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From the desk of our
Chairman & Managing Director

We continue to work hard towards our commitment of nation building in a responsible and inclusive way, even in this volatile economic environment

Dear Readers,

Steel plays a significant role in our country’s development process. India, being in a growth phase, key areas such as infrastructure development have come to the limelight making the outlook for steel in India positive in the medium and long term. JSW Steel’s road to sustainability begins with the fundamental purpose of our existence as a steel company to supply world-class steel products and contribute to India’s ever-increasing infrastructure requirements, while delivering long-term stakeholder value.

2011 has been a challenging year for most of the world. India too has suffered resulting in a GDP growth rate of 5.3%, the lowest in last nine years. In this volatile economic environment, it is imperative that businesses have a clear strategy, underpinned by a set of core strengths.

This year, we could increase our overall sales by 28% to 7.8 million tonnes. While exports grew by 61%, the domestic sales grew by 23% increasing our overall domestic market share to 9% and our contribution to India’s incremental demand growth of 4.5 million tonnes in 2011-12 at 26%. With acquisition of Ispat Industries Limited, our total steel-making capacity has increased to 14.3 MTPA.

We continue to work hard towards our commitment of nation building in a responsible and inclusive way, irrespective of economic or geo-political issues. Over the years we have developed tremendous resilience to external changes. Growing in the midst of a crisis, whether domestic or global, has become our mantra. Our goal is to strengthen the JSW Steel brand, making it one of the most sought after steel brands in the world. We aim to achieve this by becoming a one-stop solution for all steel grades required by global and Indian customers. Our focus, hard work and innovativeness enables us to surpass our competitors in any venture we undertake.
2011 saw a mining ban in the state of Karnataka. Consequently, we have faced significant shortages in the supply of good quality domestic iron ore. As the crisis of iron ore intensified in September 2011, pending commencement of e-auctions, we continued to operate our furnaces at lower capacity. The operational efficiency of our company improved significantly in the latter half of the year as we started receiving better quality of iron ore through e-auctions.

We will continue to innovate and strategise to retain our growth trajectory and also inculcating latest technology and sustainable practices. It is imperative for us to effectively transition from an era of ‘rapid growth’ to an era of ‘sustainable growth’. We have always believed in inclusive growth to facilitate the creation of an empowered society. As a responsible corporate, we have strived to embed principles of sustainable development across our operations and processes.

I am pleased with the progress made by our company this year and commend the employees of JSW Steel along with our valued stakeholders for their continued efforts and support. Our employees provide the foundation for our company, from which we draw inspiration and continuously strive to improve our strengths.

Sajjan Jindal
Chairman & Managing Director
JSW Steel
India is committed to investing USD 1.5 trillion in world-class infrastructure within a decade. Concurrently, JSW Steel resolved to create adequate manufacturing capacity, comprising of every steel grade needed by a growing nation, with the objective to create a secured and self-reliant India.

**Our Vision**
Global recognition for size, culture and quality, while nurturing nature and society

**Our Mission**
Supporting the nation's growth in Power and Steel with Speed and Innovation

**Our Core Values**
- Innovate and evolve
- Drive with excellence
- Building leaders
- Adopt youth policies
- Challenging the challenges
Our Sustainability Policy

- Be responsible and sensitive to environment by ensuring that gaseous and liquid effluents, if any, are superior or equal in quality compared to inputs and treat solid wastes to make them value added products.
- Be compliant “plus” with the norms and upgrade technology to address Climate Change issues proactively. Assist supply-chain partners to achieve similar goals.
- Continuous improvement in process efficiency to optimize usage of natural resources. Encourage recycle, reuse and reduce.
- Proactively support the community through social programmes in sanitation, health, education, women empowerment, skill building, livelihood enrichment, water conservation, youth development, etc.
- Ensuring financial growth of the enterprise along with improvement of human, social and natural wealth.
- Encourage all its employees and their families in volunteering programme to enable them participate in building the SOCIETY.
- Ensure safety and health of “All” engaged in operations, projects, logistics and other activities across all locations.
JSW Steel, the flagship company of the JSW Group, is an integrated steel company and the largest private sector steel manufacturer in India, in terms of galvanizing and colour coating production capacity. Incorporated in 1994, we are a seven billion USD company by Revenues as on 31 March 2012 and also the largest exporter of galvanized products with presence in over 100 countries across five continents. We manufacture flat and long products like hot rolled coils, cold rolled coils, galvanised products, auto grade / white goods grade CRCA steel, bars and rods.

With acquisition of majority stake in Ispat Industries Limited, we have expanded our steelmaking capacity from 11 MTPA to 14.3 MTPA with a portfolio of 23% of value added flat products spread across six locations – Vijayanagar, Salem, Vasind, Tarapur, Dolvi and Kalmeshwar. After the merger with JSW Ispat Steel, we will become the largest Indian Steel Company by installed capacity. Further, our tie-up with Japan’s JFE Steel Corp will help in technological advancement of our steel-making operations.

The Vijayanagar works in Karnataka have an existing capacity of 10 MTPA, comprising 8.5 MTPA of flat steel products (including 0.8 MTPA of value added flat products) and 1.5 MTPA of long products. We have installed state-of-the-art manufacturing facilities at the cold rolling mill of Vijayanagar works to improve our automation efficiency. Salem works in Tamil Nadu has an operating capacity of 1.0 MTPA of long products while Vasind and Tarapur units in Maharashtra have a capacity of 1.0 MTPA of value added flat products.

We have established a strong presence in the global value-added steel segment through the acquisition of a steel mill in US. We have also formed a joint venture for setting up a steel plant in Georgia. Our tie-up with JFE Steel Corp, Japan, enables us to manufacture high grade automotive steel. In addition to steel making factories, we have also acquired mining assets in Chile, USA and Mozambique.
This report covers the sustainability performance of our domestic operations as listed below.

JSW Steel Limited

Upstream Operations

Vijayanagar Works
SALEM WORKS

Downstream Operations

TARAPUR WORKS
VASIND WORKS

Hot Rolled
• HR Coil
• HR Plates & Sheet
• HRPO
• HRSPO

Cold Rolled
• CR Coil & Sheet
• Automobile
• White good
• Cold rolled formed section

Galvanised
• Galvanised Corrugated Sheet
• GP Sheet & Coil
• Automobile
• Boiler & pressure vessel
• Ship building
• Railways
• Transmission towers

Pre-painted Galvanised
• PPGI Coil
• PPGI Sheet
• PPGI Profile
• Marine containers
• Coal and mining
• General and heavy engineering

Jindal Vishwas
• GC Sheets
• Roofing

Products

• Roofing

Applications

• Cladding

• General engineering & fabrication
• Packaging
• Drums / barrels
• Furniture

• Furniture
• Automotives

• Oil & petro chemicals
• Marine containers
• Coal and mining
• General and heavy engineering

• Oil & petro chemicals
• Marine containers
• Coal and mining
• General and heavy engineering

• Oil & petro chemicals
• Marine containers
• Coal and mining
• General and heavy engineering

• Oil & petro chemicals
• Marine containers
• Coal and mining
• General and heavy engineering

• Oil & petro chemicals
• Marine containers
• Coal and mining
• General and heavy engineering
Message from the
Chief Sustainability Officer

At JSW Steel, we have built our capacity, acquired new technologies and worked on developing innovative solutions to grow our business in a sustainable manner.

Dear Readers,

We proudly present JSW Steel’s sixth corporate sustainability report for the financial year 2011-12. This report is based on the Global Reporting Initiative’s G3.1 Guidelines on Sustainability Reporting and is aligned to sustainability performance indicators specified by the World Steel Association, 10 principles of United Nations Global Compact and India’s National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business.

Over the years, at JSW Steel, we have built our capacity, acquired new technologies and worked on developing innovative solutions to grow our business in a sustainable manner. This growth has been ably supported by a robust governance mechanism that ensures ethical and transparent business transactions. We are in the process of creating a Board committee on Business Responsibility to give further direction and to drive our sustainability agenda. We continue to work with the World Steel Association as a signatory to the Association’s sustainability charter, along with 50 other global steel makers to meet the demand for steel in a safe, sustainable way; valuing the interdependence of environmental, social and economic aspects in all decision-making.

JSW Steel’s operations are becoming complex and interconnected, thereby increasing the importance of actively managing risks and opportunities related to inherent environmental and social issues, in tandem with stakeholder concerns and expectations. We have developed a process of analyzing a wide gamut of issues to arrive at those which are most important to our operations and accordingly develop an action plan to address them. The material issues identified in the last year viz. climate change and energy, intellectual capital management, health and safety, product responsibility and innovation, environmental excellence and community development, still prevail in 2011-12 as well. The mining ban instituted in the State of Karnataka in 2011-12 resulted in a significant shortage in supply of good quality iron ore affecting...
our operational efficiencies. This led to inclusion of ‘availability of raw material’ as an additional item in our material issue register for 2011-12.

At JSW Steel, we have designed our systems and processes to follow the principles of environmental stewardship. We have deployed a comprehensive and robust framework to effectively manage our GHG emissions and water utilization. Our concerted efforts towards water conservation include regular assessments of water balance along with appropriate recycle and reuse of effluents. These efforts have brought the process water consumption of the upstream operations at JSW Steel to a very respectable value of 3.14 cu.m per tonne of crude steel produced. We have also initiated water harvesting projects within our watershed areas to identify how we can enable our various operating units to be water neutral in the near future.

We have jointly worked with external agencies to create an IT-based framework to manage our GHG emissions and also identify and work on high emission areas. We are also in dialogue with the IITB-Monash academy to sponsor research in identifying most suitable and applicable methods of carbon sequestration. Further, we are also looking at various avenues to mitigate the issues related to global warming through technologies that can reduce CO₂ generation and improve energy efficiency. We have set up an energy monitoring cell at Vijayanagar to trace aspects of energy generation and consumption based on the premise of “what is recorded can be corrected”.

In 2011-12, there were 11 fatalities at JSW Steel. We deeply regret this loss of life. We investigate every incident that results in, or has the potential to cause, damage to our workforce or assets. This year, we have selected safety and health at workplace as one of the special focus areas in Vijayanagar. We have engaged external experts to build a world-class safety culture and introduce best-in-class safety practices and standards at Vijayanagar. We hope that our efforts towards managing safety and health at the workplace will improve our performance in the years to come.

The JSW group believes in the policy of ‘People First’ and the objective of our activities is to make a tangible difference in the lives of the people in the areas surrounding our operations. As a responsible organization, we are committed to investing a minimum of 1.5 percent of our PAT towards community development.

Our community development initiatives have been aligned to relevant “Millennium Development Goals” primarily focusing on universalizing primary education, mitigating infant mortality and improving maternal health. Till date we have made a difference to 737,546 beneficiaries through these initiatives. Our volunteerism program ‘Leap’ has been a major success this year, with more than 157 employees contributing towards creating a difference in the society.

This report is our sincere attempt to transparently present the aspects of our sustainability performance for the benefit of our stakeholders. Your constructive feedback on these aspects will help us to better our systems and processes and in turn our performance.

Paresh Tewary
Chief Sustainability Officer
JSW Steel

For any additional information or to provide feedback on this report, please write to us at paresh.tewary@jsw.in
**Sustainability Performance Snapshot**

**VIJAYANAGAR**

**Energy and Climate Change**

- We initiated the measurement of Carbon footprint as per ISO 14064 for each process and product.
- We implemented clean technologies such as Top Pressure Recovery Turbine Generating System in blast furnaces 3 and 4.
- We installed waste heat recovery system from stove waste gases and sinter coolers.
- We have initiated the installation of a Coke Dry Quenching system which is likely to get commissioned in FY 2012-13.

**Environmental Excellence**

- Maintained a zero effluent discharge status and reused more than 95% of process water.
- Planted nearly 40,000 trees in 2011-12 increasing the number of trees planted to 1.35 million as on March 31, 2012.
- Cascaded use of water, enhanced water conservation and achieved one of the lowest freshwater consumption per tonne of crude steel in the Indian steel industry at 3.14 m³.
- Installed dewatering filter for slurry dewatering.
- Installed de-dusting systems at blast furnace, pellet plant and sinter plant.
- Commissioned two reverse osmosis plants with a combined capacity of 725 m³/hr.
- Upgraded ESPs at our sinter plants leading to reduced emission of air pollutants.
- Installed 575 dust suppression systems in the RMHS.
- Installed treatment plant for recycling of de-dusting car waste water from coke oven plants.
Product Responsibility and Innovation

- Developed various light weight hot rolled and cold rolled products for application in the automotive industry helping in improving fuel efficiency of the vehicles.
- Implemented micro palletizing for recycling bag filter dust.
- Commissioned a 0.2 MTPA mill-scale briquetting facility, which will be used as a coolant in steelmaking.

Talent Management

- Created multiple learning opportunities through an institutionalised training calendar, technical and behavioural development through workshops, seminars and skill development programmes.
- Engaged with BITS – Pilani to provide a process engineering programme to existing diploma holder employees, an opportunity for employees to enhance qualifications and keep in pace with evolving technology demands.

Health and Safety

- Engaged M/s Dupont for implementation of a world class safety management practices and organized a 3-day training for more than 500 employees from Managers and above levels on “Leading safety efforts”.
- Inclusion of employees in safety management with 151 members being formally inducted into safety committees across various levels.

Community Development

- Conducted 41 general health camps in 28 villages.
- Screened 681 cataract patients, of which 250 were operated upon at the Jindal Sanjeevani Hospital.
- Counselling 22,393 truck drivers through the drop-in and counselling centre at our truck terminus.
- Created 28 Computer Aided Learning Centres which benefitted 11,996 children.
- Facilitated 10 new women Self Help Groups (SHGs) with a total of 90 groups functioning with 1,200 members.
- Managed 13 balawadis, 2 Vishala balawadis, 17 mobile library centers and 17 village child learning centers.
JSW Steel

Sustainability Performance Snapshot

SALEM

**Energy and Climate Change**

- Improved PCI (pulverised coal injection) from 100 kg/tonne of hot metal to 125 kg/tonne.
- Increased waste heat recovery in coke ovens for steam generation from 96 tonnes/hr to 118 tonnes/hr.
- Improved the utilization of blast furnace gas in blooming mill reheating furnace.
- Developed suitable control techniques to end oil support in CPP 1 boiler.
- Controlled excess air in BF gas boiler in CPP 2.
- Recovered waste coke fines from settling pond for utilization in sinter plant.
- Reduced energy consumption per tonne of steel in the SMS as a result of yield improvement.

**Environmental Excellence**

- Reduced raw water consumption for coke quenching to 0.55 m³/tonne from 0.64 m³/tonne by increasing recycled water usage and modifying the quenching technique.
- Established 100% disposal of fly ash from CPP to reduce environmental concerns.
- Initiated co-processing of external wastes in the sinter plant sourced from Kerala Metals and Minerals Limited after receiving CPCB approval on the innovative process designed in-house to utilize hazardous waste.

**Product Responsibility and Innovation**

- Increased EOF steelmaking slag recycling to 22 kg/tonne of steel from 12 kg/tonne of steel.
- Converted EOF steelmaking slag to 15,000 tonnes/month of useful products used for road making, cement making flux, brick making and sinter feed.
- Developed ultra low Sulphur steel for sour gas application.
- Developed alloy steel for high temperature and creep resistance in boilers.

**Community Development**

- Conducted multiskilled garment technician training programmes for rural women.
- Constructed rural road around nearby communities.
- Constructed Annai Theressa orphanage at Mecheri village.
- Conducted weekly free medical camps and eye camps.
Energy and Climate Change

- Installed condensate recovery system in pickling line leading to oil saving to the tune of nearly 130 litres per day.
- Replaced V-belts with flat belts in blowers leading to reduction in energy consumption.
- Switched to natural gas in place of other fuels like FO, LDO and LPG. LNG being a cleaner fuel will lead to reduction in GHG emissions.

Product Responsibility and Innovation

- Developed HRPO/HRSPO products for press parts components for the automotive industry.
- Developed structural grade GI with lower carbon content in place of HRC.

Community Development

- Conducted career guidance programmes through the Disha counselling centre and Pragatik Bahu Uddeshiya Sanstha and organized remedial education programme through KARM NGO.

Environmental Excellence

- Planted 360 saplings in garden areas on the occasion of World Environment day.
- Commissioned bio-digester plant of one tonne per day capacity in the township and 32 households were supplied with bio gas. The organic waste generated in the households is treated through this plant.

Community Development

- Facilitated mid-day meals programme through ISKCON Food Relief Foundation.

Product Responsibility and Innovation

- Developed new GI products for crash guard and silos applications.
- Developed new galvanized coating products for forming and structural applications.

Energy and Climate Change

- Installed VFD drives at water pumping system and optimized the operation of air compressor of CPP, leading to a reduction in CPP auxiliary power consumption.
Managing Stakeholder Expectations

Regular engagement with different stakeholder groups forms an integral part of our business strategy. With best of our efforts, we strive towards transforming our stakeholder engagement into an active two-way dialogue.
Regular engagement with different stakeholder groups forms an integral part of our business strategy. Their feedback helps us to update our risk identification, prioritization and management processes. Employees, customers, suppliers, local communities, NGOs, shareholders and financial institutions are our critical stakeholders with whom we engage through a wide range of communication channels.

We conduct surveys, organize public hearings and schedule site-visits to gain feedback from them. At the shop floor, we have created initiatives such as ‘Soundboard’ and ‘Voice of the People’ to facilitate greater employee interaction so as to enhance our HR systems and policies. In the past year, we have adopted a more systematic approach to our dialogue with stakeholders. With best of our efforts, we strive towards making our stakeholder engagement into a two-way dialogue.

Further details on our stakeholder engagement can be accessed through our previous sustainability report at http://www.jsw.in/beyond_business/Sustainability.shtml
Corporate Governance

Our cutting edge technology is combined with our application and customer service skills creating value for all our stakeholders.

We strive to be a responsible corporate citizen and conduct our business with this aim in mind. Our policies are based on the ideology of maintaining transparency and openness in the Management and Board dealings. Our top executives contribute to our ideologies and work towards embedding robust corporate governance principles in their practices. Cutting edge technology combined with our application and customer service skills help us to create value for all our stakeholders.

Board of Directors

As on 31.03.2012, the Board of Directors comprises of 13 Directors, of which nine are non-executive. The Chairperson is Executive and a promoter of the Company. Seven directors are independent directors and bring a wide range of expertise and experience to the Board. All the directors are appointed by the shareholders at Annual General Meetings and are subject to retirement by rotation.

Internal controls and audit

The Audit Committee at JSW consists of four non-Executive Directors all of whom are Independent Directors. We also have in place both internal and external audit systems with all auditors having access to every record and information about the company. The internal audit team inculcates global standards and best practices into our operations. The department comprises of 25 executives that report directly to the Audit Committee. The internal audit department obtained the ISO 9001:2008 certification during the year. We have successfully integrated the COSO (Committee of Sponsoring Organizations of the Treadway Commission) framework with our audit process in order to enhance the quality of our financial reporting and increase compatibility with business ethics. The internal audit department works on a risk based audit plan which is approved by the Audit Committee. The audit plan is formulated according to the risk ratings of various functions.

Governing sustainability

Our Corporate Sustainability Cell is responsible for the managing JSW Steel’s sustainability agenda. At each of our manufacturing operations we have Environmental and CSR Cells that are responsible for the planning and implementation of environmental and social initiatives respectively. In addition, each plant follows the CREP guidelines given by the MoEF for integrated...
steel plant operations. We have a structured system of ensuring compliance to all applicable legal requirements. The compliance to legal requirements is reviewed quarterly by the Director and CEO, who in turn report to Board.

**Risk management**

We have in place a Board level Risk Committee that consists of three Independent Directors and two Executive Directors and all risk management related activities are coordinated by the Chief Risk Officer. We follow the COSO framework for risk management to proactively manage risks and opportunities that impact our objectives.

The risk management framework gives us:
- Ownership of process specific risks with the process owner;
- Regular interactions at units and corporate offices to understand interdependencies across functions;
- Ongoing supervision of this function by a sub-committee of Directors consisting of independent and executive directors.
- Quarterly review

We have identified risks related with sustainability such as Energy, CSR, Carbon policy and Health and safety and those are among top 15 risks identified at the Corporate level. The key sustainability risks identified by the Risk Management Committee include the following:
- Material security
  - Dependency on few suppliers
  - Price volatility
  - Problems at vendor’s place like mining restrictions, natural calamity, strikes, etc.
  - New / change in regulations affecting mining / imports
- Social responsibility
- Accidents, fires, pollution or natural calamities

We are in the process of creating a Board level sustainability committee. This committee will deliberate and discuss sustainability issues in regular meetings and also allocate financial resources for implementation of related initiatives. The committee will also ensure that sustainability issues are given as much importance as business continuity issues.

**Management systems**

We are conscious of our impacts and have implemented strict monitoring systems in order to identify areas of improvement. Our operations at Vijayanagar and Salem are ISO 9001, ISO 14001 and OHSAS 18001 certified. Our senior management is responsible for monitoring and reporting on key performance indicators. We have a number of forums and systems by which we monitor our progress and receive feedback from various stakeholders. Some of these are customer feedback, activities identified under EMS, QMS and OHSMS, quality circles, cross-functional teams, six sigma, TPM and TQM.
JSW Steel endeavours to be recognised across industry as one of the most responsible organizations. A host of Awards over the years are a testament to this fact.

**2010**  
**National Sustainability Award by Indian Institute of Metals**  
Second position in integrated steel plants category for the year 2010-11 received on November 14, 2011

**2010**  
**Visvesvaraya Industrial Trade Centre (VITC) State Award**  
Gold trophy for the best exporter 2009-10 & 2010-11 received on March 23, 2012

**2010**  
**Dun and Bradstreet Information Services**  
Awarded the best company in steel sector based on total income, net profit, net worth, exports, market capitalization, net profit margin, return on net worth, received on April 26, 2011

**2011**  
**EEPC National Award for Export Excellence**  
Gold trophy for top exporter of the year 2009-10, received on November 03, 2011

**2011**  
**International Convention on Quality Circle Chapters**  
Distinguished category award to “Genius Quality Circle” from SMS – 1 received on September 14, 2011

**2011**  
**Spotlight Awards**  
(Global communication competition) awarded by league of American communication professionals for its 2010-11 annual report - Bronze award for excellence within its competition class

**2011**  
**Ashok Leyland**  
Outstanding performance for the year 2010-11 received on April 20, 2011
2011 **Brakes India**
Certificate of performance for the year 2010-11, received on November 11, 2011

2011 **CII – EXIM Award**
Commendation certificate for significant achievement, received on December 01, 2011

2012 **SPJIMR Marketing Impact Awards 2012**
Second prize for best practices and current thinking in marketing awarded on January 14, 2012

2011 **Hyundai**
Appreciation award for the year 2011-12 received on March 22, 2012

2012 **EEPC National Award for Export Excellence**
Star performer of the year 2010-11 received on March 24, 2012

2012 **FICCI Export Excellence Award**
Best district exporter award for the year 2010-11, awarded on June 15, 2011
# Performance Review

## Upstream Operations

<table>
<thead>
<tr>
<th>Environmental Performance</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Production (million tonnes)</td>
<td>7.43</td>
<td>6.43</td>
<td>5.99</td>
<td>3.27</td>
<td>3.22</td>
</tr>
</tbody>
</table>

## Material Consumption

<table>
<thead>
<tr>
<th>Material Type</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal* (million tonnes)</td>
<td>7.15</td>
<td>6.12</td>
<td>6.11</td>
<td>2.97</td>
<td>2.54</td>
</tr>
<tr>
<td>Iron ore** (million tonnes)</td>
<td>15.56</td>
<td>14.42</td>
<td>11.41</td>
<td>6.39</td>
<td>6.00</td>
</tr>
<tr>
<td>Fluxes (million tonnes)</td>
<td>4.50</td>
<td>3.35</td>
<td>3.30</td>
<td>2.04</td>
<td>2.03</td>
</tr>
</tbody>
</table>

## Material / Waste Recycled / Reused

<table>
<thead>
<tr>
<th>Material recycled ('000 tonnes)</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material recycled (%)</td>
<td>16.75</td>
<td>11.02</td>
<td>10.18</td>
<td>9.37</td>
<td>9.67</td>
</tr>
<tr>
<td>Solid waste utilization (%)</td>
<td>75</td>
<td>75</td>
<td>90</td>
<td>85</td>
<td>82</td>
</tr>
</tbody>
</table>

## Energy Consumption

<table>
<thead>
<tr>
<th>Energy Type</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct energy consumption ('000 GJ)</td>
<td>277,352</td>
<td>203,061</td>
<td>177,686</td>
<td>108,786</td>
<td>99,204</td>
</tr>
<tr>
<td>Indirect energy consumption ('000 GJ)</td>
<td>2,275.34</td>
<td>2,747.69</td>
<td>6,073.02</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Energy saved due to conservation ('000 GJ)</td>
<td>1,682.94</td>
<td>14,331.64</td>
<td>22,026.18</td>
<td>74,226.06</td>
<td>77,231.57</td>
</tr>
</tbody>
</table>

## Water Consumption

<table>
<thead>
<tr>
<th>Water Type</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total water consumption ('000 cu. m)</td>
<td>34,635.31</td>
<td>28,114.50</td>
<td>24,512.40</td>
<td>11,618.57</td>
<td>12,470.90</td>
</tr>
<tr>
<td>Total water recycled ('000 cu. m)</td>
<td>3,934.11</td>
<td>9,724.96</td>
<td>7,400.49</td>
<td>5,148.20</td>
<td>5,522.72</td>
</tr>
</tbody>
</table>

## Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Emission Type</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct emissions ('000 tonnes of CO₂ eq.)</td>
<td>18,804.69</td>
<td>15,417.69</td>
<td>14,528.50</td>
<td>10,085.50</td>
<td>9,392.09</td>
</tr>
<tr>
<td>Indirect emissions¹ ('000 tonnes of CO₂ eq.)</td>
<td>16.45</td>
<td>1,494.12</td>
<td>889.87</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Emissions of ODS (tonnes of CFC-11 eq.)</td>
<td>0.028</td>
<td>0.030</td>
<td>0.002</td>
<td>0.088</td>
<td>0.086</td>
</tr>
<tr>
<td>Total Air Emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPM ('000 tonnes / year)</td>
<td>10.44</td>
<td>9.48</td>
<td>8.22</td>
<td>4.83</td>
<td>3.99</td>
</tr>
<tr>
<td>SOx ('000 tonnes / year)</td>
<td>7.04</td>
<td>7.17</td>
<td>6.49</td>
<td>4.29</td>
<td>2.54</td>
</tr>
<tr>
<td>NOx ('000 tonnes / year)</td>
<td>9.64</td>
<td>9.35</td>
<td>8.05</td>
<td>5.05</td>
<td>3.96</td>
</tr>
</tbody>
</table>

## Workforce Turnover

<table>
<thead>
<tr>
<th>Category</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management (nos)</td>
<td>515</td>
<td>302</td>
<td>344</td>
<td>193</td>
<td>249</td>
</tr>
<tr>
<td>Non-management (nos)</td>
<td>163</td>
<td>260</td>
<td>622</td>
<td>107</td>
<td>188</td>
</tr>
<tr>
<td>&lt; 30 years of age (nos)</td>
<td>537</td>
<td>398</td>
<td>748</td>
<td>219</td>
<td>337</td>
</tr>
<tr>
<td>30-50 years of age (nos)</td>
<td>121</td>
<td>114</td>
<td>190</td>
<td>71</td>
<td>88</td>
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<tr>
<td>&gt; 50 years of age (nos)</td>
<td>20</td>
<td>50</td>
<td>28</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Male (nos)</td>
<td>649</td>
<td>529</td>
<td>894</td>
<td>281</td>
<td>401</td>
</tr>
<tr>
<td>Female (nos)</td>
<td>29</td>
<td>33</td>
<td>72</td>
<td>19</td>
<td>36</td>
</tr>
</tbody>
</table>
### Upstream Operations 2011-12 2010-11 2009-10 2008-09 2007-08

#### Workforce Breakdown

<table>
<thead>
<tr>
<th>Year</th>
<th>Management (nos)</th>
<th>Non-management (nos)</th>
<th>Contractual Labour (nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>4,234</td>
<td>3,312</td>
<td>11,357</td>
</tr>
<tr>
<td>2010-11</td>
<td>2,532</td>
<td>4,486</td>
<td>5,996</td>
</tr>
<tr>
<td>2009-10</td>
<td>2,447</td>
<td>3,400</td>
<td>6,240</td>
</tr>
<tr>
<td>2008-09</td>
<td>2,197</td>
<td>2,640</td>
<td>7,361</td>
</tr>
<tr>
<td>2007-08</td>
<td>1,959</td>
<td>2,196</td>
<td>5,993</td>
</tr>
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</table>

#### Training Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Management (manhours)</th>
<th>Non-management (manhours)</th>
<th>Contract Labour (manhours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>84,582</td>
<td>60,826</td>
<td>158,584</td>
</tr>
<tr>
<td>2010-11</td>
<td>29,074</td>
<td>37,622</td>
<td>110,808</td>
</tr>
<tr>
<td>2009-10</td>
<td>200,456</td>
<td>112,566</td>
<td>36,824</td>
</tr>
<tr>
<td>2008-09</td>
<td>169,940</td>
<td>229,080</td>
<td>267,588</td>
</tr>
<tr>
<td>2007-08</td>
<td>180,876</td>
<td>183,284</td>
<td>230,712</td>
</tr>
</tbody>
</table>

#### Safety Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Injuries (nos)</th>
<th>Injury rate (per 100 workforce)</th>
<th>Lost days (nos)</th>
<th>Lost day rate (per 100 workforce)</th>
<th>Man hours worked (million hours)</th>
<th>Fatalities (nos)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-12</td>
<td>64</td>
<td>0.217</td>
<td>3,140</td>
<td>10.63</td>
<td>59.07</td>
<td>11</td>
</tr>
<tr>
<td>2010-11</td>
<td>58</td>
<td>0.257</td>
<td>4,531</td>
<td>20.09</td>
<td>45.10</td>
<td>4</td>
</tr>
<tr>
<td>2009-10</td>
<td>97</td>
<td>0.438</td>
<td>3,546</td>
<td>16.01</td>
<td>44.31</td>
<td>4</td>
</tr>
<tr>
<td>2008-09</td>
<td>46</td>
<td>0.375</td>
<td>1,315</td>
<td>9.86</td>
<td>24.54</td>
<td>2</td>
</tr>
<tr>
<td>2007-08</td>
<td>46</td>
<td>0.375</td>
<td>2,515</td>
<td>20.50</td>
<td>24.54</td>
<td>0</td>
</tr>
</tbody>
</table>

#### World Steel Association’s Performance Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Industry avg (2010)</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment in new processes and products</td>
<td>% of revenue</td>
<td>8.30</td>
<td>7.90</td>
<td>0.17</td>
<td>0.06</td>
</tr>
<tr>
<td>Economic Value Distributed</td>
<td>Billion USD</td>
<td>617.90</td>
<td>6.09</td>
<td>4.79</td>
<td>3.69</td>
</tr>
<tr>
<td>Economic Value Distributed</td>
<td>% of revenue</td>
<td>93.10</td>
<td>89.28</td>
<td>73.75</td>
<td>74.25</td>
</tr>
<tr>
<td>Energy Intensity</td>
<td>GJ / tonne of crude steel cast</td>
<td>20.70</td>
<td>37.74</td>
<td>26.34</td>
<td>40.57</td>
</tr>
<tr>
<td>Greenhouse gas emission</td>
<td>Tonnes CO\textsubscript{2} eq. / tonne of crude steel cast</td>
<td>1.8 0</td>
<td>2.87</td>
<td>2.31</td>
<td>2.30</td>
</tr>
<tr>
<td>Material efficiency</td>
<td>% of material converted to products and by-products</td>
<td>94.40</td>
<td>83.00\textsuperscript{4}</td>
<td>71.00</td>
<td>NA</td>
</tr>
<tr>
<td>Environmental Management Systems (EMS)</td>
<td>% of employees and contractors in EMS-registered production facilities</td>
<td>89.90</td>
<td>95.00</td>
<td>58.67</td>
<td>69.50</td>
</tr>
<tr>
<td>Employee Training</td>
<td>Training days / Employee</td>
<td>7.70</td>
<td>2.40</td>
<td>1.19</td>
<td>6.69</td>
</tr>
<tr>
<td>Lost Time Injury Frequency Rate</td>
<td>Injuries / million hours worked</td>
<td>1.90</td>
<td>0.99</td>
<td>2.19</td>
<td>1.29</td>
</tr>
</tbody>
</table>

\textsuperscript{3} Data not available for 2009-2010.

\textsuperscript{4} Data not available for 2008-2009.
## Performance Review

### Downstream Operations

<table>
<thead>
<tr>
<th>Environmental Performance</th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Production ('000 tonnes)</td>
<td>1,246#</td>
<td>1,182</td>
<td>1,329</td>
<td>1,058</td>
<td>1,863</td>
</tr>
</tbody>
</table>

### Material Consumption

| Material & alloy ('000 tonnes) | 46.73 | 41.18 | 40.86 | 31.98 | 32.63 |
| Hot rolled coils ('000 tonnes) | 882.61 | 912.48 | 862.63 | 852.19 | 911.98 |
| Slabs ('000 tonnes) | 99.47 | 149.30 | 329.27 | 247.11 | 235.54 |
| Cold rolled coils ('000 tonnes) | 436.35 | 34.10 | 57.63 | - | - |

### Material Recycled

| Material recycled (tonnes) | 0 | 390.18 | 280.65 | 385.69 | 345.22 |

### Energy Consumption

| Direct energy consumption ('000 GJ) | 5,177 | 1,783 | 1,686 | 2,123 |
| Indirect energy consumption ('000 GJ) | 286.52 | 229.13 | 348.46 | 424.84 | 271.55 |
| Energy saved due to conservation ('000 GJ) | 8.96 | 3.02 | 3.66 | 13.07 | 19.78 |

### Total Water Consumption ('000 cu. m)

| Total water consumed ('000 cu. m) | 1,659.78 | 1,783 | 1,686 | 2,123 |
| Total water recycled ('000 cu. m) | 162.24 | 84.52 | 22.35 | 13.17 | 23.55 |
| Total water discharged ('000 cu. m) | 107.74 | 225.05 | 152.54 | 159.72 | 187.64 |

### Greenhouse Gas Emissions

| Direct emissions ('000 tonnes of CO₂ eq.) | 501.54 | 124.29 | 138.92 | 121.54 | 154.39 |
| Indirect emissions ('000 tonnes of CO₂ eq.) | 71.59 | 56.65 | 86.15 | 105.30 | 67.13 |
| Emissions of ODS (tonnes of CFC-11 eq.) | 0.028 | 0.011 | 0.015 | 0.132 | 0.163 |

### Total Air Emissions

| SPM (tonnes / year) | 114.68 | 157.06 | 313.31 | 143.12 | 73.90 |
| SOx (tonnes / year) | 332.53 | 468.56 | 831.77 | 1,101.23 | 1,245.38 |
| NOx (tonnes / year) | 32.87 | 18.31 | 28.05 | 12.78 | 7.94 |

### Total Waste Disposed

| Hazardous waste ('000 tonnes) | 25.36 | 29.54 | 29.76 | 30.19 | 32.33 |
| Non-hazardous waste ('000 tonnes) | 42.32 | 8.06 | 10.25 | 50.39 | 49.38 |

### Workforce Breakdown

| Management (nos) | 440 | 411 | 390 | 396 | 404 |
| Non-management (nos) | 957 | 739 | 1,045 | 1,061 | 1,070 |
| Contractual Labour (nos) | 870 | 1,133 | 1,142 | 1,091 | 891 |
### Downstream Operations

<table>
<thead>
<tr>
<th></th>
<th>2011-12</th>
<th>2010-11</th>
<th>2009-10</th>
<th>2008-09</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workforce Turnover</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management (nos)</td>
<td>15</td>
<td>86</td>
<td>38</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>Non-management (nos)</td>
<td>23</td>
<td>15</td>
<td>21</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td><strong>Age Wise</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years of age (nos)</td>
<td>15</td>
<td>23</td>
<td>20</td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td>30-50 years of age (nos)</td>
<td>13</td>
<td>25</td>
<td>11</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>&gt;50 years of age (nos)</td>
<td>10</td>
<td>11</td>
<td>4</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td><strong>Gender Wise</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (nos)</td>
<td>38</td>
<td>57</td>
<td>35</td>
<td>30</td>
<td>58</td>
</tr>
<tr>
<td>Female (nos)</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Training Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management (manhours)</td>
<td>4,181</td>
<td>4,894</td>
<td>4,339</td>
<td>10,246</td>
<td>7,691</td>
</tr>
<tr>
<td>Non-management (manhours)</td>
<td>2,326</td>
<td>4,813</td>
<td>2,317</td>
<td>7,541</td>
<td>5,107</td>
</tr>
<tr>
<td>Contract Labour (manhours)</td>
<td>584</td>
<td>2,421</td>
<td>1,338</td>
<td>484</td>
<td>219</td>
</tr>
<tr>
<td><strong>Safety Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injuries (nos)</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Injury rate (per 100 workforce)</td>
<td>0</td>
<td>0.039</td>
<td>0.104</td>
<td>0.139</td>
<td>0.252</td>
</tr>
<tr>
<td>Lost days(^2) (nos)</td>
<td>0</td>
<td>95</td>
<td>58</td>
<td>86</td>
<td>101</td>
</tr>
<tr>
<td>Lost day rate (per 100 workforce)</td>
<td>0</td>
<td>3.66</td>
<td>1.51</td>
<td>3.00</td>
<td>3.64</td>
</tr>
<tr>
<td>Man hours worked (million hours)</td>
<td>5.83</td>
<td>5.19</td>
<td>7.68</td>
<td>5.74</td>
<td>5.56</td>
</tr>
<tr>
<td>Fatalities (nos)</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

---

* Coal + Coke values have been reported separately as quantity used as raw material in tons under indicator EN1 and quantity used to produce energy in GJ under indicator EN3. Further use of Anthracite and Pet coke have been factored in along with reporting of data on a dry basis resulting in restatement of previous year’s data.

* Iron ore values reported include iron ore lumps, iron ore pellets and iron ore fines.

** For calculating specific values (e.g. specific material, energy and water consumption etc.) the entire value of processed and produced products at the two downstream locations have been considered.

1 This year we have reconciled the direct GHG emissions at our upstream operations to ensure consistency with the boundary of reporting and accordingly the values stated for the FY 2009-10 and 2010-11 have been restated.

2 As per global reporting practice, we have reported the number of lost days sans fatalities. As per Indian regulations, each fatality is equivalent to 6,000 lost days.

3 Values for upstream operations at Vijayanagar and Salem.

4 This data is available only for the Vijayanagar plant.

5 This year we have reconciled the indirect GHG emissions at our downstream operations to ensure consistency with the boundary of reporting and accordingly the values stated for the FY 2009-10 and 2010-11 have been restated.
Economic Performance

We also experienced the effects of this economic slowdown but have managed to expand our sales by 28% to 7.8 million tonnes. Our overall market share in the domestic market increased to 9%.

We capitalized on our global competitiveness by increasing the exports of our value added steel products by 21% to 1.4 million tonnes and grew by 61% over the previous financial year. We recorded an increase even though exports from the steel industry in India fell by 2% at the same time.

This underlines the strong demand for our value added products in the international markets. We have also touched 11 MPTA of steel-making capacity and our crude steel output was 7.429 million tonnes, an increase of 16% over the previous year.

In 2011, the Honourable Supreme Court of India placed a ban on iron ore mining in Karnataka and as a consequence we faced a shortage of good quality domestic iron ore. We had to operate our furnaces at a lower capacity as the crisis of iron ore intensified in September 2011 pending commencement of E-auctions.

By the end of the year the quality of iron ore we received improved and we were able to increase our capacity utilisation. We expect the recommencement of mining in Karnataka to take place within a few months and iron ore availability in Karnataka should cease to be a major hurdle.

The last financial year has been challenging for most of the world and India’s growth rate of 5.3% has been the lowest in past 9 years. We also experienced the effects of this economic slowdown but have managed to expand our sales by 28% to 7.8 million tonnes. Our overall market share in the domestic market increased to 9%. Domestic sales grew by 28% and exports grew by 61%.
### Product 2011-12 (in MnT)

<table>
<thead>
<tr>
<th>Product</th>
<th>Domestic</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semis</td>
<td>0.304</td>
<td>0.105</td>
</tr>
<tr>
<td>Rolled Products – flat</td>
<td>3.584</td>
<td>0.682</td>
</tr>
<tr>
<td>Rolled Products – long</td>
<td>1.419</td>
<td>0.038</td>
</tr>
<tr>
<td>Value added products</td>
<td>1.074</td>
<td>0.609</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6.381</td>
<td>1.434</td>
</tr>
<tr>
<td><strong>Saleable steel</strong></td>
<td><strong>7.815</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Value in INR million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic turnover</td>
<td>287,696.00</td>
</tr>
<tr>
<td>Export turnover</td>
<td>58,888.80</td>
</tr>
<tr>
<td>Other income</td>
<td>2,414.90</td>
</tr>
<tr>
<td><strong>A. Economic Value Generated</strong></td>
<td><strong>348,999.70</strong></td>
</tr>
<tr>
<td>Operating cost</td>
<td>261,777.40</td>
</tr>
<tr>
<td>Employee wages and benefits</td>
<td>6,258.70</td>
</tr>
<tr>
<td>Payments to providers of capital</td>
<td>13,331.30</td>
</tr>
<tr>
<td>Payments to Governments</td>
<td>29,350.00</td>
</tr>
<tr>
<td>CSR initiatives</td>
<td>320.00</td>
</tr>
<tr>
<td><strong>B. Economic Value Distributed</strong></td>
<td><strong>311,037.40</strong></td>
</tr>
<tr>
<td><strong>Economic Value Retained (A - B)</strong></td>
<td><strong>37,962.30</strong></td>
</tr>
</tbody>
</table>

*All values in INR million*
Energy and Climate Change

With growing scarcity of primary and non-renewable sources of energy, we are striving to minimize our energy consumption through process optimization and energy conservation initiatives.

Energy is the second most critical ingredient for making steel. With growing scarcity of primary and non-renewable sources of energy, we are striving to minimize our energy consumption through process optimization and energy conservation initiatives. The biggest contributor to our energy consumption is coal which constituted nearly 39% of our total direct energy consumption during FY 2011-12. Coal is a highly scarce and non-renewable resource and our aim is to reduce its consumption to the maximum extent possible. With this in mind, we have implemented the ‘green steel’ manufacturing technology (Corex process) at our Vijaynagar works which leads to significant saving in the consumption of coking coal and generates high calorific value gas which can be used in power generation and other steel manufacturing processes. We are the only Indian steel manufacturer to have invested in the ‘Green Steel’ manufacturing technology. For us, energy management comprises maximising the collection, recycling and reuse of hot air and process gases to reduce fossil fuel consumption and specific energy consumption across the plant.

At our downstream operations, the direct energy requirement is met through fuels such as LPG, FO, LDO and HSD. At Vijaynagar, we source our indirect energy requirement from our sister unit, JSW Energy Limited while at Salem, Tarapur and Vasind it is sourced from the respective state electricity grid. We are also working tirelessly to reduce our specific energy consumption to bring it at par with the global best. During 2011-12, specific direct energy consumption in our upstream operations was at 37.33 GJ/tonne of crude steel produced as compared to 31.60 during 2010-11. We have implemented the coke dry quenching technology at our coke plants to reduce energy consumption. Other energy conservation initiatives include process waste heat recovery and usage of waste gases for steam generation.

Vijaynagar works is one of the few integrated Indian steel plants where a majority of the power generation

![Specific Direct Energy Consumption - Upstream](chart)

![Specific Direct Energy Consumption - Downstream](chart)
is from waste heat, process gas and solid waste. These initiatives help minimize pollution, extend the useful life of resources and at the same time facilitate nation building.

We are also exploring the option of renewable energy. We have installed solar photovoltaic cells for meeting the water heating requirements in our townships. This has led to an annual saving of nearly 0.4 million units of electricity during the year 2011-12.

We are also considering installation of Solar PV based power generation for our plants at Vijayanagar. The issue of climate change is one of the most pertinent sustainability challenge faced by the steel industry. With more and more impetus being laid by the various stakeholder groups for reducing the carbon footprint of industries, the need for accounting and mitigating the GHG emissions of our operations is paramount.

We keep working towards reducing our GHG emissions by reducing our energy consumption and investing in cleaner technologies. We have installed a top pressure recovery turbine generating system in two of our blast furnaces at Vijayanagar which leads to reduction of GHG emissions by utilizing waste gases to generate power thereby reducing the requirement of coal based power. We have also installed waste heat recovery systems from stove waste gases and sinter coolers to reduce GHG emissions.

Our total direct GHG emissions during the year FY 2011-12 were 21.50 million tCO2e. Our indirect GHG emissions related to purchased energy during the year FY 2011-12 were 0.085 million tCO2e. At our upstream operations our specific GHG emissions for the year FY 2011-12 was 2.85 tCO2e/tonne of crude steel cast as compared to 2.63 in FY 2010-11.

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**Case Study**

**Surplus coke breeze utilization in 80 TPH boiler at Vijayanagar works**

Un-utilized surplus coke breeze was being disposed off as waste. We started utilizing this coke breeze in one of our boilers for steam generation instead of coal. This led to a reduction in coal consumption and a significant decrease in ash generation. The ash content in coke breeze is as low as 13%, when compared to 30% in coal. Usage of coke breeze also improved the heating regime of the boiler, thus reducing overall energy consumption.
Environmental Excellence

Being an energy and water intensive industry we realize the extent of impact our operations can have, over the ambient environment. We aim at minimizing our environmental impact by adopting latest technologies, implementing environmental management systems, creating awareness and training our employees on good environment management practices. During the FY 2011-12 we invested a total of INR 226.5 million towards environment management.

**Water management**

Water is one of the most critical inputs in the steel manufacturing process. We source water at our upstream operations from near-by water bodies and at our downstream operations from local municipal utility sources. We continuously strive to improve our water consumption efficiency by adopting technologies requiring lower levels of water use and effectively recycling and using water.

- **Specific Water Consumption - Upstream**

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>07-08</th>
<th>08-09</th>
<th>09-10</th>
<th>10-11</th>
<th>11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>KL/Tonnes of crude steel</td>
<td>3.88</td>
<td>3.56</td>
<td>4.09</td>
<td>4.37</td>
<td>4.66</td>
</tr>
</tbody>
</table>

At our Vijayanagar works, water is used in a decentralized manner with fourteen independent water recirculation systems for treating and recycling water for reuse. We have been successful in creating a cascading system of water recycle and reuse, where the blow-down water from one process is reused as make-up water for another process. Special treatment chemicals are used to increase the cycles of concentration for recycling more than 95% of treated water. The remaining water is stored in the guard pond which is utilized for meeting the requirements of beneficiation plant and horticulture activities. As the volume of treated wastewater is increasing due to addition of new facilities, two reverse osmosis plants are being installed for recovering about 350 cu. m/hr of water from the blow down of different units for use as fresh water in the steel plant.

This year we have installed dewatering filters for BOF slurry to facilitate 300 tonnes per day sludge in micro pelletization. We have installed dewatering system for Corex slurry. This is helping us in recycling more water and at the same time also enables us to utilize 30 tonnes per day of coal in pellet making.

To ensure zero discharge from the Coke Oven we have installed treatment plants for recycling of de-dusting car wastewater. We have also commissioned a Reverse Osmosis plant with a capacity of 125 m³/hr to recover good quality water from effluent. At our downstream operations, we ensure maximum reuse of the water in the process and also use treated effluent for horticulture purposes.

- **Specific Water Consumption - Downstream**

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>07-08</th>
<th>08-09</th>
<th>09-10</th>
<th>10-11</th>
<th>11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>KL/Tonne of product</td>
<td>0.54</td>
<td>0.89</td>
<td>0.82</td>
<td>0.99</td>
<td>1.04</td>
</tr>
</tbody>
</table>
**Waste management**

Our operations lead to the generation of various hazardous and non-hazardous wastes. Our goal is to reuse such waste to the maximum extent possible in our processes to reduce the consumption of fresh raw materials thereby decreasing our material intensity. We dispose the residual waste in a responsible manner. Significant quantum of sludge generated from water treatment plants is reused in pellet plant and the unutilized quantity is securely stored in the slime pond. In FY 2011-12, we started the briquetting of mill scale and ARP dust to be used in the BOF converter. We also started micro palletizing of bag filter dust. The recovery of Iron from the slime pond is also helping us completely utilize the iron content of the slime.

**Air emissions**

We monitor our air emissions from all the stacks on a periodic basis. We have put in various measures to reduce our air emissions. Special attempts have been made to reduce our SPM emissions. We have installed de-dusting systems at our blast furnaces, pellet plants, sinter plants and RMHS. We maintain our air emissions well within the limits stipulated by the pollution control board at all times.

**Biodiversity**

Our Vijayanagar works are located near a biodiversity sensitive zone. There are physical barriers to prevent the entry of animals into the plant area, lest they should be harmed. We are monitoring our emissions on a regular basis and they are well within the stipulated limits. The appraisal committee of the Ministry of Environment and Forests, GoI has visited the plant and has confirmed that the operations have had no effects on wildlife.
Our upstream operations consume natural resources such as coal, iron ore, fluxes for producing steel while our downstream operations process huge volumes of intermediate steel products such as slabs and coils.

Steel as a base material is used to manufacture a variety of products. Being an environment-friendly material, steel can be recycled indefinitely without loss of its inherent properties. The recycling of steel contributes to resource conservation including raw materials and energy and we make every effort to recycle steel to the extent possible to use in our operations.

The steel reject (scrap) generated during the processing of steel for final products is completely recycled. We also use steel scrap collected from other sources in steel making. Direct reduced iron (DRI) can also be used as an alternative to steel scrap. Though we have not conducted a comprehensive life-cycle assessment (LCA) for our products, we support the development of LCA related studies and research through our participation in World Steel Association. Our upstream operations consume natural resources such as coal, iron ore, fluxes for producing steel while our downstream operations process huge volumes of intermediate steel products such as slabs and coils.

During FY 2011-12, our specific raw material consumption in our upstream operations was 3.66 tonnes/tonne of crude steel production as compared to 3.72 tonnes/tonne of crude steel production during FY 2010-11.

Being ISO certified for quality, environment and safety, there are already certain defined processes and practices to keep a check on the quality and minimize health and safety hazards related to the product use.

However, in cases where there are critical applications of the product, stringent quality checks are made at our end. We also organize third party inspections to ensure the highest level of quality in our products. We observe narrow tolerance limits to ensure that the product does not fail during its use.
Customer focus and Responsible marketing

In the form of JSW Shoppe, we created a first-of-its-kind distribution network. It is an honest attempt to market quality steel products to steel consumers by educating customers of product usage – allowing them to make informed decisions. It is a one-stop shop showcasing all JSW products. JSW Shoppe emerged as an aspiration for entrepreneurs in semi-urban and rural locations – word of mouth emerging as an effective branding and network expansion tool. Shoppe network currently covers 150+ districts across 22 states.

Around 46% Shoppes are located in semi-urban and rural areas, making deeper inroads in areas with high growth potential. Sales from semi-urban and rural areas comprise about 14% of overall sales volume and around 20% of the total and branded sales volume. As on March 31, 2012, we have created 350 Shoppe outlets.

Case Study

Spreading customer awareness through mobile vans

With the dual objectives of spreading awareness about JSW products across the rural and semi-urban areas and improving the consumption of steel in rural India by promoting steel, we have started the mobile van activity. Our representatives interact with the gatherings in the local dialect educating them about the range of JSW Steel’s products, its advantages and also the right usage of steel and various installation tips. We also pass information to the consumers through product leaflets. The team engages with the masses through activities like quiz competition, games etc. and distributing JSW branded freebies to the winners.
Employees are the biggest asset for any organization. At JSW Steel, we believe in empowering our employees through effective inclusion and capacity development. We have established ourselves as the highest manpower productive team per tonne of steel manufactured in India’s growing steel sector. It has always been our endeavour to ensure employee satisfaction and promote welfare by providing a competitive environment wherein they realize their potential.

Our growth from 3.8 MTPA in 2007-08 to 11 MTPA in 2011-12 catalysed employment from 7,060 members (April 1, 2008) to 8,943 members (March 31, 2012) along with our indirect employment associates. Our plan of investing more than INR 100 billion in the next three years, will reinforce our position among the largest employment opportunity generators in India.

Targets with respect to aspects of Human Resource management are incorporated in our annual business plan and further these targets are used to define tasks and KRA's of employees for their performance evaluation.

The annual incentive scheme is designed in accordance with the attainment of targets and also forms the basis for incentive payment. During FY 2011-12 we paid nearly INR 1,530 million in the form of benefits to our full time employees.

We are sensitive towards the needs of our employees hence their feedback is of prime importance which is obtained from surveys, team interactions and open end discussions which are held on a timely basis. We have structured our HR policies, strategies and action plans on a framework that takes into account this employee feedback.
Talent management

Since its inception, we have consistently aggregated competencies from diverse cultures, educational backgrounds and domain experience with a singular objective: to accelerate growth. We reinforced this focus through an institutionalized multi-hierarchical training extending from steel manufacturing to holistic personality development which commences from day one of employment, followed by specialized trainings at regular intervals.

Additionally, the company consciously encourages talent mobility across locations to provide growth and exposure. The policy of internal job posting ensures that employees apply for vacancies in other locations through internal advertisements. In 2011-12, more than 175 employees moved between departments within the organization, widening the knowledge horizon.

During the FY 2011-12 we recruited a total of 1,276 new joinees across our operations. Out of these 122 left the organization within the same year.

Case Study

Early day facilitation

We launched a mentoring programme to groom fresh recruits to understand our culture and make a meaningful contribution to the organization. Seniors in the same department partnered fresh recruits to enable them to learn the roles with ease and to seamlessly adapt to the organization's culture and practices with speed.

Additionally, the HR team organized development initiatives to groom mentees like Input Seeking Session by Thomas International, Mumbai. A workshop on “Achieving Personal and Professional Excellence” was organized for mentees to align personal goals with organizational goals.

Young professionals were provided with development feedback through psychometric assessment such as Thomas profiling and were encouraged to formulate self development plans. To strengthen mentoring skills, coaching sessions were conducted through the reputed Stephen Covey South Asia Center.
Case Study

Employee benevolence scheme

The group personal accident policy takes care of the financial needs of the family of the deceased employee to a large extent. However, death due to sudden/prolonged illness or permanent total disability renders the family in great financial distress. We have devised an employee benevolence scheme which is applicable in addition to the group personal accident policy. This scheme is applicable to all permanent employees of JSW Group companies including probationers and trainees. The scheme entails benefits in the form of financial assistance ranging between INR 1 - 3 million for an individual based on the employment grade and assistance for children’s education up to INR 15,000 per child per annum for a maximum of two children up to 22 years of age.

Leadership and Succession management

To smoothen and enable the second line of leadership to take additional responsibilities resulting from the growing business, second line successors are identified to run the business efficiently. We believe in nurturing our employees and give them opportunities of growth and leadership. We have constituted initiatives to instil development and leadership characteristics in our employees, such as

- **Leadership competency framework:** To define leadership competencies for organizational success; reinforce competencies through focused training, feedback and mentoring-coaching initiatives.
- **Succession management process:** To identify key leadership positions and groom leaders from within the organization.
- **360 degree feedback process:** To enable leaders to get feedback on their leadership styles as perceived by others and enable individuals to develop leadership potential by helping them to capitalize on their strengths.
- **Horizontal integration:** Responsibility delegated to top executives with an aim to make the organization leaner.
Training and Development

We have created multiple learning opportunities through an institutionalized training calendar, technical and behavioural development as well as workshops, seminars and skill development programmes.

We entered into engagements with premier institutes to facilitate higher education through e-learning solutions. We also created rich competence in project management, making it possible to commission several capex projects on schedule and within cost. We tied up with BITS-Pilani to provide a process engineering programme to existing diploma holder employees, an opportunity for employees to enhance qualifications and keep in pace with evolving technology trends.

Performance management

Our performance management and review system ensures that the individual’s expectations and key result areas are formulated in alignment with the organization’s business goal of sustaining a high performance culture. Our compensation package is linked to performance and benchmarked to ‘better than’ industry standards. Employee performance is further reinforced by various reward and recognition practices. The performance based reward system allows the organization to pursue its strategic goals and objectives and improve employee performance and retention.

Managing Human Rights

Respect for human rights is a part of our company’s core values and is practiced all across our operations. We ensure that all our operations are free from any form of discrimination. We have proper screening mechanisms in place to make sure that we do not employ child labour. All our investment agreements and procurement policies adhere to local legal requirements on aspects of human rights. Although we do not have any trade unions we actively engage with our employees, whether permanent or contractual, to ensure their welfare. All employees including security personnel are trained on aspects of human rights.
Health and Safety

We strive to maintain the highest standards for the safety and wellbeing of our employees which minimize injuries and casualties during day-to-day operations. Our safety team conducts regular training programmes to instil the concept of maintaining safe operations among our employees and to educate them on the safety norms and procedures to be followed in case of any incident.

Our safety framework is supported by several building blocks like process hazard analysis, operating procedures and related best practices, safety reviews, technology management, training, incident reporting and investigation, personnel management, contractor safety, on-site and off-site emergency response and planning, safety audits and linkage with quality. Frequent trainings regarding occupational health and safety for employees, lorry drivers, contractor’s workmen and supervisors are provided to ensure best safety practices. At present, we have health and occupational safety management systems in line with OHSAS requirements at all the locations.

All our units are governed by departmental safety committees which ensure compliance to the safety measures and create awareness to help employees abide by the organization’s health, safety and environment policy. For all the identified emergencies, mock-drills are conducted periodically to assess the preparedness and response in case of any incidents.

We support our staff with variety of customized offerings for specific groups of employees across different health care aspects. These comprehensive programs help us to raise awareness among employees and enhance the staff’s personal accountability.

Case Study

Implementation of safety management system at Vijayanagar

At JSW Vijayanagar plant safety has been a concern which needed immediate focus. In our endeavour to improve safety practices we decided to engage DuPont to bring in world class practices. As part of the safety organizational structure an Apex team was constituted.

All the top management members, up to Manager Level (500 employees) attended training program on “Leading Safety Efforts” – 3 days conducted by M/s DuPont. 151 persons who are members of the various safety committees are endeavouring their efforts to bring about the changes in safety culture and standards across the organization. The road map is to develop a world class safety management system at JSW Steel. In the initial phase of our journey, new measures have been introduced to involve people across the plant to improve the safety culture. The endeavour is focussed.
on behavioural aspects of Safety to drive the change. These measures have been divided into following areas.

A. Safety Culture:
- Safety Contact: At all levels, meetings start with safety contact wherein someone briefs about any unsafe or safe practice observed during his recent field visit. The purpose is to increase the awareness and engage people on safety issues or sharing the experiences.
- Felt Leadership Coaching: The Felt Leadership coaching was given to 130 senior executives in a one to one interaction by DuPont Consultants.
- Safety Observation Field Coaching: The Safety Observation Field Coaching was given to 150 senior executives in one to one interaction at works, projects by DuPont Consultants.
- Incident Investigation: 75 employees have been trained in incident investigation. The incidents that occurred in the last one year have been reinvestigated using the DuPont Techniques and standards on incident investigation. Accordingly, corrective and preventive measures are being identified for implementation across the organization.

B. Quick Win:
It is process of achieving the high safety results- High impact with less effort. The following eight Quick Wins have been identified:
- Close Openings – Working Floors
- Road Safety – Speed Limit
- Road Safety – Seat Belt
- Road Safety – Traffic Signals, Rules
- Contractor Personal Protective Equipment (PPE)
- Staircase – Hand railings
- Safety Standards for High Risk Activities

C. High Risk Activities
The following High Risk Activities have been proposed for improving the working standards and procedures.
- Confined Space Entry
- Working at Height
- Gas Safety – gas line distribution net work including
- Scaffolding erection, working dismantling
- Conveyor Belts – Operation & Maintenance
- Electrical Installation – Cable galleries, LT / HT Sub Stations
- Lock out and Tag Out for Energy Isolations – Electrical, Gas Lines, Hydraulic during maintenance
- Road Safety – Internal Heavy Vehicle Movements
- Earth moving equipment – Hydra, JCB etc.
- Contract Safety Management – Prequalification, Contract Award, Screening, auditing and closure process with respect to safety.

The Corporate Standards and Procedures are being developed for identified & proposed high risk activities.

D. Training Programs
Corporate Standards and Procedures have been developed on
- Confined space entry and
- Working at height
- Energy Isolations – LockOut and Tag Out (LOTO)

The trained trainers will conduct the training program for rest of employees in respective areas / divisions.

Contractors Field Safety Audit Training Program has been conducted for three batches. The trained employees are regularly auditing the project and work sites. The idea is to involve people in improving the working practice involving contract workmen to improve safe habits.

E. Material Handling Equipment:
Pick & Carry Crane (Hydra): Equipment such as Hydra is being operated only after issuance of the ‘permit to operate’. Hydra Operators’ training programs have been conducted for two batches covering 40 operators. Also, new type of similar equipment has been identified to replace hydras in a phased manner & enhance safe working in the field. All old Hydras have been replaced by new approved Hydras. The newly introduced Hydras are having better safety features and minimizing the incidents at works and project sites.
Social Development

We believe in the policy of ‘People First’ and the objective of our activities is to make a tangible difference in the lives of the people in the areas surrounding our operations. We achieve this either through individual assistance or in partnerships with government bodies, NGO’s and the community at large.

The social development activities of JSW Steel are planned and implemented by the JSW Foundation, an independent institution. The Foundation focuses on outreach of government programs in health and employment generation through gap filling support; moving our townships and communities towards carbon efficient management systems; in-situ conservation of at least one major monument at all project locations and promote national cooperation for conservation of all monuments; collaborative earth care initiatives and need based social development interventions.

The Foundation coordinates with the various plant managers and CSR teams and identifies activities that can be built into their business plans. The execution of these projects is the responsibility of the team at the head office in Mumbai as well as the plant level personnel.

The social activities for every year are derived through consultations, continued observation and community interaction by dedicated CSR staff and specific requests by Gram Panchayats and community leaders. The activities are prioritized looking at the maximum outreach for implementation in a phased manner.

CSR Vision

“Empowered communities with sustainable livelihoods.”
The foundation encourages JSW employees to volunteer their time and resources for its projects. This initiative is supported through JSW Steel in the following ways:

- Employees are encouraged to contribute up to 40 hours towards community development activities per employee per year.
- JSW Steel also accepts pay slip deductions towards contributions for its approved projects.
- JSW Steel organizes the collection of materials on a periodic basis that can then be utilized by the foundation for its various charitable activities.

### Our Commitments

- Allocating a minimum of 1.5% of JSW Steel’s PAT to community development activities.
- Advocating the cause of women’s empowerment and upliftment of the marginalized and those with disabilities.
- Adhering to the Millennium Development Goals framework with special emphasis on:
  - Universalizing primary education
  - Mitigating infant mortality
  - Nurturing maternal health
- Safeguarding the environment through water conservation, renewable energy and sanitation activities.
- Addressing the specific needs of the community and creating viable working models through engaged social processes and infrastructure-oriented development.
- Supporting arts, sports and conserve cultural heritage.
- Promoting the culture of social responsibility through employee volunteerism.

### JSW employee volunteers

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- Employees are encouraged to contribute up to 40 hours towards community development activities per employee per year.
- JSW Steel also accepts pay slip deductions towards contributions for its approved projects.
- JSW Steel organizes the collection of materials on a periodic basis that can then be utilized by the foundation for its various charitable activities.
JSW Steel

Social Development

Achieve Universal Primary Education

- Building school infrastructure
- Mid-day Meal Schemes
- Training of Teachers
- Aid for Science, Mathematics, English and Computer Education
- Giving Scholarships to meritorious rural youth from the local community
- Mentoring of students

EDUCATION

We work on the premise that every young boy or girl not attending school is either engaged in child labour or is facing social exploitation. We are very emphatic about ensuring primary, secondary and vocational education for all with a special focus on girl children. We support the governmental programs like the right to education. We have also assisted in other programs and projects depending on the needs expressed by those in the areas in which we operate. Some of these are: building school infrastructure, providing a healthy and cheerful environment for learning, mid-day meal schemes, training for teachers, teaching aids and infrastructure for computer education, giving scholarships to rural youth and mentoring of individual or group of students.

Promote Gender Equality and Empower Women

- Formation of Self Help Groups (SHGs)
- Enterprise Promotion
- Training in Non-Conventional Operations

LIVELIHOOD

We believe that one of the prerequisites of a dignified living is a dignified source of income. The Foundation is keen to provide basic training to women in order to help them start livelihood generation activities. In Vasind and Vijayanagar a sustained effort is underway to involve women to acquire requisite skills to earn their livelihood

Ensure Environmental Sustainability

- Adaptation and mitigation of Climate Change
- Water Conservation
- Conversion to Renewable Energy Sources
- Conservation of Biodiversity

ENVIRONMENT

JSW’s focus on environmental issues includes emphasis on emission reduction and initiating a broad dialogue on climate change management.
HEALTH

Our focus is to strengthen public health system of the Government in surrounding villages by enhancing infrastructure and encouraging medical and para-medical staff to perform better.

Our aim is to reduce the prevalent incidence benchmarks in:
- Child mortality
- Maternal health
- Malnutrition
- HIV/AIDS

<table>
<thead>
<tr>
<th>Social development program</th>
<th>Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCs</td>
<td>11,996</td>
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<tr>
<td>Accelerated learning</td>
<td>1,525</td>
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<tr>
<td>Mobile libraries for children (rural)</td>
<td>5,420</td>
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<td>Balwadis</td>
<td>2,412</td>
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<td>Anganwadis</td>
<td>7,181</td>
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<tr>
<td>Adolescent health education</td>
<td>6,388</td>
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<tr>
<td>Education support: Community scholarship for Xth Students</td>
<td>120</td>
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<tr>
<td>Mid-day meal scheme</td>
<td>196,000</td>
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<tr>
<td>Village learning centres</td>
<td>427</td>
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<tr>
<td>Career guidance</td>
<td>27,425</td>
</tr>
<tr>
<td>Jindal Vidya Mandir students</td>
<td>5,502</td>
</tr>
<tr>
<td><strong>Total outreach</strong></td>
<td>737,546</td>
</tr>
</tbody>
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Social Development

Education

**Computer Aided Learning Centres (CALCs)**

We have established these centres this year in the schools in the nearby villages in Bellary, Thane and Kurnool districts in collaboration with the Azim Premji Foundation and the Village School Management Committees. We have been working with the Azim Premji Foundation to promote computer education in rural schools. We train teachers and provide them with a stipend and help in the dissemination of computer literacy by training rural children. At Vijaynagar we have trained 12,500 children through our centres in 37 schools with 155 computers. This program also helps in decreasing the number of drop outs and attracting previous drop outs back to school.

**Mobile libraries for children**

In order to improve literacy and encourage children to read we set up mobile libraries in 25 villages as part of a pilot project this year. We have identified formally educated girl volunteers from these villages to partner with us in this initiative.

These volunteers who were already involved in taking tuitions for smaller children were further trained in book keeping and maintaining records. We support the voluntary librarians through a fixed honorarium based on performance and membership strength. Over 2,500 children’s books and other material are provided and the librarians are entrusted with ensuring that the children are reading and understanding the material given to them. This not only benefits more than 5,400 member children but also provides a source of income for the librarians.

**Balwadis**

We support balwadis which provide essential pre-primary education to children through training local women to set up centres in their homes via the Vishala Balwadis which are free of cost. The balwadi officials are also entrusted to educate parents on health and nutrition as well as basic childcare skills. More than 2,400 economically underprivileged children have benefited and 13 local women have a chance to earn a living.

**Adolescent health education**

We have sessions in rural schools aimed at adolescent children to educate them on puberty and physical growth and anatomical changes. These sessions are taken by trained professionals and feedback is sought from parents and teachers. This has shown a marked decrease in eve teasing and usage of obscene language among adolescent children.
Over 6,000 children have benefited and we have now included this program in the Jindal Vidya Mandir and the Municipal school in Prabhadevi, Mumbai.

**Education support**

The JSW Foundation has a scholarship program for employee’s children and 86 children have received this award since its inception. The scholarships cover the entire duration of their higher education.

We also have an award for the first three students of the Xth standard from the schools surrounding the areas in which we operate and 131 students from 27 different schools have benefited from this award.

**Mid-day meal**

We have collaborated with civil society institutions that support the mid day meal programme and with their assistance have reached out to 196,000 children.

We have helped by donating land for kitchens and supporting the program through regular grants. This service has been appreciated by rural schools that report an increase in attendance and an improvement in the health of the children.

**Village learning centres**

In order to address the problem of school drop-outs the Foundation has set up residential camps where remedial education is given to students in order to help them integrate into schools. After the child has reached the desired level of competency the Foundation helps in his/her admission into local schools. These centres are essential in rural areas where many students are the first of their families to go to school and hence receive no parental support in their studies. These centres hold motivational activities and play the role of parents by encouraging students and assisting them in their learning. 427 students have been readmitted into mainstream schools through this program.

**Career guidance programs**

JSW staff and career guidance experts visit rural schools through the Foundation and educate students in standards 9-12 on the various future career options. The Foundation also participates in career fairs at various institutions and has helped 27,425 students through career counselling.

**Other support activities**

In tune with the Foundation’s motto ‘Excel through Education’ the Foundation runs schools under the name Jindal Vidya Mandir at Vijayanagar, Vasind and Ratnagiri: A total of 5,502 students are presently studying in these schools. Some other activities conducted by the Foundation are:

- Construction of compound wall & de-silting canal to prevent water entering school at Joga.
- Installation of solar power system for Toranagallu (Vijaynagar) CALCs.
- Distribution of school shoes to nearly 8,000 children of surrounding schools.
- Distribution of student desks at Vijaynagar.
Our health related initiatives aim to strengthen the Public Health System provided by the Government and this is achieved by improving the infrastructure as well as performance of medical and paramedical staff. We have focused our efforts on child mortality, maternal health, malnutrition and HIV / AIDS.

Rural health clinics
The clinics in rural areas are tasked with providing a mobile health clinic as well as organising periodic health camps for the local communities. These camps are operated on a needs based assessment carried out by doctors and focus on maternal health, paediatric health, pregnancy related health issues, anaemia, malnutrition and other chronic prevalent diseases.

We collaborate with hospitals and charitable organizations in some of these camps and initiatives. We have helped 384,807 rural patients through these camps.

Mitigating HIV/ AIDS
We have conducted awareness sessions and street plays in villages in order to raise the awareness levels of rural people and have identified plant personnel to be trained as peer educators. We have installed condom vending machines at truck terminals and refill these regularly. The Foundation has established a drop-in counselling centre (DIC) at the truck terminus in association with Bhoruka charitable trust to raise awareness. We have reached out to 38,089 people through our behaviour change communications and over 7,000 patients through our clinics. We also assist over 24,000 families at the voluntary testing and counselling facility in association with Vijaynagar Bhoruka Charitable Trust.

Our HIV/ AIDS programme was initiated with the goal to increase awareness and prevent the spread of Sexually Transmitted Infections (STIs)/ HIV/ AIDS among the general population keeping in mind a special focus on truck drivers, brokers, contract employees, transporters.

The objectives of the programme are:
- Sensitizing the staff at JSW on issues related to sexual health, sexually transmitted infections and HIV/ AIDS.
- Creating awareness about sexual health, STIs and HIV/ AIDS among the target group (truck drivers, brokers, transporters, sex workers and MSMs) in order to prompt a behavioural change amongst them and to encourage safe sex practices.
- Providing services for prompt detection and treatment of STIs and other ailments and encouraging the public to come forward for treatment and counselling.
- Improving the accessibility and availability of condoms and promote their use to prevent the spread of HIV.
- Encouraging HIV testing among the community members and to ensure that those infected are supported by networking with the nearest Integrated Counselling and Testing Centres and care and support centres.

Other initiatives
We have taken the following initiatives to improve the infrastructure of the Gadiganoor Public Health Centre in
consultation with Gram Panchayat:
• Electrification of the PHC with ceiling fans & tube lights
• Improvement of the flooring of PHC and repair of delivery room, toilets and labour room
• Provided incubator (for newborns) & a 1.5KV generator
• 150 Street lights for the villages (Gadiganoor, Buvanahalli & Kotaginahal)
• Regular mosquito repellent sprayed throughout the villages covering more than 10,000 people

General Health Camps, STI/RTI and cataract camps have been conducted in the surrounding villages through which 66,559 people have benefited. 476 people benefited from STI/RTI camps, 729 people benefited and 233 people were operated on during our cataract camps. The programme is now conducted on every Wednesday at JSH.

Jindal Sanjeevani Hospital
Jindal Sanjeevani Hospital (JSH), Vijaynagar provides the best level of health care to JSW employees, their dependents and to the families in and around the plant. The seventy-five bed hospital is centrally air-conditioned, and is equipped with the latest amenities. Once a week, JSH runs a free OPD for the underprivileged. Health camps held in the surrounding villages are free of cost & the medical facilities from the JSH are used for the same.

Primary Health Centres (PHCs)
With the aim to strengthen the existing government infrastructure, JSW Foundation has upgraded PHCs across locations. After upgradation an increase in institutional delivery, adoption of family planning methods, etc. have been observed. The Foundation has upgraded / helped with
• Water and sewerage systems
• Overall renovation of the building
• Nurses accommodation,
• Sanitization of operation theatre and other sections
• Nurse and other staff recruitment
• Refrigerator for medicines/ vaccines
• Registers for data collection and MIS

We have provided new equipment and in collaboration with the state health departments hope to ensure upgraded and comfortable health outreach to a large rural population that avails the facility at the PHCs.

Disability assessment and intervention
We conduct household surveys in select villages around plant locations to ascertain prevalence and intensity of physical and mental disability. We are presently collaborating with vocational training providers for this underserved section of the society. As an outcome of this detailed survey the foundation has created a school for the mentally challenged called “Tamanna”. This school caters to patients from the neighbourhood of our Vijayanagar operations providing skills training for livelihood generation.

Aid to young girls for cardiac surgeries
We provide financial support for under privileged young girls diagnosed with heart ailments. We have supported six such cases.

Sanitation
Sanitation facilities are lacking in villages due to ignorance and costs associated with sanitary living conditions. To counter these problems the Foundation partnered with ‘Nirmal Gram Abhiyan’ with mutual understanding between Zilla Parishad, Panchayat Samiti and Gram Panchayat. JSW workers created awareness through door-to-door visits and also screened films on health and sanitation in the evenings at a common meeting point. These efforts led to a number of people signing up for individual toilet construction. The number of beneficiaries for this programme across locations is 3,657.
Vocational centres

The two vocational training centres in Vijayanagar and Vasind have till now trained 5,291 students. O P Jindal Vocational Training Centre (OPJVTC), Vasind formally known as the Shramsadhana Vocational Training Centre (SVTC) was started in Vasind in 2003 with the initial aim to reach out to school dropouts and women. Many of these students have found jobs in local small-scale industries.

To facilitate their absorption, OPJVTC now covers many areas, including soft skills and communication skills. Currently, OPJVTC has partnered with Fr. Agnel Technical Institute, Bandra, Mumbai. For a nominal fee the students pursue diverse technical and non-technical courses ranging from Tailoring to Welding, from Computer Hardware to Electrical maintenance. The Ministry of labour has allotted “Vocational Training Provider” status to OPJVTC under its Modular Employability Scheme (MES).

O. P. Jindal Centre (OPJC), Vijayanagar started livelihood generation activities in 1999 with an initial strength of 5 women trainees in textile and apparels. The scope of the centre has grown to include different courses in welding and electrical maintenance. In 2007 the OPJC partnered with the Nettur Technical Training Foundation (NTTF), Bangalore.

Industrial Training Institutes (ITIs)

The JSW group of companies has adopted 23 ITI’s under the public private partnership opportunity provided by the central government. It has initiated training of faculty and students with exposure to modern technology and proposes to develop each of these ITI’s into a centre for excellence in particular trades.

The government has provided a one-time grant of INR 25 million and with that and its own resources JSW proposes to fulfil its commitment to the Institute Development Plans it has formulated with other industry partners.

Self Help Groups (SHGs)

JSW Foundation forms SHGs with the sole objective of reaching out to the poor women in villages around plants through collateral free credit programmes aimed at income generation thereby promoting sustainable livelihood opportunities.

This objective is achieved by organizing the women into Self Help Groups (SHGs), which assist them to build their capacities, enabling them to identify and prioritize their needs and resources.
Fostering gender equity

The JSW Foundation has always championed the causes of women, especially in the rural areas around our plants. The Foundation has been keen to engage women in its workforce not for conventional jobs, but also in those areas traditionally reserved for men.

The Foundation encouraged rural girls with higher secondary education to take on the unorthodox skill of operating heavy earth-moving machines.

These women are given 3 to 6 months of training and during that period, they are given a stipend, Group Personal Accident benefit/Workmen’s Compensation benefit and all safety equipment.

After the successful completion of the training, these women are placed with associate companies. So far about 80 women from the surrounding villages have been placed in companies.

Non-voice rural BPO

A non voice rural BPO for women has been established as a pilot project in our Karnataka operations. This aims to improve the knowledge and skills of rural women making them IT savvy and giving them an opportunity to earn their livelihood through gainful employment while at the same time improving the socio-economic condition of these women.

This initiative was started in 2005, and over the years it has touched the lives of 500 rural women. These women are now recognized in their respective families as bread earners and few are augmenting the family income to lead a better life.
Social Development

Environment

Waste utilization and management

This is a pilot project to determine community involvement in collection, disposal and management of village waste. This has been established following a prolonged dialogue with the community. Village shops have been persuaded to purchase two used drums and every household is given two waste bins for segregating their waste. The community has nominated village men and women for daily collection of waste. From the collection point the waste is transported to a nearby dump where it is composed using biological methods. Six villages are covered under this programme with 48,627 beneficiaries. A demonstration ‘Biodigester project’ has been installed at Vasind with a capacity to process 1,000 kg of organic waste. The gas produced from this unit is supplied to 32 households.

Further, a CDM project in rural areas using improved cooking stoves is proposed, to benefit 10,000 families in Maharashtra and Rajasthan. This project is registered with the UNFCCC and is expected to both improve the cooking conditions in rural households as well as reduce the amount of fuel wood required.

Model village development

This is a pilot project in collaboration with local village panchayat. A detailed study was undertaken to map the socio-economic condition of the village. Over two phases, the first focusing on physical rehabilitation and the second, on social rehabilitation.

This project will address issues of drainage, roads, sanitation, water and education, health and community organization. The foundation has insisted upon provision of community library and roof water harvesting facility.

Summer camps

The Foundation observed young children around its plants express concern about the smoke emerging from its chimneys and about the longevity of their river because of the plant effluents.

We developed this project in order to allow children to see the plant, discuss their concerns and understand the operations. For the Foundation, this has proved to be an important activity in subsequent work with the parents of these children. 933 students have participated in these camps.
Other Initiatives

Sports

Jindal Squash Academy

Jindal Squash Academy is the second biggest squash academy in the country and the predominant hub for the sport in Maharashtra. So far, the Academy has produced 7 International Squash players, 22 National players and 46 State players. The academy has also been providing exposure to the rural youth of the neighbouring villages. It has been a constant endeavour to create a squash culture by identifying talents from within the company and to foster competitive spirit amongst them. We encourage the aspiring squash players to play at international level.

Academies have also been started in tennis, table tennis and swimming. Every year, the academies organize summer camps that are open to village boys and girls who participate in various sport activities like squash, table tennis, swimming, lawn tennis, yoga, karate, skating, rope climbing, fun games, first-aid training, nutrition & diet etc.

JSW Challengers Trophy

The interplant sports tournament named ‘Challengers Trophy’ is being coordinated by the Foundation for the past 3 years. Across locations there is increasing investment on sports infrastructure to enable employees to compete in this tournament.

Talent hunt

To implement the right platform for fostering young sporting talents, JSW Foundation and Thane District Sports Office has initiated a unique partnership to create national and international sportspersons, to identify sports aptitude in the age group of 8 to 14 years. A total of 6,000 schools are covered in the Thane district to search out talent. A set of 12 posters was displayed across the district to create awareness about nine important exercises and their required parameters, as developed by the Mumbai Sports Committee, for selection to the State Sports Academies.

Self defence training

JSW along with Thane district sports council has been organizing a ten day self defence camp for women from rural Thane district for 2 years now. Batches of 25 women each from different villages participate in the camp during which they are introduced to basic skills of karate, taekwondo, judo, lathi-kathi, yoga, fire fighting, swimming, first aid training and aerobics. Under public private partnership, such engagements with the Thane district sports council not only enables us to effectively disseminate these programs but also provides adequate opportunity to our volunteers to serve the community.
Other Initiatives

Environment

Earth Care awards

The JSW Earth Care Awards is aimed at highlighting action of direct relevance to India to tackle challenges posed by climate change. The award is for excellence in climate change mitigation and adaptation.

This is in response to the recently growing consciousness about issues associated with climate change and that it is important to identify and foster locally evolved options to reduce emissions, approaches to protect land and water resources and other innovations for reducing impacts, emphasizing appropriate environmental action. The award focuses on three important areas: signifying action by industries, collaborative action by industry and community and by individuals covering a wide range of stakeholders. Earth Care Awards have been a success with 22 Climate Crusaders awarded till now.

Township carbon footprint studies

JSW Foundation garners support from employees tackling environmental problems. We strive to upgrade the standards of energy efficiency at all JSW plants and carbon footprint studies is a continual process in our townships.

Environment training workshops

JSW has identified environment and climate change as strategic priority areas and wants to ensure the next generation of JSW employees are prepared for the changes ahead. To provide an overview of climate change issues and mitigation options workshops were conducted in partnership with Earth Watch Institute, Sirsi. JSW - Earth watch ‘Leadership Programme on Climate Change’ have been organized for six batches of employees.
Other Initiatives

Conservation of Arts & Cultural Heritage

The JSW Foundation believes in the beguiling power of art, and is attentive to the need of preserving the timeless cultural heritage of our country.

Creating a platform to restore pride in our cultural heritage and promoting dialogue in contemporary & performing arts is an extension of the overall collective thrust that the Foundation lays on all its endeavours.

Hampi restoration

Restoration of the Krishna temple, a UNESCO World Heritage site at Hampi, Karnataka. A national treasure, the temple was built under the royal patronage of the Vijayanagar Empire in 111 Century AD.

Under the aegis of the JSW Foundation, world-renowned restorers undertook the painstaking work of restoring the complex, and their untiring efforts have saved the temple from further deterioration.

Art India

The Foundation has been a forerunner in disseminating critical ideas about contemporary art and initiating dialogue in contemporary culture. This has been achieved through Art India, India’s premier art magazine.

Over the last fifteen years, the magazine has been responsible for the promotion of a critical discourse around diverse art forms and disciplines. The magazine has won several national awards for printing and content and is recognized internationally as the most important independent voice on contemporary art from India.

Publications: The Foundation periodically supports publications on various topics. These have been absorbed by connoisseurs and find place in national and international bookstores.
Independent Assurance Statement

JSW Steel Limited (the Company) has requested KPMG to provide an independent assurance on its 2011-2012 Corporate Sustainability Report (the Report).

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” in accordance with International Standard on Assurance Engagements (ISAE 3000) on the Report content as described in the scope of assurance. The assurance statement should not be taken as a basis for interpreting the company’s overall performance, except for the aspects mentioned in the scope below.

Our responsibility in performing our assurance activities is to the management of the Company only and in accordance with the terms of reference agreed with the Company. We do not therefore accept or assume any responsibility for any other purpose or to any other person or organization. Any dependence that any such third party may place on the Report is entirely at its own risk.

Scope

The scope of assurance covers the following aspects of the Report:

- Data and information related to the Company’s sustainability performance for the period 01 April 2011 to 31 March 2012.
- The sustainability specific data and information covering the Company’s downstream works at Vasind and Tarapur & upstream works at Vijaynagar & Salem.
- The Company’s internal protocols, processes, and controls related to the collection, collation, and reporting of sustainability performance data.
- The Company’s approach to identify material issues and engage with its stakeholders.

Exclusions

The assurance scope excludes;

- Aspects of the Report other than those mentioned above.
- Data & information outside the defined reporting period.
- Financial data sourced from JSW Steel’s audited annual report for FY 2011-12.
- The Company’s statements that describe expression of opinion, belief, aspiration, expectation, aim or future intention provided by the Company.

Methodology

We conducted our review in accordance with International Standard on Assurance Engagements (ISAE 3000), “assurance engagements other than audits of review of historical information” issued by International Audit and Assurance Standards board. The process of assurance involved:

- Discussion with Senior Executives at upstream and downstream works and at corporate office to understand their perspectives on sustainability, their expectations, and future plans.
- Site visits to the downstream works at Vasind & Tarapur and upstream works at Vijaynagar & Salem for 1. Testing reliability and accuracy of data on a sample basis 2. Understanding assumptions / thumb rules considered 3. Assessment of the stakeholder engagement process through interviews with concerned personnel and review of relevant documentation 4. Review of the processes deployed for collection, compilation, and reporting of sustainability performance indicators at corporate & works level.

Appropriate documentary evidence was obtained to support our conclusions on the information and data verified; wherever such documentary evidence could not be collected on account of confidential information our team physically verified the documents.

Observations

Our observations are as follows:

- JSW Steel has demonstrated serious efforts towards creating a sustainability governance framework by creating the position of a Chief Sustainability Officer, to drive the Corporate Sustainability Cell.
- Key sustainability risks have been included in JSW
Conclusions

On the basis of our assurance methodology, nothing has come to our attention that would cause us not to believe that:

- The Report presents JSW Steel's sustainability performance covering its operations as mentioned in the scope.
- Material issues that have impact on JSW Steel and are of interest to its stakeholders have been highlighted in the Report.
- The process of engaging with key stakeholders to map their expectations and its subsequent outcome has been reported.

Independence

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 firm (assurance provider) be independent of the assurance client, including not being involved in writing the Report.

The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence.

Responsibilities

Our responsibility is to express our conclusions in relation to the assurance scope listed above. We conducted our engagement with a multidisciplinary team including specialists in ISAE 3000, stakeholder engagement, auditing environmental, social and economic information and with experience in similar engagements.

JSW Steel is responsible for developing the Report contents. JSW Steel 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 assurance statement is made solely to JSW Steel in accordance with the terms of our engagement. Our work has been undertaken so that we might state to JSW Steel those matters we have been engaged for.

To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than JSW Steel for our work, for this statement, or for the conclusions we have reached. By reading this statement, stakeholders agree and accept and agree to the limitations and disclaimers mentioned above.

Santhosh Jayaram
KPMG India
GRI Application Level

To indicate that a report is GRI-based, report makers declare the level to which they have applied the GRI Reporting Framework via the “Application Levels” system.

To meet the needs of beginners, those somewhere in between, and advanced reporters, there are three levels in the system. They are titled C, B, and A. The reporting criteria at each level reflect a measure of the extent of application or coverage of the GRI Reporting Framework.

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STANDARD DISCLOSURES

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STANDARD DISCLOSURES

G3 Profile Disclosures

G3 Management Approach Disclosures

G3 Performance Indicators & Sector Supplement Performance Indicators

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Statement
GRI Application Level Check

GRI hereby states that JSW Steel Limited has presented its report "Corporate Sustainability Report 2011-12" to GRI’s Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines.

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 7 December 2012

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative

The “+” has been added to this Application Level because JSW Steel Limited has submitted (part of) this report for external assurance. GRI accepts the reporter’s own criteria for choosing the relevant assurance provider.

The Global Reporting Initiative (GRI) is a network-based organisation that has pioneered the development of the world’s most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organisations can use to measure and report their economic, environmental, and social performance.

www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 1 December 2012. GRI explicitly excludes the statement being applied to any later changes to such material.
# GRI Content Index

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*Additional Information Sources:*

- **JSW Steel Limited Annual Report 2010-2011:**
  [http://www.jsw.in/investor_zone/pdf/Annual_Results/JSW_Steel_Annual_Report_2010_11.pdf](http://www.jsw.in/investor_zone/pdf/Annual_Results/JSW_Steel_Annual_Report_2010_11.pdf)

- **JSW Steel Annual Report 2011-12 is available at**
  [http://www.jsw.in/investor_zone/pdf/Annual_Results/JSW_Steel_Annual_Report_2011-12.pdf](http://www.jsw.in/investor_zone/pdf/Annual_Results/JSW_Steel_Annual_Report_2011-12.pdf)

- **JSW Steel Limited Corporate Sustainability Report 2007-09:**
  [http://www.jsw.in/companies/JSWSteel_Sustainability_Report0709.pdf](http://www.jsw.in/companies/JSWSteel_Sustainability_Report0709.pdf)

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  [http://www.jsw.in/companies/JSWSteel_Sustainability_Report0911.pdf](http://www.jsw.in/companies/JSWSteel_Sustainability_Report0911.pdf)