

## COMMUNICATION ON PROGRESS- 2015

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**TATA SPONGE IRON LIMITED**  
**Bileipada, At/P.O.- Joda, Keonjhar, Orissa- 758034**

## Communication of progress 2015

Like in the past, Tata Sponge logged significant progress this year too. It has been recertification for ISO 14000.

It dropped the energy consumption by about 15 percent, and the progress is ON.

In the process, it earned e- certificates that can be traded with those who will have to buy them.

15 percent saving in coal means that much drop in CO<sub>2</sub> emission and also less fly ash generation.

It simultaneously raised its fly ash brick manufacture by over 50 percent,

Tata sponge also stepped up its efforts in discharge of its community responsibility, in the area of education, health, provision of drinking water facilities etc. It teamed with two renowned NGOs to bring in established model for maximum effectiveness of its community efforts. It has undertaken upon itself to build 1800 toilets in all the villages in its neighbourhood and build a piped drinking water supply to a 1000 odd families of a nearby village. It is promising to give employability oriented training in its factory to the local youths. It facilitated organising a health camp for a Delhi based organisation.

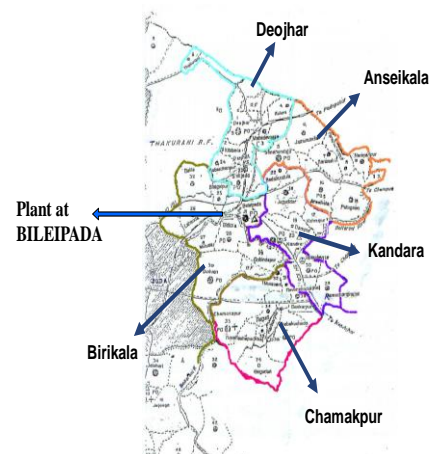


**Company's Profile:** Tata Sponge Iron Limited, is in the business of manufacturing sponge iron from its three rotary kilns and the current production capacity is 390,000 TPA of sponge iron. It also generates 26 MW of power from the waste heat recovered from the rotary kilns during sponge iron production. The primary raw materials for the manufacture of sponge iron are Iron Ore, Coal and Dolomite. The registered office-cum Works is in the north-western part of Odisha at Bileipada, in the district of Keonjhar, India.

**Overall local geo-ecological context and social environment**

The sponge iron plant is located in village Bileipada of Birikala Gram Panchayat under Joda Block of Keonjhar district Odisha. The entire area is predominantly a mining belt, inhabited by poor, illiterate, under nourished children and unemployed youths mostly belonging to the scheduled tribes. The primary source of their livelihood is from the wages earned as daily labourers in the surrounding mines, very low percentage of families practice agriculture as source of livelihood, inhabitants depend upon the minor forest produces, which is again in depleting trend.

According to the study conducted by Tata Sponge during 2014-15, reveals 69% of total population belongs to Schedule Caste. Only 2% of total population living in 5 surrounding Gram Panchayats use toilets. Most of the tribal children in the region are



scholastically backward as they don't get any support from their illiterate/ semiliterate parents at home in their studies. Also, in govt. schools the teachers are not well equipped to impart quality education for these students and in some cases to understand the dialect of the students. In this hilly region drinking water is also a perennial problem during pick summer. Superstition is another issue in this region.

**Coverage Area**

The company's corporate social responsibility interventions covers 38 Revenue villages of the 5 surrounding Gram Panchayats namely Anseikala, Birikala, Chamakpur, Deojhar and Kandara in Joda Block of Keonjhar district in Odisha covering approximately thirty thousand population of which 69% belongs to Schedule Tribe.

**Synopsis**

As a mark of company's value towards social equity and development for the surrounding community that forms an integral part of its business. An exclusive and dedicated Corporate Social Responsibility (CSR) department of the company identifies the need and aspiration of the local community, develops and implements developmental projects to bring everlasting changes in the lives of the surrounding villagers.

An overview of multifarious CSR initiatives undertaken during past half-decade are enumerated below confirms its commitment towards upliftment of downtrodden.

**Promotion of Education:**

With a deep conviction that Education is fundamental for upliftment of any society, Tata Sponge placed its primary focus on promoting education from pre-school to high school students by improving quality of the education and developing infrastructures.



**“Prarambh”:** Through this initiative, Tata Sponge aims to improve Preschool education targeting over 1200 children in the age group of 3-6 years reading in 71 Anganwadi centres in 5 surrounding Gram-Panchayats. In this process it coordinated training programmes with ICDS department for all 71 preschool teachers (Anganwadi workers) focused on child psychology, preschool teaching methodology, teaching & learning material development, interface techniques with the parents, etc.



Moreover, Tata Sponge has constructed seven model Anganwadi centres. These centres are quite specious to organize joyful activities for 40 enrolled students. It has a specious veranda for the students to take their MDM. Inside walls of the classroom, veranda, outside walls and boundary walls are painted based on preschool syllabus. The centre has attached office room, kitchen-cum-store and attached specious toilet & wash facility. These Anganwadi structures has become an eye-opener for the department to facilitate child learning process.

**“Gurudikshya”:** With two-pronged objectives to improve educational standard among the students by enhancing the teaching skills among the teachers project “Gurudikshya” come into being. Through this intervention, Tata Sponge reaching out over five thousand students reading in class VI & VII in 50 schools in eight blocks of tribal dominated Keonjhar district in Odisha. Through this project, Tata Sponge engaged an education resource agency namely American India Foundation Trust to build the capacity of the teachers to teach mathematics, science and geography using computer. Within a year of intervention gradual progress has been observed among the students, but a substantial changes has been witnessed in teaching methodology and confidence level among the teachers.

In this process, Tata Sponge has provided laptops, projector and projector screen in fourteen periphery schools of its plant, where as in remaining 36 schools Govt. has provided the desktop computers.



**“Vidyarthi”:** Tata Sponge in its endeavour emphasizes sharpening teaching skills of the teachers to enrich quality of education in this tribal belt through promotion of participatory, interactive and innovative classroom teaching & learning. Rounds of training programmes were organized for the teachers from 25 primary schools on “Interactive Learning”, “Developing Language Skills among Yong Children”, “Discovery – Primary Science Made easy”, etc. This intervention would benefit more than six-thousand students pursuing their education in these primary schools.

Tata Sponge firmly believes and promotes children’s rights to participation and had organized series of consultations with the students in five High Schools and selected primary schools situated in all its five surrounding Gram-panchayats. In this process, children’s thoughts and voice were captured for promoting education. The consultation process has also captured the concern and suggestions of the teachers, parents, elected representatives to improve quality of education in the region. All these process forms the basis of education programme initiatives. Round the year, Tata Sponge organizes various programmes on “Swachh Bhart Abhiyan”, School enrolment, Anti Child Labour day, Child rights based on UNCRC, etc. to ensure overall development of the students. Through these programmes efforts have been made to bring the students, teachers, parents and elected representatives to a common platform to address issues related to education, child labour, children’s participation and protection issues, so that an inclusive education process can be ensured.



#### **“Rights to Education” An initiative for Tribal Children in Munda sahi of Lahanda village:**

Munda sahi is a hamlet of Lahanda revenue village, which is inhabited by Munda tribes, surrounded by hills and forests, which get separated from the main revenue village by the busy National Highway and Railway line. This aspect of inaccessibility is the primary factor to debar the children from pursuing education in the school situated in the main village. the absence of education coupled with lack of awareness among the parents the innocent children loiter around the village and forest whole day.

With this backdrop to promote education, few volunteers were mobilized and a Non-Formal Education centre was started during 2008 with an enrolment of 26 tribal students. Same time, regular interface was made with the education department to set up a school to address the issue permanently. As a



In



these concentrated efforts enabled this school as a model school in the region.

result of efforts of villagers and Tata Sponge a primary school came into existence in the year 2009. Over the years the enrolment of children have increase to 153. Two students from this school have appeared in scholarship examinations, there was no evidence of school dropout so far.

Govt. has provided four teachers, two class rooms, kitchen and toilet, whereas, the company has provided dining hall, toilets, an activity hall and constructed an approach road to the school. Also, Vidya Shakti Niyias - a NGO runs by the spouse of Tata Sponge officials has supported a teacher and motivated the parents to ensure regular attendance of their children in the school. All



Table below gives a glimpse on few infrastructure that has been developed to promote education in the region;

Facilities Provided	Up to Dec'15
Construction of Anganwadi centres	07
New School building	14
Building renovation	14
Kitchen-cum-Dinning unit	09
Dual bench-desk	1256
Boundary wall	18
Toilets	04
Repair of Anganwadi centre	06
Water filters	15
Almirah/ Book shelves	21



Realizing poverty is one of the major stumble block to pursue education for some meritorious students, Tata Sponge has provided financial support to few students as listed in below table.

Sponsorship/ Financial Aid	Level	Beneficiary
Financial support to meritorious SC/ST students pursuing professional courses, through FAEA	National	1
Financial support to ST students for degree engineering course	State	4
Scholarship for poor students in Pry. Schools	District	5

**Preventive Healthcare & Sanitation:** Despite of several schemes & efforts are being made by both Central and State government, still the health conditions in this tribal region has not improved to the desired level due to the ignorance and superstition among the people. Therefore, Tata Sponge has been undertaking various activities are as follows;

**“Swabiman”:** A study undertaken by Tata Sponge, reveals only 2% of total population living in five surrounding Gram-Panchayats use toilets.



To address this issue under “Swabhiman” Tata Sponge has aimed to construct more than twelve hundred toilets to make open defecation free to five surrounding villages of the Company. During this period for 55 families construction of toilets & bathroom are in

progress, which would be functional soon.

- Health checkup camps were held on regular basis focusing on both curative and preventive measures.
- In collaboration with Health and ICDS departments various programs i.e. immunization, pulse polio drops, mother & childcare, nutrition supplements initiatives were conducted in regular intervals.



- Orientation of adolescent girls on reproductive healthcare were organized in the Anganwadi centers with the support of Anganwadi worker, ANM and volunteers from Tata Sponge.
- Aligning to “Swachh Bharat Abhiyan” appealed by Honorable Prime Minister Shri. Narendra Modi, Tata Sponge had organized series of cleanliness and awareness drives covering more than 6000 students in periphery schools along with their parents, teachers and elected representatives. Also, the drive has expanded to more than five villages and Company Township and nearby market areas.
- To address Malaria one of the major issue in the region, 15,000 mosquito nets were provided in the operational villages and fogging activities were undertaken along with awareness building among the villages on both preventive and curative aspects.
- Cancer and Tumor operation cases were supported in case of poor and marginalized families.
- Periodic health checkup camps and awareness initiatives were undertaken in the schools for early detection of disabilities.
- Promoted voluntary family planning with emphasis on “Small Family is Happy Family”. The men and women in the reproductive age group were encouraged to adopt safe contraceptive methods.
- World AIDS Day observed annually within the plant, in periphery villages, market areas, railway sidings and brick kilns through employees CSR volunteering initiatives. In this process the awareness made to demonstrate responsible behavior and addressed the myths and misconceptions related to HIV & AIDS.

**Drinking water:** Around 70% of total population belongs to ST and SC communities who live in scattered hamlets on undulated village topography, where non-availability of drinking water is major issue, especially during pick summer. Keeping in view this acute crisis in this region, 45 number of open wells, 105 hand pumps and 18 bore wells were made. Moreover, company maintains these hand-pumps to ensure round the year water availability in these villages. Moreover, during pick summer drinking water provided to few villages situated on hilly upland.



#### Livelihood Promotion:

Considering Joda is predominantly a mining area, where agriculture receives least priority, The Company has made conscious effort to promote agriculture as major source of livelihood. In four Gram-panchayats, four Farmers SHGs were formed and provided Power Tillers with financial support from bank subsidy, Tata Sponge and people's contribution. These groups were empowered with the technical and group management knowledge and supports. Now these groups not only cultivating their own land same time supporting other farmers and encouraging farming in the locality.



- Women SHGs were formed and organized training programs on Agarwati, Soap, Phenyl making, Duckery and Paper packet preparation. These groups were trained on procuring raw materials, marketing the products and maintaining the bank accounts. Now these groups have more than Rs. 1.5 lakhs savings. Also, these empowered women have been playing active role in their village development process.



- Girls from underprivileged families were sent for Nursing / Tailoring trainings.
- Vegetable seeds and saplings were provided to encourage vegetable farming. Most evidently in many villages the women groups have been providing vegetables to the MDM (Mid-Day-Meal) schemes in the schools to add nutritional value to the food consumed by the students.



#### Promotion of Sports & Culture:

- Village youth groups were provided Valley ball & Net, football, Cricket sets and other sports materials along with coaching facility. Also, support extended to organize inter panchayats tournaments within Joda block.
- More than 69% percent population belongs to Scheduled Tribe in the region, therefore various local tribal festivals and cultural activities were supported during this period to promote rich tribal culture in the region.



#### Affirmative Action:

The Company promotes inclusion of the underprivileged SC/STs community through its Affirmative Action Programme under the 4 Es.

- Two meritorious students from poor SC/ ST families were provided with financial assistances, now they are pursuing their 4<sup>th</sup> year Diploma in Engineering and 4 year Degree Engineering.
- Scholarship provided to 5 students from poor Scheduled Caste families pursuing their education in Sarswati Sishu Mandir at Beleipada
- Stipend given to 10 ITI Apprentice Trainees from Scheduled Caste families.



#### Environment Sustainability:

- In a village Sankarpur with the participation of the villagers two thousand mango saplings were planted, with two pronged objectives i.e. environment sustainability and livelihood generation for the villagers.
- Series of plantation programmes were organized on the community land, school campuses and colonies, involving the school children, youths and TSIL staff.





- During this period awareness programmes were organized for the school children, rural youths and PRI members on plantation of trees, use of biodegradable and recyclable products.

**Rural Development Projects:**

- Solar lights handed over to respective village communities at 42 locations, which are used as street lights, lighting at Panchayat bhawan and other community locations, these solar lights were managed by the community representatives and respective institutions.

- Bus rest shed, a bridge on sona river, stadium, roads were constructed at various locations by Tata sponge.





Principles	Company’s Policy	Key Results & Measurement
Human Rights		
<b>Principle – 1</b> Business should support and respect the protection of internationally proclaimed human rights  (HR 1,2,3,4)	<p>We review our HR policies periodically to ensure that human rights are not violated.</p> <p>✓ We ensure that contractors do not employ child labourers in our premises and it is part of our TCoC.</p> <p>✓ Factories Act &amp; Rules, Contractor Labour (R&amp;A) Act &amp; Rules are strictly adhered in terms of working hours and welfare &amp; benefits.</p> <p>✓ TATA Code of Conduct</p> <p>✓ Human rights issues</p> <p>✓ We ensure that all contract labourers get minimum wages.</p>	<p>✓ We have standard operating procedures, contractors produce list of persons with their age/identity proof with photograph. After verification from HR department gate passes issued to enter to work premises. IT system (Face Identification for attendance) in place not to allow any proxy attendance. Security personnel check the gate passes on regular basis to ensure that no delicacy and no child labour entering to work premises. Daily monitoring of the report is in place.</p> <p>✓ In terms of working hour we are abide by Factories Act &amp; Rules, Contractor Labour (R&amp;A) Act &amp; Rules. Each shift runs for eight hours. In terms of welfare amenities we have provided subsidized canteen facility to company employees and free canteen facility to contract workers. We are maintaining both the canteen as per factories act and ISO norms and conditions. All the employees are provided restroom inside the work premises. Contractor workers are provided with rest male and female rest shed and male and female bath house inside the plant premises. To take care of health and hygiene of the employee and contractor labourers regular health check-up is conducted by the Management. A first Aid facility is available inside the work premises.</p> <p>✓ A copy of Tata Code of Conduct has been given to each employees working in our company. To create awareness, classes are being taken on regular basis to reinforce its clauses.</p> <p>Every department is being advised to discuss clauses of TCoC in their monthly departmental meeting.</p> <p>✓ We have a HR committee functioning properly which reviews human right issues on regular basis. In every coordination meeting human rights issues are taken care.</p> <p>✓ To ensure that all contract labourers are getting minimum wages, we verify monthly wages register duly sign by their contractor and workers. Monthly wages to the labourers are disbursed in the presence</p>





		of company’s authorised representatives to ensure that there is no violation. A survey is being conducted every year to know that the contract workers are getting right wages in right time.
<p><b>Principle – 2</b> Make sure they are not complacent to human rights abuses  (HR 2,3)</p>	<p>We emphasize on bipartite / collaborative / consultative decision making to address HR issues proactively to avoid conflict with the union and Associates.</p> <ul style="list-style-type: none"><li>✓ Company’s business relations.</li><li>✓ Various bipartite foras representing Management &amp; Associates</li><li>✓ Statutory Committees</li><li>✓ Due diligence on human rights like safe working condition and on the job safety</li></ul>	<ul style="list-style-type: none"><li>✓ Before engaging any agencies in our business we thoroughly verify their ethical practices, including compliance to all statutory regulations.</li><li>✓ We have various Bipartite Committee representing Management and Associates to resolve various issues and bring out development. We have committee like JCCM, JDCs, Welfare committee, safety committee, canteen management committee. Town development committee, grievance redressal committee, Prevention of Sexual Harassment Committee, house allotment committee, medical committee and provident fund committee.</li><li>✓ We have statutory committees like safety, canteen and health that review and resolves various grievances related to statutory.</li><li>✓ To ensure safe working condition, we have process identify hazards on regular basis and assuring corrective and preventive actions to the identified hazards. Imparting regular safety training to the work force. Periodical inspection of workplace is followed by line Management.</li></ul>



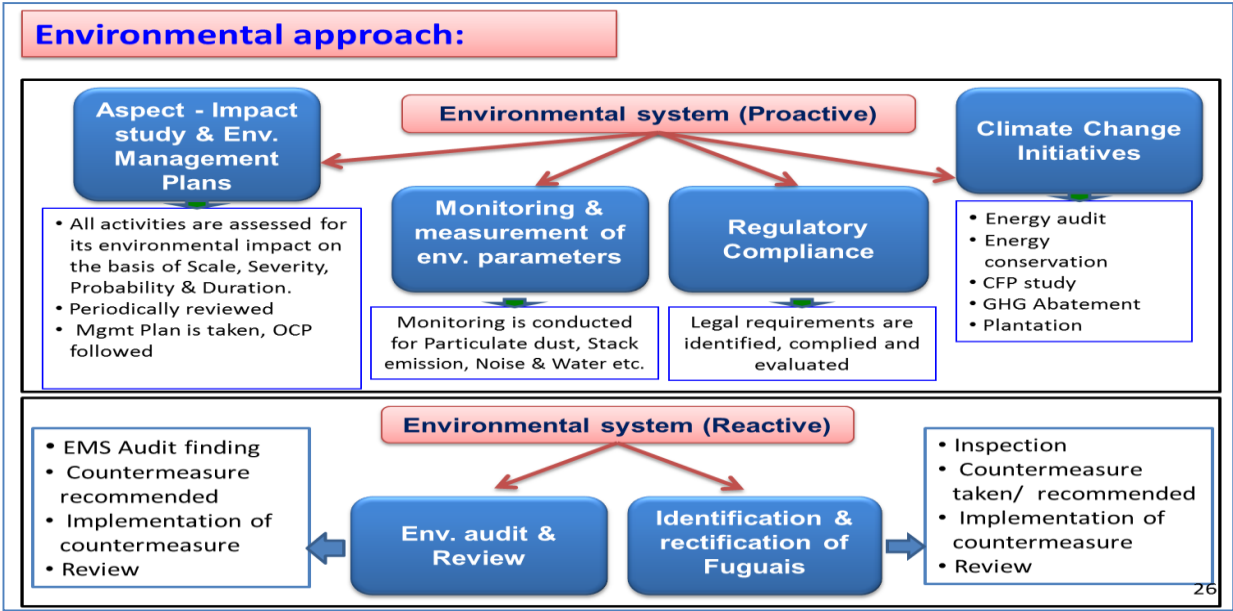
Principles	Company’s Policy	Key Results & Measurement
<b>Labour Standards</b>		
<b>Principle – 3</b> Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	All statutory labour laws are implemented and we have a process to review the statutory compliance by a core committee constituted by the Management.	<ul style="list-style-type: none"><li>✓ Focus is given to settle common issues of Associates through collective bargaining forum being represented by equal representative from Management &amp; Associates. Several bipartite agreements are arrived at through this kind of forum.</li><li>✓ In the process of participative management council equal participation of Management &amp; Trade union representatives are ensured by the management.</li></ul>
<b>Principle – 4</b> The elimination of all forms of forced and compulsory labour  (HR 5, 7LA 3, 4)	No forced & compulsory / under aged labour are deployed. This is being ensured through various check post like Security/Safety/HR.	<ul style="list-style-type: none"><li>✓ Engagement of contract labourer / indirect employment is in line with contract labour regulation &amp; abolition Act. There is no violation or any forced / compulsory entry of labour force inside the factory premises.</li><li>✓ Interstate migrant (CL) are given equal opportunity on human rights including remuneration.</li></ul>
<b>Principle – 5</b> The effective abolition of child labour  (HR 6)	All contractors / suppliers are informed not to deploy child labour / under aged personnel. Our standing order and TCoC also restricts engagement of child labour / under aged labour.	<ul style="list-style-type: none"><li>✓ Our hiring policy reflects transparency and focus on equal opportunity by Employer.</li><li>✓ Company ensures engagement of labour over 18 years of age including in its township.</li><li>✓ In process of abolition of child labour in plant and township, we ensure school drop out for readmission in the school through CS activity.</li></ul>
<b>Principle – 6</b> Eliminate discrimination in respect of employment and occupation.  (HR 4, LA 10,11)	We honestly follow TATA Code of Conduct, also practice role of equal opportunity employer.	<ul style="list-style-type: none"><li>✓ Company’s hiring process evidences that no discrimination prevails on account of age, sex, locality, caste, creed, religion.</li><li>✓ Company doesn’t discourage for employment of physically challenged people.</li></ul>

**Principle - 7**  
**Business at Tata Sponge - supporting a precautionary approach to environmental challenges**

Tata Sponge Iron Ltd. addresses its productivity in harmony with nature. Manufacturing of sponge iron mainly contribute dust pollution to the environment. Due to handling and processing of bulk dry solids such as iron ore, coal and sponge iron, particulate matter is generated. To combat with this dust pollution, Tata Sponge has taken several measures in place. By these, company is fully compliant with all the regulatory norms and conditions laid by SPCB, CPCB and MoEF. Safety, Health & Environment (SHE) is identified as



major Key Business Process at the company and is formally documented in SHEQ apex manual. With defined Roles & Objectives and Operational Control Procedures, entire process is mapped. The key performance indices (KPI) and key activity indices (KAI) are reviewed periodically at different levels for effectiveness and efficiency of the process. The best industry practices for environment protections are deployed during plant operations and also during project activity.



Level-1 Process of EMS at Tata Sponge is as given below.

Supplier	Input	Process Steps	Output	Customer
Government agencies	Env. acts & rules, consent conditions, ISO guide lines etc.	<div>Env. Impact Assessment</div>	Clean work atmosphere	<ul style="list-style-type: none"><li>• Employees</li><li>• surrounding community</li><li>• Government</li><li>• Suppliers</li></ul>
Tata group	Tata values, Group policies, TCoC	<div>Environment Policy</div>	Compliance to environmental regulations	
Works & Support Departments	Pollution caused and Waste generation, Identification of significant aspects	<div>Formulation of EMP</div>	Control of air, water & noise pollution	
		<div>Implement / Execute</div>	Compliance to certification stipulations	
		<div>Monitor &amp; Measure</div>		

Tata Sponge Iron Ltd. is the first coal based Sponge Iron plant in the country to have achieved ISO-14001:1996 version certification on 28<sup>th</sup> March 2003. Subsequently the company achieved certification of ISO-14001:2004 version in the year 2006 and continuing with its latest verion.

Environmental Policy of Tata Sponge iron Limited is as produced below:

ENVIRONMENTAL POLICY

Tata Sponge Iron Limited is committed to sustainable and continual improvement in its activities pertaining to the handling of raw materials, production & marketing of sponge iron and power; so as to achieve ever improving legal, environmental and all other compliance standard and provide clean environment to its employees and the society.

To this end, it will

- Identify the impact of its activities upon the environment.
- Prepare an annual environmental improvement plan and implement.
- Communicate the policy, plan and performance to persons working for or on behalf of the organization and also make it available to public as and what is applicable.

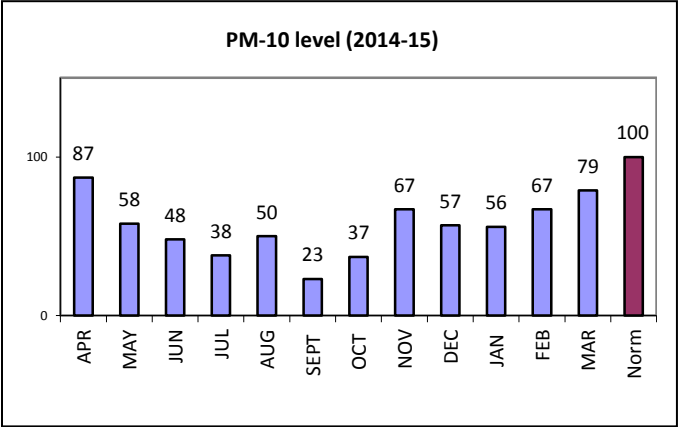
(D.P Deshpande)  
Managing Director

1st May, 2013

Highlights of Environmental Performance as a support to Business by ‘Going Green’

Power generation from waste heat :

Tata Sponge is generating 26 MW power from waste heat, which is emanating during production of Sponge Iron. After utilizing this power for it captive use (about 7MW), the excess power (19 MW) is exported. This power generation replaces fossil fuel based power generation and thereby reducing the emission of GHG, SOx, NOx etc.). Power generation from waste heat during last several years is shown here.



Reduction in Energy Consumption:

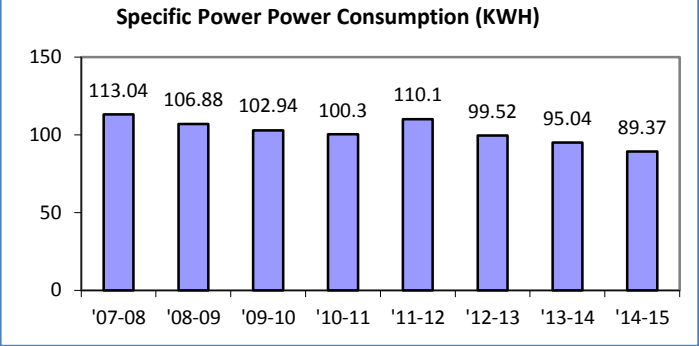
TSIL’s drive to reduce energy consumption thro’ various initiatives such as introduction of VVVF drives, improvement in power factor, replacing high capacity drives by low capacity ones, replacing higher watt incandescent electric bulbs with low watt energy efficient CFL bulbs, bringing awareness among users to consume less power and the overall focus on conserving power has resulted in a decreasing trend in specific



consumption of power in DRI produced. Specific power consumption per ton of sponge iron production for last several years is shown.

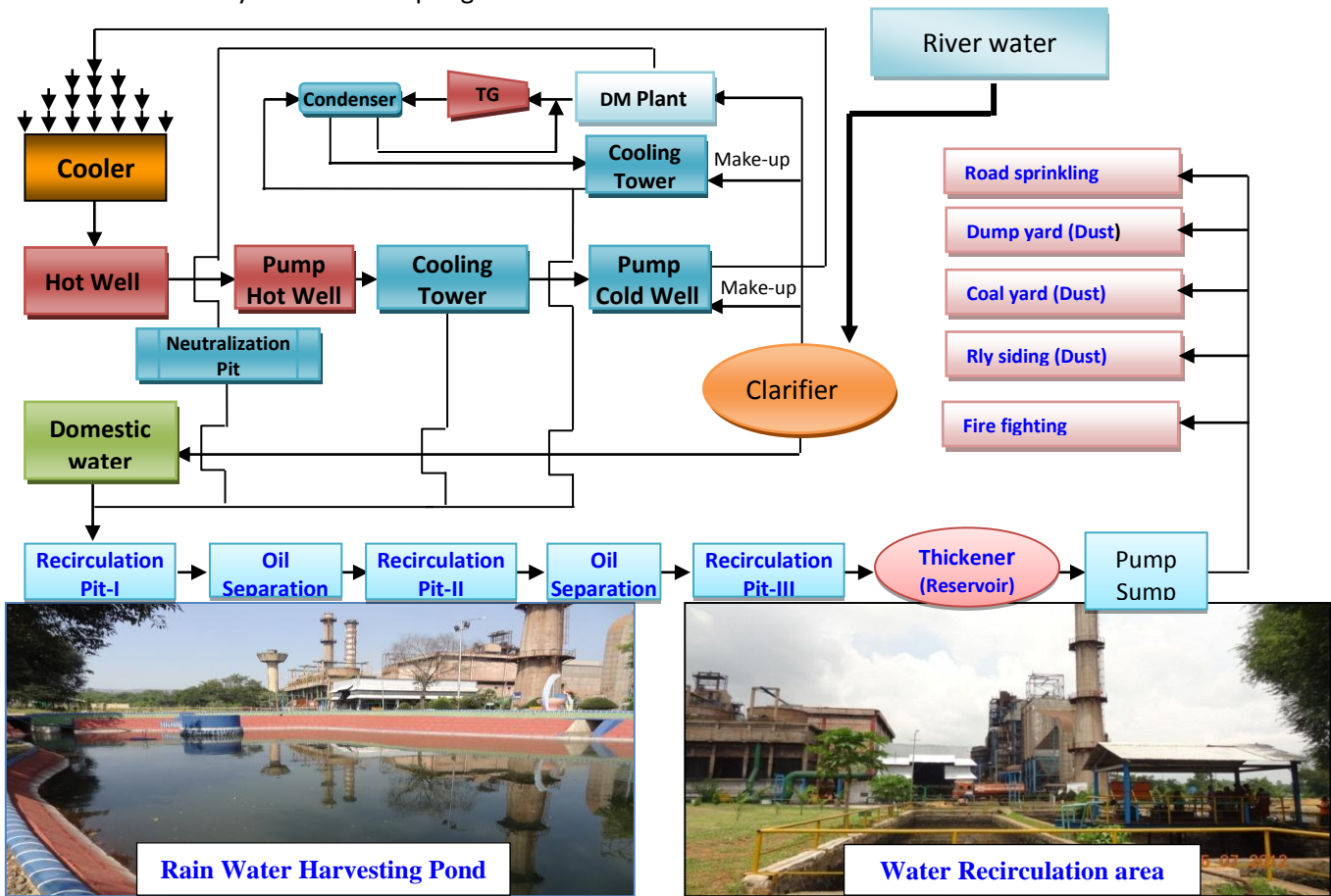
Assessment of Carbon Foot Print :

Towards the perspective of Climate change, every year Tata Sponge assess its Carbon Foot Print for taking necessary actions to reduce its GHG emission. Initially company made an agreement with Ernst & Young to ascertain its Carbon Foot Print, later an independent study was conducted by Tata Quality Management Services (TQMS). From 2009 onwards company is conducting its carbon foot print study by its own climate change champions, who are specially trained by TQMS. The standard followed is the GHG protocol convened by the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). TSIL is in the process of implementing various abatement levers on the basis of assessment for reduction of CO2 emission.



Water Conservation:

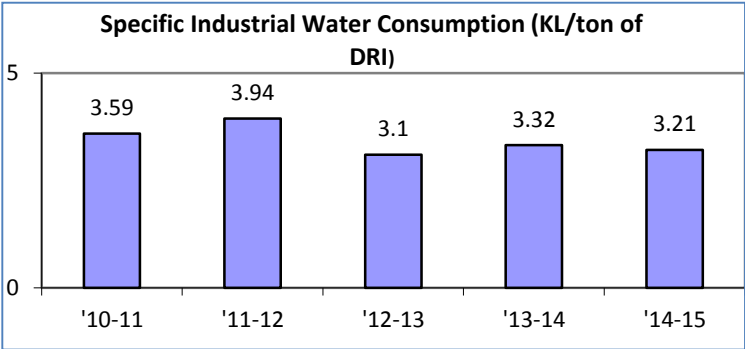
Tata Sponge does not discharge any water to outside its premises. Cooling water is re-circulated in the system. Entire waste water generated is used for dust suppression on roads, raw material as well as solid waste dump yards and gardening purpose after primary treatment. Given below is a schematic of waste water treatment system at Tata Sponge.



Main facilities used for control Water Pollution & Water Discharge are:

- Cooling towers and recirculation pumps
- Neutralization pit and pumps for recirculation
- Settling pit and pumps for recirculation with electronic float system for auto recirculation.
- Oil separation pits at recirculation pond

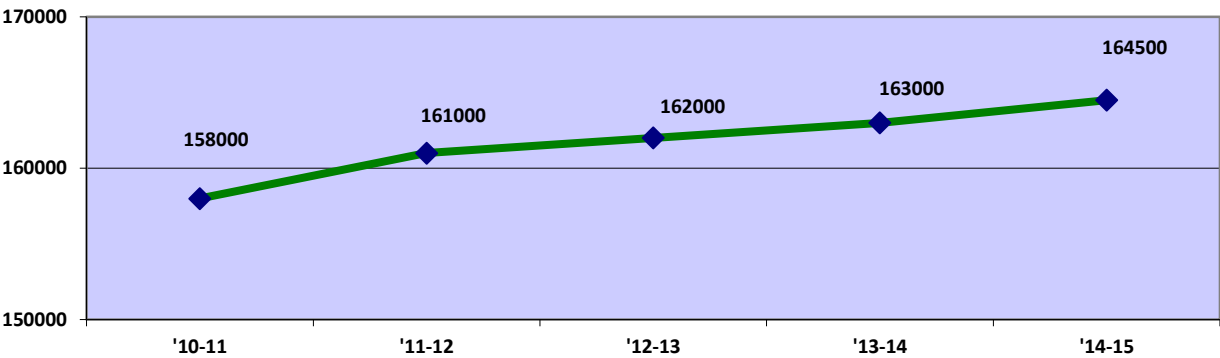
Company is doing water harvesting for ground water percolation as well as water utilization. In addition to the previous water harvesting arrangements, TSIL has added one more huge water harvesting facility within its premises during 2012-13 at an expense of INR 70 lacs, after conducting the resistivity survey and feasibility study of the area. The water consumption (in KL/MT of DRI produced) is as shown.



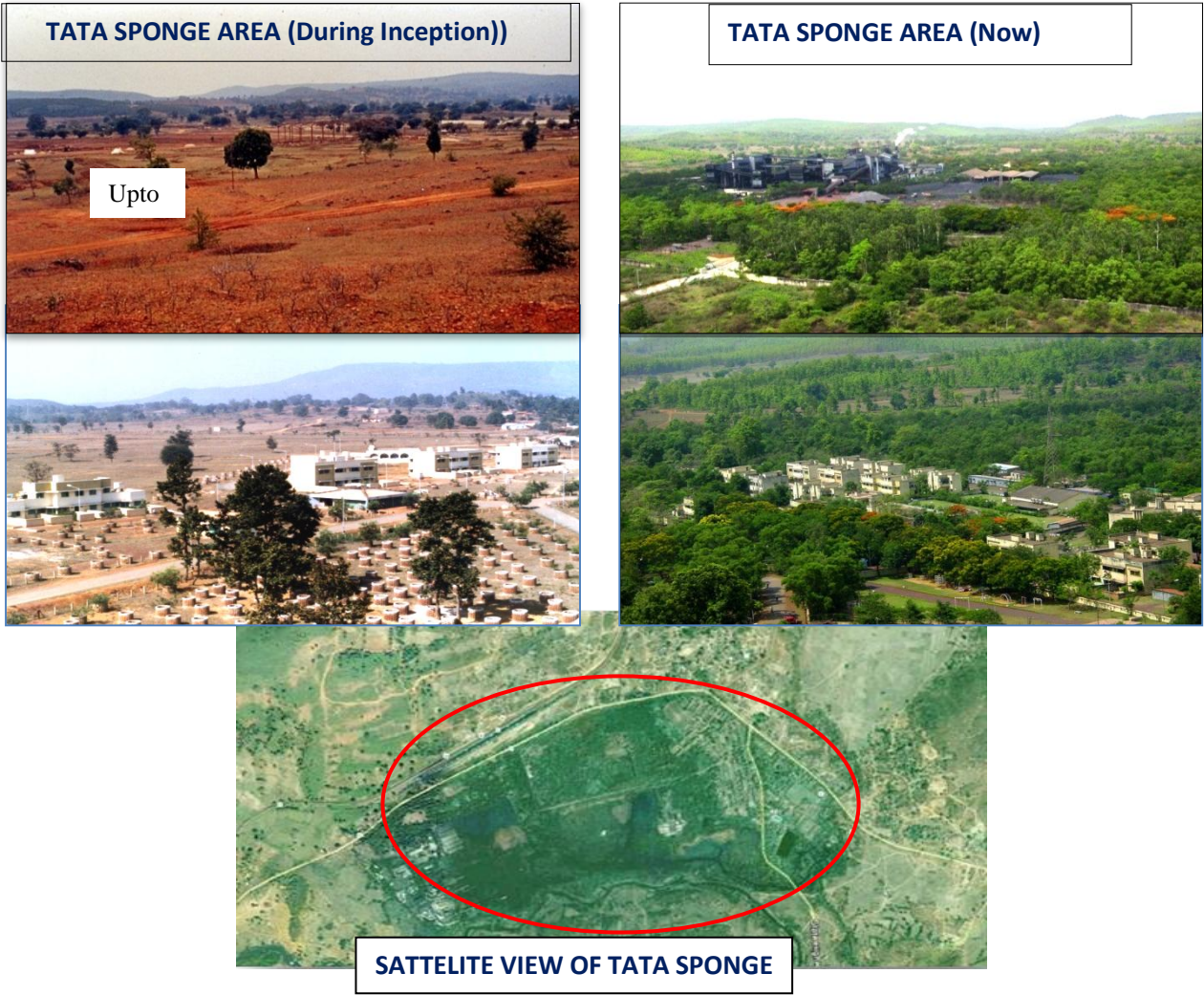
**Principle - 8**  
**Initiatives undertaken to promote greater environmental responsibility**

**Afforestation / Tree Plantation:**

In last several years Tata Sponge has transformed a completely barren land into a green patch and eco zone. The company has planted more than 1,64,500 trees since its inception with survival rate of about 94%. Plantation of trees remained as one of TSIL’s major priorities since its inception. Given below is a graphical representation of the year-wise plantation (Cumulative) taken up by Tata Sponge over the years.







Waste utilization:

**Use of Waste heat :** Tata Sponge is generating 26 MW power from waste heat, which is emanating during production of Sponge Iron. After utilizing this power for it captive use, the excess power is exported. By generation power through waste heat, lot of coal (Non-renewable natural resource) is saved which are calculated as follows:



of

Year	Total power generation (KWH)	Coal saved (MT) KWH x 0.9 /1000
2009-10	181392700	163254
2010-10	191370600	172233
2011-12	134395300	120956
2012-13	178868700	160982
2013-14	195711800	176140
2014-15	173015900	155714

**Use of ESP dust:** The ESP waste generated from the DRI plants is used for manufacturing bricks through FAL-G technology. No heat is required for manufacturing of these bricks, thus conserving natural resources such as coal and soil. ESP dust is also used during concreting of roads, platforms and filling of low lying areas.

**Use of Char:** The non-magnetic char generated as a solid waste from the DRI plants at TSIL is sold to the private entrepreneurs for their industrial use (Cement, AFBC, sponge iron etc.).

**Used Oil & Batteries:** TSIL does not produce any hazardous waste except used oil and batteries. All the used oil is collected from different user points and sold to authorized dealers (approved by Central Pollution Control Board-CPCB) for further processing at their end. The old batteries are sold to authorized dealers through buy back system.

**Use of Canteen wastes:** Food and vegetable wastes collected from canteens are used for generation of Biogas, which is used as fuel for cooking purpose.

### Principle - 9

#### Development and diffusion of environmentally friendly technology - Use of cleaner & greener processes:

- **Ensured 'Zero' discharge of waste water, 100 % waste water is re circulated**

Company does not discharge any waste water to outside its premises. Cooling water is recirculated in the system. Other wastewater is used for road cleaning, coal yard dust suppression etc. after primary treatment.



- **Water Harvesting for ground water percolation and utilisation**

Company is doing water harvesting for capturing rain water for its utilization and also for ground water percolation. In addition to the existing water harvesting, TSIL has added one more huge rainwater harvesting facility within its premises. Also roof rain water is collected in a big tank and water is utilized for cooling purpose.



- **High capacity semi-automatic brick manufacturing machine capable to convert 100 % ESP dust (Waste) for making bricks.**

Company initially installed 4 brick manufacturing machines with a capacity of 8000 bricks/ shift/machine to convert its ESP generated Fly ash into useful bricks. Afterwards company has installed one semi-



automatic brick manufacturing machine, which has a capacity to produce 4500 bricks /hour of operation. Bricks are made through cold pressing process where no heat/fire is required, thus conserving natural resource (coal) and soil. Company is capable to convert 100 % fly ash generation to manufacture Fly ash bricks. During 2014-15, total production was over 10.3 million bricks



▪ **Online AAQ & Stack monitoring:**

Company has 03 numbers of online AAQ monitoring stations and 03 numbers of online stack monitoring stations. Out of 03 AAQ stations, one station is mounted on mobile van. The parameters are displayed at the main gate on a giant display board for the information of the public.



▪ **Generating Biogas from canteen Wastes and utilizing for energy utilization at canteen:**

Company has installed 2 nos of Biogas units within its premises. Food and vegetable waste of Canteen and guest houses are utilized to generate gas and subsequently for generation of heat during preparation food. By adopting this process, waste as well as its foul smell at the dump area is eliminated, also the waste of biogas plant is used as good fertilizer to maintain gardens and lawns

▪ **Procured heavy duty fogging Canon for suppression of Fugitive dust:**

Company has procured one water cannon for suppression of fugitive dust of localized area. The canon is movable as well as truck mountable for its quick movement. The waste water is used through this cannons to suppress air borne dust up to distance of 50 mts.



- **Telescopic unloading spouts** have been provided with pressurized water jacketing system at the discharge point of bunkers to control fugitive dust during unloading of char.





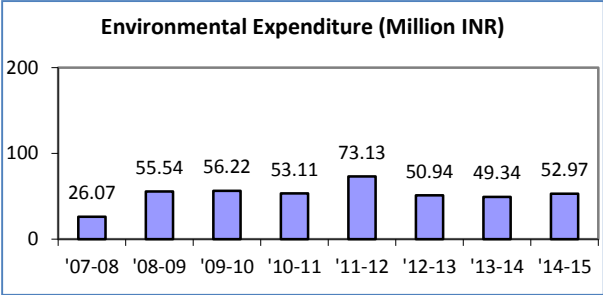
- **Chemical dust suppression system** is used to reduce the dust in running circuits. Viscous chemical is sprayed over the running belt to entrap the flying dust and bring it back on the belt. A significant reduction in the fugitive dust is achieved by this process.
- For cleaning of roads, the **road vacuum-cleaning machine** is used. The machine sucks the road dust and controls air pollution. Besides, the machine is also used for vacuum cleaning of the deposited dust from the floors of raw material circuits and finished product circuits using flexible pipe assembly



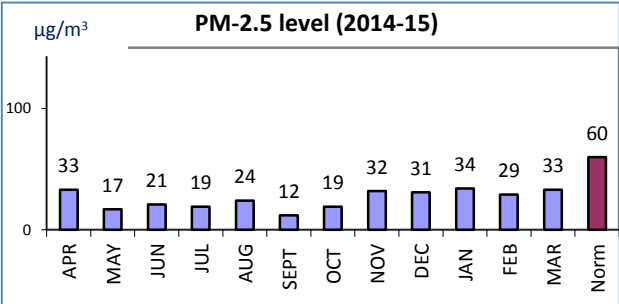
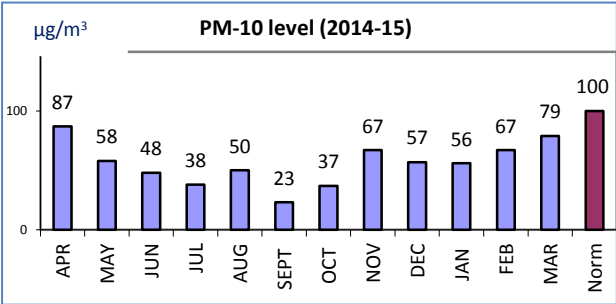
In addition, TSIL has undertaken the following development activities over the years.

- **Reduction in CO<sub>2</sub> emission:** Various energy saving initiatives have been taken to reduce coal consumption, power consumption etc. Company is calculating its carbon fort print every year taking target to take necessary actions to reduce Greenhouse gas emission.
- **Use of alternate energy :** TSIL has provided rural electrification in the nearby villages by installing solar powered panels.

The **total expenditure** incurred on account of installation and maintenance of pollution control equipments over last few years is shown.



Shown below the avg. **ambient dust level** at plant area in  $\mu\text{g}/\text{m}^3$ :



**Policies addressing TSIL environment:**

TSIL has following policies in place as a part of its commitment to the environment:

- ✚ Environmental policy
- ✚ Climate change policy
- ✚ CSR policy
- ✚ TPM policy ( addressing environment) and
- ✚ Vision & Mission of the company

**Principle – 10****ANTI-CORRUPTION**

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

Consistent with Tata Group purpose and in line with Tata Code of Conduct, the company has a set of defined Values (TSIL) as follows:

**T** – *Trust & respect*      **S** – *Social equity*      **I** – *Integrity*      **L** – *Loyalty*

and also an Organisational culture (SEWA) as follows:

**S** - *Safety*

**E** – *Environment friendly operations*

**W** – *Welfare of employees & surrounding community*

**A** – *Adaptability to changing scenario*

**Corporate Governance:** In order to enhance shareholders' value and promote national interest, the company is committed to good corporate governance and to achieve the objectives of this, the company follows the principles of transparency, disclosure, fairness, independent supervision, healthy competition, equal opportunity in employment and compliance to all relevant laws, rules and regulation.

**Adoption of Code of Conduct:** Keeping in view the Values (TSIL), Organisational Culture (SEWA) and requirements of good corporate governance, the company has laid down a code which is called Tata Code of Conduct (TCoC). It is mandatory for the company and all employees to follow the TCoC.

**Coverage of Code of Conduct:** All employees of Tata Sponge have signed the "Tata Code of Conduct". This has also been extended to suppliers and customers along with the contract for compliance in respect of relevant clauses. To re-enforce company's firm resolve towards fostering an ethical environment, employees are encouraged to raise ethical issues through Whistle Blower Policy, a formal mechanism for all employees to make protective disclosures about unethical behavior, actual or suspected fraud or violation of the company's Code of Conduct. The Ethics Counsellor personally addresses employees, local contractors, suppliers & customers to support them in upholding ethical transactions.

We shall inform our financial stakeholders about relevant aspects of our business in a fair, accurate and timely manner and shall disclose such information in accordance with applicable law and agreements.

We shall keep accurate records of our activities and shall adhere to disclosure standards in accordance with applicable law and industry standards.

We shall ensure that any gifts or hospitality received from, or given to, our suppliers or service providers comply with our company's gift and hospitality policy.

**Under section I (regarding engagement with Govt. Agencies)** state that engage with government and regulators in a constructive manner in order to promote good governance. We conduct our interactions with them in a manner consistent with our Code. We do not impede, obstruct or improperly influence the conclusions of, or affect the integrity or availability of data or documents for any government review or investigation.

Regarding political non-alignment states that the company shall act in accordance with the constitution and governance systems of the countries in which we operate. We do not seek to influence the outcome of public elections, nor to undermine or alter any system of government. We do not support any specific political party or candidate for political office. Our conduct must preclude any activity that could be

interpreted as mutual dependence/favour with any political body or person, and we do not offer or give any company funds or property or other resources as donations to any specific political party, candidate or campaign. Any financial contributions considered by our Board of Directors in order to strengthen democratic forces through a clean electoral process shall be extended only through the Progressive Electoral Trust in India.

**Reporting of Concerns:** The code gives freedom to all stakeholders to raise concerns regarding unethical behavior and actual or suspected violation of Code. During the year 2013, total of 7 (Seven) concerns were received from employees all are of same nature are under investigation.

**The Whistle Blower Policy (WBP)** gives freedom to all the employees to raise concerns regarding actual / potential violation of Code of Conduct at the same time ensuring full protection to Whistle blowers against any form of victimization or harassment/reprimand. A high level Whistle Blower Protection Committee is in place.

**Awareness sessions** were held by the Ethics Counsellor on TCoC / WBP with the following stakeholders:

- Employees - 8 sessions (covering over 223 employees)

Additionally the Ethics Counsellor also addressed employees in 8 Dialogue sessions covering over 450 employees.

**Organisation Structure for ensuring Ethics:** The Company has an Ethics Counsellor and a team of 5 Ethics Coordinators which also includes a female Ethics Coordinator. The company also has a Committee for dealing with the cases of sexual harassment at workplace