable period, it progresses to the Department Head, Functional Head, Human Resources Department, and ultimately, the Management Enquiry Committee (MEC) if no satisfactory resolution is reached. The MEC addresses grievances beyond the organizational scope, employing a systematic approach involving hearings and the imposition of fines or penalties if necessary. Notably, CCAL reports that no grievances were received during the reporting period.



Great place to work certification

The objective of obtaining this certification is to establish and highlight CCAL as an excellent workplace with enhanced culture, trust, and performance. It facilitates the realization of organizational goals through active employee engagement, fostering both individual and team excellence.



FOSTERING INTELLECTUAL CAPITAL

Intellectual Capital

CCAL enthusiastically channels its resources into Research and Development endeavors, prioritizing a sustainable value chain and leveraging technology for innovative advancements.

We are committed to enhancing our performance and environmental standards, progressing steadily toward sustainability. CCAL has filed a total of 06 patents to date.

CCAL has further invested INR 26.17 Lacs in additional expenditures for emission capital expenditures, surpassing standard technological costs.

We firmly believe that innovation is crucial for every step toward sustainable development and endeavor to comply with laws and regulations to enhance operational efficiency.

We actively collaborate with external parties and research organizations to implement green and clean technologies, aiming to augment our utilization of renewable energy sources.

Our intellectual capital serves as the driving force behind our progress in innovating new product development, deploying sustainable and green technologies, and maintaining a strong brand portfolio while consistently improving product quality.

This section outlines our current activities and future plans or strategies toward sustainable development, all inspired by the innovative thinking within CCAL's think tank. Additionally, it describes our initiatives regarding Product Stewardship and Life Cycle Assessment to ensure responsible management of our products throughout their lifecycles.

FOSTERING INTELLECTUAL CAPITAL

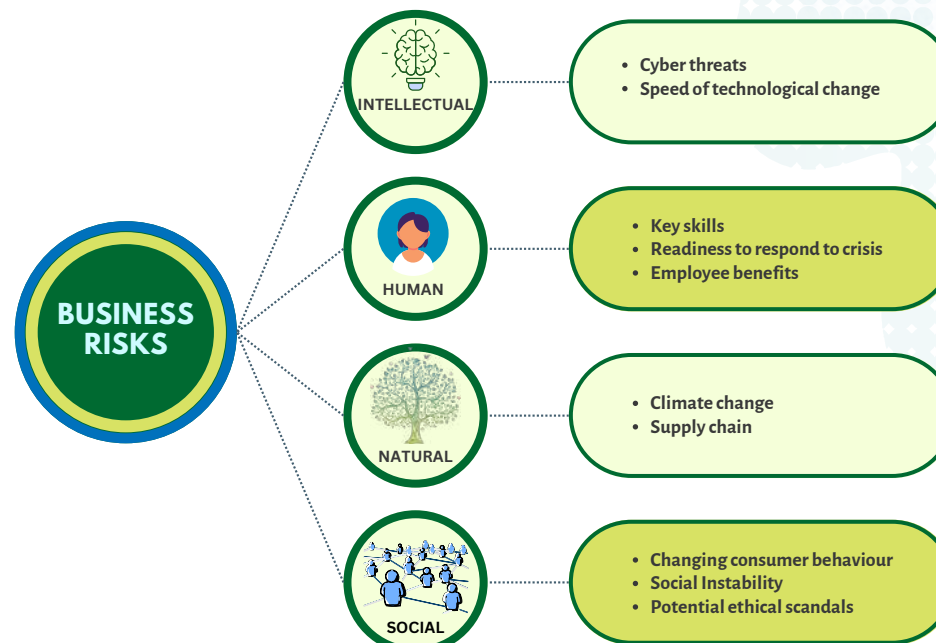
CCAL is dedicated to manufacturing and delivering high-quality products in a safe, efficient, and responsible manner, while fostering valuable, collaborative, and enduring relationships with our customers. We embrace open innovation, actively engaging with partners and investing in pioneering activities, all guided by our Sustainable Thinking ethos.

Our significant contributions to research have bolstered our Intellectual Capital, evident in the form of working models, innovations, and patents. The substantial R&D endeavors undertaken by CCAL have significantly enriched our Intellectual Capital portfolio. As mentioned, the total R&D expenses for the reporting year are detailed in the introduction. CCAL has always been committed to devising sustainable solutions for challenges. The following examples exemplify our long-term, sustained, and ongoing efforts.

CCAL has implemented in house R & D efforts to improve the plant performance and commercialising the research efforts

- The brine solution to the electrolyser has iodine coming from the salt which is the raw material. The Company's R & D team has installed a plant to treat and remove this iodine to meet the membrane supplier's requirement.
- Has installed a Soda ash production from the flue gas emission. This soda ash is one of the raw materials for Brine Treatment
- Ammonia Removal from Secondary treated sewage water for utilization as a feed to the Reverse Osmosis plant
- Clarifier sludge to Brick Conversion

Linking business with risk capital



Wealth out of Waste

CCAL has initiated several projects to recycle liquid and solid waste and implement circular economy principles, marking a pioneering effort in the Chlor-alkali Industrial sector. Properties of the developed blocks match those of commercially available concrete blocks, suitable for civil construction. The brine sludge is deemed non-hazardous. A fully operational plant capable of manufacturing 23,570 units of bricks/blocks daily from non-hazardous sludge has been installed and awaits commissioning. This plant aims to convert brine sludge into marketable bricks and blocks, addressing challenges in ecologically safe disposal.

The sludge, rich in Ca & Mg salts and Al & Fe hydroxides, enhances the strength of construction recipes. With sludge neutralized by waste sulfuric acid and mixed with cement and aggregates, a mechanical pan mixer ensures uniform consistency before molding and compaction with a vibrator. This process not only converts waste acid and sludge into a marketable product but also promotes environmental sustainability, aligning with the concept of "Wealth Out of Waste" (WOW).

A patent has been filed for this process (Application No. 201841021599).

ENGAGING CUSTOMERS AND SUPPLY CHAIN

Customers Engagement and Supply Chain

CCAL handles its supply chain by dedicatedly connecting the dots between suppliers, vendors, dealers, and channel partners to ultimately provide the quality products and services to our customers. CCAL uses various innovative strategies and approaches to engage with the supply chain and considers Customer Relationship Management (CRM) as an integral part of our success. The constituents of the supply chain such as sustainable procurement, raw materials costs, production, packaging and supply of products to the customers are governed by the integrated approach and efficient management.

We also ensure that, the quality of our products meet the National as well as International standards which in turn ensures that the quality of raw materials.

CCAL conducts audits by third parties as well as by customers periodically which not only ensures the continuous improvement of our Products and Services but also helps us to build a strong network with our customers. CCAL rely on its Research and Development team to ensure the quality of raw materials and products.

Our laboratory is equipped with state-of-the-art instruments and management systems which continually monitors the quality and helps in reduction of impurities in the raw materials and products. We believe in consistency for a sustainable growth and strive to achieve it through efficient supply and value chain.

ENGAGING CUSTOMERS AND SUPPLY CHAIN

Vendor Assessment

Vendors play an essential role in supplying qualitative raw materials to CCAL. All the vendors are screened by the Code of Conduct and abide by the Company's norms, safety policies, and practices. CCAL continuously monitors the performances of all vendors based on the following parameters.

Vendors are screened through a "Composite Vendor Rating" based on ratings, experience, and judgments. Compliance with legal requirements and customer satisfaction are also considered. Vendors with excellent ratings are awarded, while those with low ratings are counseled for better performance.

Ratings	Grade
81 and above	A. Excellent
71-80	B. Very Good
61-70	C. Good
51-60	D. Satisfactory
Below 50	E. Unsatisfactory

QUALITY



The ratio of the total amount delivered to the total quantity accepted with an acceptable variance is used to determine the quality. The rating for the supply of lower-quality materials is based on this ratio, which is proportionate to the rating.

TRANSPORT



In the evaluations, vendors also deduct points for unjustified delays in material delivery. The ratings take into account the material's actual delivery date in comparison to the order delivery plan.

PRICE



The consignment is made at the vendor's lowest quote. The market environment and the price of the most recent purchase from the same vendor are also used to cross-verify the pricing.

PAYMENT TERMS



By allocating appropriate de-merits elements, the grade pertaining to payment is determined by credit and other terms that the vendor has approved.

SERVICE



The service aspects that are taken into account during consignment delivery include promptness in response, complaint management, cooperativeness, and preparedness for emergency operations.

ENGAGING CUSTOMERS AND SUPPLY CHAIN

Purchase department is to counsel the concerned vendor in writing, to improve his performance rating, lest he should stand the risk of deletion of his Company's name from Approved Vendor List. Vendors, whose performance is rated at 50 or below, are to be informed that their registration has been cancelled citing reasons for low grading and that they may be considered again after overcoming the deficiencies observed.

Grades A, B, C & D are arrived at on the basis of performance against each order and averaging at the end of the year. Classification of vendors engaged during the reporting period is depicted in the table



Delivery Norms

CCAL has stringent regulations and criteria that have to be passed before delivering any products and especially chlorine and Hydrogen products, to customers. The criteria for inspection are as follows:

- Distance from any of the chimney must be greater than 50 meters.
- Distance from any of the electrical HT transformers must be greater than 20 meters.
- Conductive tubing only allowed
- The unloading area must be fenced
- There must not be any transmission line crossing over the fenced area at a distance greater than 70 meters.
- For transportation from the factory gate to the gas station, safety must be ensured around the areas greater than 7 meters
- Presence of Warning boards at specific locations
- Provision for unloading of the lorry with all the required arrangements
- Provision of space for a specified number of lorries during unloading and parking
- Lorries with slide open facility
- Main earth pit next to unloading station with the required type of cable
- Connectivity at flanges
- Additional earthing provision

Customer audit

We offer customer audits at periodic intervals of time to ensure customers that we are taking care of the quality of the products we made. The criteria remains the same as stated under the Sustainability Report 2019-20.

Transportation of chemicals to customers
All the transportations carried out only if it classifies the checklist as follows:

I. All drivers responsible for the delivery of finished goods must have a valid license with hazardous endorsement provided by the State government. The license is to be checked and verified by the security personnel and safety officer from time to time.

II. The Emergency Information Panel present on the three sides of the deliverable truck with finished goods.

III. The safety training of all the deliverable trucks done periodically or not.

IV. To prevent valve damage, the presence of valve hood.

V. GPS installation on the hydrogen manifold trucks.

ENGAGING CUSTOMERS AND SUPPLY CHAIN

VI. Transportation of hydrogen is a time constraint procedure. The allowed time is between 5:00 am to 11:00 pm.

VII. Presence of emergency kit for emergency operations.

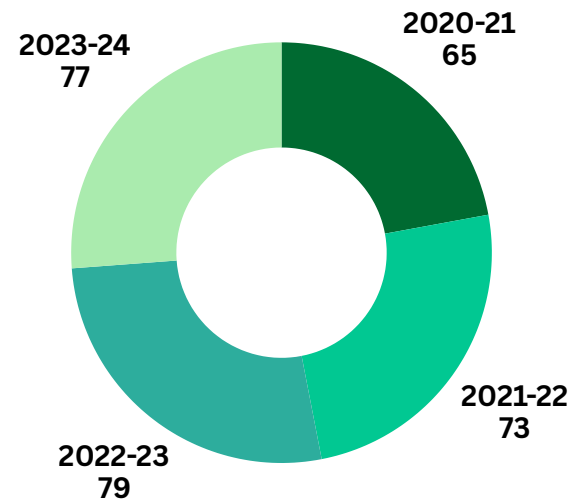
VIII. Periodical check of trucks by mechanical engineers for both contract as well as non-contract vehicles.

CCAL takes utmost care of the transportation of finished goods. We provide Transport Emergency Card (TREM) and Material Safety Data Sheets (MSDS) to all the drivers of finished goods. The card and sheets contain steps to be taken during an emergency and detailed information about the product.

In case of a new customer, a prior check is performed by the Engineers at CCAL to ensure the safety and proper arrangements for storing the product. In such cases, CCAL offers training programs to prepare the customer for the safe handling of the products. CCAL engineers are also available for emergency operations at the customer end, such as leakage of Chlorine, Valve defects, etc.

The real-time tracking of trucks is guided by a criterion about which proper training is provided to all drivers with finished goods.

Number of GPS installation



ENGAGING CUSTOMERS AND SUPPLY CHAIN

Criteria of deviations

Description of deviation	Criteria
Over speed	Above 50 kmph
Rapid acceleration	More than 15 kmph
Rapid deceleration	More than 15 kmph
Night driving	Between 11:00 P.M. and 5:00 A.M.
Continuous driving	For more than 6 hours or 150 Km (whichever is lesser)
stoppage	More than 30 minutes
Dis-connection of GPS devices	More than 30 minutes
Non-adherence to planned route	Planned route

EHS Training to CCAL's contractors

Description	2019-20	2020-21	2021-22	2022-23	2023-24
Number of training	71	139	46	13	20
Number of participants	645	1368	325	189	195

Criteria of deviations

Description	2020-21		2021-22		2022-23		2023-24	
	Number of training	Number of participants	Number of training	Number of participants	Number of training	Number of participants	Number of training	Number of participants
EHS INDUCTION	40	225	78	666	52	402	45	328
FIRE FIGHTING	8	180	11	282	16	158	16	419
DEFENSIVE	15	80	11	282	11	125	-	-
OLAR/SCBA	4	75	2	25	11	215	2	17
ERP	4	85	37	113	3	71	1	6

ENGAGING CUSTOMERS AND SUPPLY CHAIN

Sl.No	Name of the training	2023-24	
		No of Trainings	No of Participants
1	EHS Induction	45	328
2	Fire Fighting	16	419
3	Work Permit system	3	27
4	Defensive Training	-	-
5	Training Need analysis	-	-
6	PSM Trainings	4	49
7	Contractors Training	4	81
8	OLAR/SCBA	2	17
9	ERP	1	6
10	First Aid training	4	132
11	Environment training	2	38
12	Near miss reporting	-	-
13	Energy conservation	1	13
14	Chemical disaster Prevention Program	1	15
15	Height work training	7	92
16	RCA	-	-
17	Online EHS Webinars	-	-
18	ISO Internal Training	4	76
19	Transport & Road safety	1	13
	Total	95	1276



INDEPENDENT ASSURANCE STATEMENT

Independent Limited Assurance Statement to Chemfab Alkalys Limited on Their Sustainability Report 2023-24

Introduction

Intertek India Private Limited ("Intertek") was engaged by Chemfab Alkalys Limited ("Chemfab") to provide an independent limited assurance on its Sustainability Report for 2023-24 ('the Report'). The Report is prepared by Chemfab based on the Global Reporting Initiative (GRI) Standards "in-accordance" option for sustainability reporting. The assurance was performed in accordance with the requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagement (ISAE) 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information.

Objective

The objectives of this limited assurance exercise were, by review of objective evidence, to confirm whether any evidence existed that the sustainability related disclosures, as declared in the Report, were not accurate, complete, consistent, transparent and free of material error or omission in accordance with the criteria outlined below.

Intended Users

This Assurance Statement is intended to be a part of the Annual Sustainability Report 2023-24.

Responsibilities

Chemfab is responsible for developing the Report and its presentation. Chemfab is also responsible for designing, implementation and maintenance of internal controls relevant to the preparation of the Report so that it is free from material misstatement, whether due to fraud or error. Intertek's responsibility, as agreed with Chemfab, is to provide assurance and express an opinion on the data and assertions in the Report based on our verification following the assurance scope and criteria given below. Intertek does not accept or assume any responsibility for any other purpose or to any other person or organization. This document represents Intertek's independent and balanced opinion on the content and accuracy of the information and data held within.

INDEPENDENT ASSURANCE STATEMENT

Assurance Scope

The Assurance has been provided for selected sustainability related disclosures presented by Chemfab in its Report. The assurance boundary included data and information for the operations of Chemfab in accordance to GRI Standards 2021. Our scope of assurance included verification of data and information on selected disclosures reported as summarized in the table below:

General Disclosures

- Organization and its reporting practices 2021: 2-1, 2-2, 2-3, 2-5, 2-6, 2-7, 2-9, 2-11, 2-13, 2-17
- Strategy 2021: 2-22,
- Strategy, policies and practices 2021: 2-23, 2-24, 2-25, 2-26, 2-28
- Approach to stakeholder engagement 2021: 2-29
- Material Topics
- Process to determine material topics 2021: 3-1
- List of material topics 2021:3-2
- Management of Topics: 3-3

Topic Specific Disclosures

Environmental Disclosures

- Energy 2016: 302-1, 302-3, 302-4, 302-5
- Water and Effluents 2018: 303-1, 303-2, 303-3, 303-4, 303-5
- Emissions 2016: 305-1, 305-2, 305-3, 305-4, 305-5, 305-7
- Waste 2020: 306-1, 306-2, 306-3, 306-4, 306-5
- Biodiversity 2016: 304-1, 304-2, 304-3
- Supplier Environmental Assessment 2016: 308-1, 308-2

Economic Disclosures

- Economic Performance 2016: 201-1, 201-2, 201-3
- Indirect Economic Impacts 2016:203-1. 203-2

Procurement Practices 2016

- Proportion of spending on local suppliers: 204-1

Anti-Corruption 2016

- Operations assessed for risks related to corruption: 205-1
- Communication and training about anti- corruption policies and procedures: 205-2.

Anti-Competitive Behavior 2026

- Legal actions for anti-competitive behavior, anti-trust, and monopoly practice.

Social Disclosures

- Employment 2016: 401-1, 401-2
- Labor Management Relations 2016: 402-1
- Occupational Health and Safety 2018: 403-1, 403-2 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10
- Training and Skill Development 404-1, 404-2, 404-3
- Diversity and Equal Opportunity 2016: 405-1, 405-2
- Non-Discrimination 2016: 406-1
- Training and Skill Development 404-1, 404-2, 404-3
- Freedom of Association & Collective Bargaining 2016:407-1
- Child Labor 2016: 408-1
- Forced or Compulsory Labor 2018: 409-1
- Right of Indigenous People: 411-1
- Local Communities 2016: 413-1, 413-2
- Supplier Social Assessment 2016: 414-1
- Public Policy 2016: 415-1
- Customer Health and Safety 2016: 414-1
- Marketing and Labeling 2016: 417-1
- Customer Privacy 2016: 418-1

INDEPENDENT ASSURANCE STATEMENT

Assurance Criteria

Intertek conducted the assurance work in accordance with requirements of 'Limited Assurance' procedures as per the following standard:

- International Standard on Assurance Engagements (ISAE) 3000 (revised) for 'Assurance Engagements other than Audits or Reviews of Historical Financial Information'.

A limited assurance engagement comprises of limited depth of evidence gathering, including inquiry and analytical procedures and limited sampling as per professional judgement of assurance provider. A materiality threshold level of 10% was applied. Assessment of compliance and materiality was undertaken against the stated calculation methodology and criteria.

Methodology

Intertek performed assurance work using a risk-based approach to obtain information, explanations and evidence that was considered necessary to provide a limited level of assurance. The assurance was conducted by desk review & stakeholder interviews regarding the reporting and supporting records for the FY2023-24. The assessment included the following:

- Assessment of the Report that was prepared in-accordance to the Sustainability Reporting Standards of the Global Reporting Initiative.
- Review of processes and systems used to gather and consolidate data.
- Examined and reviewed documents, data, and other information made available digitally.
- Conducted virtual interviews with key personnel responsible for data management.
- Assessment of appropriateness of various assumptions, estimations, and thresholds used by Chemfab for data analysis.
- Review of sustainability disclosures on sample basis for the duration from 1st April 2023 to 31st March 2024 was carried out remotely through virtual interactions and screen sharing tools.

INDEPENDENT ASSURANCE STATEMENT

Conclusions

Intertek reviewed selected sustainability disclosures provided by Chemfab in the Report for the reporting period from 1st April 2023 to 31st March 2024. Based on the data and information provided by Chemfab, Intertek concludes with limited assurance that there is no evidence that the sustainability data and information presented in the Report is not accurate, complete, consistent, transparent, materially correct, and thus is a fair representation of sustainability disclosures in line with the identified material topics and is in-accordance to the sustainability reporting standards of the GRI Standards to the best of our knowledge.

Intertek's Competence and Independence

Intertek is a global provider of assurance services with a presence in more than 100 countries employing approximately 43,500 people. The Intertek assurance team included Competent Sustainability Assurance Professionals, who were not involved in the collection and collation of any data except for this Assurance Opinion. Intertek maintains complete impartiality towards any people interviewed.

For Intertek India Pvt. Ltd.


 Toshi Satwaskar
 Intertek India
 15th April 2025


 Shilpa Naryal
 Head of Sustainability
 Intertek South Asia & MENAP
 15th April 2025


SANDEEP VIG
 Sandeep Vig
 Director-Business Assurance
 Intertek India & MENAP
 16th April 2025

No member of the verification team (stated above) has a business relationship with Chemfab stakeholders beyond that is required of this assignment. No form of bribe has been accepted before, throughout and after performing the verification. The verification team has not been intimidated to agree to do this work, change and/or alter the results of the verification. The verification team has not participated in any form of nepotism, self-dealing and/or tampering. If any concerns or conflicts were identified, appropriate mitigation measures were put in place, documented and presented with the final report. The process followed during the verification is based on the principles of impartiality, evidence, fair presentation and documentation. The documentation received and reviewed supports the conclusion reached and stated in this opinion.

LINKING SDG'S AND GRI

Sustainable Development Goals (SDGs)

CCAL's Contribution



Good Health & Well Being

Guaranteeing the health and safety of our products, employees, and contractors



Quality education

Providing Quality education, vocational training, and provide learning and development opportunities to all community, staff, and peers.

Outcomes

- Health care as per Schedule VII (i) for the local area, Puducherry
- Conducting the safety on-site and off-site mock-drills for Chlorine emergency
- CCAL has provided water and road facilities to local villages, and sanitation endeavours, including contribution to the Swach Bharat Kosh set up by the Central Government for the promotion of sanitation and provision of safe drinking water. CCAL has also run industrial hygiene programmes, drinking water campaigns for the people of the Community.
- Employment enhancing Vocational training in line with Schedule VII (i) for the local area, Puducherry.
- Education and training in line with Schedule VII (i) for the local area, Puducherry.
- Supported suppliers, students, peers in learning and development opportunities for safety, energy efficiency, operational excellence, desalination, waste handling, and up-cycling (viz brick manufacturing from brine sludge and other innovations).

Commitments

- Increasing access to quality and essential health care services
- Committed to supporting the municipalities for the mitigation and relief measures
- For more details on CSR activity, please refer <https://chemfabalkalis.com/community-outreach/>
- Continued dissemination of knowledge to our supplier and peers for safe operations
- Continue to encourage 'complete engagement' with the entire spectrum to impart vocational skills for the needy and deserving. For more details, please refer to our chapter: "Social Capital"

LINKING SDG'S AND GRI

Sustainable Development Goals (SDGs)

CCAL's Contribution



Gender equality

Supporting gender equality and the increased participation and advancement of women



Clean water and sanitation

Managing sustainable water consumption and discharge, analysing global water risk to minimize the water crisis

Outcomes

- No human rights violations
- Puducherry lies in the water-stressed region[1]
- CCAL has developed a 2 MLD desalination plant that can handle seawater as well as sanitary water
- CCAL has engaged with the community to provide safe drinking water in line with Schedule VII (i) for the local area, Puducherry
- Increased rainwater harvested to 2,10,600 m³ compared to the baseline value of 39152 m³ in 2013.
- Increase in the quantity of recycled water from the baseline value of 21,489 m³ (the base year 2013) to 89,852 m³ for the reporting year.

Commitments

- Increasing the numbers of women in managerial and leadership positions
- No human rights violations
- To become water positive by 2025
- Promoting sustainable water management
- Increasing access to safe drinking water for communities in rural areas

LINKING SDG'S AND GRI

Sustainable Development Goals (SDGs)

CCAL's Contribution



Industry, Innovation, and Infrastructure

Empowering sustainable development through investments in manufacturing, innovation and technology



Responsible consumption and production

Reducing the impacts of our products in the production phase and innovating ways to include Circularity

Outcomes

- CCAL pioneered the membrane cell process in India, paving the way for the Chlor-alkali industry in the country to adopt a more environment-friendly technology
- First of its kind plant to deploy Desalination plant which can treat seawater as well as treated sewage water
- Sponsoring a project for the development of Sodium ion battery at CECRI
- Research and development of the prototype for up scaling projects for major waste streams to divert waste from landfill
- Life Cycle Assessment of Products and Services
- Implementation of various energy efficiency projects
- Reducing the specific water consumption
- Zero waste sent to landfill
- 204% water reused/ recycled compared to 2013-14 baseline.
- Integrating the Circular Economy to CCAL business
- Commitment to adhere to "Responsible Care" principles & Codes of management practices

Commitments

- 25 % reduction in combined GHG (Scope 1 and 2) intensity reduction by 2030
- Promoting investment in R&D and Technology
- 100 % waste recycling

LINKING SDG'S AND GRI

Sustainable Development Goals (SDGs)

CCAL's Contribution



Climate action

Improving resource use, energy efficiency, and developing robust low-carbon strategies



Life on Land

Reducing the risk of potentially adverse environmental impacts and monitoring the new areas near our operations



Partnerships for the Goals

Partnering with organizations to intensify our contributions to achieve the goals and a circular economy

Outcomes

- Reduced our Specific Energy Consumption (TOE/MT of Caustic) a 0.2697
- Reduced our carbon intensity to 2.32 MTCO2e/MT of caustic
- Separate nursery for multiplication/propagation of tree saplings and shrubs
- Plantation activity for Miyawaki forest
- Partnership with educational institutes, research organizations, and industries to further technological innovation

Commitments

- 25 % reduction in combined GHG (Scope 1 & 2) intensity by 2030.
- Taking efforts to align with the COP21 and TCFD frameworks and recommendations in our future Climate Change Strategy
- Engagement with CDP: Climate / Supply Chain Management
- Protecting and restoring degraded forests and promoting sustainable ecosystems and biodiversity
- Partnering with organizations to intensify our contribution to sustainable development.

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Economic Performance

Direct Economic Value Generated & Distributed

Particulars	Particulars	Amount (in INR Crores)								
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Economic Value Generated	Revenue Generated	116.25	159.37	187.8	198.03	207.63	182.19	277.28	336.68	335.07
Economic Value Distributed	Operating Costs	79.33	111.63	127.71	133.29	158.78	160.94	217.85	223.48	269.57
	Employee Wages and Benefits	11.16	14.51	15.22	16.14	18.07	18.35	19.68	18.54	21.95
	Payments to government	16.65	17.29	18.87	11.73	1.26	10.15	10.35	24.81	12.63
	Community investments (CSR)	0.23	0.42	0.53	0.49	0.72	0.79	0.56	0.27	0.92
	Exceptional Item	0.22	-	-	19.63	3.21	-	-	3.37	-
Economic Value Retained		8.66	15.52	25.47	16.75	25.59	-8.04	28.84	66.21	30

Note: Previous years' values have been reclassified to conform to current year presentation.

Particulars	Amount (in INR Crores)								
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Payments to providers of capital	1.15	1.15	1.73	1.73	1.74	1.75	Nil	1.767	1.77

Note: Values from FY 2016-17 are of the merged entity (CCAL & TCL) and are as per Ind AS

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Coverage of the Organization's Defined Benefit Plan

Particulars	Amount (in INR Lakhs)								
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Gratuity (Liability as on Balance Sheet Date)	97.87	100.07	154.93	172.45	123.68	86.54	58.06	189.73	201.64
Provident Fund Contribution	65.67	83.88	88.75	97.71	106.04	100.87	113.93	118.80	128.83
Super Annuation Contribution	15.43	16.35	20.76	23.46	26.23	23.47	21.71	20.86	20.84
Total	178.98	200.3	264.44	293.62	255.95	210.88	193.7	329.39	351.31

Note: Values from 2017-18 are of the merged entity (CAL & TCL).

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Development and Impact of Infrastructure Investments and Services Supported; and Indirect Economic Impacts

Year	Significant Infrastructure Developments Amount (in INR Lakhs)	Current or Expected Impacts on Communities and Local Economies Amount (in INR Lakhs)	Nature and Extent of Impact (Positive or Negative)
2015-16	211.86	146.72 (Contribution to Schools, Temples, Local Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2016-17	129.55	148.19 (Contribution to Schools, Temples, Local Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2017-18	27.62	193.42 (Contribution to Schools, Temples, Local Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2018-19	1107.03	178.34 (Contribution to Schools, Temples, Local Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2019-20	160.78	192.31 (Contribution to Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2020-21	17.88	129.98 (Contribution to Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2021-22	32.02	161.57 (Contribution to Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2022-23	153.65	149.71 (Contribution to Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.
2023-24	93.2	(Contribution to Communities & Others)	Positive - Financial assistance to village, panchayat, schools, etc.

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Materials

Reporting Year	Amount of Products Produced	Name of Raw Materials Used in Production of Product	Weight of Material used per Unit of Product Produced
Chlorine Gas			
2015-16	17021 MT	Raw Salt	
2016-17	17466 MT	Raw Salt	
2017-18	19199 MT	Raw Salt	
2018-19	19672 MT	Raw Salt	
2019-20	20829 MT	Raw Salt	
2020-21	20996 MT	Raw Salt	
2021-22	23602 MT	Raw Salt	
2022-23	22691 MT	Raw Salt	
2023-24	24136 MT	Raw Salt	
Hydrogen Gas			
2015-16	2.15 MCM	Raw Salt	
2016-17	2.34 MCM	Raw Salt	
2017-18	2.29 MCM	Raw Salt	
2018-19	2.59 MCM	Raw Salt	
2019-20	3.05 MCM	Raw Salt	
2020-21	2.53 MCM	Raw Salt	

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Materials

Reporting Year	Amount of Products Produced	Name of Raw Materials Used in Production of Product	Weight of Material used per Unit of Product Produced
Hydrogen Gas			
2021-22	2.44 MCM	Raw Salt	
2022-23	2.62 MCM	Raw Salt	
2023-24	2.60 MCM	Raw Salt	
Caustic Soda			
2015-16	30909 MT	Raw Salt	1.77 MT/MT
2016-17	32998 MT	Raw Salt	1.70 MT/MT
2017-18	38809 MT	Raw Salt	1.65 MT/MT
2018-19	37732 MT	Raw Salt	1.70 MT/MT
2019-20	38846 MT	Raw Salt	1.70 MT/MT
2020-21	40525 MT	Raw Salt	1.74 MT/MT
2021-22	45919 MT	Raw Salt	1.72 MT/MT
2022-23	47081 MT	Raw Salt	1.74 MT/MT
2023-24	49879 MT	Raw Salt	1.74 MT/MT

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Energy

Type of Energy Used	Unit	Amount of Energy Usage								
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Diesel	kL	116.635	11	11.93	27.23	13.07	18.603	29.125	17.67	9.33
LPG	kg	2736	3420	3876	4617	5586	422	722	1406	437
Biogas	m3	-	333	380.43	208.11	-	1.6658	1021	869	1739
Furnace Oil	MT	476.798	614	903.11	1302.13	1662	1493	1380	1891	2101
Hydrogen	Nm3	27,46,998	27,13,194	31,04,524	29,38,294	28,30,839	30,42,384	3437948	3286999	14810880
Electricity	kWh	8,13,43,500	8,73,33,000	10,44,19,500	10,67,19,500	10,65,83,000	11,12,70,400	11,78,25,860	13,54,72,914	13,81,48,200
Electricity generated from Solar Roof-Top	kWh	-	-	-	99719	220109	441820	313367	293546	291504
Steam generated from waste heat	kg	75,06,196	86,84,160	1,25,57,073	65,26,847	1,04,67,575	1,15,14,090	1,02,24,568	1,42,26,450	1,48,18, 000

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Energy

Total Energy Consumption (MJ/MT)								
2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
8302	8854	9972	10581	10159	11565	11452	12761	13390

Energy Intensity (Energy (TOE)/MT of caustic)								
2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
0.2862	0.2686	0.2684	0.257	0.2804	0.2615	0.2664	0.2749	0.2697

From 2017-18 the TOE is Calculated as per the BEE format

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

GHG Emissions

Particulars	Unit	Reporting Period								
		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Direct Greenhouse Gas (GHG) emissions										
Total Direct Emission (Scope 1)	MTCO2e	1691	2079	2983	4303	6434	4228	5247	9634	9507.02
Indirect Greenhouse Gas (GHG) emissions										
Total Indirect Emission (Scope 2)	MTCO2e	77390	83089	96066	98182	97225	94580	98715	96122	113281
Indirect Greenhouse Gas (GHG) emissions										
Total Indirect Emission (Scope 3)	MTCO2e	116	106.972	73	111	127	351	276	6.37	2.98
EN 18 - Greenhouse Gas emissions intensity										
Emission intensity by production	GHG Intensity per MT of caustic	2.56	2.581	2.55	2.72	2.67	2.26	2.69	2.08	2.32
Reduction of Green House Gases (GHG) Emissions										
GHG Emissions Reductions Achieved	MTCO2e per MT of caustic	0.128	-	0.029	-	0.047	0.077	0.066	0.072	0.097

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Air Emissions

Air Emission Category	Significant Air Emissions (µg/cu.m)								
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
NO _x	13.11	13.41	16.93	16.13	16.68	13.62	12.56	15.23	7.92
SO _x	10.8	13.27	15.19	16.87	15.16	11.33	15.19	16.25	13.65
Particulate matter (PM10)	61.98	66.15	66.72	64.47	66.92	26.72	67.85	65.23	64.43
Chlorine	7.11	7.09	6.89	6.04	8.25	6.61	7.25	6.89	6.79
Acidity	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Effluents and Waste

Reporting Period	Volume of Discharged Water (cu.m)	Quality of Discharged Water	Destination of Discharged Water	Was the water treated before discharge	Method of Treatment of Water
PLANT					
2014-15	2589	Analysis yearly average: pH: 7.02, TSS: 13.86 mgpl, TRC : Nil, COD: 74.33 mgpl, BOD: 23.30 mgpl	Marine outfall	Yes	pH adjustment and settling
2015-16	2545	Analysis yearly average : pH:7.06, TSS:7.54 mgpl, TRC: Nil, COD:84.10 mgpl, BOD:36.8 mgpl, Oil and Grease :8.75 mgpl	Marine outfall	Yes	pH adjustment and settling
2016-17	2422	Analysis yearly average- pH: 7.05, TSS:4.42 mgpl, TRC: Nil, COD: 94.20 mgpl, BOD: 59.17 mgpl, Oil and Grease: 6.50 mgpl	Marine outfall	Yes	pH adjustment and settling
2017-18	3088	Analysis yearly average- pH :7.35, TSS: 3.75 mgpl, TRC: Nil, COD:37.22 mgpl, BOD:12.87 mgpl, Oil and Grease :6.27mgpl	Marine outfall	Yes	pH adjustment and settling
2018-19	3087	Analysis yearly average- pH :7.20, TSS: 1.20 mgpl, TRC: Nil, COD: 47.90, mgpl, BOD:21.88 mgpl, Oil and Grease :6.75 mgpl	Marine outfall	Yes	pH adjustment and settling
2019-20	2961	Analysis yearly average- pH :7.25, TSS: 1.23 mgpl, TRC: Nil, COD: 48.90 mgpl, BOD:21.93 mgpl, Oil and Grease :6.70 mgpl	Marine outfall	Yes	pH adjustment and settling
2020-21	2360	Analysis yearly average- pH :6.99, TSS: 2.57 mgpl, TRC: Nil, COD: 46.4 mgpl, BOD:18.2 mgpl, Oil and Grease :6.54 mgpl	Marine outfall	Yes	pH adjustment and settling
2021-22	2895	Analysis yearly average- pH :7.01, TSS: 2.45 mgpl, TRC: Nil, COD: 47.1 mgpl, BOD:19.4 mgpl, Oil and Grease :6.81 mgpl	Marine outfall	Yes	pH adjustment and settling
2022-23	2658	Analysis yearly average- pH :7.06, TSS: 2.52 mgpl, TRC: Nil, COD: 46.6 mgpl, BOD:19.1 mgpl, Oil and Grease :6.78 mgpl	Marine outfall	Yes	pH adjustment and settling
2023-24	2780	Analysis yearly average- pH :7.05, TSS: 2.56 mgpl, TRC: Nil, COD: 47.2 mgpl, BOD:19.5 mgpl, Oil and Grease :6.69 mgpl	Marine outfall	Yes	pH adjustment and settling

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Effluents and Waste

Reporting Period	Volume of Discharged Water (cu.m)	Quality of Discharged Water	Destination of Discharged Water	Was the water treated before discharge	Method of Treatment of Water
STP- II (FACTORY)					
2014-15	1799	Analysis yearly average : DO: 5.42, BOD: 23.5 mgpl, COD: 35.58 mgpl, Oil and grease: 0.21 mgpl	For Horticulture/Gardening	Yes	Packaged STP
2015-16	1905	Average yearly average DO:5.26 mgpl, BOD:23.25 mgpl, COD:28.88 mgpl, Oil and grease :0.25 mgpl	For Horticulture/Gardening	Yes	Packaged STP
2016-17	1123	Analysis yearly average - BOD: 27.84 mgpl, COD: 33.10 mgpl, Oil and Grease: 0.24 mgpl, DO: 5.45 mgpl	For horticulture/gardening	Yes	Packaged STP
2018-19	1232	Analysis yearly average - BOD :21.22 mgpl, COD : 26.79 mgpl, Oil and Grease : 0.22 mgpl, DO : 5.42 mgpl	For Horticulture/Gardening	Yes	Packaged STP
2019-20	1729	Analysis yearly average - BOD :24.59 mgpl, COD : 27.22 mgpl, Oil and Grease : 0.22 mgpl, DO : 5.37 mgpl	For Horticulture/Gardening	Yes	Packaged STP
2020-21	1492	Analysis yearly average - BOD :23.35 mgpl, COD : 26.77 mgpl, Oil and Grease : 0.15 mgpl, DO : 5.31 mgpl	For Horticulture/Gardening	Yes	Packaged STP
2021-22	1356	Analysis yearly average - BOD :23.22 mgpl, COD : 26.69 mgpl, Oil and Grease : 0.16 mgpl, DO : 5.42 mgpl	For Horticulture/Gardening	Yes	Packaged STP
2022-23	1799	Analysis yearly average - BOD :23.36 mgpl, COD : 26.72 mgpl, Oil and Grease : 0.17 mgpl, DO : 5.33 mgpl	For Horticulture/Gardening	Yes	Packaged STP
2023-24	1906	Analysis yearly average - BOD :23.33 mgpl, COD : 26.69 mgpl, Oil and Grease : 0.16 mgpl, DO : 5.31 mgpl	For Horticulture/Gardening	Yes	Packaged STP

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Effluents and Waste

Reporting Period	Volume of Discharged Water (cu.m)	Quality of Discharged Water	Destination of Discharged Water	Was the water treated before discharge	Method of Treatment of Water
STP- I (COLONY + CANTEEN)					
2014-15	3022	Analysis yearly average : DO:4.3 mgpl BOD: 25.13 mgplCOD: 42.96 mgpl Oil and grease: 3.10 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2015-16	2787	Average yearly average DO:4.34 mgpl, BOD:21.83 mgpl, COD:31.04 mgpl, Oil and grease :3.46 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2016-17	2935	Analysis yearly BOD: 24 mgpl, COD: 29.79 mgpl, Oil and Grease: 4.60 mgpl, DO: 4.44 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2018-19	3479	Analysis yearly average - BOD :21.22 mgpl, COD : 26.79 mgpl, Oil and Grease : 0.22 mgpl, DO : 5.42 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2019-20	3494	Analysis yearly BOD :17.50 mgpl, COD: 23.35 mgpl , Oil and Grease :4.35 mgpl, DO :5.31 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2020-21	3503	Analysis yearly BOD :18.77 mgpl, COD: 24.75 mgpl , Oil and Grease :5.10 mgpl, DO :4.50 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2021-22	3589	Analysis yearly BOD :18.70 mgpl, COD: 23.55 mgpl , Oil and Grease :4.90 mgpl, DO :4.83 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2022-23	3118	Analysis yearly BOD :18.97 mgpl, COD: 25.85 mgpl , Oil and Grease :5.43 mgpl, DO :4.62 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP
2023-24	3257	Analysis yearly BOD :18.76 mgpl, COD: 23.35 mgpl , Oil and Grease :5.20 mgpl, DO :4.35 mgpl	make up for the lichlor cooling tower	Yes	Packaged STP

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Non-Hazardous Solid Waste Management

Year	Waste Category / Name of Waste Stream	Weight of Waste Discharged (MT)	Nature of Waste - Hazardous/ Non-Hazardous	Waste Management Method
2015-16	Brine mud	2739	Non-Hazardous	Re-used for bunding of salt pans in salt field
2016-17	Brine mud	2788	Non-Hazardous	Re-used for bunding of salt pans in salt field
2017-18	Brine mud	3046	Non-Hazardous	Re-used for bunding of salt pans in salt field
2018-19	Brine mud	3100	Non-Hazardous	Re-used for bunding of salt pans in salt field
2019-20	Brine mud	3000	Non-Hazardous	Re-used for bunding of salt pans in salt field
2020-21	Brine mud	2652	Non-Hazardous	Re-used for bunding of salt pans in salt field
2021-22	Brine mud	2081	Non-Hazardous	Re-used for bunding of salt pans in salt field
2022-23	Brine mud	2391	Non-Hazardous	Re-used for bunding of salt pans in salt field
2023-24	Brine mud	2683	Non-Hazardous	Utilized to Produce Blocks and land filling was terminated

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Hazardous Solid Waste Management

Year	Waste Category / Name of Waste Stream	Weight of Waste Disposed (MT)	Nature of Waste - Hazardous / Non-Hazardous	Waste Management Method
2014-15	Used Oil	1.90	Hazardous	Sent to authorized recycler/ re-user
2015-16	Used Oil	1.53	Hazardous	Sent to authorized recycler/ re-user
2016-17	Used Oil	0.81	Hazardous	Sent to authorized recycler/ re-user
2017-18	Used Oil	3.78	Hazardous	Sent to authorized recycler/ re-user
2018-19	Used Oil	5.92	Hazardous	Sent to authorized recycler/ re-user
2019-20	Used Oil	3.22	Hazardous	Sent to authorized recycler/ re-user
2020-21	Used Oil	2.88	Hazardous	Sent to authorized recycler/ re-user
2021-22	Used Oil	2.48	Hazardous	Sent to authorized recycler/ re-user
2022-23	Used Oil	2.52	Hazardous	Sent to authorized recycler/ re-user
2023-24	Used Oil	3.27	Hazardous	Sent to authorized recycler/ re-user

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Investments in Education & Training, Environment, R&D/Innovation

Particulars	Amount Spent On the Environment Protection Mechanism Technique								
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Education and training	5.29	9.94	4.31	6.89	13.3	6.57	34.59	21.4	7.8
External services for environmental management & External certification of management systems	41.49	6.53	5.14	12.02	14.19	-	8.56	12.56	6.546
Extra expenditures to install cleaner technologies (such as additional cost beyond standard technologies)	506.97	154.88	23.99	6.23	233.19	-	-	-	-
Extra expenditures on green purchases	1.3	-	1.64	1.98	4.94	-	-	-	-
Research and development	46.48	58.24	56.07	60.59	58.35	54.62	37.39	61.44	
Insurance for environmental liability (Environment Fund - Public Liability Policy)	0.68	1.55	1.38	0.2	0.21	0.14	0.14	0.12	0.07
Treatment and disposal of waste	-	-	-	1.61	0.77	-	1.25	0.90	0.12
Treatment of emissions (such as expenditure for filters, agents)	-	-	-	3	3.32	-	0.50	0.68	
Expenditure on equipment, maintenance, and operating materials and services, and related personnel costs	-	-	-	-	666.44		665.25	680.56	1329.46
TOTAL	602.21	233.29	92.53	92.52	994.71	61.33	747.68	777.66	1,344

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Employment

New Employees Hired								
In Each Age Group								
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
18 - 30	12	7	7	9	11	8	10	37
30 - 40	3	5	4	3	6	3	6	12
40 - 50	1	0	0	4	1	1	-	5
50 - Above	0	0	0	-	0	1	-	1

Employees Attrition								
In Each Age Group								
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
18 - 30	12	6	10	8	2	3	10	2
30 - 40	3	0	2	4	5	3	11	2
40 - 50	4	0	0	2	2	2	2	-
50 -Above	4	3	0	8	8	3	7	-

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Training and Education

Employee Category	Number of Employees in Each Category							
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Senior Management	8	8	7	8	26	8	8	10
Middle Management	81	81	79	74	41	28	28	35
Shop floor Personnel	67	67	61	72	28	115	134	172
Any Other Contract (IF Applicable)	-	-	-	-	-	-	-	-
Total	156	156	147	154	95	151	166	217
Employee Category	Total Hours of Training (Reporting Year)							
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Senior Management	276	166	48	8	176	879	181	190
Middle Management	992	257	156	99	246	652.1	523	574
Shop floor Personnel	415	322	437	2184	204	425.5	568	628
Any Other Contract (IF Applicable)	-	-	-	223		-	-	-
Total	1683	745	641	2313	626	1956.6	1272	1392
Employee Category	Number of Employees receiving regular performance and career development review							
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Senior Management	140	149	141	129	8	8	8	10
Middle Management	-	-	-	-	23	23	24	35
Shop floor Personnel	-	-	-	-	121	121	134	172
Any Other Contract (IF Applicable)	-	-	-	-		-	-	-
Total	156	149	141	129	152	152	166	217

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Diversity and Equal Opportunity

Age Group	Individuals in the Governing Body as per Age category							
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
18 - 30	-	-	-	-	-	2	4	4
30 - 40	-	-	-	-	-	2	2	3
40 - 50	4	4	7	-	2	2	2	3
50 - Above	-	-	-	4	6	-	-	-
Total	4	4	7	4	8	6	8	10

Age Group	Employees in the Organization as per Age category							
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
18 - 30	34	31	26	33	32	33	30	52
30 - 40	34	36	39	38	44	37	44	62
40 - 50	59	53	51	57	55	55	44	49
50 - Above	28	36	31	31	40	32	48	54
Total	155	156	147	159	171	157	166	217

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Occupational Health & Safety

Sr. No	Name of Training	2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24	
		No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants
1	EHS Induction	46	223	49	31	62	305	87	675	41	223	52	402	45	328
2	Fire fighting	5	187	6	155	12	286	12	327	9	187	16	158	16	419
3	Work permit System Training	6	45	1	26	2	45	1	21	7	167	1	26	3	27
4	Defensive Training	6	19	4	54	15	80	5	93	6	19	11	125	-	-
5	TNA Topics	7	81	11	199	6	56	5	54	7	81	2	42	-	-
6	PSM Trainings	6	49	1	9	3	38	2	28	6	49	1	3	4	49
7	Contractor Training	48	228	23	446	21	262	26	156	46	325	13	189	4	81
8	OLAR/SCBA Training	5	64	2	24	4	75	12	293	5	64	11	215	2	17
9	Emergency Response Training	5	75	1	16	8	15	41	198	5	75	3	71	1	6
10	First aid Training	1	27	1	24	1	32	1	18	1	27	1	30	4	132

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

Occupational Health & Safety

Sr. No	Name of Training	2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24	
		No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants	No. of Trainings	No. of Participants
11	Environment training	-	-	-	-	3	85	4	35	-	-	2	22	2	38
12	Near miss reporting	-	-	-	-	1	32	1	9	-	-	1	4	-	-
13	Energy conservation	-	-	-	-	1	15	1	16	-	-	1	7	1	13
14	Chemical disaster Prevention Program	-	-	-	-	1	25	1	18	-	-	1	18	1	15
15	Height work training	-	-	-	-	3	45			-	-	1	37	7	92
16	RCA	-	-	-	-	-	-	1	16	-	-	-	-	-	-
17	Online EHS Webinars	-	-	-	-	-	-	10	90	-	-	-	-	-	-
18	ISO Internal Training	-	-	-	-	-	-	-	-	-	-	-	-	4	76
19	Transport & Road safety	-	-	-	-	-	-	-	-	-	-	-	-	1	13
Total		1001	135	998	99	1264	143	1539	210	135	998	117	1349	95	1276

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

PVC-O PIPES PLANT

POWER CONSUMPTION DETAILS

Month	EB Power Consumption (Units)	Solar Generation (Unit)	Solar power Cost (Rs)	EB Cost (Rs.)	Cost /Units (Rs.)	Total production (MT)
Apr-23	105630	26482	124465	989565	9.37	200
May-23	174130	23052	108344	1458791	8.38	324
Jun-23	290390	22899	107625	2288422	7.88	550
Jul-23	324710	18228	85672	2531114	7.79	655
Aug-23	319370	24624	115733	2498129	7.82	656
Sep-23	329590	19145	89982	2582930	7.84	660
Oct-23	328500	23500	110450	2571800	7.83	633
Nov-23	266310	14750	69325	2234940	8.39	580
Dec-23	314220	15422	72483	2473688	7.87	611
Jan-24	344240	18709	87932	2698619	7.84	663
Feb-24	286110	21500	101050	2286654	7.99	492
Mar-24	248870	25419	119469	1995460	8.02	291

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

PVC-O PIPES PLANT

WATER CONSUMPTION DETAILS

Month	Water consumption in KL	Water Cost (Incl.tax)
Apr-23	608	43046
May-23	429	30373
Jun-23	531	37595
Jul-23	390	27612
Aug-23	269	19045
Sep-23	269	19045
Oct-23	385	27258
Nov-23	557	39435
Dec-23	279	19753
Jan-24	328	19680
Feb-24	555	39294
Mar-24	1059	74977

ANNEXURE: SPECIFIC STANDARD DISCLOSURES

SALT DIVISION- 1

Month	PRODUCTION IN MT	SEA WATER IN Cu.m	BOREWELL WATER IN CuM	EB POWER IN KWH
Apr-23	5224	365694	0	31994
May-23	2572	180068	0	21213
Jun-23	5234	314064	0	23538
Jul-23	1285	64250	0	18247
Aug-23	3213	128528	0	17107
Sep-23	57	2264	0	22086
Oct-23	0	0	0	1708
Nov-23	0	0	0	0
Dec-23	0	0	0	0
Jan-24	0	0	16480	10027
Feb-24	0	0	14330	25514
Mar-24	195	13657	8830	76057
TOTAL	17781	1068525	39640	247491

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2-11	Chair of the highest governance body	14	
2-12	Role of the highest governance body in overseeing the management of impacts		Refer Annual Report 23-24 - Annexure G
2-13	Delegation of responsibility for managing impacts	15	
2-14	Role of the highest governance body in sustainability reporting		Refer Annual Report 23-24 - Annexure G
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2-16	Communication of critical concerns		
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401-2	Benefits provided to full-time employees that are not provided to temporary or part- time employees	47	
401-3	Parental leave		
GRI 402: LABOR/MANAGEMENT RELATIONS 2016			
402-1	Minimum notice periods regarding operational changes	47	
GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018			
403-1	Occupational health and safety management system	36, 49	
403-2	Hazard identification, risk assessment, and incident investigation	36	
403-3	Occupational health services	49	
403-4	Worker participation, consultation, and communication on occupational health and safety	49	
403-5	Worker training on occupational health and safety	46, 47, 49	
403-6	Promotion of worker health	18, 21	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	36, 38, 45, 49, 57	
403-8	Workers covered by an occupational health and safety management system	18, 21	

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Disclosure		Reference Page Number or Web Link	Omissions – Reasons and Explanations
403-9	Work-related injuries	8	
403-10	Work-related ill health		No cases reported
GRI 404: TRAINING AND EDUCATION 2016			
404-1	Average hours of training per year per employee	8, 47, 58, 84	
404-2	Programs for upgrading employee skills and transition assistance programs	42, 46	
404-3	Percentage of employees receiving regular performance and career development reviews	42, 47, 84	
GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016			
405-1	Diversity of governance bodies and employees	42, 43	
405-2	Ratio of basic salary and remuneration of women to men	14	
GRI 406: NON-DISCRIMINATION 2016			
406-1	Incidents of discrimination and corrective actions taken	22, 51	
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	22	
GRI 408: CHILD LABOUR 2016			
408-1	Operations and suppliers at significant risk for incidents of child labor	22, 43	
GRI 409: FORCED OR COMPULSORY LABOUR 2018			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	22	
GRI 410: SECURITY PRACTICES 2016			
410-1	Security personnel trained in human rights policies or procedures		Refer to Annual Report
GRI 411: RIGHTS OF INDIGENOUS PEOPLES 2016			
411-1	Incidents of violations involving rights of indigenous peoples	57	

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Disclosure		Reference Page Number or Web Link	Omissions – Reasons and Explanations
GRI 413: LOCAL COMMUNITIES 2016			
413-1	Operations with local community engagement, impact assessments, and development	40	
413-2	Operations with significant actual and potential negative impacts on local communities	8, 40	
GRI 414: SUPPLIER SOCIAL ASSESSMENT 2016			
414-1	New suppliers that were screened using social criteria	21	
414-2	Negative social impacts in the supply chain and actions taken		No Incidents
GRI 415: PUBLIC POLICY 2016			
415-1	Political contributions	41	
GRI 416: CUSTOMER HEALTH AND SAFETY 2016			
416-1	Assessment of the health and safety impacts of product and service categories	55, 56, 57	
416-2	Incidents of non-compliance concerning the health & safety impacts of products and services	57	
GRI 417: MARKETING AND LABELING 2016			
417-1	Requirements for product and service information and labeling	55, 56, 57	
417-2	Incidents of non-compliance concerning product and service information and labeling		No Incidents
417-3	Incidents of non-compliance concerning marketing communications		No Incidents
GRI 418: CUSTOMER PRIVACY 2016			
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