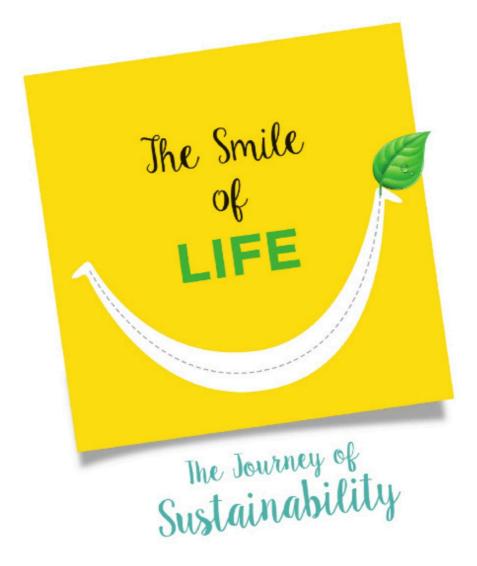
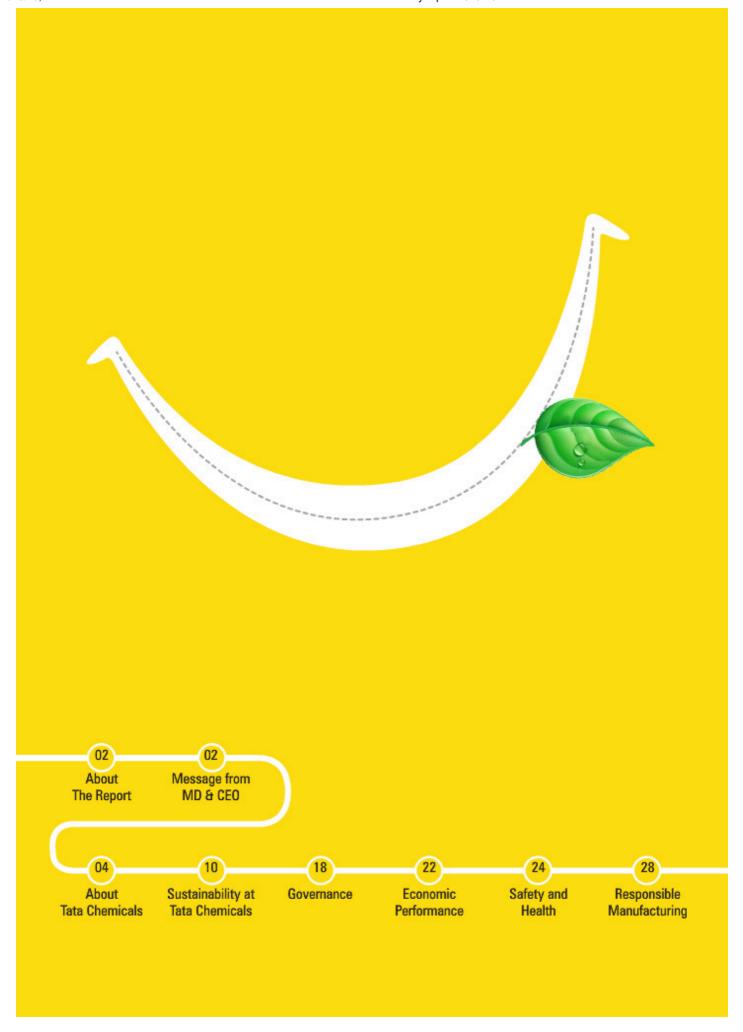
# **TATA CHEMICALS**



# Sustainability Report 2015-16







# About the Report

This is the seventh sustainability report in the public domain by Tata Chemicals (TCL). This report covers the period 2015-16.

The previous report covered the period FY 2014-15. TCL has been bringing out a sustainability report annually and has been slowly incorporating the global entities in the report. Going forward we will be publishing a global report every alternate year and an India only report in between. The report this year covers all Indian operations. As the process matures, we look forward to preparing an annual enterprise wide report and subsequently a comprehensive report in a phased manner. This report has been prepared using the Global Reporting Initiative (GRI-G4) guidelines with 'In accordance' - Core option. We have engaged KPMG for providing independent assurance.

There is no relationship between the Company and the assurance providers' organisation. This report is assured with independent third party Limited Assurance ISAE 3000 of type 2 moderate level assurance requirements along with AA1000 assurance standard.

Information on earnings and financial data is based on the financial statements of the Company published in our Annual Financial Report FY 2015-16. All information is derived from official Tata Chemicals documents.

At Tata Chemicals' there is a conscious effort to ensure that sustainability remains at the core of business strategy. We are responsible to our stakeholders and ensure we return better value to them. While TCM, TCNA and TCE are a part of Tata Chemicals' global Sustainability reporting exercise, their streamlining of sustainability data management systems and processes are in progress along with the implementation of an online tool for the same. Thus we have cautiously decided to produce an India operations' specific report. Going forward we will continue to publish a report along with international entities, every two years.

The information regarding EC5, EC9, EN4, EN6, EN7, EN11, EN13, EN19, EN28, EN30, LA2, LA5, LA7, LA13, LA15, SO3, SO6, SO9, SO10, SO11 indicators is not included in this report. It will be included going forward in future reporting cycles.

TCL's significant locations of operation for this report are as given below:

1. Mithapur, Gujarat, India

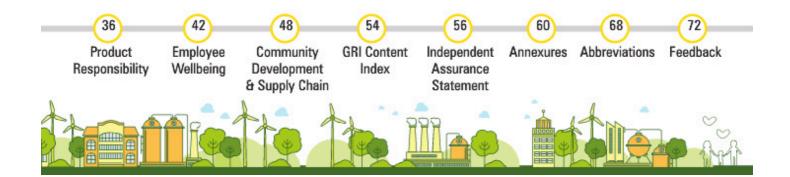
Babrala, Uttar Pradesh, India

3. Haldia, West Bengal, India

Additional information on our products, processes, philosophy and approach is available on our company website: www.tatachemicals.com

#### FOR MORE INFO

Write to: Ms. Alka Talwar
Chief CSR & Sustainability Officer
sustainability@tatachemicals.com
corporate\_communications@tatachemicals.com





Since 1939, Tata Chemicals has pursued a journey that has brought "Smiles to Life" enriching lives of everyone we have touched. This is central to our ethos and embedded in our Vision "Serving Society through Science".

From a single site at Mithapur Gujarat, we are now present across four continents, Asia, Europe, Africa and North America and we touch a large number of people across the globe, directly through our products or indirectly through our customer's products, which empowers us to make a difference to everyone's life.

In a flat world where communication advances has merged our world into one global community, shared value creation is of the utmost importance. We need to work together to face uncertainties and challenges on climate change, energy and water availability, raw material scarcity, future skills, sustainable management and conservation of eco systems and human development. We at Tata Chemicals have articulated a "LEAP" strategy that looks at - Leading in sustainability, engaging deeply with our stakeholders, aspiring for the greater common good and finally performing on these aspirations. We will continue to use our greatest assets — our people and a focus on innovation and technology to deliver on the strategy. We have articulated short, medium and long term goals along with targets, which are available on our website.

With a portfolio ranging from Tata Salt, to fertilisers to basic industrial chemicals, we work in close connect with our customers & partners for a more sustainable future. While we have marched ahead in many areas there is still a long way to go. Our key sustainability performances for the year are:

- TCL India operations were recertified and granted use of Responsible Care Logo for a period of three years showing our continued commitment towards Responsible manufacturing. We were also conferred the "Sustainable Plus Platinum" label in FY 15-16 by CII – ITC centre for Sustainable Development.
- TCL as an enterprise achieved 99/100 in Carbon Disclosure Project (CDP) and secured 2nd Position in the Carbon Disclosure Leadership Index (CDLI) category.
- Projects are taken up at various plants to address energy and GHG emissions. Examples of which include reconfiguration of MUW-4 double effect evaporation to triple effect, and replacement with LED bulbs in a phased manner.
- We continue to work on improving our water footprint both within and beyond the fence. Our water footprint
  in terms of water withdrawal decreased by from the previous year. Mithapur maintained zero fresh water
  consumption in plant processes throughout the year.
- We have initiated programmes to address water use by our customers especially the farmers through the Unnati project. Water management and harvesting programmes at Mithapur provide large benefits to our communities.
- Safety is one of the core value and integral part of our business at Tata Chemicals. Based on British Safety Council Standard, our Mithapur and Haldia sites secured Sword of Honour for its Health & Safety Management System.







We are committed to provide a healthy and safe environment and our teams have invested significant efforts to improve safety standards across value chain. Behaviour based safety, Suraksha Jyot, Unnati along with programmes like SRESHTO are extensively supporting improvement in workplace safety standards through good engineering practices.

- We have strived to achieve "Target Zero Harm" Zero Harm to People, Zero Harm to Asset and Zero Harm
  to Environment. We are continuously focusing on transforming our mindset whereby we can achieve Target
  Zero Harm.
- Our team engagement levels were at 82% this year and have shown a significant improvement over previous
  years. Providing opportunities for taking up challenging projects, sustained and relevant learning and development,
  a focus on diversity and inclusion have all played a part in this engagement.
- We have developed and launched new sustainability focused products and processes including double fortified salt – Tata Salt Plus and Neem coated urea. We have continued to innovate on our supply chain, working with our customers to reduce packaging through bulk transportation.
- Our support to protect and restore vital ecosystems around the world include projects on conservation of species such as the sage grouse, whale shark and green turtles. We have partnered with organisations such as IUCN and WTI on projects targeting coral reef restoration and conservation, mangrove plantations, khijadiya bird sanctuary interpretation centre.

We need to work together to face uncertainties and challenges on climate change, energy and water availability, raw material scarcity, future skills, sustainable management and conservation of eco systems and human development.

- With more than 32000 volunteering hours being logged, our robust internal volunteering programme "Hope" along with the Tata Groups' Tata Engage programme motivates our employees to provide their skills, talents, commitment and expertise for the benefits of the larger community. Programmes such as tree plantation drives, Okhai and Beacon provide multifold benefits.
- In early 2003, we joined the United Nations Global Compact and have continued to act in accordance with the
  core values represented in the compact. We communicate annually our progress on its 10 principles in the areas
  of human rights, labour, environmental and anti-corruption.
- Working towards our commitment of transparency and continuous improvement, this year, we have initiated
  projects on on-line tracking of sustainability indicators, an interactive sustainability microsite and are working on
  natural and social capital evaluation methods.



As we celebrate our achievements, we do understand the scale of the global challenges we are all looking to address. It is not an easy task, and we believe that we need to focus on "Business unusual", requiring shifts in the way we operate, make long-term decisions and collaborate. We firmly believe that, by working with our customers and partners, and by empowering our people to exercise their own passion and innovation ability, we can drive the transformational changes necessary for the success of both business and society.

We have a 8000 plus strong committed team that is poised to help create a more sustainable future. We intend to do this by designing products that support our customers' sustainability efforts, embedding sustainable practices across our supply chain, creating think tanks on critical areas and, perhaps most importantly, joining together with a shared purpose.

I am proud to be a part of TCL and am excited about the role we can play in "serving society through Science.

# R Mukundan

MD and CEO, Tata Chemicals







Tata Chemicals Limited (TCL), incorporated in January 1939 and a part of the over \$100 billion Tata Group is a global company having interests in businesses that focus on LIFE – Living, Industrial and Farm Essentials. In line with its mission, 'Serving Society through Science', the company is applying its expertise in sciences, to develop sustainable products.



-	BUSINESSES	NEEDS	BRANDS
		Specialised Fortification blend for health benefits	Tata Salt Plus, Tata Salt Lite
8		In addition to Iodisation, Product quality: Purity (complete solubility), Consistent Saltiness, Whiteness	Tata Salt
rtials	Communication of the state of t	Product quality, Adequate Iodisation, Value for Money	I-Shakti Salt
Living Essentials (	Consumer Products	Protein consistency - Unpolished, Free of impurities (Sortexed), Taste, Traditional Indian food in convenient packaging, Low oil absorb, guilt free indulgence	Tata Sampann Pulses Tata Sampann Besan
Ē		Naturally rich, Retain natural spice oils, Healthy life	Tata Sampann Spices
		Affordable safe drinking water	Tata Swach
İ	Bulk Chemicals	Differentiated services Value added products as per customer requirements	Soda Ash, Bicarbonate, Industrial Salt
Industry Essentials	Duk Greinicais	Ordinary Portland Cement - to bear a particular compressive strength, Masonry - setting or drying time	Cement © 29
	Crop Nutrition and Agri Business	Product quality, Packaging quality and availability	Basic products (Urea/NPK fertiliser)
Essentials.	Crop Protection	Product and Packaging quality, new technology (Products & Services), Technical Knowledge (TKPM Programme), Advice by Farm Experts, Tata Kisan Sansar (TKS) outlet	Value added products and services Pesticides
Farm	Seeds	Effective germination and high yield	Seeds



#### **VALUE CHAIN**

	RAW MATERIAL	PROCESSING	PRODUCT	PACKAGING	LOGISTICS	DISTRIBUTION (THROUGH PARTNERS)	END USE
	Sea salt/ brine access/ procurement	Vacuum evaporation /3P refining	lodised VE salt	Multiple SKUs at CFAs under HACCP/FSSAI standards	>98% through rail	Distributor > stockist > retailer Institution	Homemakers/ consumers
Living essentials	Sourcing of pulses: 1. Farm 2. Mandi	Milling/ Processing operations outsourced	Unpolished dals	SKUs of multiple sizes and dal types	Reach CFA through 3Ps via road	Distributor > stockist > retailer Institution Dal on call	Consumer
ż	Sourcing of RHA, silver nitrate, packaging material/FG for RO	Impregnation of silver in RHA and granulation	BulbTata Swach	In-house and outsourced assembly	Reach CFA thru 3Ps via road	Warehouses > Distributor > Retailer Concurrent channel MTF	Consumers
Living essentials	Solar salt, limestone, coke/GAS	Solvay method	Soda ash, bicarb	Bags (SKUs), bulkers	Via sea/rail/road	Direct Channel partners	Industry - glass, detergent, health food products
	Ammonia, Gas	Ammonia stripping for urea	Urea	50 Kgs SKUs	Thru 3Ps via road	BHA, dealers, TKS from BHA, TKS, retailer	Farmers
Living essentials	Phos Acid, H2SO4, Ammonia, Muriate of potash	Granulation	NPK	50 Kgs SKUs	Thru 3Ps via road	BHA, dealer, TKS from BHA dealer, TKS	Farmers

## TATA CHEMICALS GROUP AT A GLANCE



Tata Chemicals Sustainability Report 2015-1



The company has over 3000 direct employees in India with operations in Mithapur, Babrala and Haldia.

#### TCL's annual turnover crossed INR 17,700 crores, for the year ended 2015-16.

Through its Living Essentials portfolio the company has positively impacted the lives of millions of Indians. TCL, through its brand, Tata Salt, is the pioneer and market leader in India's branded iodised salt segment and is a part of the everyday life of over 600 million consumers. The Tata Salt brand has two other variants — Tata Salt Lite (Low sodium salt) and Tata Salt Plus (Iron fortified salt). With the introduction of an innovative, low-cost, nanotechnology-based water purifier 'Tata Swach'; it is providing affordable, safe drinking water to the masses. Extending its portfolio from salt to other food essentials, in 2010, TCL unveiled India's first national brand of pulses called Tata I-Shakti. With a focus on providing everyday nourishing foods, TCL launched a new brand Tata Sampann in October 2015 under its consumer products business. With a focus on delivering food products that fulfill everyday needs of nourishment, Tata Sampann acts as an umbrella brand and houses the future food portfolio including the unpolished high-protein dal range, low-oil absorb besan and spices.

Under the umbrella of Industry Essentials, Tata Chemicals produces products which act as an essential input to diverse industries across the glass, detergents, sodium silicate, textiles, food, feed, pharmaceuticals, mining and chemical processing sectors. Tata Chemicals is the second largest producer of soda ash in the world with a total global capacity of 4.3 million MT per annum and operational plants in India, USA, UK and Kenya. The company manufactures sodium bicarbonate at Mithapur (India) and at the UK plants for pharmaceutical, food, feed, dyes, flue gas treatment, textiles etc. It is the fourth largest producer of sodium bicarbonate with combined capacity of about 0.2 million MT per annum. The allied chemicals manufactured by the company include, caustic soda, liquid chlorine, liquid bromine and gypsum. TCL manufactures various grades of industrial salt at its UK facility. Its various grades includes, undried vacuum, pure dried vacuum, water softening products, de-icing salt products and bespoke products. The cement plant at Mithapur was set-up to consume solid waste generated during the manufacture of soda ash. This plant has an installed capacity of 5.5 lakh tonnes per annum. The company produces two varieties of cement i.e., OPC grade 53 and masonry cement under the brand, Tata Shudh.

Tata Chemicals has carved a niche in India as a crop nutrients provider. Through its subsidiaries Rallis India and Metahelix Life Sciences it has built a strong position in crop protection and seeds business respectively. Under the segment of Farm Essentials, the company offers farm inputs which are required to improve crop health and productivity, such as fertilisers, pesticides, specialty nutrients, seeds and agro-services.

Tata Chemicals is one of the leading manufacturers in the urea and phosphatic fertiliser segments and is a key player in the growing and extremely exciting segment of specialty fertilisers. The fertiliser range is marketed under the flagship brand of Tata Paras, which has the highest brand equity in its core geographies. TCL produces

















customised fertilisers that provide balanced crop nutrition to the soil. Its products are sold under the brand, Paras Farmoola. Its products are produced at Babrala facility in UP with a capacity of 1.3 lakh MT.

Tata Chemicals through, Tata Kisan Sansar (TKS) network offers services enabling farmers in creating and generating farm produce by offering information on new and improved agronomic practices and facilitating use of agricultural inputs. It is a network of nearly 800+ farmer resource centres that caters to more than 1.3 million farmers across 26,000 villages in the northern and eastern part of India.

The Innovation Centre (IC) was set up in 2004 to seed new businesses using principles of sustainability and green chemistry. The Nutritional Solutions (food formulations) and Specialty Chemicals (nano formulations) lines of businesses are outcomes of this process. In addition, IC provides application development, IP and regulatory support to business units in TCL and the Tata Group based on domain expertise. Over time, this Department of Science and Industrial Research (DSIR) approved centre aims to evolve into an autonomous and self-reliant basic and applied sciences unit of the Tata Group's Technology and Innovation Office (GTIO). At present the company boasts of five centres for innovation and advancement in India.

- Tata Chemicals Innovation Centre, Pune
- · Tata Chemicals R & D Centre, Mithapur, Gujarat
- Tata Chemicals Centre for Agri-solutions & Technology, Aligarh
- Rallis Innovation Centre Hub (RICH), Bengaluru
- Metahelix Life Sciences, Bengaluru

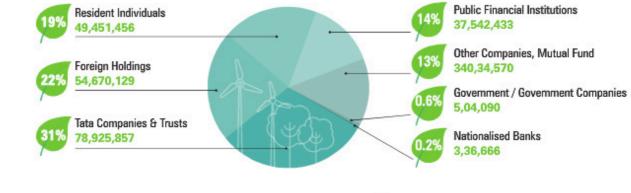
TCL also has a joint venture with Temasek Life Sciences Laboratory, Singapore (JOiL) to develop jathropa seedlings to enable biofuels capability.

With the customer at heart, Tata Chemicals is poised to leverage the passion and excellence of its people to develop a deeper understanding of its customers' needs, while providing pioneering and innovative products that deliver smiles to all its customers.

#### NATURE OF OWNERSHIP

Incorporated in India in 1938, Tata Chemicals Limited (TCL) is registered under the Indian Companies Act, 1913. Tata Chemicals North America (TCNA), Tata Chemicals Europe (TCE) and Tata Chemicals Magadi (TCML) are wholly owned subsidiaries of TCL India. We have four manufacturing sites and two research centres in India, a manufacturing site in North America, three in Europe and one in Kenya.

## Category of shareholding as on 31st March, 2016





SR. NO.	RANGE OF HOLDINGS	NUMBER OF SHARES	AMOUNT (₹)	% TO CAPITAL	NUMBER OF SHARE- HOLDERS	% OF SHARE- HOLDERS
1	1 to 500	1,82,50,041	18,25,00,410	7.17	1,65,783	89.48
501	501 to 1000	77,71,286	7,77,12,860	3.05	10,385	5.60
1001	1001 to 2000	73,19,090	7,31,90,900	2.87	5,088	2.75
2001	2001 to 3000	39,68,340	3,96,83,400	1.56	1,592	0.86
3001	3001 to 4000	24,68,987	2,46,89,870	0.97	700	0.38
4001	4001 to 5000	19,94,893	1,99,48,930	0.78	435	0.23
5001	5001 to 10000	52,01,426	5,20,14,260	2.04	735	0.40
10001	Above 10000	20,77,82,215	2,07,78,22,150	81.56	557	0.30
	TOTAL	25,47,56,278	2,54,75,62,780	100.00	1,85,275	100

The overall head count as on 31 March 2016 is 8177 out of which 3102 are permanent and 5075 are on contract and third party payroll. The workmen at our site locations of Haldia (155) & Mithapur (902) are covered under collective bargaining agreements. They form approximately 34% of our permanent employee base. TCL's annual revenue was ₹16,913 crore with a profit of ₹596 crore in the financial year 2014-15. The market capitalisation (equity) is ₹11,300 crores. TCL subscribes to externally developed charters like UN Global Compact (UNGC), Responsible Care, and Carbon Disclosure Leadership Index (CDLI). TCL has a stewardship role in the chemical and fertiliser industries. It is represented in CII, ICC, FAI, EUCCI, BCCI, ASSOCHAM, AIMA, etc., and is also member of IFA, AIChE-CCPS.

All entities included in the organization's consolidated financial statements are listed on page no 161 and 162 of the organisation's Annual Report FY 2015-16. Information regarding entities listed below as 'significant locations of operations' is only covered in this report.

LOCATION	PRODUCT QUANTITIES FOR FY 2015-16
TCL, India	4665980 MT













At Tata Chemicals, there is a conscious effort to ensure that sustainability remains at the core of business strategy and taking it beyond the triple bottom line. It is the means of sustaining our leadership in all aspects of business in an innovative way, to return better value to our stakeholders.

For us, sustainability encompasses stakeholder engagement to meet their expectations, corporate governance and ethical practices, responsible manufacturing, ensuring safety & health of employees and the communities we serve, promoting employee well-being, product stewardship and working with and supporting our key communities while creating economic value. TCL is a diverse organisation and its businesses are organised around life i.e., Living, Industry and Farm Essentials. We make a persistent effort to understand sustainability aspects of the various stages in our value chain and increase stakeholder engagement to identify opportunities that meet 'essential needs' relating to economic, environmental and social aspects. The first step of TCL's strategy planning process includes analysing political, economic, social, technological, legal and environmental changes that may impact TCL business and this includes summarising inputs from various stakeholder interactions and engagement. This is an input to the TCL strategy, ensuring that sustainability is the basic foundation of TCL's business strategy.

#### STRATEGIC CHALLENGES

The strategic challenges in terms of long-term sustainability identified by TCL are as follows:

- Ageing technology/equipment and infrastructure
- Talent management attraction, retention, ageing workforce
- · Leveraged balance sheet
- · High proportion of bulk commodity business
- Increased regulatory environment and dependence on government policy
- Energy/raw material security and cost (likelihood of rising prices)
- Increased expectations from stakeholders and community

Operational excellence, access to low cost raw materials in bulk chemicals business, our strong corporate brand, robust customer engagement process and relationship and market leadership in key markets and products are our key strategic advantages that help us effectively address our challenges. We continue to be committed to UN Global Compact and Responsible Care and follow the precautionary principles as defined in Principle-15 of the Rio Declaration.



CDP Climate Disclosure Leader 2015 - Tata Chemicals Limited is among the top two performers for CDP





#### ENTERPRISE RISK MANAGEMENT

The company has put in place systems for internal audit, risk assessment and mitigation and has an independent Internal Audit Department with internal control and risk management processes both at business and corporate levels. The Head of Audit & Risk Management reports directly to the Chairman of the Audit committee of the Board of Directors, thereby ensuring independence.

The Corporate Audit function plays a key role in providing for both the operating management and the Audit committee of the Board, an objective view and reassurance of overall control systems and effectiveness of the risk management process across company and its subsidiaries. Corporate Audit also assesses opportunities for improvement in business processes, systems and controls and provides recommendations designed to add value to the operations.

The scope and authority of Corporate Audit department is derived from the Audit Charter approved by the Audit committee. Internal Audits are performed by an in-house team of multi-disciplinary professionals comprising Chartered Accountants and Engineers. Reviews are conducted on an on-going basis, based on a comprehensive risk-based audit plan, which is approved by the Audit committee at the beginning of the year.

The internal audit department which operates on a decentralised basis continuously monitors the adequacy and effectiveness of the internal control environment across Company and the status of compliance with operating systems, internal policies and regulatory requirements. The Audit committee meets on a quarterly basis to review and discuss the reports submitted by Head of Audit & Risk Management.

The Audit Committee also meets the Statutory Auditors separately to ascertain their views on the adequacy and efficiency of internal control systems. A peer review of the Internal Audit function is done once in four years to assess quality effectiveness of internal audits with reference to standards and best practices.

The Company believes that every employee has a role to play in fostering an environment in which, controls, assurance, accountability and ethical behaviour are given high importance. To supplement the reviews carried out by the internal audit teams, the Company follows an elaborate system of Control Self Assurance (CSA) (self-audit) for all critical departments in the organisation conducted annually. The IT enabled CSA process provides a good bottom-up approach and build up for the CEO/CFO certification as required by clause 49 of the listing agreement, besides helping in awareness creation of controls across a wide segment of the Company employees. This complements the internal audits in ensuring total coverage in a year.

Risk Management and Internal audit functions complement each other. Enterprise Risk Management (ERM) process entails a bottom up and top down approach covering all units, functions and departments of the Company and its subsidiaries. The basic framework followed is the international standard AS/NZS 4360:1999. The Risk Management process is also benchmarked periodically against available standards such as ISO 31000. TCL is recertified as ISO 27001:2013 (i.e. Information Security Management System standards).



The Company's risk identification and assessment process is dynamic and hence the Company has been able to identify, monitor and mitigate the most relevant strategic and operational risks both during periods of accelerated growth and recessionary pressures. No financial implications and other risks & opportunities for organisation's activities due to climate change identified. One of our key operations at Mithapur is vulnerable. We are working with Tata Sustainability Group and Government of Gujarat for its mitigation and adaptation. The key risks and opportunities for the current year have essentially remained the same as those of the previous years. These are as shown in the table.



#### Risks, Impact and Strategic Initiatives

#### **KEY RISKS**

#### OPPORTUNITIES & RISK MITIGATION ACTIONS

Safety and Environment related risks (Linked to the changes in climatic conditions (erratic rainfall) effecting operations, rising expectations from key stakeholders and tightening regulatory norms regarding safe and environmentfriendly operations) TCL is conscious of its strong corporate reputation and the positive role it can play by focusing on social and environmental issues. TCL has set very exacting standards in safety, ethics and environmental management and has established comprehensive indicators to track its performance. TCL values safety of its employees and constantly raises the bar in ensuring a safe work place. It has taken up projects to map its energy and water footprint and create sustainability action plans. Its Dharti Ko Arpan program specifically targets environment conservation. Use of Lupa bulkers is a pioneering step in Indian soda ash industry towards green supply chain to reduce plastic packaging. Tracking of emerging legislations happens consistently along with establishment of an e-enabled Legal compliance/management system (legatrix) across the enterprise.

People, Talent and Mindset (Linked to the sustainability challenge of attracting and retaining of right skill sets for the operations and growth plans and changing the mindset from a commodity business to a consumer facing business): Attracting and retaining talented employees is core to our success TCL has over the years embarked on several "people initiatives" to help employees achieve their personal and professional goals. Work life balance is consciously perused. TCL's performance appraisal systems are well integrated to our business objectives and help bring out the best in individuals. Constant investments on training are made to equip our employees for challenges in their roles and also understand customer behaviour. Strengthening township infrastructure and amenities are also steps in making the sites more attractive for people. Setting up of a chief culture officer and the culture department to guide TCL towards an even more transparent and collaborative culture.

Continued economic pressures & increasingly volatile macroeconomic environment (Linked to the sustainability challenge regarding slowing of global demand, and rising burden of liabilities and disbursement of subsidy). Though markets & economies have begun to recover from unprecedented turmoil witnessed in previous years, financial constraints in USA and Europe coupled with low demand for agri inputs in India has aggravated the situation.

TCL has initiated actions through lean six sigma projects to counter these risks and work towards making the operations more competitive TCL also is focusing to build on consumer facing business and non-subsidised agri business over long term as part of its strategy, which may position the company better to withstand the cyclical headwinds in commodity businesses and subsidy recovery.

Community expectations (Linked to challenge of provision of livelihood option independent of TCL's areas of operation) As TCL is becoming a leaner organisation, its capacity to provide new employment opportunities has reduced, leading to a mismatch with community expectations.

Tata Chemicals has taken up key projects on livelihood generation in its area of operations by skill building, entrepreneurship development, supporting in sales and marketing through Okhai. TCL has partnered with Tata Strive to set up a skill development centre at Aligarh that provides for quality skill training to rural youth. Expansion of Apprentice training school and other training centres is also being taken up.





STAKEHOLDERS	COMMUNICATION/ENGAGEMENT METHODS			
Shareholders/Investors	Annual General Meeting (AGM), report to shareholders, investor/analysts meets annual report, quarterly results, media releases, company website, report to stock exchange			
Customers	Distributor/retailer/direct customer meets, senior leaders customer meets/visits, customer plant visits, COO club, achievers meet, KAM workshops, focus group discussion, membership in trade organisation/associations, complaints management, helpdesk, conferences, joint business development plans, information on packaging, customer surveys			
Suppliers/Partners	Supplier prequalification/vetting, suppliers meets, supplier plant visits(to/from) partnership meetings, MOU agreements, trade association meets/seminars, professional networks, Bhagidhari Sabha, contract management/review, product workshops/on site presentations, framework agreements			
Government	Advocacy meetings with local/state/national government and ministries, seminars, media releases, conferences, membership in local enterprise partnership, membership industry bodies such as ICC, BCCI, CII etc.			
Employees	Senior leaders' communication/talk, senior leadership forum, town hall briefing, goal setting & performance appraisal meetings/performance review, exit interviews, arbitration/union meetings, wellness initiatives, focus on workplace safety, employee engagement survey, review for an email updates, intranet, flat screens, websites, poster campaigns, house magazines, confluence, circulars, quarterly publication, intranet, theatre workshops (Oorja), newsletters			
Community/Society	Community meetings/visits, local authority and town council meetings, location head's meet, SWOT, committee meetings, community projects, partnership working with local charities, volunteerism, seminars/conferences			

# TCL Recognised for Tata Affirmative Action Program





#### OVERARCHING MANAGEMENT APPROACH

Tata Chemicals has established a number of policies, processes and procedures to drive economic, environmental and social sustainability within the organisation. Foremost among all is our Corporate Sustainability Policy, which is an overarching policy that guides us at all levels for promoting and supporting sustainability programmes. We ensure good governance through various mechanisms that include:

- Management of Business Ethics Process (MBE) and adoption of the Tata Code of Conduct (TCOC)
- Enterprise Wide Risk Management process (EWRM)
- Systems and controls across the organisations that are led by our Board of Directors
- Adoption of 'Tata Business Excellence Model' (TBEM), a Tata Group wide system to drive excellence within the organisation
- The Enterprise Process Model (EPM) that maps all the processes across the enterprise
- ISO 9000, ISO 14001, OHSAS 18001, Responsible care

Tata Group's sustainability frameworks, including Tata Affirmative Action Programme (TAAP) Management approach to specific criteria are mentioned in the opening intro of each chapter within the report. Management approach for key material concerns other than those mentioned above are detailed at the beginning of each chapter.

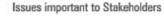
#### MATERIALITY ASSESSMENT

Current report is based on materiality study taken up in the year 2014-15 in line with GRI guidance on materiality for most of the organisation.

This assessment was done by a third party - NextGen and it involved engaging with the company's internal and external stakeholders to gather insights into the relevance of issues and impacts affecting the business of the company as well as the stakeholders.

# ssues important to Tata Chemicals Supply Chain SHE О

#### **TCL MATERIALITY MAP 2014-15**







#### Aspect Boundaries within and outside the organization

Material Aspect	Aspect Boundary within Tata Chemicals	Aspect Boundary outside Tata Chemicals	
Energy	TCL, India	Not material	
Product Stewardship	TCL, India	Our customers	
Wastes	TCL, India	Communities around which we operate	
Logistics	TCL, India	Our Customers, Transporters	
Water	TCL, India	Communities around which we operate	
Health and Safety	TCL, India	Communities around which we operate	
Emissions	TCL, India	Communities around which we operate	
Ethics	TCL, India	All stakeholders	
Community	TCL, India	Communities around which we operate	

Through this process, the organisation identified those opportunities and risks that are most important to Tata Chemicals Limited and its stakeholders, including its impacts on the economy, environment and society, which will merit focus in the company's sustainability report. The identification and selection of stakeholders with whom we engage is based on impact on stakeholders and impact on our organisation.

The steps involved in conducting the Materiality Assessment for Tata Chemicals were perception mapping, stakeholder prioritisation, stakeholder engagement and building & integrating the matrix. We continue to track and measure the focus area parameters of previous materiality assessment and going forward we will keep reviewing the same based on the recent materiality assessment. Going forward, we will be conducting a materiality assessment through a third party every three years and an annual internal review by each business to check its relevance.

# Sustainability commitments

Going forward during this year, we have worked towards reviewing and renewing up our sustainability commitments, which are displayed below:

#### Climate Change Actions

Establish and promote consistent climate policy across the value chain and pursue science based targets.

#### Resource Conservation: Energy

- Energy efficiency as a part of Responsible Manufacturing Index (RMI)
- Promote renewables and fuel efficiency in the community and with farmers

#### Resource Conservation: Water

- Water in the value chain: Be net fresh water neutral at manufacturing sites
- Safe drinking water: Reach 25 million people

# Waste Management

- · Promoting reduction,
- Reuse and recycling of packaging and other wastes

# Nature & Biodiversity

- Responsible mining/ supply chain
- · Species conservation
- Commit to remove commodity driven deforestation in supply chains

#### Product Stewardship

- · Supply chain
- Responsible care/ customer education
- Life cycle assessment (cradle to grave)

# **Empowering Communities**

- Empowerment: Establish community based organisations
- Inclusion: Women, socially and economically backward communities
- Technology and innovation
- Volunteering
- Community connect/community grievance management

#### Human Capital

- Safety
- Engagemen
- Development



This report contains a performance update on previous materiality assessment issues divided into 10 parameters: Employee health & safety, Process & workplace safety, Employee engagement, Training, Communication, Sustainable development practices, Enabling and empowering communities, Product stewardship, Climate change, and Sustainable manufacturing.

Based on FY 2014-15 materiality assessment, we continue to focus, track and measure parameters on Responsible manufacturing issues through Energy, Water, Waste and Biodiversity; Product stewardship issues through Life Cycle Assessment, Supply chain SHE, Customer satisfaction; Climate change through greenhouse gas emissions; Human capital issues through parameters on Health and safety, Employee benefits; Social capital issues through parameters on Community satisfaction, Corporate Sustainability Protocol Index, Affirmative Action; Economic issues through Sustainable investments and Transparency issues through Ethical governance practices, Grievance mechanisms, Sustainability reporting.

There have been changes in GHG emissions data of previous years due to changes in operation boundaries, inclusion of audit findings and calculation errors.

While scope and aspect boundaries are for the listed significant locations in this report, we have reported the data where we are sure of systems and have applied measurement methods in this report. For other places we are putting things in place.

FOCUS AREA & KEY MEASURE	КРІ	TARGET	ACHIEVEMENT 2015-16	KEY ACTION TAKEN 2015-16	
Human Capital	Create an environment that fosters employee well-being, achievement, innovation, learning, teamwork and ensures safety & health and minimises attrition rates				
	TRIFR India	< 3	3.06		
Employee Health & Safety, Process & Workplace Safety	Fatality (No.) (Mithapur/ Babrala/ Haldia)	0/0/0	0/0/0	Continual improvement and strengthening of initiatives under Target Zero Harm programme like Surakhsa Jyot at Mithapur, Process Safety Management at Babrala, SRESTHO at Haldia. Introduced Plant Inspection rounds at Mithapur & Haldia and Rail Safety Management at TCM. Also previous initiatives like MD's Suraksha Puraskar, PLVP/incentives linked to safety performance, Long-term asset management plan still continue.	





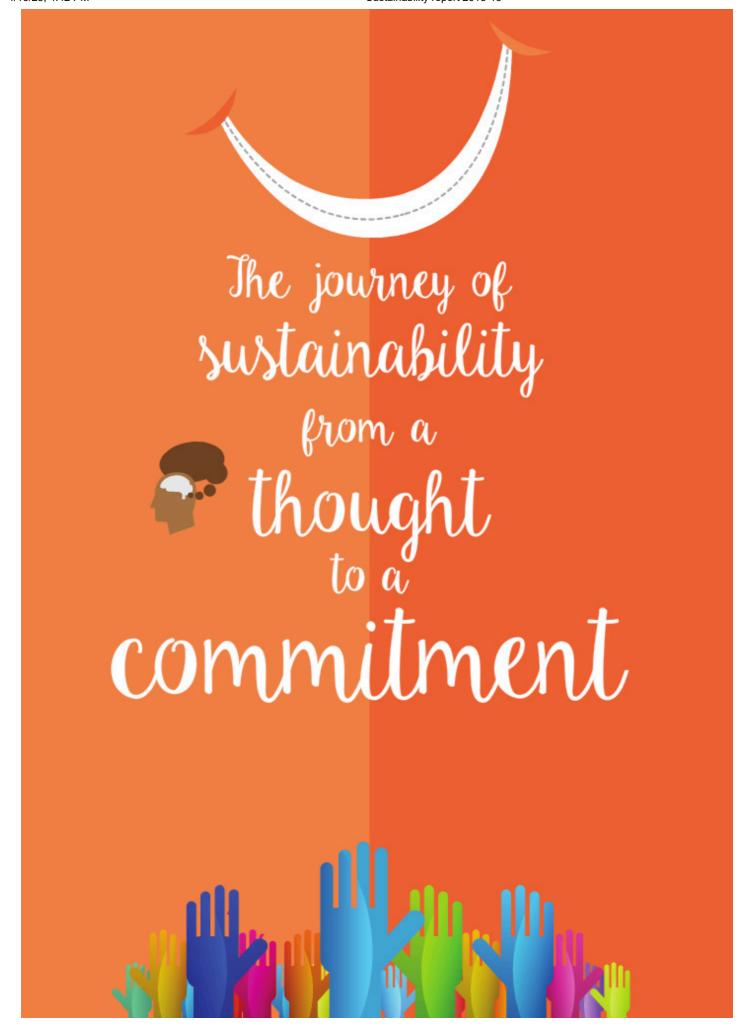
FOCUS AREA & KEY MEASURE	КРІ	TARGET	ACHIEVEMENT 2015-16	KEY ACTION TAKEN 2015-16
	Employee Engagement Score	New	82%	Celebrating happiness policy     Flexi timings
Employee Engagement	Employee Turnover Rate	Below Industry Norms	9.9	Annual event 'Oorja'     LEAP posts
Training & Communication	Avg Training hrs (per year, per employee)	4 days / 32 Hours	33.84	InCEPT — a branded three phase induction programme for new and lateral joiners. Introduced e-leaming platforms, Strengthened Training need identification.
Social Capital		d as the leade		eacting all communities in the core command eent amongst Indian companies in terms of
Sustainable Development practices	Tata Corporate Sustainability Protocol Index (% CSPI Score)	50%	47%	Restructured the assessment process based on Tata Group's Sustainability Assessment Framework (SAF). New baseline score generated.
practices	Community Satisfaction Index	> 4	4.03	Action on community concerns and other feedback
Enabling and empowering communities	Affirmative action Score	> 60	In the band of 50-60	Affirmative action to create a more inclusive society.  TCL is considering a more comprehensive Diversity council both at the apex and at the sites.
	To understand and	work for mini	mising the impact of prod	ucts over its life cycle
Product Stewardship	Life Cycle Assessment (LCA)	Major products by 2015	Completed LCA cradle-to-Gate of Urea, DAP/NPK, SSP, Salt, Soda Ash, Cement	Using Ga-Bi Agrian model completed LCA for fertilisers and also completed LCA of most of chemicals.



FOCUS AREA & KEY MEASURE	KPI	TARGET	ACHIEVEMENT 2015-16	KEY ACTION TAKEN 2015-16		
	Reduction in carbon intensity in terms of MT of GHG emission per MT of total products by operational abetment, carbon conscious growth and offsets					
Climate Change	Emission Intensity (MT of GHG per MT of products) - reduction by 2020 over the baseline of 2008	20% by 2020		Wind power is used for Mithapur township supply. Supported Tata Power for installing and commissioning of 25 MW Solar PV Power plant at Mithapur. We have Hot Air Gas (HAG) generator at Haldia which uses Biomass brickets as a fuel		
Sustainable Manufacturing	achieved in the pa design and promot operating locations effluent discharge	st (2) Reduce tion of better of and reduce of and air emiss	water & energy consumpt usage practices (3) Attain dependence on other fresh ions to levels achievable (	comparable global benchmarks & best tion in usage of products though product overall sustainable watersheds at the water resources (4) Reduce solid waste, 5) Use packaging material either recyclable for collection & safe disposal		
	Responsible Manufacturing Index* (%)	5				
	<ol> <li>Urea production - benchmark amongst Indian fertiliser industries for specific energy and water consumption. Continued zero dependency on ground water at Mithapur and use of RO and thermal desalination to further reduce dependence on fresh water. Action plan are chalked out at Babrala and Mithapur to meet the PAT targets</li> </ol>					
	<ol> <li>Achieved reach of 3000 rural households for Tata Swach which does not require electricity or running water for its operations</li> </ol>					
	<ol> <li>Water footprint and sustainability assessment for use of shared water resources. Rain water harvesting projects at all 3 sites. Continued watershed development and management programmes at Mithapur.</li> </ol>					
	4) Salt pans at Mithapur, limestone mining at Ranavav, Urea plant at Babrala, DAP/NPK fertilisers at Haldia are zero process solid waste facility. Valid permissions for reutilising hazardous waste are granted by CPCB. Soda ash effluent solids consumption in cement has reached the level of 73.39%. Lowest SO <sub>2</sub> emission from sulphuric acid plants.					
Supply Chain Sustainability	Establish social & environment standards (covering safety, working conditions, skill, well-being, GHG and other emissions, water/energy consumption) for supply chain (material and services etc.) Ensure compliance amongst key suppliers					
Sustainability	Investment in renewable material, energy, low carbon products, water, agribusiness & green chemistry, safety, health, environment, employee welfare initiatives					
Investments	The total community investments done were ₹ 19.88 Crores					
Reporting on Sustainability	Transparent comm	unication of p	erformance to internal/ext	ternal stakeholders		
Governance:	External – Annual Report, TCSRD Report, Annual Sustainability Report, COP on UNGC Principle, Investor CDP, Water CDP, Business Responsibility Report					
Reporting on Sustainability	Internal – Confluence, Marine Insight, Safety Almanac, Management of Business Ethics Report, We care					

Further details are available on website www.tatachemicals.com. Annual Report 2015-16, TCSRD Report 2015-16







#### Company's Philosophy on the Code of Governance

The Company believes that good Corporate Governance is essential for achieving long-term corporate goals and to enhance stakeholders' value. In this pursuit, the Company's Corporate Governance philosophy is to ensure fairness, transparency and integrity of the management, in order to protect the interests of all its stakeholders. The Company has a strong legacy of fair, transparent and ethical governance practices.

Strong leadership and effective corporate governance practices have been the Company's hallmark and it has inherited these from the Tata culture and ethos. The Company has adopted a Code of Conduct for its employees including the Managing Director and the Executive Director. In addition, the Company has adopted a Code of Conduct for Non-Executive Directors. The Company's Corporate Governance philosophy has been further strengthened through the Tata Business Excellence Model, the Tata Code of Conduct for Prevention of Insider Trading and the Code of Corporate Disclosure Policy.

The Company has an active, experienced and a well-informed Board. The Board along with its Committees undertakes its fiduciary duties keeping in mind the interests of all its stakeholders and the Company's corporate governance philosophy.

The Company is in compliance with the requirements stipulated under the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ('Listing Regulations, 2015') (and also the erstwhile Clause 49 of the Listing Agreement) with regard to corporate governance.

#### Board of Directors

The composition of the Board of Directors of the Company is in conformity with the Listing Regulations, 2015 and the Companies Act, 2013 ('the Act'). As on 31st March, 2016, the Board comprised eight Directors, out of which seven are Non-Executive Directors and one Managing Director. Out of seven Non-Executive Directors, five (i.e. 62.50%) are Independent Directors (including one woman Independent Director).

All Directors possess the requisite qualifications and experience in general corporate management, finance, banking, marketing and other allied fields which enable them to contribute effectively to the Company in their capacity as Directors of the Company. Detailed profile of the Directors is available on the Company's website: www.tatachemicals.com





None of the Directors on the Board is a Member of more than 10 Committees and Chairman of more than 5 Committees across all the public companies in which he/she is a Director. All the Directors have made the requisite disclosures regarding committee positions held by them in other companies. None of the Directors of the Company is related to each other.

None of the Independent Directors on the Board serve as an Independent Director in more than seven listed companies. All Directors are also in compliance of the limit on Independent Directorships of listed companies as prescribed in Regulation 25 (1) of the Listing Regulations. The Managing Director of the Company does not serve as an Independent Director in any listed company.

#### **Board Committees**

There are statutory and non-statutory Committees of the Board, each having a clear mandate laid out in the Terms of Reference (Refer Annual Report 2015-16). The various committees of Board are as follows:

#### **Audit Committee:**

The Managing Director, Executive Director & CFO, CFO, External Auditors, Head - Internal Audit & Risk Management and Vice President & Group Corporate Controller attend and participate in all meetings of the Committee. The Committee from time to time also invites various executives, as it considers appropriate, to be present at the meetings. For detailed information on the Audit Committee refer page 97 and 98 of the Annual Report 2015-16.

#### Nomination and Remuneration Committee

In terms of Section 178(1) of the Companies Act, 2013 a Nomination and Remuneration Committee was constituted. For detailed information on the Nomination and Remuneration Committee refer page nos 98-100 of the Annual Report of 2015-16.

#### Stakeholders Relationship Committee:

The Stakeholders Relationship Committee specifically ensures redressing of investor's/security holders complaints and requests.

For detailed information on the Stakeholders Relationship Committee refer page nos. 100-101 of the Annual Report of 2015-16.

#### **Executive Committee of the Board (ECOB)**

The Executive Committee of the Board (Non-Statutory) review business strategy, long-term financial projections & cash flow, capital and revenue expenditure, acquisition/divestments and business restructuring proposals, senior management succession planning.

For detailed information on ECOB refer page 101 of the Annual Report of 2015-16.

#### **CSR, Safety and Sustainability Committee**

In terms of Section 135 of the Companies Act, 2013, the scope of the CSR, Safety and Sustainability Committee includes, inter-alia, corporate Social Responsibility (CSR). For detailed information on this Committee refer page nos. 101-102 of the Annual Report of 2015-16.

#### **Risk Management Committee**

Regulation 21 of the Listing Regulations mandates top 100 listed companies as on 31st March, 2016 to constitute of the Risk Management Committee. Although non-mandatory, the Company has constituted a Risk Management Committee of the Board.

For detailed information on this Committee refer page nos. 102-103 of the Annual Report of 2015-16.

#### Meeting of Independent Directors

A separate meeting of Independent Directors of the Company, without the attendance of Non-Independent Directors and members of management, was held on 22nd March, 2016, as required under Schedule IV to the Companies Act, 2013 (Code for Independent Directors) and Regulation 25(7) of the Listing Regulations.

For detailed information on this Committee refer page no. 96 of the Annual Report of 2015-16.



#### Management of Business Ethics

- TCL has adopted a Whistle Blower policy and Vigil Mechanism to provide a formal mechanism to the employees
  to report their concerns about unethical behaviour, actual or suspected fraud or violation of the Company's
  Conduct or Ethics policy.
- The policy provides for adequate safeguards against victimisation of employees who avail of the mechanism and also
  provides for direct access to the Chairman of the Audit Committee.
- It is affirmed that no personnel of the Company has been denied access to the Audit Committee.
- The Companies Act, 2013 specifically mentions about the type of resolutions passed by the shareholders.
- The resolutions to be passed by the shareholders are (1) Ordinary Resolutions which are required to be passed by simple majority and (2) Special Resolutions which are required to be passed by 3/4th majority.
- The said resolutions are generally passed at the General meetings of the Companies. Some of the resolutions can also be passed by Postal Ballot.
- Annual General Meetings/Extraordinary General Meetings are held from time to time where the minority shareholders
  can express opinions to the Chairman of the Company and other directors.
- This year we have shared Ethics helpline, partnering with KPMG, an independent third party to maintain global standards. Employees can now login their issues/concerns through various modes like Hotline number, Fax, PO Box, Dedicated email id and Web portal.

#### Remuneration Policy

The Company's philosophy for remuneration of Directors, Key Managerial Personnel and all other employees is based on the commitment of fostering a culture of leadership and trust. Nomination and Remuneration Committee reviews remuneration packages applicable to the Managing Director, Executive Director and Non-Executive Director.

For detailed information on this Remuneration Policy and remuneration paid to Managing and Executive Directors and Non-Executive Directors refer page nos. 99 and 100 of the Annual Report 2015-16.

#### Non-Executive Directors

- a. Non-Executive Directors were paid sitting fees of ₹ 30,000 for every Meeting of the Board or the Committee attended (except for Stakeholders Relationship Committee, CSR Safety and Sustainability Committee, and Risk Management Committee where the sitting fee was ₹ 20,000 per meeting).
- b. The remuneration by way of commission to the Non-Executive Directors is decided by the Board of Directors and distributed to them based on their participation and contribution at the Board/Committee meetings and the time spent on matters other than at meetings. In terms of the approval of the members at the 74th Annual General Meeting of the Company held on 26th August, 2013, commission is paid at a rate not exceeding one per cent of the net profits of the Company calculated in accordance with the provisions of Sections 198, 349 and 350 of the Companies Act, 1956. For details refer page 100 of the Annual Report of 2015-16.

#### Determining the composition of the Board

The board has a Nomination and Remuneration Committee which makes recommendations on the composition of the board. The composition and terms of reference of the Nomination and Remuneration Committee is given on page nos. 98-99 of the Annual Report 2015-16.

#### Board oversight for Sustainability performance

The Audit Committee and CSR, Safety and Sustainability Committee of the board specifically review and oversee the identification and management of economic, environmental and social performance including relevant risks and opportunities, adherence to, or compliance with, internationally agreed standards, codes of conduct and principles in every quarter. More details of this committee are given on page nos. 101-102 the Annual Report 2015-16.





Tata Chemicals Sustainability Report 2015-16



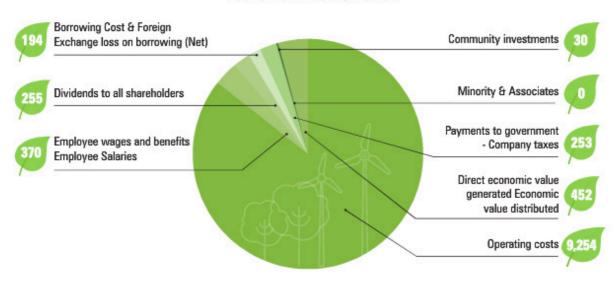
Tata Chemicals' overall Economic Performance for the financial year 2015-16

#### Finance and Value Based Management

In the year 2015-16 total turnover increased by ₹ 566 crore from ₹ 10,650 crore in 2014-15 to ₹ 10,084 crore. This represents a 5.6% growth over the previous year.

The Direct Economic Value generated in the year 2015-16 was ₹ 10,808 crore.

#### Economic value distributed



<sup>\*</sup> Includes ₹ 30.37 crore for TCL's community investments (₹ 13.97 crore as per Companies Act, ₹ 16.4 crore outside Companies Act)

#### **Profit Before Taxes**

Compared with the previous year, profit before taxes and exceptional items decreased to ₹ 802 crore in 2015-16 from ₹ 854 crore in the previous year

The PBT after exceptional items was ₹ 802 crore in 2015-16 compared to ₹ 854 crore in the previous year. The ROCE for the year was 18%

#### Earnings per share

The Earnings per share (basic) was ₹ 23.34 in 2015-16 compared to ₹ 25.04 in the previous year.







#### Appropriation of Profit

In the year 2015-16, TCL achieved a profit after tax of ₹ 595 crore (from ₹ 637.97 crore in the PY). At the Board Meeting held on 27th May, 2015, the Board Directors recommended a dividend payment of ₹ 10 per qualifying share. The total dividend payable (including dividend tax) on qualifying shares for the financial year 2015-16 will amount ₹ 307 crore.

#### **Balance Sheet Structure**

In the year 2015-16 our total balance sheet decreased by ₹ 318 crore.

#### Net Cash

Cash and cash equivalents balance increase to Rs. 600 crore at March 2016 from Rs. 574 crore in the previous year.

#### Statement of Cash Flows

Cash from operating activities was at ₹ 444.28 crore during 2015-16 on account of funds in trade & other receivables and trade payables, other liabilities and provisions.

In 2015-16, net cash generated from investing activities was ₹ (120) crore and ₹ (299) crore was used in financing activities.

#### **Employee Benefits**

- Our employees are covered through various employee benefit plans that include: Provident fund, pension schemes, gratuity, superannuation and family benefit scheme, etc.
- Total contribution to Provident fund and other funds was ₹ 26.87 crore. Other benefits provided are detailed in the Employee Investment section.
- Wages to be offered to an employee are mentioned in respective State Factory Rules". We have fixed minimum
  entry level wage as the full time wage offered to an employee in the lowest permanent employee category.



During the year ₹ 369.90 crore were incurred over payments and provision for employees, an increase of ₹ 12% over the previous year.

#### Local Supplier and Employement

- · The Organization has a diverse workforce and is an equal opportunity employer.
- There is no specific practice for the preference of local residents in the management cadre. However, efforts
  are made to recruit from across the country especially from disadvantage locations e.g. northeast part of India,
  Kashmir, etc.
- Same principle of equal opportunity is applicable for the selection of suppliers and vendors irrespective of local or not.
- In this case local supplier is the one where there are no transnational payments involved.
- All vendors are selected based on vendor selection and qualification process. Key selection criteria are conformation to legal and regulatory compliance, cost & quality of supplies, OEM suppliers, ISO certification etc.
- In all cases preference is given to suppliers from the neighbourhood all other things being equal. As an added push
  for sustainability, we have recently released the Sustainability Guidelines for our suppliers.
- · Going ahead we will be putting in processes for self-assessment of suppliers based on the guidelines.

#### Government Subsity

In the year 2015-16 a total sum of ₹ 2,977.41 crore was accrued towards subsidies for the fertilizer business.

#### Indirect Impact

 Besides giving direct employment, we also provide indirect opportunities for employment and livelihood generation, both through our contractors and vendors and also through the various community development initiatives. Further details of community development programs are available in the community investments section.







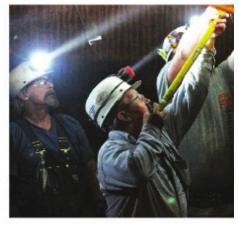


Safety being core value at Tata Chemicals, we are committed to continually improve the safety performance by targeting "Zero Harm" – Zero Harm to People, Zero Harm to Asset and Zero Harm to Environment through world class SHE practices.

TCL has a Board level "CSS Committee" (CSR, Safety and Sustainability Committee) exclusively focusing in this area. The Chief Safety, Engineering & Project Officer has direct access to the Chairman of the CSS committee. The Board provides valuable direction and guidance to the management to ensure that SHEs (Safety, Health, Environment & Sustainability) implications are properly addressed in all new strategic initiatives, budgets, audit actions and improvement plans. The Senior leadership plays a critical role in encouraging positive attitudes towards safety and help in creating an environment that fosters safety culture, by setting the direction, establishing clear and transparent policies like SHE Policy, Corporate Sustainability Policy. TCL Corporate SHE policy is the umbrella policy. The subsidiaries have their own policy aligned to local regulatory and safety directorates.



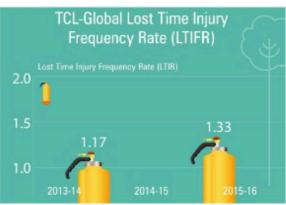
TCL, like other chemical industries, have to deal with the twin issues of chemical hazards and occupational safety & health. People come first at TCL and their health & safety is of prime importance. To ensure safe and healthy working environment we need to address challenges related to Asset integrity due to ageing assets, atmospheric conditions like proximity to sea, nature of materials we handle, etc. This leads to accelerated ageing due to corrosion, erosion and fatigue which creates challenge to safety associated with asset integrity which may pose serious threat to human safety and process safety. The voluntary standards like OHSAS 18001, Responsible Care, British Safety Council guidelines, AIChE-CCPS Guidelines help us for ensuring continual improvement in the SHE performance. During the year Mithapur and Haldia were awarded with Sword of Honour by British Safety Council for Health & Safety Management System.



We deploy an integrated approach to safety culture that draws upon individual and group values, attitudes, competencies and patterns of behaviour and determines the commitment of the organisation towards safety management programmes. Our leadership continuously works towards establishing, sustaining and improving the safety culture through Safety Culture Drivers. We have, over the years, witnessed a transformation from traditional approach of safety being associated with safety managers to a model of collective ownership with individual empowerment and accountability. Senior managers seek to demonstrate effective safety leadership and have integrated the same with their responsibilities and daily duties. For common Global Safety Information and Management System, an up-graded version of "Work Safe Online", an Intranet based data capture, analysis and reporting system for safety has been relaunched across sites. Three elements of WSO - Phase 1 are actively used at TCL, Indian Operations & TCE. Deployment of WSO - Phase 2 is in progress.







The continual improvement journey towards "Target Zero Harm" ensure that our Long Term Strategic Plan (LTSP) while balancing stakeholder needs also focuses on key SHE challenges and risks. For health & safety related key lead and lag measures, targets are set considering past performances, stakeholders, legal & voluntary requirements, best practices, learning & sharing and benchmarking with leading companies. The key inputs to health & safety related projects & initiatives considers site's process capabilities, hazardous equipment, machines, labour processes, learning from past incidents as well as SHE challenges, etc., which may need to be evaluated from an engineering and/or process improvement perspective. Safety performance is linked with individual performances and there are conscious efforts to ensure an active engagement of workforce in promoting safety and achieving safe and healthy work environment. We believe that what gets measured is improved in structured manner. All identified KPIs are monitored at defined frequency to evaluate the performance. Internal/external audits and periodic inspection by experts/safety inspectors, daily behaviour observation, post project monitoring helps to ensure safe execution of action plans.

The high hazard areas and activities are assessed at all locations. Employees are specially trained for associated hazard and by adopting all possible means of risk reduction.

The additional periodic medical check-up tailored as per work area hazards of people working in high hazard area is ensured for early identification of risk to human health. Ergonomic surveys are conducted from time to time for issues like work place lighting and safe working postures, etc. Actions plans are finalised based on the survey finding and are tracked and reviewed for effective closure. Training and workshops on "Positive Health Options", yoga classes, stress management, first-aid etc., are conducted to make employees aware of better approaches to good health and well-being.

Medical facilities are ensured at all the sites and we are also having tie up with other hospitals for specialised medical facilities. Locations where trade unions are present there is formal agreement between management and trade unions covering relevant safety & health topics. Various formal committees are formed at site level namely works/central safety committee, plant/department safety committee, canteen committee, wellness committee, etc., are joint committees comprising Management and Unionised employees. These Joint Committees works in various areas of occupational health & safety like implementation of best practices, risk control, etc. Several more cross functional teams are formed for safety improvement initiative like "Suraksha Jyot" – Safety Excellence initiative at Mithapur, Process Safety Management at Babrala, SRESTHO at Haldia, etc. These committees and CFTs meet periodically with defined agendas on health & safety.

As a part of Management of Change process whenever there is technology/process/equipment, etc., changes, safety training has been made mandatory. Specialised training for employees working with high risk activities like working







at height, confined space entry, handling hazardous chemicals, etc., have higher focus and often considered under retraining plans. Overall employee training needs are identified & captured through a structured process to address individual, operational and organisational training needs.

#### **Key Initiatives**

Suraksha Jyot: Mithapur has introduced an innovative safety excellence programme "Suraksha Jyot" to review the hazard-risks of all activities by physical observation and ensuring its effective implementation by communication to the workforce in focused manner. The waves are planned to cover entire Chemical Complex with the help of dedicated cross functional teams in a time bound manner. Specialised safety training of employees focusing on behaviour aspects and cultural improvement is also implemented to ensure sustenance of initiative.

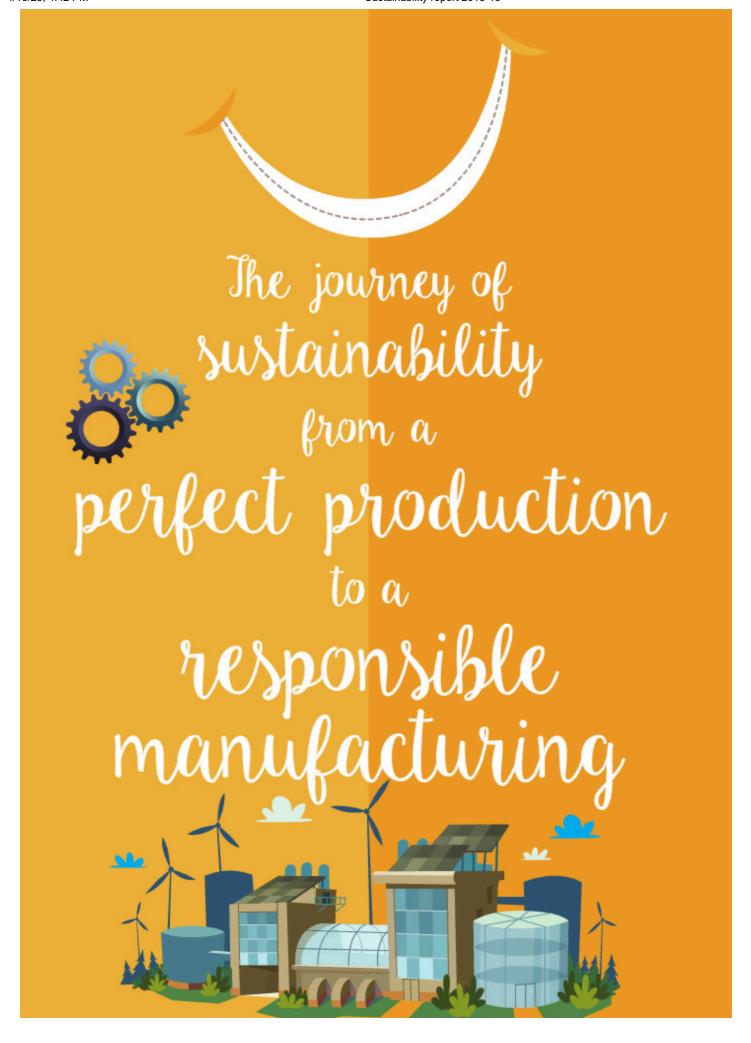


Plant Inspection rounds: Haldia has compared daily plant inspection rounds by forming CFT involving employees across different hierarchy & contractual employees. Now, BSO rounds are also practiced at Mithapur in same manner. Daily observations are reviewed by Senior Management team in presence of Site Head.

SRESHTO: To achieve continual improvement towards common goal of Target Zero Harm SRESHTO (Securing Reliability of Equipment and Structure at Haldia through Team-work and Obsession) is launched at Haldia. SRESHTO addresses the issue of ageing assets and equipment reliability to ensure safe working environment. It is a programme to make cultural transformation to institutionalise and strengthen systems through robust planning, scheduling and quality control by having better coordination amongst line functions.











# Responsible Manufacturing



Being clean, green and responsible is an important aspect of Tata Chemicals long-term sustainability. We have in place processes that help go beyond compliance, ensuring that we continuously improve to manage and address sustainability risks including those arising out of climate change. A key measure for this is "Responsible Manufacturing Index", which helps us monitor and measure various parameters on energy, water, waste, emissions, etc. While there is an enterprise level index, each manufacturing site has its own index that is responding to local needs and concerns as well as helping us get more granular in our approach. Improvement projects have been identified focusing on specific energy consumption, emission reductions, water consumption and water footprint etc., which not only helps us be more responsible, but also reduce costs in the long run.

In order to meet the strategic objective of growing new businesses, TCL is supported by its Innovation Centre (IC) at Pune and Centre for Agri solutions and Technology (CAT) at Aligarh. These units collaborate with companies and research institutes and aid in the development of a pipeline of innovative products with sound business rationale. Energy efficient operations are a key to short-term and long-term strategic plans to reduce GHG emissions. Capital investments for development and incorporation of new technologies are part of our short-term and long-term strategic plans.

TCL has a Board Level CSR, Safety and Sustainability (CSS) committee to review performance and sustainable investments. We are members of the Tata Climate Change and Tata Sustainability Group that looks at capacity building of our teams, exposure of current trends and benchmarking with other companies. Under the aegis of the Tata Sustainability Group we have trained a number of climate and water champions, who have then helped us measure, monitor and improve on our processes. The progress is tracked on carbon abatement measures through a carbon-focussed dashboard with the help of key performance indicators. Similarly, a green filter have been embedded within the capital approval, supplier evaluation and mergers and acquisition processes to ensure that sustainability considerations are a part of all business decisions.





#### Energy

Energy conservation is a key aspect of TCL operations across geographies. Energy efficiency related goals are taken according to the Balance Score Card and Responsible Manufacturing Index.

Energy generation sources include natural gas with co-gen facility at Babrala. Mithapur uses coal with co-gen facility. Along with fossil fuels, Haldia also uses grid power as an additional source of energy. Babrala also uses solar power and a small quantity of wind power is used by Mithapur in its township. The cement production at Mithapur and fertiliser at Babrala falls under the Perform, Achieve & Trade (PAT) scheme.

To manage the downstream energy consumption, TCL dispatches more than 90% volume of its total products through rail transport. We use highly efficient state-of-the-art product transporting modes such as Lupa Bulkers, ISO tankers.

Energy cost is a critical differentiation factor between synthetic soda ash and natural soda ash.

Babrala plant is one of the lowest energy consuming units among the fertiliser units in the world and the most energy efficient unit in India. Babrala is working to improve energy management by implementing ISO 50001 to monitor and manage energy use. Babrala has adopted alternative energy use by installing 100% roof top solar water geysers in its township and plant area. To further utilise solar energy, a roof top solar photo voltaic plant of 150kW has been installed. It also works with end consumers (farmers) for efficient use of energy and water by using innovative Laser Land Levelling techniques, which have resulted in approximately 15-20% reduction in fresh water and fuel usage.

Mithapur Township uses wind power. Tata Power Renewable Energy Limited has commissioned a 25 MW solar power plant at Mithapur.



Babrala has adopted alternative energy use by installing 100% roof top solar water geysers in its township and plant area

#### **Emissions**

Being within the emission norms and continuous improvements thereon is a part of responsible manufacturing at TCL. Combustion of natural gas and coal for electrical and steam generation result in NOx and SOx emissions.

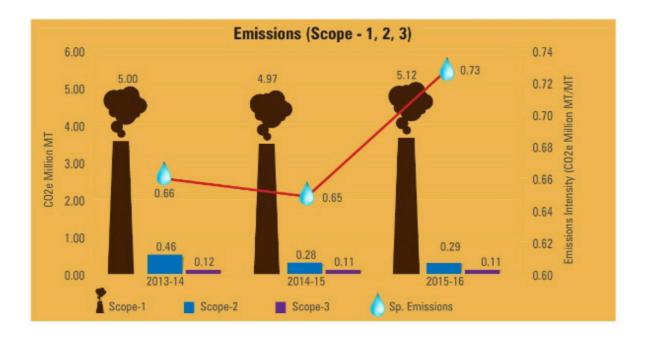
Stacks are monitored as per the schedule under ISO 14001 and results are well within the limits. Furthermore, all environmental regulations are being adhered to and in-house monitoring is done on a daily basis. Half-yearly external monitoring is also done by a third party. The organisation measures emissions from the combustion processes using continuous emission and opacity monitors. These measures are reported to the CDP and GRI-G4 reporting.

None of the Tata Chemicals' operation processes across geographies generate ozonedepleting substances (ODS). TCL consumes government permitted ODS of non-significant quantities wherever required.

We moved ahead by taking up improvement projects based on evaluation and improvement process. Haldia has started monitoring total fluorides instead of gaseous fluorides since 2004. An additional scrubber was designed and installed in the SSP plant.

Emissions at Mithapur were reduced by taking up initiatives like MUW FBD and Vacuum system modifications; replacement of flash vessel and its bypass system at power plant; utilisation of effluent solids in cement manufacturing; renewable energy generation by wind mill and increase of production of bicarbonate.





#### Water

Water being a significant natural resource, all measures to reduce its usage are implemented and water sources are metered and monitored regularly.

The organisation has set forth targets year-on-year to reduce water consumption and reviews it on a weekly basis. TCL India carried out a detailed water footprint and sustainability assessment as per Water Footprint Network (WFN) Netherlands methodology. Direct product water footprints and site water footprints were established for blue, green and grey water. Action points were taken up for improvement.

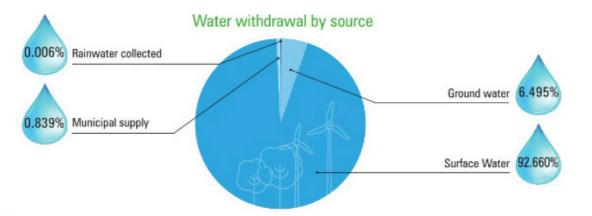
Babrala is situated in river Ganga basin with high ground water availability through deep bore wells and no significant impact being observed. It has been recycling 77% of plant effluent water within the system and the rest is treated and reused along with domestic sewage for irrigation purpose in the green belt area. Babrala conserves and recharges water by collecting rainwater and making recharge pits.

Haldia meets its water requirement through two deep tube wells and the state Public Health Engineering Department (PHE), which supplies treated river water from Geokhali. Haldia reduces fresh water withdrawal and recovers phosphates; by recycling most of the effluent generated from phosphoric acid plants. Excess effluents from sulphuric acid plant (SAP), phosphoric acid plant (PAP) and Demineralised (DM) water plant is treated in ETP before discharge. Effluent from phosphoric acid plant is taken to large gypsum ponds where gypsum settles down and is then sold as a by-product.

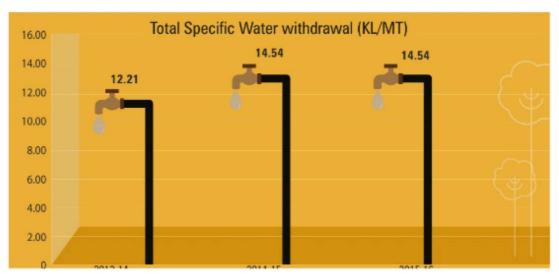
Mithapur manufacturing has sustained its zero dependence on ground water by adopting various in-house water conservation measures as well as management of the rain-fed lakes and innovative seawater desalination technologies. More than 99% of all water needs at Mithapur are met by seawater due to its effective process integration and water pinch analysis. Mithapur recycles around 94% of water utilised. Company has developed structures for rain water storage in new housing development in Mithapur Township. Strengthened rain water collection system and created new rain water collection ponds.







TCSRD (Tata Chemicals Society for Rural Development) has been implementing various water conservation projects especially in Mithapur region, where non-availability of quality water is a biggest concern. TCSRD has been following an integrated and comprehensive approach to meet the objective of providing adequate, assured and good quality water to the community for agriculture, animal husbandry, drinking and household use.



#### Waste

Minimising the amount of waste produced is the key objective of Tata Chemicals, from both on economic as well as environmental perspective. We have implemented on-site segregation of waste at all the sites. As per classification, all hazardous and non-hazardous waste across locations is sold to authorised and registered dealers and organic waste is composted. A monthly SHE Performance Matrix tracks the performance on waste minimisation activities and incorporates a monthly SHE audit, which audits the storage and segregation of waste on site.

Babrala has implemented 100% reuse of waste water (treated domestic and industrial effluent) and collected rain water for agricultural use and irrigation in the green belt.

At Haldia plant, 100% of phospho-gypsum generated during manufacturing of phosphoric acid at Haldia plant is sold as by-product. The sulphur sludge generated in sulphuric acid manufacturing is used as filler in single super phosphate. It reduces virgin material consumption, silver sand as well as provides additional nutrient to plants as elemental sulphur. Utilisation of molten sulphur, a neighbouring refinery by-product is sourced through specially designed steam jacketed tankers directly. Treated effluent at Haldia is discharged into a drainage channel called the green belt channel and finally joining the Hooghly River.





No quantity of transported, imported, exported, or treated waste; deemed hazardous under the terms of the Basel Convention 2 Annex I, II, III, and VIII is shipped internationally by any of Tata Chemicals' sites. No water bodies and related habitats are significantly affected due to discharges of water and runoff by any of the sites of Tata Chemicals.

There was no incidence of significant spillage at TCL, India.

#### Responding to climate change concerns

Tata Chemicals' sustainable enterprise strategy has always focussed on green technologies and uses clean development mechanisms. Tata Chemicals has adopted the climate change policy issued by the Tata Group, which includes mapping carbon footprint and creating an abatement strategy for sustainable manufacturing.

TCL's strategy includes identifying opportunities for carbon abatement; investing in low carbon growth and tapping into opportunities presented by the emerging low carbon technologies. It has identified abatement levers, low carbon growth opportunities and carbon offset opportunities towards that end. The carbon abatement measures are chosen on the basis of the techno-commercial feasibility of implementation, maturity and availability of technologies and the magnitude of emissions reduction. It has also adapted its businesses to become energy-efficient, use less water and is also innovating with new chemicals and fertiliser products and agri-services for carbon conscious growth.

We have in place processes that help transcend mere compliance, ensuring that we continuously improve to manage and address risks including those arising out of climate change. Reduction in the carbon footprint has been defined as an objective in enterprise BSC (Balance Scorecard) with targets for Responsible Manufacturing Index and CO<sub>2</sub> emissions. The improvement projects focus on specific energy consumption, emission reduction, water consumption reduction, etc., which not only help reduce the carbon footprint but also reduces costs.

In the absence of mandated carbon emission cuts, TCL has chosen a path, which balances the imperatives of growth, while ensuring measurable action on climate change; it leads to a carbon-managed future. We have taken up the goal of 20% reduction in emission intensity by 2020 and to achieve it, we have drawn a three-pronged strategy, which includes: identifying opportunities for carbon abatement, investing in low carbon growth and tapping into opportunities presented by the emerging low carbon technologies. We actively monitor our existing products and services, and also invest in developing new climate friendly products through innovation and research. We have also explored CDM opportunities and have registered projects for GHG reductions with UNFCCC.





Technology upgradation helped us become the benchmark for energy efficient operations. These benchmark operations have gained the company a brand value and financial benefits. Most of our operations globally have efficient steam and power co-gen systems, which have improved over the years.

We are also addressing energy efficiency issues directly by waste reduction initiatives and novel technological advances which offer the prospect of utilising low grade heat, further enhancing energy efficiency and reducing GHG emissions.

The Carbon Disclosure Project (CDP) is an international, not-for-profit organisation providing a global system for companies and cities to measure, disclose, manage, and share vital environment related information. It works to transform the way the world does business to mitigate the effects of climate change and protect our natural resources. TCL is responding to CDP since FY 2008-09 for climate change and has achieved 99 score with 2nd position in the Carbon Disclosure Leadership Index (CDLI) for FY 2014-15.

#### **Biodiversity**

We conducted EIA studies to assess the impacts of its operation on nearby biodiversity and surrounding environment. The findings of the study illustrates that no significant negative impact has been observed on the native flora and fauna. While operating in harsh ecological conditions/semi-arid conditions at Mithapur site, TCL has restored the ecological balance in the surrounding habitats by converting wastelands into a greenbelt.

Our commitment towards continual improvement is triggering new programmes such as grassland development, mangrove conservation and regeneration at west coast near Mithapur, restoration of highly alkaline soil conditions at Babrala site and at east coast for the Aila affected region of Sundarban near Haldia. For preserving biodiversity of Okhamandal we conducted a biodiversity reserve plantation project, implemented with support of employee volunteers, which seeks to preserve indigenous vegetation. Under the project, 90 acres were afforested with 12 native species of vegetation. Also projects like community conserved wetland, eco clubs programme and organic waste converter continued around at all three manufacturing sites.

We have initiated the process for biodiversity mapping and are improving the same at the Babrala township area. We continue to support species conservation efforts through the Dharti Ko Arpan programme. Eleven miles from TCNA's.

The Charakla Saltworks form a large man-made wetland which sustains a diverse waterfowl population – both native and migratory. The presence of 121 species of birds has been recorded at the Charakla saltworks over the period of time and this site is the only active nesting site for the Caspian Terns (Hydroprognecaspia) in the country.

TCL has undertaken an ex-situ attempt for conservation of the native flora by raising a 150 acre botanical reserve at Mithapur. The reserve has an exclusive 30 acre plantation of the endangered Gugal (Commiphorawightii) plant.







The Great Indian Bustard (Ardeotisnigriceps) and the Lesser Florican (Sypheotidesindica) were to be found in the Okhamandal region, where the Mithapur chemical plant is located, until the late 1980s. However, because of the disappearance of their grassland habitats due to the rampant spread of the Gando Baval (Prosopisjuliflora) bush, these birds have not been sighted for more than 20 years now. Also fauna species like the Indian Wolf (Canis lupus) have become endangered species.

The rise of the sea level due to climate change has intensified the coastal erosion problem and altered the sand dune contours at the marine turtle nesting beaches in the Okhamandal region. The sand dune slopes have been eroded due to strong waves and now feature steep inclines which the turtles are unable to negotiate to reach their nesting site. This is bound to adversely affect the population growth of the endangered Olive Ridley (Lepidochelys Olivacea) and the Green Turtles (Cheloniamydas) in the years to come. TCL runs the Marine Turtle monitoring programme for the same.

The coral reef restoration project at Mithapur continues. Work on creation of 830 square metres of artificial reef has been completed and required limestone boulders transported and arranged underwater. Development of coral nurseries for creation of a coral garden has been taken-up at 15 locations on this artificial reef.

Work on assessment of benthic fauna assemblages along the intertidal zone continues. Benthic fauna or benthos is the community of organisms that live on, in or near seabed, starting from the high-water mark till the depths of the sea. A total of 34 species of mollusks (sea shell species), belonging to 18 families were recorded during the survey at the Mithapur reef site. This rich diversity of molluscan fauna along the 2 kilometres of Mithapur stretch indicates the healthy status of the coastline and its potential to support various life forms.

As per Natural Capital forum, natural capital can be defined as the world's stock of natural assets which include geology, soil, air, water and all living things.

It is from this natural capital that humans derive a wide range of services, often called ecosystem services, which make human life possible.

Tata Chemicals Farm Essentials business has taken up the project to map its natural capital in consultation with IBBI (India Business Biodiversity Initiative).

Tata Chemicals Haldia used to import its total requirement of sulphur as raw materials for our sulphuric acid plant. Since the last couple of years we have established a system by which we purchase molten sulphur from nearby industry, which is a waste product for them. We are now gradually increasing the use of molten sulphur for feeding our sulphuric acid plant, replacing the import of solid sulphur.

TCL holds about 1,500 acres of land at Babrala, out of which more than 35 per cent land is under green cover. The annual rainfall in the area is approx. 600 - 650 mm. During heavy rainfall most of water flows down as runoff from the site to the nearby river. To further utilise the open land area and conserve the rain water through rain water harvesting, it was decided to identify some areas where the flowing water can be diverted during heavy rainfall. A topographical survey of the site was conducted and three areas were identified which could be used as proposed catchment areas for rainwater harvesting.

TCL will be piloting natural capital mapping at its other sites also in the coming years.





Tata Chemicals Sustainability Report 2015-16



# Product Responsibility and Supply Chain

At Tata Chemicals, our goal is to make an organisation that is even more responsible, transparent and responsive to its stakeholder's needs. To strengthen responsible care approach, TCL practices product stewardship code as an act of minimising the health, safety, environmental and social impacts of its products and packaging throughout all lifecycle stages, while also maximising economic benefits. Product safety encompasses selection of safe raw material, use of safe processes and adoption of safe practices for handling products.

#### **Product Responsibility**

While chemical products provide many benefits to society, they must also be managed in a responsible way to minimise any adverse effects on humans and the environment. Our employees take this responsibility very seriously and work hard to ensure that our products are manufactured, stored, transported, used, disposed and recycled in a manner that shows high regard for human health, safety and environmental stewardship. Along with our manufacturing operations, our stakeholders, such as suppliers, distributors, contractors, retailers and consumers also play an important role to minimise the impacts on the triple bottom line.



Some of our products and services whose design has incorporated social or environmental concerns, risks and/or opportunities are listed below:

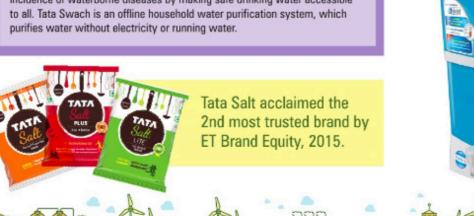
#### **CUSTOMISED FERTILISER – PARAS FARMOOLA**

This is a Research and Development-based innovative offering, and an area (soil) and crop-specific nutrient, which enhances crop productivity, promotes balanced application of nutrients and improves soil health.

#### WATER PURIFIER - TATA SWACH

Safe drinking water is a basic human need and its non-availability has been a major concern worldwide. The vision for Tata Swach is to reduce the incidence of waterborne diseases by making safe drinking water accessible to all. Tata Swach is an offline household water purification system, which purifies water without electricity or running water.









#### **AGRI SOLUTIONS SERVICES**

Tata Kisan Sansar and Tata Kisan Parivar: Tata Kisan Sansar (TKS) is a one-stop agri input shop and farmer's solutions shop, offering a range of agri products and services. It has played an important role in empowering the farmer community. Tata Kisan Parivar Membership Programme is a unique relationship initiative aimed at the most important stakeholder in value chain - the end consumer, i.e. farmer. This is a bond with a selective membership that attracts progressive farmers with a positive attitude. TKS provides a range of innovative and unique services to farmers through a dedicated team of Krishi Preraks and agronomists, giving them an extra edge over traditional farming practices and, thus, empowering farmer community.

Through 800+ Tata Kisan Sansar centres, we cover around 26,000 villages and reach out to approximately 1.3 million farmers.

#### TATA SALT PLUS

India has a high incidence of Iron Deficiency Anaemia (IDA). To address the same, we launched Tata Salt Plus, a double fortified salt which contains iron and iodine. It provides up to 50% of the body's daily requirement of iron. Since salt is used across all sections of the society throughout the year, this is an effective way to deliver iron to the populace and thus tackle the problem of IDA.

#### **SPICES**

We have launched high quality spices rich in international markers like Curcumin content for Turmeric and Capsaicin for Chilli powder. We use unspent spices (spices from which oils are not extracted). This ensures that the nourishing and medicinal quality of our spices is retained. Spices are known for their anti carcinogenic, anti oxidant and digestive properties. Spices have been launched under the Tata Sampann brand and are available in North India and parts of East.

#### FRUCTO OLIGO SACCHARIDE (FOS)

Nutra plant produces Fructo Oligo Saccharide (FOS) through biotechnology route, no chemical synthesis step is involved in the entire manufacturing process. FOS is a prebiotic dietary fibre available naturally in fruits and vegetables. Intake of FOS promotes growth of helpful bacteria in colon, in addition FOS being a very low calorie sweetener, is an ideal alternative for sugar.

#### **PULSES**

Dal (pulses) is the mainstay diet of a majority of Indians, cutting across social and economic strata. Tata I-Shakti was launched with a mission of not only bridging the existing gap between demand and supply of pulses in the country but also providing reliable quality, hygienic pulses to Indian households and pioneering the 'unpolished dals' category. Available across 21 states in India, Tata I-Shakti pulses are now called Tata Sampann. Following the Farmto- Fork model, pulses are sourced through a strong network of farmer groups in order to provide quality, healthy, tasty and nutritious products to consumers. The brand also introduced a 'Dal on Call' initiative to drive direct sales from consumers.

#### Product Information

Product information on the physical dimensions and chemical compositions, nutritional information and nutrient content is provided through our product labels; pack declaration catalogues and advertising messages in mass media such as television, print publications, radio and social media. Information on our products is available 24x7 on the company or brand website and at the call centre.



All packages, both retail and bulk, contain product information including the product manager's address/CRM (customer relationship manager) contact number to enable consumers to correspond. All of our information is voluntary with various branding elements and is available with no comments on competitors or any regional bias statements. Wherever applicable, specific certification requirements of regulatory authorities and markets, like ISI, FSSAI, Halal, etc., are provided on the product labels and/or catalogues.

ADVERTISING TCL believes in advertising its products and improving market image on its own merits without encroaching on others through unethical means. We engage only reputed advertising agencies that are members of ASCI and, hence, all our advertising is as per ASCI codes. The procedure to be followed and adherence to applicable standards codes is under the control of the ethics counsellor. There have been no cases of non-adherence to regulations.

PACKAGING The plant at Mithapur, India, and all the packing centres of Tata Salt are Hazard Analysis at Critical Control Point (HACCP) certified. Tata Salt is one of the first salt brands in the country to be HACCP certified until last leg of distribution, making it the most hygienic salt available in India. As a sustainability initiative, reusable primary outer bags have been introduced by the salt team wherein the finished product, packed in 1 kg PET poly pouches, is repacked in the used primary bag, thus reducing the overall usage of high-density polyethylene (HDPE) and making the outer packaging more environment-friendly.





We are continuously making efforts to reduce packaging through innovative solutions such as jumbo bags. We have increased the use of bulkers, especially for soda ash. We started moving bromine in a bulk form through ISO tankers and use bulkers for fly ash. Currently, we have seven bulkers for soda ash, two ISO tankers for bromine and transporters' bulkers for fly ash. All Soda Ash and Bromine put together, we have moved 11,623 MT in bulk form in 2015-16. This initiative will reduce, and if possible, eliminate the consumption of HDPE/PP bags, leading to a reduction of CO<sub>2</sub> emission, apart from helping automation both at our plant and at customer locations.



Product safety starts from the selection of raw materials. These are handled, stored and used in accordance with SHE guidelines. The selection of material suppliers comprises the following critical criteria:

- Registered and reputed organisation
- Complying with applicable statutes
- Following the best SHE management practices at site and certified for ISO-9001/ISO-14001/OHSAS-18001 systems

After selection, suppliers' SHE management practices are re-evaluated by site visits and interaction at the shop floor to ascertain whether they are practicing and following SHE practices as stated in the supplier performance rating checklist. This enables gap identification and further improves their management systems. Our expertise and experiences are also shared with them for dealing with SHE issues related to their operations and practices. The supply chain members conduct training and improve awareness among concerned stakeholders on handling, storage, transportation and distribution.







#### Supply chain

Extracting minerals on four continents, Tata Chemicals is leading the way in promoting principles of sustainable supply chains.

2 million tonnes of limestone are mined using traditional blasting techniques in India for use in the synthetic manufacture of soda ash at Mithapur. Alongside these captive mining operations, another 3 million tonnes of coal, coke and limestone are procured each year.

Managing the impact of these diverse operations is an important part of the Group's sustainability plan. While the mining techniques vary, common principles mean all Tata Chemicals companies operate responsible mining practices. Responsible sourcing, especially of mined materials, means many different things.

There is a growing need for integrating environmentally sound choices into supply chain management. From an economic and governance perspective we focus on risk and supply chain management as well as accountability and transparency.

TCL's key suppliers are for its major raw materials like natural gas, limestone, raw brine, solar salt, coal, bittern, phosphoric acid, potassium chloride, rock phosphate, ammonia, sulphur, MoP, DAP and packing material (HDPE bags) for the manufacture of our wide product range. There are also suppliers who provide manufacturing equipment/machines/apparatus (mechanical, electrical, civil, instrumentation, laboratories) to TCL. Wherever required, TCL also does annual maintenance contracts with such suppliers. The respective State Electricity Boards supply electricity at locations wherever required. The other key suppliers for TCL include transport and logistics (rail and road) providers for transportation of its raw materials and finished products.

The total number of suppliers engaged by TCL is around 380 and estimated number of suppliers in the supply chain is close to 3,000. Our suppliers are spread across geographies where TCL has its operations. The type of suppliers at TCL comprises contractors, distributors, independent contractors, manufacturers, primary producers, sub-contractors, wholesalers, brokers and consultants.



#### Key processes and roles played by supplier/partner/collaborator/channel partner

KEY WORK PROCESS	KEY SUPPLIER/PARTNER/ COLLABORATOR/CHANNEL PARTNER	ROLES PLAYED IN ENHANCING COMPETITIVENESS/INNOVATION	
Customer and market focus	BHA, distributor, dealer, stockist, TKS, retailer, advertising agencies, market research agencies	Enhance market access, market awareness and competitive intelligence, TKS store brands auto invoicing to customers, packing for speciality productions FGD, ChemConnect, monitor and improve stakeholds engagement (CSI, BEI)	
Supply chain management	RM and fuel, packaging, transporters, railways, alliance partners, C&F/RH agents, stevedores	Increase cost competitiveness, improve service levels, product and service innovations, sustainability	
Technology and Technology suppliers, equipment manufacturing manufacturers, maintenance and spares providers, external auditors/consultants		Enhance awareness of new technologies, increase information on industry benchmarks, improve plant an product efficiency, bulk flow cooler, advance process control, enhance awareness of best practices	

There was no change in the location of suppliers, the structure of the supply chain, or in relationships with suppliers, including selection and termination.

In TCL, India, we have a vendor development programme to promote local contractors and service providers. We also promote skills and livelihood development in the neighbouring community through various training and community development programmes. We established an apprentice training centre to improve capacity and skills of more than 100 apprentices every year. The centre provides support to people from socially backward community backgrounds.

TCL keeps exploring the potential for development of suppliers hailing from socially and economically backward communities. Our consumer products business has a mission to increase schedule caste/schedule tribes (SC/ST) community participation in its third party workforce over a period of three to five years. We initiated a sponsored professional training programme for developing functional skills and competencies of SC/ST and other economically backward candidates to make them employable in the sales and marketing field as front line sales force.

As a new initiative to promote even greater supplier partner participation in sustainability initiatives, TCL has established supplier sustainability guidelines. As a part of it, a supplier sustainability self-assessment tool has been developed to assess suppliers and partners on sustainability criteria that include governance, safety, health, labour practices, human rights and impacts on environment and society. We have assessed 40% of the key suppliers at the Mithapur site. We have also conducted capacity building and awareness sessions on crop nutrition at the business locations to progressively implement the same.







#### Transportation

Transportation is a critical aspect of distribution safety that depends on selection of the right form of transport and route. TCL participates in many sustainability initiatives of customers, wherein the company is invited to participate for knowledge sharing, active involvement in development of codes, or for declarations.

Knowledge and awareness of transporters on product safety and their role in case of emergency play a vital role in accident management. Regular checks and training programmes ensure safe distribution of the product. All suppliers and vendors are advised to provide material safety data sheets (MSDS), along with all materials and chemicals, for complete information and use of the right personal protective equipment (PPE) while handling unwanted emergencies. MSDS boards for bulk fertilisers have also been provided to dealers so as to create and promote safe handling, storage and use of fertilisers.

Every year in December or January, advanced training is undertaken for drivers who carry hazardous chemicals in trucks and tankers. They also get a Transport Emergency (TREM) card. To further enhance safety, we have established the emergency chlorine helpline — a dedicated 24X7 phone line setup to extend help during any chlorine-related emergency. Every quarter, safety department provides training to workmen involved in loading bromine. Safety department also conducts on-the-floor mock drills for employees, contractors, and loading and packaging workmen to check their preparedness during emergencies. Job Safety Analysis (JSA) card is issued for CC/marine chemicals, both in English and Gujarati.

Incidents related to product spills, transport accident, bad products and packaging quality are tracked and assessed by supply chain and field employees. Suppliers and distributors' meetings are used as a platform to express the company's expectation from distributors, suppliers and transporters. This forum is used to provide all relevant information and training on handling, storage, transportation and distribution of products, as and when required. No significant spills were reported this year.

#### Customer Engagement

The customer requirement and the company's image are determined primarily through customer satisfaction surveys for each customer group, customer contact programmes, e-customer care, customer feedback captured by our ChemConnect call centre, senior leadership visits, annual distributor's conference, COO club, customer care system as well as other listening and learning posts. Kano model helps us in identifying parameters to evaluate the dissatisfaction, satisfaction and delight of the customer. The feedback and complaints provide opportunities for improvement.

Avalon Consulting, Integrated Marketing & Research Services (IMRS) and IMRB conduct customer satisfaction studies on a quarterly/half yearly/annual basis for TCL, covering all the Indian territories and international markets where the company exports. We track brand equity index through brand track studies conducted by Nielsen to measure brand loyalty among end consumers for salt and farmers for the crop nutrition range. We also conduct a dissatisfaction survey for our chemical industry once in two years through Avalon Consulting.

A written undertaking is given to all the customers about non-disclosure of their responses received for the customer satisfaction index (CSI) surveys. The 100% primary data relating to customers is on the ERP (SAP) in the form of master data, which is fully secured; no unauthorised access is available to anyone. Changing/creating options are given only to key authorised individuals. We do not share or sell this information except if required under any regulation, but only after the consent of the concerned person. As such, there is no standard procedure to monitor compliance with legal statutes, but for voluntary codes our approach is to maintain the brand equity index, monitoring GRP at the time of campaigns.



Market studies such as monthly retail audit by Nielsen or IMRB household panel are conducted on a regular basis. Detailed analysis of CSI findings is carried out to serve customers in a better way and determine future and expected needs of the customers. The Voice of the Customer (VOC), i.e., customer feedback/suggestion/perception, is gathered from various sources like regular customer visits by the sales team, feel the pulse (customer visits by the sales team), communication meetings, quality function deployment, CSI, customer circles DART reports and COO club meets, are integrated on a regular basis to serve as inputs for current and future products, services and customer support.

A web-enabled Customer Care System (CCS) has been deployed to effectively manage all customer complaints. Customers of industry essentials are provided with a separate and unique user ID and password for logging complaints on the CCS. Consumers are also provided contact numbers/e-mail id/address of the customer care cell/ChemConnect on packs and bags. This web enablement of the system helps reduce complaint handling time and ensures expeditious closure of complaints.

Facility to delegate resolution of complaints has been added in the CCS recently; this helps in early resolution. Customer can also view detailed resolution and give their feedback on the system. If resolution is not in line with customer satisfaction, the complaint is rebooked for further action; this helps in customer involvement and enhances engagement levels. A toll-free number allows farmers to register complaints, suggestions or inquiries about our products/services. All consumer products are registered with the FSSAI and adhere to all the requirements under it. Farm essentials, living essentials, industry essentials business and stakeholders have benefitted from deployment of various modes of engagements, as shown in the section of stakeholder engagement.

Customer satisfaction survey is carried out by the Company every year. Overall customer satisfaction for FY15-16 is given below.







Tata Chemicals Sustainability Report 2015-16

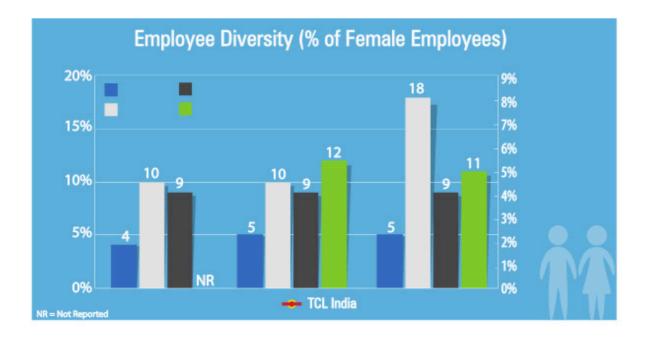


We, at Tata Chemicals Limited (TCL), ensure that our values, ethics and dimensions of care and welfare are incorporated in our Human Resource (HR) policies and processes and nurtured through our practices.

The HR team at TCL acts as a strategic partner for businesses to achieve its strategic objectives by creating an engaging environment for the workforce. Our HR team is structured as Corporate HR and Business HR, which includes various locations in India and overseas. Corporate HR focuses on evaluating and improving HR systems, shaping policies and framework and establishing the strategic road map with a long-term perspective. Our Business HR is embedded in the business with a focus on delivering the business objective through various people interventions. TCL being a diverse organisation, operating in four geographies, our HR processes are customised to meet the local regulatory and business requirements and culture.

#### Employment

The recruitment process at TCL is triggered by a Manpower Requisition Form (MPR), which has been recently digitised (e-MPR) in India to eliminate paper work and facilitate tracking and reporting. TCL deploys multiple sourcing strategies to ensure supply of talent as per business needs. These include placement consultants, Tata group companies, employee referrals, internal job postings (SHInE +) in India and campus hiring. The candidates are recruited based on evaluation with regard to functional knowledge, behavioural skills and/or leadership attributes. To ensure a constant induction of fresh ideas into the system, TCL recruits trainees from engineering and management institutes across the country and experienced lateral hires. Although the overall attrition rate in TCL is under control, attracting and retaining talent at remote manufacturing locations continues to be a challenge.



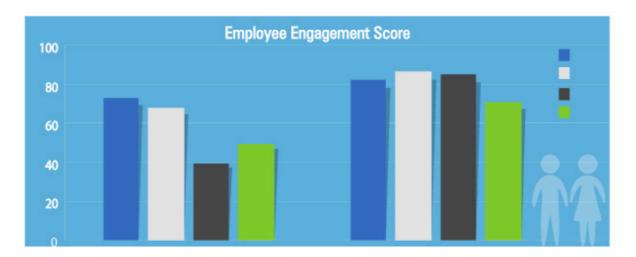




#### **Employee Engagement**

To ensure a supportive and encouraging work environment, TCL has focused its efforts towards employee engagement and regular monitoring of employee engagement levels.

While Tata Chemicals Limited uses a number of formal and informal mechanisms to assess the engagement levels of its workforce, the annual global EES (Xpress) which guarantees anonymity to the respondent, gives a truer picture of employee engagement levels. In 2015-16 the engagement score was 82% compared to the score of 70% in the previous year.



Post the Survey communication, FGD's are held at the organisation/BU/Site/function level to create action plans to address specific areas of concern. These action plans are then reviewed at the monthly review meetings like AQC, SBUC, etc.

Managers who have more than five direct reports, receive a manager scorecard which enables them to identify specific workgroup related engagement factors for improvement. The other mechanisms of gauging employee engagement is through FGD's, skip level meetings, town halls and exit surveys for various workforce. These inputs have resulted in policy related changes for eg. work flexi timings at office locations, paternity leave, health & wellness etc.

Goal & strategy alignment, performance linked scheme, communication channels, township benefits & allowance, rewards & recognition are some of the examples of how the engagement levels are sustained. 'Awaaz' in Mithapur, 'We Care' at Haldia and 'HR Clinic 'at Babrala were programmes that helped address employee issues and grievances and also enhance employee engagement.

A Rewards & Recognition framework was launched and has been adapted as 'STARS' (Special Thanks and Recognition Scheme) at Babrala and as 'E-Spark' in Mithapur to recognise employees for their contribution and upholding TCL values is implemented and is working well. Cross section of leadership team interacts with the new joiners every quarter through the "Lets Chat" forum.

Other informal engagement measures include participation in organisation initiatives like CFTs, theatres, cultural events, family days, opportunity to participate in the CSR events etc. We also use other measures to check the engagement levels such as retention rate, regrettable losses, employee referrals, response to internal job postings, improved safety indicators etc. Voluntary attrition rate was 9.9% in FY 2015-16.



#### Training and Education

TCL equips the workforce with current and future competency requirements arising from our business plans and changes in external environment by assessing the competency gaps redesigning and customising our training programmes. The induction programme branded as InCEPT (Induction Course for Enabling Positive Traction) has been enhanced to include three phases in case of lateral recruits

Several learning initiatives are being made available to the employees across the organisation to build or enhance rolecritical competencies through functional, behavioural and leadership training in these areas. These include Jagruti – for the front-line field force in Agri business, Technical Capability programmes at manufacturing sites, On-the-job projects by Management Development Programme (MDP) and extensive focus on Safety Awareness initiatives. The MDP has been redesigned to incorporate relevant inputs to equip people in handling future challenges.

Employees can continuously upgrade their competencies/skills at their own pace from any location through various e-learning platforms in our organisation like Skill Soft.

As part of the increased focus on Safety, various training programmes and initiatives were rolled out such as Suraksha Jyot at Mithapur, Process Safety Management at Babrala, SRESHTO at Haldia. Other initiatives include adoption of DuPont Safety Systems, e-learning modules, Safety Stewards, Safety Stars, Contractor Safety Management, etc.

We have a Katalyst Programme to develop and deploy Internal Faculty for programmes like AMT, Safety, Sustainability,

MBE, LSS, Technical training etc. Besides saving cost on external facilitators, this initiative also acts as a great motivator for internal talent.

The talent management process SpringBoard in India is designed with the objective of building technical/functional specialist and leadership pipeline for the business. Other initiatives included nominating for quality training programmes at Tata Management Training Centre (TMTC) programmes.

During the fiscal, TCL covered 78% of its employees for min. one training programme. A total of of the 1085 programmes (internal/external) were conducted/organised. Total training days were 13,123.

In 2016, Tata Chemicals was recognised as Best Employer, India (2016) by Aon Hewitt.







#### **Employee Benefits**

Ensuring a safe working environment for our workforce continued to be an area of focus as we launched many interventions like audits, training, rewards, recognitions and process/design improvements.

The company has a set of people-friendly employee policies & benefits which we review every year to ensure these policies are contemporary and aligned to our values. All employees are covered under Group Personal Accident Insurance/workmen compensation insurance.

A Group Gratuity Scheme has also been initiated for Contracted Services Workmen at Mithapur. For contract workmen we have Suraksha scheme to cover financial assistance towards death/disablement. Special care is administered for women employees' w.r.t amenities, travel, child care, flexi hours etc.

In India – the employee medical insurance cover has been enhanced to ₹ 3 lakh. Additional coverage options of ₹ 2 lakhs or ₹ 4 lakhs has also been extended on co-share basis. Workforce health is monitored through annual health check-up. Medical facilities and medical officers are available at all company locations to quickly respond to any eventuality.

#### Summary of the employee benefits:

"Varies based on location

FACILITY	SOME EXAMPLES*
Education Related	Sabbatical, professional assistance, higher education support, scholarships, sponsorships
Wellness Related	Annual Medical Check-ups, Wellness Initiative, Canteen, Ergonomics, Counselling, Health insurance, Flexi working hours, Maternity leave Policy, Hospital facilities, Paternity leave, Special leave for marriage of children
Recreation Related	Leave Travel Assistance, Clubs, Fun at work
Township Amenities	Housing, Subsidised Electricity, Transport, Uniforms
Safety Related	Emergency support
Financial Support	Retirement benefits, Family benefit scheme, professional allowance, site allowance, perks, etc.







#### Contract Workforce

TCL has a contract workforce of aprox. 4000 numbers majorly spread across our 3 manufacturing sites in Mithapur, Babrala & Haldia. The contract workforce is employed under contractors.

TCL monitors all contractors to ensure they have complied with statutory norms. As a monitoring system TCL audits all Contractors Records & Registers with following objectives:

- To ensure all returns are submitted as per statutory timeline with accurate information by the Contractors is in time
  and accurate.
- 2. All Records Registers maintained by Contractors is as per TCL's statutory norms.
- 3. Continual improvement in record management will lead to data accuracy and control on manpower.

Based on the certification from personnel department the individual contractor payment gets cleared. If any lapses are noticed in filing of statutory returns or maintaining accurate records the penalty is deducted as per agreement terms.

As per the agreement clause it is mandatory that all suppliers/contractors have to pay their employee as per the Minimum Wage Act and no deviation is accepted by TCL. Appropriate action is taken if the norms are flouted.

Contractors are given regular training to manage the statutory requirement and records of their employees hence now all the contractors are well versed with our norms and understand the seriousness of compliance.

3 weeks' notice is provided to employees and their elected representatives prior to the implementation of significant operational changes that could substantially affect them. The notice period and provisions for consultation and negotiation are specified in collective agreements.

Health and safety topics are covered in formal agreements with trade unions

#### Labour Relations

Labour Management is critical for Industrial peace is necessary for better and higher production which result to the organisations goal. Total number of employees in the bargainable category are 1069 and approx. 4000 more are working through contractors.







We are one of the few companies in India, who have Implemented 'Code of Discipline' by way of recognition of Union. This is a very fair and transparent recognition system for Unions; this system is used as a best practice by few Government/Public Sector Units.

TCL — Mithapur have completed Long Term Settlement deed with Union on 12th July, 2015 and the whole process of settlement with Union went smoothly as a result of which 950 unionised

employees got benefited with the deed and the plant ran smoothly without any ambiguity.

Similarly at Haldia, the Long Term Settlement of Permanent Workmen was signed in March 2015.

We have actively adopted the concept of 'Joint Management Council' (JMC) to address proactively any issues/concerns which are of administrative nature or related to facilities or any other issues which involves day to day operations. These are discussed in the monthly JMC meetings, in which, representatives of management and workmen cadre participate and resolve issues.

TCL – Mithapur has adopted 'Social Accountability – 8000' standards and have been certified by the international certification agency on that. We have created 'Awaaz', a platform to jointly analyse employee engagement survey findings by various work groups and identify action plans and improvement teams that work delicately towards improving employee engagement

At Haldia Plant, a number of mechanisms are available for workmen to seek redressal for their grievances. Drop box, We Care Portal are some of the mechanisms.

We believe in empowerment model through participatory approach towards problem solving. This also helps in increasing cohesiveness, bonding and participative management. Following committees reflect this approach, in which representatives from all sections of workforce, with maximum diversity angle are chosen to participate.

### Joint Management Council:

A Joint forum to address issues/concerns which are of administrative nature or related to facilities.

#### Cultural Committee:

A committee comprising of all cadre employees for promotion of all types of arts and to entertain Town People.

#### Works Safety Committee:

A Joint forum to discuss improvement possibilities related to Safety Matters.

## House Allotment Committee:

A committee comprising of all cadre employees for deciding norms for House allotment and to address concerns if any keeping equal empowerment.

#### Canteen Committee:

A Joint Committee for improving Canteen facilities.

### Town Safety Committee:

A Joint forum comprising of all cadre of employees and merchants to discuss improvement possibilities related to Township Safety Matters.

#### Sports Committee:

A committee comprising of all cadre employees for promotion of Sports and sportsman.

#### Kamdar Club Committee:

A committee of workmen to decide about the facilities, related to sports, entertainment and Library in Kamdar (Workmen) Club.



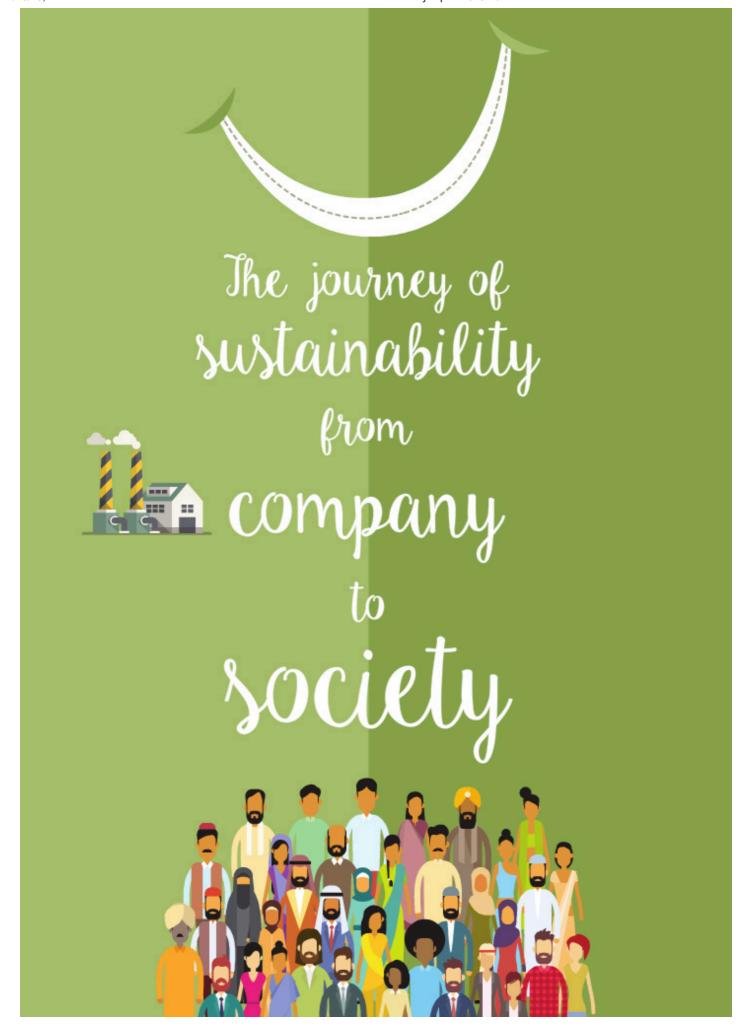
Government Recognised 'Apprentice Training School' run by TCL – Mithapur, wherein, apart from Mithapur/Okhamandal students, we also push our employees from Workmen Cadre to be certified on certain skills, the workmen cadre employees even go for ITI certification for the growth in the organisation. The result of which we get quality and certified workforce in the organisation.

No grievances related to labour practices have been filled through the official formal grievance mechanisms of the company.

















Tata Chemicals has its CSR operations across locations in India, Europe, Magadi (Kenya) & UK. Community is an important stakeholder of the organisation and it believes in integrated development of the community by partnering with local NGOs, government line department, national & international institutions and community based organisation. The company major emphasis is to develop sustainable livelihood models and simultaneously ensure basic rights of education, health and sanitation of the target population.

TCL (India) implement its CSR activities through Tata Chemicals Society for Rural Development, OKHAI – Centre For Empowerment & Uday Foundation. TCSRD was established and registered in 1980. It is operational in Mithapur, Babrala, Haldia and has recently started interventions in Sriperumbudur, Pune and Farukabad UP.

TCL has a process of stakeholder engagement which helps in discussion with the stakeholders at various platforms for addressing their concerns and issues. TCL engages with the community at various stages of implementation of the community development projects. TCL also has a community concern redressal mechanism through which concerns received from community on any impact arising from TCl plant operations are registered and are addressed with the help concerned department.

The Company's overall community development initiatives have been named as BEACoN (Blossom – Enhance – Aspire – Conserve – Nurture):

Tata Chemicals Limited featured in best companies for CSR by Economic Times







## Blossom – Capacity building and empowerment of local communities through sustainable and replicable handicraft development model

#### Promotion and development of traditional handicrafts – Okhai

Tata Chemicals Society for Rural Development (TCSRD) is promoting handicraft products under the brand OKHAI in all the locations with the objective of keeping alive the traditional skills and at the same time provide sustainable livelihood to the artisans. TCSRD initiated this with the Saurashtra handicrafts of Okhamandal, Karjobi of Babrala and Jute craft of Haldia. TCSRD at present is working with 500 artisans across sites through the cluster development programme and has been able generate business turnover of Rs. 1.51 crores. The major focus of OKHAI during the year was on product Innovation, online sales & exports.

#### **Clusters Development**

Cluster Development programme strives to develop entrepreneurship qualities in rural women and guide them adeptly engage in productive enterprises. TCSRD organised training on entrepreneurship development for all the women members of SHG clusters, so that they are equipped with entrepreneur skills and can establish their respective production unit.

At Mithapur, six clusters/group enterprise have been formed. They are Bandhani, Rexene & Leather, Bead work, Jute, Block print and Coconut Fibre products, which are also linked to Okhai for providing a marketing platform for the same. The products being promoted in Babrala are Karzobi, incense, mobile charger, solar table lamps, paper envelope and paper carry bags. TCSRD in Babrala also supported "Sevarthi Seva Samiti" a SHG federation for setting up its Jute product training cum production centre in Babrala.

## Enhance - Enhance income of community Agriculture Development Programme

TCL launched the Phase III of OSGP programme in Mithapur with the aim of improving socio-economic status of farmers of 40 villages affected by salinity in agriculture land. The programme targets to benefit 11,000 households through Natural Resource Management, drinking water & sanitation. In Mithapur & Sriperumbudur TCL is also promoting the use of organic fertiliser for agriculture production. During the year 174 farmers were trained and supported for organic farming. The land reclamation programme is being carried out in Babrala. This year 42.20 acres of land were reclaimed and 400.73 acres of land have been completely leveled which has benefited 274 farmers of Gunnour tehsil. In Haldia, TCL is promoting the SRI method of paddy cultivation & mushroom cultivation among the farmers. During the year, 3213 farmers were provided training & exposure for adopting improved methods of agriculture practices.

#### **Animal Husbandry**

**Promotion of dairy farming:** Activities in this project include OPD, FMD vaccination, HS vaccination, deworming camps and animal health camps at different locations. In the financial year 2015-16, 4120 animals were examined and treated at OPDs which benefited 3670 households from 42 villages. During the year, 31371 cattle were vaccinated for FMD & HS in Babrala. In Mithapur 63000 cattle were vaccinated and in Haldia 5218 cattle were vaccinated. This year TCL supported cattle owners for artificial insemination; 16286 cows & buffaloes inseminated with high milk yielding genetic materials in Babrala. In Haldia 598 cows were artificially inseminated.

Agri Allied Activities: In Haldia, TCL supported 100 families for fish culture and 57 households for poultry farming.

#### **Uday Foundation**

258 youth are employed by Uday at Mithapur and Babrala. Uday Foundation continues to provide customer support to Tata Sky, Tata Chemicals (Chem Connect) and Ministry of External Affairs (Passport helpline). Babrala has tied up



with Rural Shores organisation to deliver services to organisations such as Ministry of Corporate Affairs, National Skill Development Corporation & Ernst & Young etc.

#### Infrastructure Development Support

Infrastructure development programme is the key to rural development as it helps improve rural economy and quality of life. TCSRD since its inception has given importance to this programme as it is essential for the overall development of community. Projects like construction of brick pavement track, individual toilets and school boundary wall were undertaken at Babrala. 190 meter of track was constructed, adding to a total of 30245 meter laid so far. At Mithapur, 6 cattle trough and 5 cattle shed were constructed. 200 running meter of drainage channel was also constructed. Infrastructure support was also provided to 1 Primary school, 2 High schools and 4 ICDS centres.

## Aspire - Facilitate and empower local communities to seek functional education and skills to enable sustainable socio-economic development

#### Education

Education programmes at all locations have been taken based on the need of the area with a target of zero drop-out of students at all levels of education starting from pre-primary education. The focus has been to improve quality of education in schools, provide scholarship support to meritorious students, provide basic infrastructure support to schools imparting bridge courses and provide required coaching support to youth for their academic and professional growth.

During the reporting year, Education programmes like learning Enhancement Programme (LEP), Teacher training, scholarships, child learning and improvement, SNDT (Shreemati Nathibai Damodar Thackersey Women's University) center, IGNOU (Indira Gandhi National Open University) and National Open University, career resource center, Shala Pravesh Utsav, adult literacy classes, residential summer camp on spoken english and personality development were implemented, benefiting more than 7000 children across the three sites.

A separate initiative "Learning And Migration Programme (LAMP)" is being carried out in seven districts of Gujarat for the migratory population. The programme is run in partnership with American India Foundation which with the help of implementing NGOs is working closely with community and government schools to strengthen school governance system and quality of education. During the year the programme has reached out to more than 15000 children and has been able to strengthen the local governance system at block and village level.

#### **Vocational Skills**

TCSRD is running the skill development programme in Mithapur, Babrala, Haldia and Sriperumbudur to train unemployed youth and facilitate in their employment or entrepreneurship development.

The vocational skill training includes mobile repairing, computer repairing, electrical fittings, AC/Refrigerator repairing etc. There are specially designed training for women like tailoring, beautician course and nursing. TCSRD has also tied up with CSTI (L&T) for providing industrial trainings like bar bending, masonry, electrical fittings & carpentry. The training also included component of soft skills for overall personality development and entrepreneurship development









for developing entrepreneurship skills among youth. During the year 1929 youth were trained on different vocational skills which would help them get employment or start their own enterprises.

## Conserve - Maintain ecological balance and conserve natural resources through participatory approach for environmental sustainability

Nature conservation projects like whale shark conservation, coral reef restoration, mangrove plantation, biodiversity reserve plantation, marine turtle monitoring, community conserved wetland, monitoring of birdlife, eco clubs programme and organic waste converter continued in Mithapur. In Babrala & Haldia, TCSRD is also working with the eco clubs in schools.

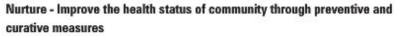
The whale shark project at Mithapur is currently in its third phase which focuses on habitat study, and research on migratory pattern and breeding biology of this fish. During the year, 101 whale sharks caught incidentally in the fishing



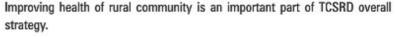
nets along the Saurashtra coast were rescued and released taking the total rescue figure since the inception of the campaign to 591. In Babrala, solar products have been introduced both for domestic uses and external for public use like street lights etc.

Land development programme and Water management and conservation like Mission Jal and drip irrigation were also carried out at Babrala, Mithapur and Haldia.

In Haldia, TCSRD continued promoting the energy efficient cook stoves and biogas plants.



#### **Health Care**



This year, 37844 patients were examined and treated at health care camps and OPD centre at Babrala. The most prevalent health problems at the OPD (Out Patient Department) were skin problem, anemia, water borne diseases and cold & cough. Heamoglobin and nutrition check-up was done for 313 young girls during the camp.



Eye camps were organised at Babrala, Haldia and Mithapur to address the issue of vision problems. During the camps 2465 people got eye check-up and were supported with spectacles and 292 patients were supported for cataract operation.

Awareness & Training programmes like capacity building of ASHA (Accredited Social Health Activist) & Anganwadi workers, AIDS Awareness, No Tobacco Day, Health awareness camps, Thalassemia awareness camps continued across three sites.

#### Nutrition - Women & Child Health

TCSRD in Babrala, has been facilitating government run health programme in the rural communities like Janani Suraksha Yojna especially targeting women and child health. Prime importance is given to vaccination of pregnant women, children (0-10) years and adolescent girls. To reduce Maternal & Infant Mortality Rate, Mobile Health services have been provided in 40 villages of Gunnour Tehsil. 12965 women and children got vaccination and 4399 patients were provided treatment at village level during the year.



In Mithapur, TCSRD identified mal-nourished children within 0-5 years by organising camps with the support of Mithapur Hospital. During the year screening of 451 children, 28 children were sent to Rajkot and Ahmedabad for their treatment.

In Haldia, TCSRD has been able to establish linkage with district Nutritional Rehabilitation Centre and the health department for treatment of the severely mal-nourished children. During the last year 53 severely mal-nourished children were sent to NRC with the support of the ICDS and ASHA workers.

#### Sanitation

TCSRD has partnered with WASMO for undertaking drinking water & sanitation activites under CADP project. The project aims to provide drinking water facilities to the rural households of Okhamandal with the help of village institutions. During the year, 176 units of RRWHS (Roof Rainwater Harvesting System) was facilitated with each household getting additional 10,000 litres of drinking water. 2775 households were provided pipeline connection of drinking water.

616 new sanitation units were facilitated in Mithapur and 7 villages were officially declared as Open Defecacy Free villages. In Babrala 46 and in Haldia 6 sanitation units were constructed.

#### **Relief Programmes**

Tata Chemicals continues its support to any disaster, which hits our country. This year relief support was provided to Nepal during earthquake disaster and Chennai during cyclone disaster.

For further information on projects and achievement please visit www.tcsrd.org; www.okhai.org

#### Volunteering

TCSRD provided ample opportunities for Tata Chemicals' employees and their family members to volunteer in various activities on social, environmental and developmental issues. TCL volunteers actively participated in the various activities organised under the banner of HOPE (Harnessing Opportunities of People's Empowerment), Tata Engage, Tata Pro-engage & relief work for people during disasters.

In Mithapur, TCSRD celebrated World Water Day, coaching on athletics, dance & music workshop, awareness on home safety measures, coaching on kabaddi & khokho, awareness on environmental issues, cleanliness drive in TB Hospital etc.

In Babrala, TCL volunteers participated in animal health camp & helped in animal OPD, spread awareness on environment issues, eye camp, mobilisation of skill development programme & education programme. In Haldia, TCSRD organised eye camps, blood donation camp, residential summer camp, AROHAN (Bal Utsav) and anaemia camps with the help of TCL volunteers & family members.



In Mumbai, TCL employees participated in various programmes organised for the school children, plantation drives and supporting charity institutions through the Standard Chartered Mumbai Marathon. In Sriperumbudur TCL employees participated in women empowerment programmes. In Pune, employees volunteered in organising programmes for primary school children.





# GRI Content Index 2015-16 In Accordance — Core

GENERAL STANDARD D	DISCLOSURE PAGE
	Strategy and Analysis
-1	02, 03, 04, 05
	Organisational Profile
-2	13, 14, 15
-3	07, 08, 09
4	10, 11
-5	Back cover
-6	01, 08
-7	10, 11
-8	08
-9	11
-10	75, 76
-11	55, 73
-12	46, 47
-13	19
-14	13
15	11
16	11
Identifie	d Material Aspects and Boundaries
17	11
-18	19
-19	17, 18
-20	18
-21	18
-22	19
-23	19
	Stakeholder Engagement
24	16
25	18
-26	16, 18
-27	18

	GENERAL STANDARD DISCLOSURE	PAGE	
	Report Profile		
G4-28			
G4-29		01	
G4-30		01	
G4-31			
G4-32		01, 64, 65, 66	
G4-33		01	
	Governance		
G4-34		23, 24, 25	
	Ethics and Integrity		
G4-56		25	

Specific Standard Disclosures			
MATERIAL ASPECT	DMA AND INDICATORS	PAGE	
Economic Performance	EC 1, EC 2, EC 3, EC 4	11, 27, 28, 29, 70	
Market Presence	EC6	70	
Indirect Economic Impacts	EC7	70	
Materials	EN1, EN2	73	
Energy	EN3, EN5	36,71	
Water	EN8, EN9, EN10	37, 38, 71	
Biodiversity	EN11, EN12, EN14	40, 41	
Emissions	EN15, EN16, EN17, EN18, EN20, EN21	36, 37, 72	
Effluents and Wastes	EN22, EN23, EN24, EN25, EN 26	38, 39, 72	
Product and Services	EN27	45, 46, 47	
Compliance	EN29	76	
Overall	EN31	73	
Supplier Environment Assessment	EN32, EN33	46, 47	
Environmental grievance mechanism	EN34	48, 49	
Employment	LA1, LA3	54	
Labor/Management Relations	LA4	55, 73	
Occupational Health and Safety	LA6, LA8	31, 32, 33, 74	
Training and Education	LA9, LA10, LA11	53	
Diversity and Equal Opportunity	LA12	74, 75	
Supplier Assessment for Labour Practices	LA14, LA15	47	





MATERIAL ASPECT	DMA AND INDICATORS	PAGE	
Customer Health and Safety	PR1, PR2	43, 44, 45, 77	
Product and Service Labelling	PR3, PR4, PR5	43, 44, 45, 48, 49, 77	
Marketing communications	PR6, PR7	45, 77	
Compliance	PR9	45, 46, 47, 48, 49	
Local Communities	S01, S02	58, 59, 60, 61, 62, 63	
Anti-corruption	S04, S05	76	
Public policy	S06		
Anti-competitive Behaviour	S07	76	
Compliance	S08	76	
Investment	HR1, HR2	76	
Non-discrimination	HR3	76	
Indigenous Rights	HR8	76	
Assessment	HR9	77	
Supplier Human Rights Assessment	HR10, HR11	77	
Human Rights Grievance Mechanisms	HR12	77	



Tata Chemicals Sustainability Report 2015-16



# Independent Assurance Statement



KPMG (Registered) Building No.10, 8th Floor, Tower-C DLF Cyber City, Phase - II Gurgaon - 122 002 (India) Telephone: + 91 124 307 4000 Fax: + 91 124 254 9101 internet: www.kpmg.com/n

### Independent Assurance Statement to Tata Chemicals Limited on their Sustainability Report for Financial Year 2015-16

To the Management of Tata Chemicals Limited, No. 24, Bombay House, Homi Mody Street, Fort, Mumbai 400001, India.

#### Introduction

Tata Chemicals Limited ("the Company" or "TCL") has requested KPMG in India ("KPMG" or "We") to provide an independent assurance on its Sustainability Report FY 2015-16.

The Company's management is responsible for content of the report, identification of the key issues, engagement with stakeholders and its presentation. KPMG's responsibility is to provide limited assurance on the report content as described in the scope of assurance.

#### Assurance Standards

We conducted the assurance in accordance with

- Limited Assurance requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagement (ISAE) 3000 (revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information o Under this standard, we have reviewed the information presented in the report against the principles of relevance, completeness, reliability, neutrality and understandability.
- Type 2, Moderate level assurance requirements of AA1000 Assurance Standard 2008 by AccountAbility.
   Under this standard, we have reviewed the nature and extent of adherence to the AA1000 AccountAbility Principles and the quality of publicity disclosed information as part of the Report limited to performance indicators/information required by the Reporting Criteria.

#### Scope and Boundary of Assurance

The report was based on the Global Reporting Initiative's (GRI) G4 Guidelines – 'In-accordance' core option and included data and information for the period of 01<sup>st</sup> April 2015 to 31<sup>st</sup> March, 2016 for TCL's Indian operations.

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

#### General Standard Disclosures

- . Identified Material Aspects and Boundaries (G4-17 to G4-23)
- · Stakeholder Engagement (G4-24 to G4-27)
- Report Profile (G4-28, G4-29, G4-30, G4-31, G4-32, G4-33)
- Governance (G4-34)
- . Ethics and Integrity (G4-56)

#### Specific Standard Disclosures

- Environment
  - Material (G4 EN-1), Energy (G4 EN-3, G4 EN-5), Water (G4 EN-8, G4 EN-10), Emissions (G4 EN-15, G4 EN-16, G4 EN-18
     G4 EN-20, G4 EN-21), Effluents and Waste (G4 EN-23)
- Social

Labour Practices and Decent Work

Employment (G4 LA-1), Occupational Health and Safety (G4 LA-6)

Human Rights

✓ Non Discrim nation (G4 HR-3)

Society

KPMS, an Indian perhapsing line, and a member firm of the KPMS restricts of independent member firms affiliated with KPMS international Cooperative (TKPMS International), a Swiss entity.





✓ Local Communities (G4 SO-1, G4 SO-2)

Product Responsibility

Customer Satisfaction (G4 PR-5)

#### Limitations in Conducting the Assurance

Our assurance process was subject to the following limitations:

- Varification of claims was limited to data and information presented in the Report for the period 01st April 2015 to 31st March 2018. Data and information in the Report outside this reporting period was not subject to verification.
- Any statement/ remarks/ comments indicating intention, opinion, belief and/ or aspiration by TCL, were excluded from the scope of assurance.
- Determine which, if any, recommendations should be implemented.
- The Assurance Statement does not include verification of financial performance indicators/information that was sourced from TCL's FY 2015-16 Annual Report,
- . Assurance visits were limited to the sites which are mentioned in the Assurance Procedure

#### Assurance Procedure

Our procedures include assessment of the risks of material misstatements of selected performance indicators and disclosures and underlying internal controls relevant to the information published in the Report. Our procedures were designed to gather sufficient and appropriate evidence to determine that the selected performance information is not materially missiated. We have undertaken the following:

- Evaluating the Report's content to ascertain the in accordance option as per Global Reporting Initiative's G4 Guidelines
- Testing on a sample basis, the evidence supporting the data and information
- Evaluating the appropriateness of the quantification methods and models used to arrive at the data presented in the Report,
- Verification of systems and procedures used for quantification, collation, and analysis of sustainability performance indicators included in the Report.
- Understanding the appropriateness of various assumptions, estimations and materiality thresholds used by TCL for data analysis.
- · Discussions with the personnel responsible for the evaluation of competence required to ensure reliability of data and information presented in the Report.
- Discussion on sustainability with senior executives at the different plant locations and at the corporate office to understand the risk and opportunities from sustainability context and the strategy TCL is following.
- Assessment of stakeholder engagement and materiality assessment process for determining material aspects. [Interaction with the senior management at Bombay House and various alle locations
- Assurance visits to following India operation sites mentioned below:

  - ✓ Mithapur, Gujarat
     ✓ Haldia, West Bengal
  - ✓ Babrala, Uttar Pradesh
- Visits to following international sites were also carried out to understand the preparedness for assurance, Observations from these sites do not form part of this statement.
  - Tata Chemicals North Americs (TCNA), Green River, Wyoming, USA Tata Chemicals Magadi (TCM), Lake Magadi, Kenya

  - Tata Chemicals Europe (TCE), Northwich, United Kingdom

The procedures performed in a limited assurance engagement are less in extent than for a reasonable assurance engagement. Appropriate documentary evidence was obtained to support our conclusions on the information and data verified. Where such documentary evidence could not be collected on account of confidential information our team verified the same at TCL's premise.

#### Conclusions

We have reviewed the Sustainability Report of Tafa Chemicals Limited. Based on our review and procedures performed as described above, nothing has come to our attention that causes us not to believe that:

 The Report is in accordance with the GRI G4 guidelines and covers TCL's sustainability performance covering its operations as mentioned in the scope.





 The standard disclosures and key performance indicators presented in the report by TCL, are fairly represented in line with the identified material issues.

#### Observations

Following is an except from the observations reported to the management of the Company. These do not, however, affect our conclusions regarding the Report stated above.

As per AA1000AS 2008 principles

#### Principle of Inclusivity

TCL demonstrates regular engagement with its key stakeholders, both internal and external, including shareholders, investors, customers, suppliers, government, employees and community/ society. TCL has planned to have a structured approach for engagement with stakeholders as part of expanding the scope of the report to include international operations.

#### · Principle of Materiality

TCL has a structured methodology for identification of material issues which includes feedback from both internal and external stakeholders. TCL had taken up materiality study in FY 2014-15 and plans to update the same (including its international locations). The future reports may disclose the approach and methodology of incorporating stakeholders' (internal and external) feadback in prioritizing material issues for the Company.

#### · Principle of Responsiveness

The Company has a systematic procedure to receive feedback from each of the stakeholder groups and respond/ initiate actions to the concerns raised. The key concerns by stakeholders and TCL's response to these concerns have been fairly represented in the report.

#### Independence

The assurance was conducted by a multidisciplinary team including professionals with suitable skills and experience in auditing environmental, social and economic information in fine with the requirements of ISAE 3000 (revised) and AA 1000 Assurance Standard 2008. Our work was performed in compliance with the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) as well as the assurance film (assurance provider) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentially and professional behavior. KPMC has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies ISQC 1 and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

#### Responsibilities

TCL is responsible for developing the Report contents: TCL is also responsible for identification of material sustainability issues, establishing and maintaining appropriate performance management and internal control systems and derivation of performance data reported. This statement is made solely to the Management of TCL in accordance with the terms of our engagement and as per scope of assurence.

Our work has been undertaken so that we might state to TCL those matters for which we have been engaged to state in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than TCL for our work, for this report, or for the conclusions expressed in this independent assurance statement. The assurance engagement is based on the assumption that the data and information provided to us is complete and true. We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this assurance statement. By reading this assurance statement, stakeholders acknowledge and agree to the limitations and disclaimers mentioned above.

Santhosh Jayaram

Partner Sustainability Services KPMG 21<sup>th</sup> February, 2017









#### **Economic**

Aspect - Economic Performance

EC 1				
PARAMETER	UNIT	2013-14	2014-15	2015-16
Direct Economic V	alue Generate	d		
a) Revenues	₹ Crores	8,882	10,278	10,808
Economic Value	Distributed			
a) Operating costs	₹ Crores	7,484	8,715	9,254
b) Employee wages and benefits - Employee Salaries	₹ Crores	267	330	370
Payments to provi	ders of capita	I		
Dividends to all shareholders	₹ Crores	255	318	255
Borrowing Cost & Foreign Exchange loss on borrowings (Net)	₹ Crores	185	187	194
d) Payments to government - Company taxes	₹ Crores	173	280	253
Minority & Associates	₹ Crores	-	-	-
e) Community investments	₹ Crores	14	22	30
Economic valu	e retained			
Direct economic value generated - Economic value distributed	₹ Crores	503	426	452

#### GRI-G4 Standard Disclosure 2015-16

#### Aspect - Economic Performance

#### PARAMETER

- EC 2: Financial Implications and other Risks and Opportunities for the Organisation's activities due to Climate Change
- EC 2: No financial implications and other risks & opportunities for organisation's activities due to climate change identified. One of our key operations Mithapur vulnerable. We are working with Tata Sustainability Group and Government of Gujarat for its mitigation and adaptation.
- EC 3: Coverage of the Organisation's Defined Benefit Plan Obligations
- EC 3: Total contribution to Provident fund and other funds was ₹ 26.87 crore.
- EC 3: Total contribution to group insurance scheme was ₹ 0.28 crores.
- EC 4: Financial Assistance Received From Government
- EC 4: Total sum of ₹ 2,977.41 crore was accrued towards subsidies for the fertiliser business

#### Aspect – Market Presence

- EC 5: Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation
- EC 5: Measurement not taken up
- EC 6: Proportion of senior management hired from the local community at significant locations of operation
- EC 6: No senior management employee is hired from the local community at significant locations of operation

#### Aspect - Indirect Economic Impacts

- EC 7: Development and impact of infrastructure investments and services supported
- EC 7: The total community investments done were ₹ 30.37 Crore (₹ 13.97 Crores as per Companies Act and ₹ 16.40 Crore outside Companies Act). For more information on this visit Page No. 47 of Annual Report.
- EC 8: Significant indirect economic impacts, including the extent of impacts
- EC 8: Measurement not taken up

#### Aspect – Procurement Practices

- EC 9: Proportion of spending on local suppliers at significant locations of operation
- EC 9: Measurement not taken up



Tata Chemicals Sustainability Report 2015-16

#### GRI-G4 Standard Disclosure 2015-16

#### Aspect - Materials

DESCRIPTION	UOM	2013-14	2014-15	2015-16
Limestone	MT	1,755,459	1,789,870	1,884,279
Raw Brine	KL	4,329,083	3,847,115	4,291,752
Solar salt (inclusive of purchased quantity if any)	MT	1,707,328	1,685,542	1,585,874
Bittem	MT	2,689,625	2,887,360	1,259,702
Natural Gas	Sm3	452,888,736	491,983,634	490,848,366
Sulphur	MT	67,419.804	76,569	57,309
Rock Phosphate	MT	175,607	196,520	168,435
Phos acid (purchased only)	MT	176,789	173,674	129,478
Ammonia	MT	92,437	105,628	84,682
Potassium Chloride (MOP)	MT	117,509	185,559	125,348
Packaging Material (including 50Kg WPP Bags)	MT	76,483,867	82,101,879	79,300,967
Lubricating Oil	KL	296	263	242
G4 EN 2* - Percentage of mater	ials used tha	t are recycled inp	ut materials	
% Limestone as recycled input	%	73.39	73.54	76.45
Sulphur Sludge	%	12.28	0.01	0.44
Total recycled input materials	%	0.12	0.11	0.11
Aspect – Energy				
G4 EN 3 - Energy Cons	umption Witl	nin the Organisati	on	
Total Energy from Fossil Fuel	TJ	35,952.84	32,633.31	31,647.20
Total Energy from Purchased Electricity (Non-renewable)	TJ	497.03	141.96	132.80
Energy from Non-renewable sources	TJ	36,449.87	32,775.27	31,780.00
Energy from Renewable sources	TJ	5.47	5.65	7.00
Total Energy Consumed	TJ	36,455.34	32,780.93	31,787.00
G4 EN 5	- Energy Inte	ensity		
Energy intensity within Organisation (from non-renewable sources)	TJ/MT of Production	0.008	0.007	0.007
Aspect – Water				
G4 EN 8 – Total W	ater Withdra	wal by Source		
Ground Water	KL	6,103,302	5,911,519	5,985,947
Total Surface water - Wetlands + lake + river + oceans	KL	95,411,330	87,555,626	85,394,363
Purchased Water	KL	982,412	940,826	772,872
↑↑Rainwater collected directly and stored by the organisation	KL	3,611	3,104	5,512
Total Water withdrawal	KL	102,500,654.80	94,411,074.42	92,158,694.28



G4 EN 10 - Percentage And Total Volume Of Water Recycled And Reused

KL

89,226,636

87.05

87,315,003

92.48

70,098,469

76.06

Water Recycled and Reused

% of total water recycled and reused



DESCRIPTION	UOM	2013-14	2014-15	2015-16
Aspect – Emissions				
G4 EN 15 – D	irect greenhouse gas (GHG	) emissions (Sco	pe 1)	
Total Scope-1 GHG Emission	MT of CO <sub>2</sub> e	4,995,109.14	4,970,038.38	3,035,981.39
G4 EN 16 – Energ	y indirect greenhouse gas (	GHG) emissions	(Scope 2)	
Total Scope-2 GHG Emission	MT of CO <sub>z</sub> e	462,260.25	281,332.39	30,343.71
G4 EN 17 – Other	indirect greenhouse gas ((	GHG) emissions (	Scope 3)	
Total Scope-3 GHG Emission	MT of CO <sub>2</sub> e	118,060.51	113,949.80	87,346.70
G4 EN 18	– greenhouse gas (GHG) ei	missions intensit	у	
Emission intensity for Scope-1,2,3		1.25	1.13	0.686
G4 EN 21 –	NOx, SOx, and Other signif	ficant Air Emissi	ons	
Total Particulate Matter	MT	3,900.60	2,123.99	1,842.50
Total SOx emission	MT	6,045.29	2,150.62	1,985.21
Total NOx emission	MT	4,105.18	832.26	1,356.73
Ammonia	MT	767.10	1,018.14	663.24
Fluorides	MT	49.39	54.83	40.16

# Aspect - Effluents and Waste

Total Effluent Discharge	KL	78,730,608.48	76,495,920.04	70,885,285.71
Ammonical nitrogen	MT	195.70	240.38	160.94
Total Suspended Solids	MT	10,223.62	15,040.89	16,546.95
Biological Oxygen Demand (BOD)	MT	22.91	23.48	29.44
Chemical Oxygen Demand (COD)	MT		8.55	10.37
Oil & Grease	MT		0.96	0.00
Phosphate	MT		0.28	0.10
Fluoride	MT		0.12	0.11

G4 EN 23 – 1	otal weight of waste by typ	e and disposal me	ethod	
Non-Hazardous Waste	MT	713,433.71	772,963.58	1,002,016.39
Hazardous Waste	MT	97.95	547.49	386.03
Biomedical Waste	MT	4.59	4.38	3.74
Other Waste	MT	34.61	3.11	13.80
Total Waste	MT	713,570.86	773,518.57	1,002,419.96

<sup>\*</sup> Reported for TCL, India only



Tata Chemicals Sustainability Report 2015-16

DESCRIPTION	UOM	2013-14	2014-15	2015-16
Aspect – Compliance				
G4 EN 29 – Monetary value of significant non-compliance with e			The state of the s	ns for
Monetary	INR	0.00	0.00	0.00
Non-Monetary	INR	0.00	0.00	0.00
Cases brought through Dispute Resolution mechanism	No.	0.00	0.00	0.00
G4 EN 31 – Total environmental pr	otection expe	nditures and inves	tments by type	
Total environmental protection expenditures and investments	INR	737,299,209	860,209,835	738,888,572
Production quantities	MT	4,452,687.27	4,742,391.48	4,594,191.34

# LA<sub>1</sub>

### Aspect - Employment

TCL Global GRI-G4 Specific Standard Disclosures 2015-16 (till March '16)

Total number and rates of new employee hires and employee turnover by age group, gender, and region

CATEGORY		SUB- CATEGORY	TOTAL EMPLOYEES	NEW HIRES	TURNOVER	TURNOVER RATE	CONTRACT EMPLOYEES	PERCENTAGE
Total			3102	338	307	9.90	5075	37.69%
Age (yrs)	India	29	677	224	84	12.41		% employees
		30 - 50	1195	113	69	5.77		under
		Over 50	1230	1	154	12.52		collective
Gender	India	Male	2937	306	293	9.98		bargaining
		Female	165	32	14	8.48		
Region	India		3102	338	307	9.90	5075	1169

<sup>\*</sup> Assumption 1USD = 66 INR, 1 USD = 101 KSH, 1 USD = 0.75 GBP





### GRI-G4 Standard Disclosures 2015-16

Aspect	GRI Code	Parameter	Unit	2013-14	2014-15	2015-16
	LA6	Type of injury and rates of injury, occupational diseas number of work related fatalities, by region and by ge		d absentee	ism, and to	tal
		Work Related Fatalities - TCL, India	No.	0	1	0
		Total Lost Time Injury (LWC) - TCL, India	No.	9	10	12
nety		Total Recordable Injury (LWC+RWC+MTC) - TCL, India	No.	23	16	27
Occupational Health and Safety		Total Recordable Injury Frequency Rate (TRIFR) - TCL, India	No./Mn Man-hrs	1.10	0.68	1.13
iii Leali		Lost Time Injury Frequency Rate (LTIFR) - TCL, India	No./Mn Man-hrs	0.43	0.43	0.50
nbanou		Occupational Disease Rate - TCL, India	No./Mn Man-hrs	0.00	0.00	0.00
9	,	Lost Day Rate - TCL, India	Lost days/Mn Man-hrs	24	277	35
	LA7	No. of workers with high incidence or high risk of diseases related to their occupation - TCL, India	No.	0	0	0
	LA8	Health and safety topics covered in formal agreements with trade unions	Where ever tra listed local and formal agreem	d global top	ics are part	3.70

# Aspect - Diversity and Equal Opportunity

#### LA12

Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity

	COMPOSITION OF GOVERNAN	E BODIES		
	<b>BOARD OF DIRECTORS</b>			
Canda		Age Group (Yrs)		
Gender	Under 30	30 – 50	Over 50	groups
Male	0	1	6	0
Female	0	0	1	0

#### **EXECUTIVE COMMITTEE**

Gender	Age Group (Yrs)				
	Under 30	30 - 50	Over 50	groups	
Male	0	2	11	0	
Female	0	0	2	0	

	BREAKDOWN OF EMPLOYEES	BY LEVEL			
	MANAGEMENT				
Gender		Age Group (Yrs)			
	Under 30	30 - 50	Over 50	groups	
Male	40	45	9	0	
Female	188	605	181	0	



Tata Chemicals Sustainability Report 2015-16

#### **OFFICER**

Gender		Minority		
	Under 30	30 - 50	Over 50	groups
Male	18	12	4	0
Female	431	369	131	0

### NON-MANAGEMENT

Gender		Age Group (Yrs)				
	Under 30	30 - 50	Over 50	groups		
Male	0	5	32	0		
Female	0	159	873	0		

# **BREAKDOWN OF EMPLOYEES BY FUNCTION**

#### **ENGINEERING**

Condon		Age Group (Yrs)		
Gender	Under 30	30 - 50	Over 50	groups
Male	12	2	6	0
Female	218	233	372	0

#### **SALES & MARKETING**

Gender		Age Group (Yrs)			
dender	Under 30	30 - 50	Over 50	groups	
Male	8	12	1	0	
Female	80	262	43	0	

#### **PRODUCTION**

Gender		Age Group (Yrs)			
dender	Under 30	30 - 50	Over 50	groups	
Male	22	2	4	0	
Female	265	253	463	0	

#### SCIENTIST

Gender		Age Group (Yrs)		
denuer	Under 30	30 - 50	Over 50	groups
Male	0	1	2	0
Female	0	16	2	0

### SUPPLY CHAIN, COMMERCIAL, PAQA

Gender		Age Group (Yrs)			
Gender	Under 30	30 - 50	Over 50	groups	
Male	4	1	4	0	
Female	137	122	28	0	

#### SUPPORT SERVICES

Gender	Age Group (Yrs)			Minority	
dender	Under 30	30 - 50	Over 50	groups	
Male	16	45	32	0	
Female	56	369	305	2	





#### Aspect - Anti-Corruption

GRI CODE	PARAMETER
004	Communication and training on anti-corruption policies and procedures
S04	100%
005	Confirmed incidents of corruption and actions taken
S05	None
	titive Behavior  Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes
	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes
S07	
	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes  None
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes  None
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes  None

#### Aspect - Investment

GRI CODE	PARAMETER
HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening
	100%
HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained
nnz	Approx 100% of employees were covered using various initiatives to reinforce the concept of human rights and workplace ethics such as TCOC awareness sessions, Ethics Awareness Session, KSS, etc.

#### Aspect - Non-discrimination

HR3	Total number of incidents of discrimination and corrective actions taken
rina	None

#### Aspect – Freedom of Association and Collective Bargaining

Operations and suppliers identified in which the right to exercise freedom of association and collective HR4 bargaining may be violated or at significant risk, and measures taken to support these rights None

#### Aspect - Child Labour

Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken HR5 to contribute to the effective abolition of child labor No operations

#### Aspect – Forced or Compulsory Labor

Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and HR6 measures to contribute to the elimination of all forms of forced or compulsory labor None

#### Aspect - Indigenous Rights

HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken
11110	None



	,	'n	1	
	,	,		

HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments
	All operations have been subject to human rights reviews or human rights impact assessments. 100%
Aspect – S	Supplier Human Rights Assessment
HR10	Percentage of new suppliers that were screened using human rights criteria
	All new suppliers were screened using human rights criteria. 100%
HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken
	Company follows Principles of the International Declaration of Human Rights. Its policies support, respect and protect the Human rights of its direct as well as indirect employees. The sustainability Policy addresses these aspects.
Aspect – I	luman Rights Grievance Mechanisms
HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms
	None

GRI CODE	PARAMETER				
PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement				
	Health and Safety impacts for all products are assessed for improvements				
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes				
	None				

PR3	Type of product and service information required by the organization's procedures for product and service information and labelling, and percentage of significant product and service categories subject to such information requirements				
	Not Applicable				
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes				
	None				

# **Aspect – Marketing Communications**

Sale of banned or disputed products				
None				
Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes				
None				

# **Aspect - Customer Privacy**

PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data
	None

# Aspect - Compliance

PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	
	None	







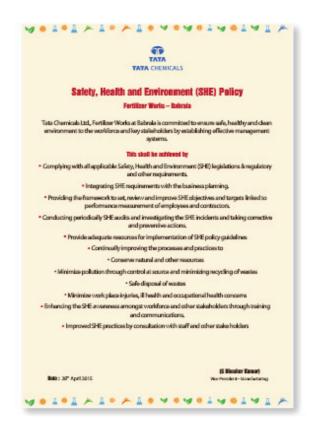


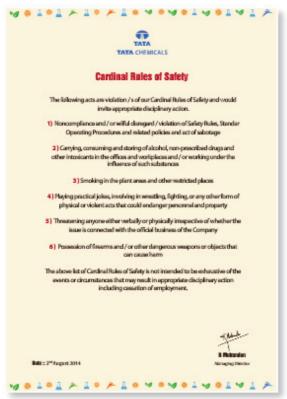


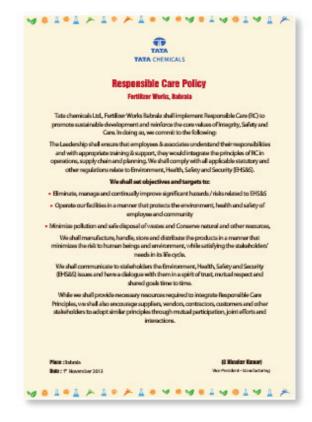






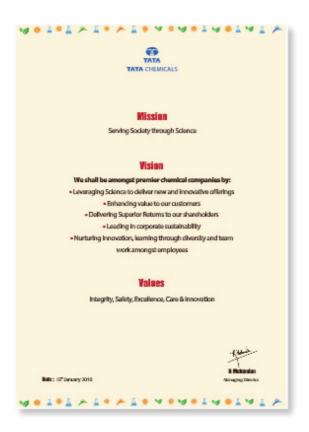




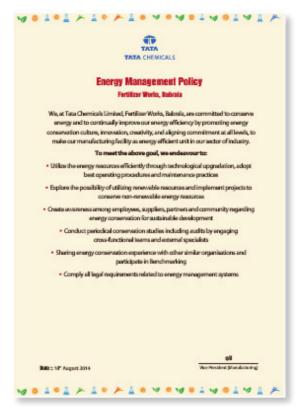




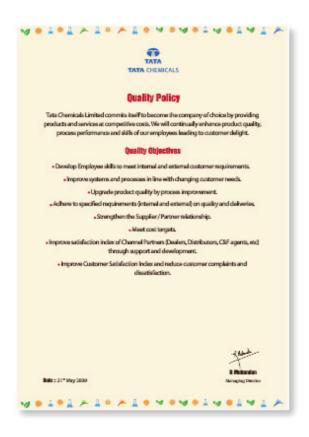




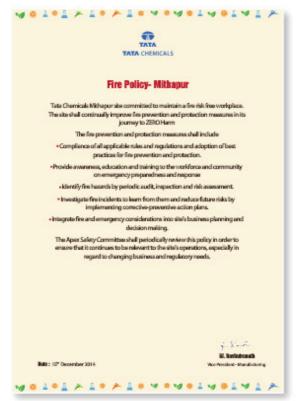
















# **Abbreviations**

ADAPT	Action for Downturn Alleviation of Profit in	CPB	Consumer Products Business	GHG GRI	Greenhouse Gas Global Reporting Initiative
AGM	Turbulent Times Annual General Body	CPCB	Central Pollution Control Board	GRIMCO	Gujarat Rural Industries
AIChE	Meeting American Institute of	CRDP	Customer Relationship Development Programme	HACCP	Marketing Cooperative Hazard Analysis Critical
Alone	Chemical Engineers	CRS	Crushed Refined Soda	HAZOP	Control Points Hazard and Operability
AMAI	Alkali Manufacturers'	СТС	Carbon Tetra Chloride	TIAZOI	Study
AMT	Association of India Achievement Motivation	CS	Corporate Sustainability	HDPE	High Density Poly Ethylene
AIVII	Training	CSI	Community/Customer Satisfaction Index	HIRA	Hazard Identification and
APC	Apex Policy Committee	CSPI	Corporate Sustainability	HOPE	Risk Analysis Harnessing Opportunities
AQC	Apex Quality Council		Protocol Index	4407400	for People Empowerment
ASCI	Advertising Standards Council of India	CSR	Corporate Social	IC	Innovation Centre
BCSD	Business Council for Sustainable Development	CSSGM	Responsibility Corporate Sustainability Steering Group Meeting	ICRISAT	International Crop Research Institute for Semi-Arid Tropics
BELP	Business Excellence Leaders Programme	DAP EGA	Di-Ammonium Phosphate Employee Growth Scheme	ICSI	Internal Customer Satisfaction Index
BP0	Business Process Outsourcing	EIA	Environmental Impact Assessment	IFA	International Fertiliser Industry Association
BSC	Balance Score Card	EPM	Enterprise Process model	IGNOU	Indira Gandhi National
BSC	British Safety Council	EMP	Environment Management	200	Open University
CAT	Centre for Agriculture & Technology	ERP	Programme Enterprise Resource	ILO	International Labour Organisation
CCEMC	Corporate Capital Expenditure Management	607445	Planning	ISO	International Organisation for Standardisation
	Committee	ESF	Effluent Solid Filtrate	ISI	Indian Standards Institute
CCS	Customer Care System	ETP EXCOM	Effluent Treatment Plant Executive Committee	JMC	Joint Management
CDM	Clean Development	JMC	Joint Management-Worker		Committee
CDP	Mechanism Carbon Disclosure Project	0.010	Health & Safety Committee	JV KAM	Joint Venture
CFA	Carry Forward Agency	FAC	First Aid Case	KSS	Key Account Management Knowledge Sharing
CFO	Chief Financial Officer	FAEA	Foundation for Academic	KOO	Sessions
CFT	Cross Functional Team	EAL	Excellence and Access	LCA	Life Cycle Assessment
CII	Confederation of Indian Industry	FAI	Fertiliser Association of India	LTIR	Lost Time Injury (Frequency) Rate
CO,e	Carbon Dioxide Equivalent	FICCI	Federation of Indian Chambers of Commerce	LTS	Long Term Settlement
CoP	Community of Practices		and Industry	LTSP	Long Term Strategic Plan
CoRE	Corporate Roundtable on Development of Strategies	FSSAI	Food Safety and Standards Authority of India	MBE	Lost Work Day Case Management of Business
	for the Environment and Sustainable Development	GET	Graduate Engineer Trainee	MD	Ethics Managing Director



83

MDP	Management Development	RCA	Root Cause Analysis	TOMS	Tata Quality Management
	Programme	RWC	Restricted Work Case		Services
MNP	Marine National Park	SA	Social Accountability	TRIR	Total Recordable Injury
MOP	Muriate of Potash	SAM	Soda Ash, Magadi	T005	(Frequency) Rate
MOU	Memorandum Of Understanding	SBU	Strategic Business Unit Strategy Deployment	TSDF	Treatment, Storage & Disposal Facility
MSDS	Material Safety Data Sheet	SDIVI	Mechanism	UK	United Kingdom
MT	Metric Tonne	SDP	Supervisor Development	UN	United Nations
MT	Management Trainee		Programme	UNFCCC	United Nations Framework
MTC	Medical Treatment Case	SDTT	Sir Dorabji Tata Trust		Convention on Climate Change
NABARD	National Bank for Agriculture & Rural	SHE	Safety, Health and Environment	UNGC	United Nations Global Compact
NFC	Development Neutral Filter Cake	SHES	Safety, Health, Environment and Sustainability	US	United States
NGO	Non-Government	SHG	Self Help Group	USA	United States of America
NGU	Organisation	SLA	Service Level Agreement	VDU	Visual Display Unit
NRM	Natural Resource	Sp.	Specific	VFD	Variable Frequency Drive
	Management	SPCB	State Pollution Control	VOC	Voice of Customer
OD	Ozone Depletion	01 00	Board	WASM0	
ODS	Ozone Depleting Substances	SPL	Standard Performance Level	WPRM	Management Organisation Weekly Performance
ODSE	Other Directly Supervised Employees	SPM	Suspended Particulate Matter	YOY	Review Meeting Year on Year
OHI	Occupational Health Index	SPOC	Single Point of Contact		
OHSAS	Occupational Health and Safety Advisory Services	SRM	Supply chain Relationship Management		
OPD	Out Patient Department	SRTT	Sir Ratan Tata Trust		
PIPE	Personal and Inter Personal Effectiveness	SS SSP	Support Services Single Super Phosphate		
PF	Pulmonary Function	SSERC	Sweet Sorghum Ethanol		
PFI	Population Foundation of India	STPP	Research Consortium Sodium Tri-Poly Phosphate		
PHE	Public Health Engineering	TBEM	Tata Business Excellence		
PIPE	Personal & Interpersonal Effectiveness	\$35,700000A	Model		
PMS	Performance Management System	TCDAV	Tata Chemicals Dayanand Anglo-Vedic		
POSH	Prevention Of Sexual	TCL	Tata Chemicals Limited		
. 0011	Harassment	TCOC	Tata Code of Conduct		
PPC	Portland Pozzolana Cement	TCSRD	Tata Chemicals Society for Rural Development		
PPE	Personal Protective Equipment	TERI	The Energy Research		
PSI	Professional Service Industries	TJ	Terra Joule		
QFD	Quality Function	TKN	Total K-jeldhal Nitrogen		
	Deployment	TKS	Tata Kisan Sansar		
RC	Responsible Care	TLP	Tata Leadership Practices		

#### [LA 5] [LA 6] [LA 7] [LA 8]





# **FEEDBACK FORM FOR SUSTAINABILITY REPORT 2015-16**

We hope you enjoyed the opportunity to learn about us and now we want to hear what you have to say. We value your suggestions to improve our performance.

1.	Meeting your info	Meeting your information requirements pertaining to Economic, Social and Environment:						
	Excellent	☐ Very Good	Good		Poor			
2.	Openness and tra	Openness and transparency in providing information about material issues in the report:						
	Excellent	Very Good	Good	Average	Poor			
3. Clarity and ease of understanding:								
	Excellent		Good	Average	Poor			
4.	Presentation, Des	ign and Layout:						
	Excellent	□ Very Good	Good	Average	Poor			
5.	Suggest any othe	r material issues and areas	s to be covered in the	next report		<del>-0'=0</del>		
	*****		* 5 % % % % %	N 107 NO 108 6450 78 N		100-100		
	9 <u>8 86 86 86 86 86</u>	<u> </u>			<u> </u>	3865		
	T <del>o 10 10 10 10 10</del>		<del>19-3-36-38-38-3</del>	<del></del>	- 10 - 05 - 10 - 10 - 10	<del>-0=0</del>		
Na	ame:	99 - 50 - <u>33 - 33 - 37 - 37 - 37 -</u>	<del>10 0                                  </del>	-10-01	<del></del>	10 -000		
De	esignation:							
Or	ganisation:		# 12 14 10 E E					
Со	ontact Address:		Version view NA Arma			100		
	0204 (b) #\$ 100	RE (N 148 L* 40 E) 55.	AN HANN MANNE MAN C	in the time of the second	\$1	30 1920		
Ple	ease email your fee	dback at sustainability@t	atachemicals.com or v	vrite to:				
He Tar Le	ta Chemicals Limit	Andheri Kurla Road	ns					
	r more information ww.tatachemicals.							

TATA CHEMICALS LIMITED

# Registered office and Organisation Headquarters: Tata Chemicals Limited Bombay House, 24, Homi Mody Street, Fort, Mumbai 400001 India Tel: +91 22 6665 8282

#### Websites:

www.tatasalt.com | www.tataswach.com www.tcsrd.org | www.okhai.org www.humantouchofchemistry.com

#### Social Media:

