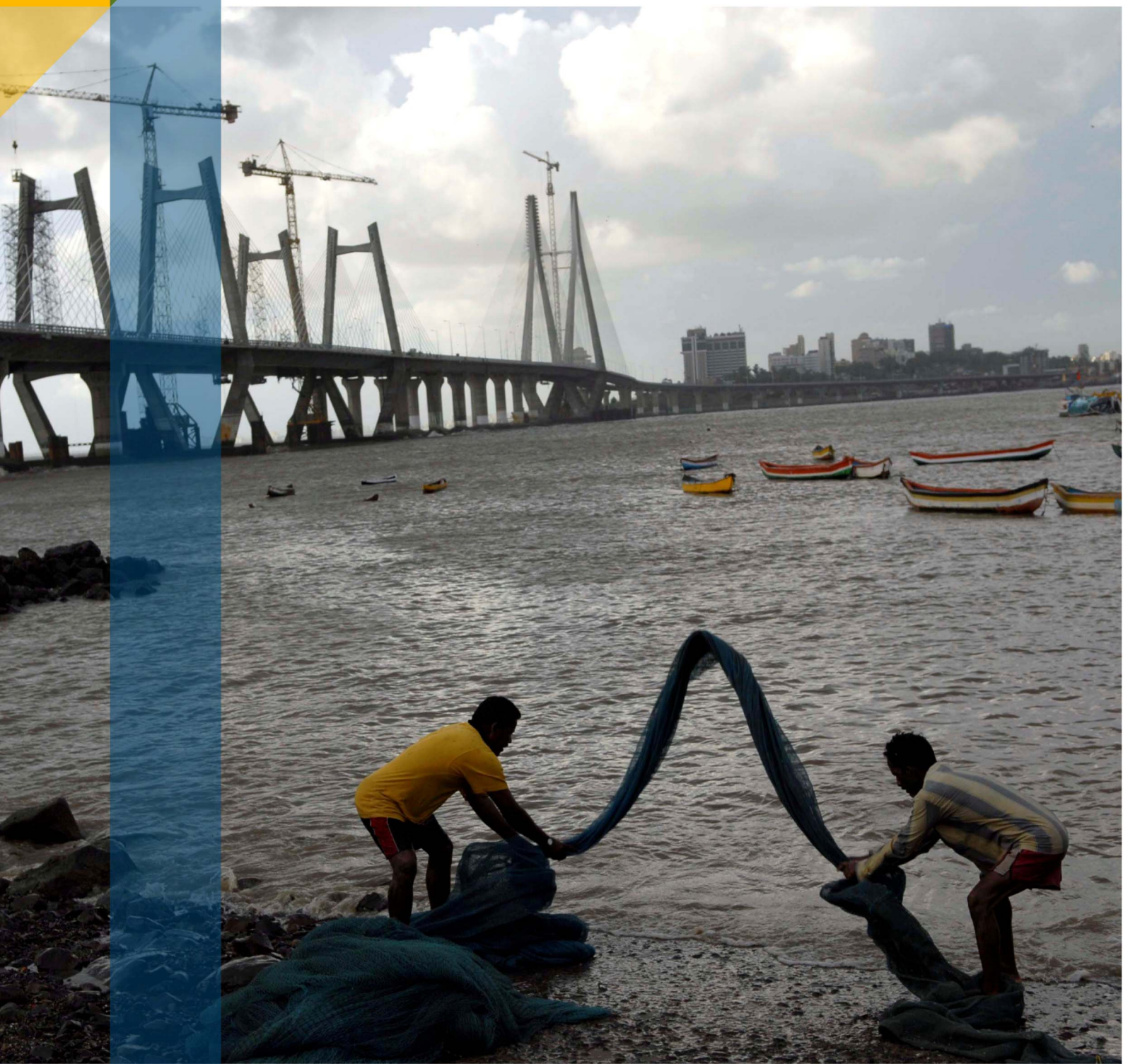
Sustainability Report 2011-12

Responsible Infrastructure

HCC



Statement
GRI Application Level Check

GRI hereby states that **Hindustan Construction Company Ltd.** has presented its report "Responsible Infrastructure 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, 11 September 2012

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative

The "+" has been added to this Application Level because **Hindustan Construction Company Ltd.** 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 organization 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 organizations 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 27 August 2012. GRI explicitly excludes the statement being applied to any later changes to such material.*

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About the Report

Responsible Infrastructure 2011-12 is Hindustan Construction Company's (HCC) third consecutive annual sustainability report, and presents sustainability highlights from the financial year (FY) 2011-12 (1 April 2011 to 31 March 2012). For this report, we have adopted the new Global Reporting Initiative (GRI) G3.1 Construction and Real Estate Sector Supplement (CRESS) reporting framework. We continue reporting the highest Application Level of A+. Wherever necessary, we have explained the assumptions and/or exceptions while reporting on the GRI key performance indicators.

This report also comprises our fourth Communication on Progress (COP) for the UN Global Compact's CEO Water Mandate initiative, for the same reporting period.

The primary target audiences for this report are our employees, investors, customers and suppliers, business partners, regulatory authorities as well as individuals and organizations who may be interested in learning more about out triple bottom line philosophy and performance.

The scope of reporting of key performance indicators is limited to our Engineering & Construction business. For FY 2011-12, a total of seventeen projects across India have been included in the reporting purview. Some of the projects in scope last year have either been completed or are being demobilized, and Sainj Hydro-electric Power Project is a new addition to the reporting scope this year.

This report has been assured by Ernst & Young (India) Pvt. Ltd, an independent and professional services firm. A representative sample of data was made available for scrutiny and verification to their assurance team. The external assurance adds continued credibility to our reporting and has strengthened our approach through capacity building at HCC.

Readers are welcome to address their queries or feedback on this report to:

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All financial values in this report are expressed in terms of Indian Rupees ("INR" or "Rs."). Large numbers may be expressed in terms of Lacs, Crores or Millions; these are units of monetary value commonly used and accepted in the Indian sub-continent.

From the Chairman and Managing Director's Desk

Dear Readers,

In continuation of HCC's commitment to sustainable business practices, I am delighted to present **Responsible Infrastructure, our sustainability report for 2011-12**. Like our previous sustainability reports, this report fulfils the requirements of the highest Application Level (A+) of the Global Reporting Initiative's (GRI) framework. We have followed the G3.1 Guidelines, which also includes the Construction and Real Estate Sector Supplement (CRESS). In addition, the report contains HCC's Communication on Progress (CoP) for 2012 on the UN Global Compact's CEO Water Mandate.

I want to take this opportunity to briefly dwell upon the developmental challenges we are facing as a country. Over the next thirty years, four hundred million people are expected to move to cities from rural areas in India. Around thirty million people will need to be employed in the next twenty years, and nearly five hundred million people need to be brought out of poverty. In order to achieve this enormous task, India has to invest heavily in urban infrastructure, roads that connect cities, water supply and irrigation infrastructure, and new and improved power generation capacity to drive it all.

As we go about achieving this growth, the environment will be damaged considerably because even basic infrastructure calls for power generation, which in turn results in carbon emissions and ecological damage. India faces the task of not only restoring its ecology but also enhancing it, given that it is already considerably depleted. In India, poverty and environmental degradation often feed into each other. Abject poverty often leads to environmentally degrading activities, and if progress is stalled, it increases poverty leading to further ecological damage. Hence, alleviating poverty and ensuring rapid development will require environmentally friendly industrialization. India's infrastructure will have to be sustainable, and responsibly built. True sustainability takes into account both environmental and social considerations. It ought to be an integral part of everything we do as a company, industry, society and as a nation. Developing sustainably will also entail the creation of measurable standards which people can adhere to.

A particularly important aspect of protecting our natural environment is the need to conserve water. Effective treatment and recycling of water as well as harvesting of rainwater and ground water recharging are some relatively simple practices that will make a difference between a water-starved country and one where water sustainability contributes to nation's growth.

We need to encourage innovation and achieve higher efficiencies to drive responsible development. Fast-paced development and environmental protection can be achieved best through innovation. Larger efficiencies are needed to accomplish the common objectives of making India prosperous, alleviating poverty and providing environmental protection. It will take a long time for solar and wind technology to contribute significantly to the world's energy requirements. Hence, traditional forms of fuel will have to be used in the foreseeable future. Destructive technologies need to be created only to the extent that the productivity of resources is increased.

Innovation has three main ingredients – education, collaboration amongst educational institutions, business and science, and freedom. For path-baking technology, you need intellectual property protection and other things that can only be provided by a free society. Free societies allow minds to think and free speech allows people to interact. If India's population is going to grow to nine billion, there is an urgent need for food, transportation, comfortable living and employment. To satisfy this requirement, the focus must be on innovation and our government's policies must encourage it. India has a vibrant, young population. This population needs to be allowed to create dreams, for which it needs all-round education.

By pursuing developmental practices that are innovative and responsible, it is entirely possible for India's ambitious growth and urbanization to be sustainable. This will call for the involvement of people, good government practices and engagement with the private sector. Implementing this model will call for leadership – leadership from the government, business, non-governmental organizations and ordinary citizens. It calls for government policies that are timely and visionary, policies that are implemented with clarity while effectively engaging the population.

In this report, you will find highlights of HCC's environmental and social performance, practices and achievements, as well as snapshots of innovations and technologies we are using to build cutting edge infrastructure. The UN CEO Water Mandate CoP describes HCC's efforts to conserve water and our participation in various forums that hold policy discussions on water consciousness and sustainability in general. Also included are updates on 'Beyond Bread' - our corporate social responsibility activities in our local communities.

HCC continues to win national and global recognition at many thought leadership forums. Recently, HCC's initiatives towards water sustainability was featured amongst international case studies by the U.N. Global Compact and U.N. Environment Program in a report titled, 'Business and Climate Change Adaptation: Toward Resilient Companies and Communities.' These accolades encourage us to make further strides as we move forward in our sustainability journey.

I hope you will find this report informative, and we welcome your feedback and suggestions.

Ajit Gulabchand
Chairman and Managing Director

Organizational Profile

Hindustan Construction Company is a business group of global scale developing and building responsible infrastructure through 'Next Practices'. HCC Engineering & Construction is a part of the HCC Group of Companies[1]. The scope of this report is limited to the Engineering & Construction (E&C) entity only.

Key Group Companies

HCC

Engineering & Construction

- Hydel Power
- Water Solutions
- Transportation
- Nuclear Power and process Plants
- Built 25% of India's hydel power capacity and 50+% of India's nuclear power capacity

Lavasa Corporation

Urban Development and Management

- Spread across 23,000 acres of environmentally friendly development
- Planned for 300,000 residents and 2 million tourists
- A city where people across socio-economic spectrum will live, work, learn & play in harmony with nature

HCC Real Estate

Integrated Real Estate Development

Developed

- 247Park, India's largest, stand-alone LEED certified gold rated green building

Under development

- 247Park - Phase II
- Rs.40,000 Cr ($7 billion) waterfront city spread over 4,000 acres at Dholera, Gujarat
- 40 acres of Slum Rehabilitation in Mumbai

HCC Infrastructure

Concessions in PPP/BOT

Developed

- Dhule Palesner Toll Road, Delhi Faridabad Elevated Expressway, Nirmal Annuity
- Plan to create diversified portfolio of Rs.15,000 Cr ($3 bn) in road, power & water concessions

Steiner AG

Total Services Contractor

- Switzerland's second largest total services contractor
- HCC owns 66% stake
- Revenue of Rs 3,996.2 crore (CHF 728.0 million) for FY 2011-12
- Key markets: Switzerland, with entry being prepared in selected European markets
- Steiner India Ltd. established in October 2011

HCC Group Highlights in 2011-12

- Group turnover at Rs. 8,157 crore, increased by 14%
- HCC Standalone Turnover at Rs. 4,003 crore
- HCC E&C Orderbook at Rs. 8,288 crore. One of India's largest E&C companies
- Lavasa resumed development and construction activities post Environment Clearance from MoEF in November 2011. Lavasa launched its second town, Mugaon
- HCC Infrastructure raised Rs. 240 crore by divesting 14.5% equity stake in HCC Concessions to The Xander Group at a valuation of Rs. 1,650 crore

[1] Further details of HCC Group Companies can be found in HCC's Annual Report FY 2011-12 http://www.hccindia.com/hcc_admin/data_content/invester_pdf/HCC_Annual_Report_2011-12.pdf

Engineering and Construction Business

Hindustan Construction Company Ltd. (E&C Business) has nearly a century of construction experience, notably in geographically challenging terrains. We are an experienced Engineering and Construction leader with businesses in Hydel Power, Water Solutions, Transportation, and Nuclear & Special Projects, as highlighted below.

Hydel Power

- We have built more than 25% of India's hydro power generation capacity
- We are involved in complex construction projects across the country, more than 70% of which are in difficult Himalayan terrain

Water Solutions

- We have the capability to execute large scale complex EPC projects, and have executed some of India's largest water supply / irrigation contracts
- We have extensive experience in construction of tunnels using TBM in congested urban areas
- We have done more than 25 Km of Tunnel Boring Machine (TBM) tunneling. This is the highest tunneling by TBM for any Indian company

Transportation

- We have a presence across the complete spectrum of transportation
- We have built more than 3100 Lane Km of highways and expressways
- We build bridges, sea links and elevated Roads, and have been involved in the construction of over 300 bridges
- We are pioneers in MRTS and Railways, and have constructed India's first & second MRTS & railway tunnels

Nuclear

- We have built 50% of India's nuclear power installed capacity
- We have built the Kudankulam Nuclear Power Project (KKNPP 1& 2), India's first and largest Light Water Reactor for Power (PLWR)

Projects in Scope for Sustainability Report 2011-12

Hydel Power Projects	Water Solutions Projects	Transportation Projects	Nuclear & Special Projects
Dagacchu HEP* Kashang HEP Kishanganga HEP Pare HEP Pir Panjal Tunnel Zone VA Pir Panjal Tunnel Zone VB Punatsangchhu HEP* Sainj HEP Teesta Low Dam HEP Stage IV Teesta HEP Stage VI Lot IV (A and B)	Maroshi-Ruparel Water Supply Tunnel Project	AS-23 (East West Corridor) Assam Kolkata Elevated Road Corridor Project Four-laning of NH 34 Package 3 Four-laning of NH 34 Package 4	Aditya Aluminium Project Padur Rock Cavern Project for Crude Oil Storage

The report contains data on key sustainability performance indicators from the above projects and presents company wide data on economic performance, human resources, policies, and key initiatives during the reporting period.

** Dagachhu HEP and Punatsangchhu HEP are located in Bhutan; Rest of the sites in scope for this report are in India.*

Vision, Mission and Values

Vision

"To be the Industry Leader and a Market - Driven Engineering Construction Company renowned for excellence, quality, performance and reliability in all types of construction"

The Vision Statement has been inspired by the global infrastructure development needs of tomorrow, with the Customer as the central focus. It was developed after conducting a series of in-house workshops. Senior Leaders within the organization are actively involved in developing and maintaining an effective and efficient management system to disseminate the Vision across HCC in order to achieve 'Customer Delight.'

Mission

The HCC Corporate Mission encompasses the overall strategies, objectives and goals of the Organization-

- To be a leading construction company in the global market.
- To become the customers' most preferred choice by attaining excellence in quality and value added projects completed on time.
- To continually innovate, develop and adopt state-of-the-art technology in methods and materials to enhance productivity and cost effectiveness.
- To continually improve the competence of our people and make them proud to work at HCC.
- To build a safety culture aimed at continually reducing the frequency severity rate towards achieving zero accidents.
- To identify and mitigate all the environmental impacts arising from our activities and comply with applicable environmental norms.
- To develop and adopt eco-friendly concrete technology to reduce one million tons of greenhouse gas (GHG) emissions in the next 10 years.
- To contribute to the development of the local community and society at large as a part of our corporate social responsibility.

Values

Bold, determined, committed and quality conscious at all times - these values are the driving force behind our organization, defining us and guiding us every step of the way. Quality, for us, is a beacon that inspires us in everything we do, and a facet which is carefully nurtured at HCC. We believe that our people are our knowledge assets. We adhere to international standards of governance, and are extremely serious about our corporate and social responsibilities. Our values are representative of who we are and how we behave. They impact our everyday work life and give us a competitive edge.

Building Our Brand

Over its long and illustrious history, the HCC brand has consistently reflected the qualities of big vision, attention to detail, passion for nation building through creation of infrastructure, and striving for best-in-world technologies and business practices. In 2011-12, we continued to build our brand presence and communicate our core competence. The completion of 12 Km long Marol-Maroshi water supply tunnel in Mumbai and the 21 Km Pir Panjal tunnel packages in Jammu and Kashmir were two major milestones achieved during the year. These and other HCC projects received positive visibility in the national media through a structured communication program that focused on HCC's core philosophy of developing Responsible Infrastructure.

HCC's contribution in nation building through infrastructure development is becoming increasingly visible as highways and transport corridors built by us are opened up for motorists and goods carriers. A prime example is the four lane Dhule-Palesnar Tollway on NH-3, developed by HCC Concessions Ltd in a joint venture, which was completed four months ahead of schedule. Effective branding along this 89 Km route is now facilitating a smoother and safer journey for all users. Similar efforts are now underway along the 276 Km long NH-34 redevelopment project in West Bengal.

Our projects have also attracted several high-level visits by dignitaries. Mr. Jigme Y. Thinley, the Prime Minister of Bhutan, highlighted the key role our company continues to play in building hydel power capacities for the region.

Among the various initiatives undertaken to improve our external brand communication, the HCC website was given a comprehensive overhaul for enhanced public access to recent company updates. We have also begun an extensive effort to chronicle some of our major projects through documentaries and/or printed articles in order to both educate the general media and public about HCC's technical accomplishments as well as use them as learning tools for our employees currently executing similar projects. Internally, we have appointed and inducted Project Brand Champions in order to strengthen the dissemination of brand values among our employees. Key project milestones, research and development, and innovation updates continue to be effectively communicated to our employees through a variety of channels.

Construction Achievements and Highlights

Cumulative Physical Achievements up to March 2012

- 324 Bridges
- 3,124 lane kilometers of Roads
- 14 Nuclear Reactors
- 30 Hydro Power Projects
- 44 Dams and Barrages
- 204 kilometers of Tunnels

Construction Highlights in FY 2011-12

- **Rajasthan Nuclear Power Plant (Reactors 7 & 8)** team accomplished the largest single concrete pour (5757 m^3) undertaken and completed in nuclear power projects in India. The pour, which took place at 19^o C concrete placement temperature, took place in October-November 2011 over a period of less than six days. A total of 1950 metric tons of cement and 830 metric tons of fly ash were consumed.

- **Padur Rock Cavern Project** team achieved 553 RMT tunneling of a tunnel sized 20 m X 8m and a cross-section of 130 m^2 along with complete rock supports (NATM method) in the month of December 2011, there by surpassing its own record. The rock support works consists of 22000 RMT rock bolting and 1210 m^3 SFR shotcrete.

Project Showcase: Kishanganga Hydel Power Project

HCC is constructing a 330 MW hydro power project on the Kishanganga River in Gurez Valley, Kashmir, for the Government of India. A 37 m high dam is being constructed and water will be brought down through a 23.5 Km long head race tunnel. Of this, 14.6 Km will be constructed using a tunnel boring machine (TBM). The finished diameter of this tunnel will be 5.2 m with nominal boring diameter of 6.18 m. The machine is capable of boring 6.4 m diameter under special geological conditions and can bore in all types of rock conditions.

Status of the Project:

Construction of dam is underway and work on the 23.50 Km Head Race Tunnel (HRT) has begun. Work is also progressing on the power house & transformer hall, surge shaft and ventilation tunnel.

Manpower Deployed: 134 Engineers & Managers, 1395 Workmen

Major Equipment Used:

1 Tunnel Boring Machine	37 Excavators	85 Trucks
23 Compressors	18 Boomers (Drillers)	17 Cement Grout Equipments
1 EGT Drill M/C	1 Raise Climber	48 Dewatering pumps
2 Stone Crushers	4 Concrete Batching Plant	50 Generators
20 Cranes		

The TBM Machine:

The machine uses electrical power at 20 KVA rating, which is generated by 4 x 2000 KVA generators. An 11 KVA step-up transformer boosts the power from 11 KVA to 20 KVA and feeds the power to a feeder panel which feeds the power via HT line to TBM. HT Reel mounted at the lat deck of TBM back receives the power and feed to transformer station in the TBM back up.

The machine was imported from Italy in parts and shipped to site from Mumbai. Due to the difficult Himalayan terrain, roads has to be widened, bridges had to be strengthened and big water streams needed to be crossed. The machine's highest single consignment weight is 57 ton. It made its way through the Jawahar Tunnel in Pir Panjal, was assembled and subsequently launched into tunnel Adit using a launching chamber and ring.

Two air compressors are installed directly on the backup platform. Workers and materials required for operation are moved inside by tracked cars. The TBM ventilation system sucks air through a series of filters and pumps.

If the internal ambient temperature rises above 38°C, water chillers are switched on and chilled water at 4°C is supplied inside tunnel. The machine is equipped with dewatering system deal with water seepage.


In the event of loose soil or cavities/faults, the surface is strengthened by foaming or piped fore poling. The movements of rock in the excavated tunnel are also monitored.

Pre-cast concrete lining for the head race tunnel:

Pre-cast concrete lining for the head race tunnel (HRT) of specified thickness of 350 mm is proposed for the entire length of the tunnel excavated by TBM, which is nearly 14.6 km. It is proposed that this lining be made for all rock classes. This involves three major processes, formation of the reinforcement cage, followed by segment casting and steam curing, and finally de-molding, stacking & transporting. To accommodate these three processes a segment casting yard has been established with sections for reinforcement cage formation, casting of moulds & stacking of steam-cured segments. It is equipped with all-weather covered roof and sufficient vehicle movement routes.

Reinforcement fabrication yard:

Reinforcement cage formation is the first stage of the entire process of segment casting. The 70 m x 27 m yard is equipped with two decoilers, three bar-cutting machines, three radial bending machines, three bar bending machines, twelve cage fabrication fixtures and two five-ton Electrical Overhead Travelling (EOT) crane spanning 25 m. Sixty four segments are made per day .

Main Casting Yard:

The layout of the casting yard is crucial as there is a lot of vehicular and EOT movement during the operations. The movement of transit mixers for concreting occurs through a defined unidirectional route to allow smooth and safe movement in this area.

Water curing and temporary stacking yard:

The curing yard comprises of 20 beds each for 16 segments, thus having total capacity of 320 segments, equivalent to the requirement for five days. The stacking yard comprises of 112 beds each for 16 segments, thus having total capacity of 1792 segments, equivalent to the requirement for 28 days**.** The 35 m x 100 m yard has eight rows of stacking beds – four on either side of the rail mounted trolley.

Record Keeping:

In segment formation, record keeping of sub-processes is very important. Concreting and steam curing process time is critically monitored because it directly impacts the strength and quality of segments. Records of segment consumption and the type-wise number of the segments are maintained as the installation of segments begins. These records are used for quality checks maintenance.

Safety precautions and risk assessment:

All conventional safety precautions required for concreting are in place. Adequate lighting and ventilation is provided and gutters and sumps are kept clean. All working platforms, gangways and runs at a height greater than 2 m are provided with suitable guardrails of adequate height. All platforms, gangways, runs and stairs are kept free from unnecessary obstruction in the form of material, rubbish and projecting nails. When they become slippery, appropriate steps are taken to remedy the defect, such as sanding or cleaning.

Key Accolades and Recognition

Award	Project Awarded	Awarding Entity
CIDC Vishwakarma Award for 'Best Project'	Chutak Hydel Power Project, Kudankulam Nuclear Power Plant	Construction Industry Development Council of India (CIDC)
Infrastructure Excellence Award 2011	Delhi-Faridabad Skyway	CNBC TV18
CIDC Vishwakarma Award for 'Best Project'	Delhi-Faridabad Skyway	Construction Industry Development Council of India (CIDC)
Construction Week Awards 2011, 'Roads and Highways Project of the Year'	Delhi-Faridabad Skyway	Construction Week Magazine
ICI – MC Bauchemie Award for Most Outstanding Concrete Structure for 2011	Badarpur Elevated Corridor, New Delhi	Indian Concrete Institute (ICI)

Professional Memberships

Our company is represented at a multitude of industry associations and non-governmental organizations locally, nationally and globally through active participation of Mr. Ajit Gulabchand, Chairman and Managing Director. Some of his key active memberships are:

Organization	Position Held
Confederation of Indian Industry (CII)	Chair - National Committee on Urbanization and Future Cities (2011-12) Member – National Council (2011-12) Member – National Committee on Infrastructure (2011-12) Economic Policy Council (2011-12)
World Economic Forum (WEF)	Member – Governor's Steering Board of Infrastructure and Urban Development Community Member - Disaster Resource Partnership Steering Board Chair – Disaster Resource Network, India Member – Future of Urban Development Initiative Steering Board
United Nations	Member – Private Sector Advisory Group, UN International Strategy for Disaster Risk Reduction (UNISDR) First Indian signatory to endorse UN CEO Water Mandate
The Energy and Resources Institute (TERI)	Executive Committee Member – Business Council for Sustainable Development
International Federation of Asian and Western Pacific Contractors' Associations (IFAWPCA)	President (2011-13)
New Cities Foundation	Member – Board of Trustees
Construction Federation of India (CFI)	President
Builders Association of India (BAI)	Patron Member and Past President
Construction Industry Development Council of India (CIDC)	Founding Member
National Institute of Construction Management and Research (NICMAR)	Chairman – Board of Governors, Member – Board of Trustees
Walchand College of Engineering	Chairman – Administrative Council

Stakeholder Engagement

Thought Leadership

At HCC, we take our role in business sustainability, creation of responsible infrastructure and nation building very seriously. To this end, we regularly engage in collective action, advocacy and public policy discussions at the highest level of our management. Listed below are some of the key thought leadership forums where Mr. Ajit Gulabchand, HCC's Chairman and Managing Director, actively participated and contributed in FY 2011-12.

Forum	Participation
World Economic Forum Annual Meeting 2012	Panelist - 'The Sustainability Context' (public session)
	Discussion Leader - 'Forging a New Commitment to Resource-efficient Growth'
	WEF on East Asia, Indonesia – 'Building around Bottlenecks: Upgrading Asia's Infrastructure'
Delhi Sustainable Development Summit (DSDS) 2012	Speaker – Special Event – Water: Our Global Common (TERI-VITO) – "An Integrated Approach to Water Management"
	World CEO Sustainability Summit Panelist – 'Doing business while protecting the Global Commons: Case studies and lessons learnt since Rio 1992, Structured around sectors/issues that relate to the Global Commons'
	DSDS 2012 Summit Participation
Conference on US-India Economic and Financial Partnership, Washington DC	Panelist – 'Innovative approaches to financing our infrastructure needs'
12th International Sustainability Leadership Symposium 2011, The Sustainability Forum, Zurich	From Opportunities for All – Dialogue on 'Emerging Economies: The new global powerhouse. Sustainability strategies to capitalize on growth opportunities and promote prosperity'
India Economic Summit, November 2011, Mumbai	Panelist, 'Spotlight on Mumbai: Getting Urbanization Right' Chair– Disaster Resource Network (DRN) India Partnership Session

Participation in Forums and Seminars by other Executives

Forums	Participation
Engineering & Construction Risk Institute. (a Non-profit organization chartered under the laws of Washington, D.C)	Mr. Stuart Aitken is a board member.
Planning Commission of India	Mr. Arun Karambelkar is member of 12th National Plan for the Construction Industry
Indian Institute of Materials Management (IIMM)	Mr. Arun Karambelkar is member and National Councilor for Mumbai Module.
Construction Federation of India	Ms. Niyati Sareen is working member of 'Mandated Best Safe Practices'.
United Nations International Strategy for Disaster Reduction,	Ms. Niyati Sareen is member of working group for private sector partnership.
WEF- Disaster Resource Partnership	Ms. Niyati Sareen is member of working group
WEF- Disaster Resource Network	Ms. Niyati Sareen is member of working group
CII National Council on Affirmative Action	Ms. Niyati Sareen is a Member of the council
CII National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business	Ms. Niyati Sareen is member on CSR Working Group
Indian Institute of Materials Management (IIMM)	Mr. Arun Banavali is the Hon. Vice Chairman of the Mumbai Branch

Participation on Seminars

Seminars	Participants
6th International Hydro Power Convention: "Speedier Harnessing of Hydro Power Potential in Northern Himalaya", at Shimla	Mr. Stuart Aitken, Mr. Ajit Pradhan, Mr. A.G. Murthy
India EPC Conference 2011, Mumbai	Mr. Purnachandra Bhave, Arun Kumar
National seminar on 'Metro Rail Projects' Indian Scenario, New Delhi.	Mr. Suhas Khedkar presented on 'Underground Metro Projects by HCC'.
Technologue Lecture No. 15 on Earth Retaining Schemes for Basements & Deep Excavations, Mumbai	Mr. Suhas Khedkar
HCC sponsored 'India International Nuclear Symposium', New Delhi	Mr. Stuart Aitken, Mr. Ajit Pradhan
India Innovation Summit 2011 – Energy Conference, 'Power of Innovation: Energizing the Energy and Construction Industry'	Mr. Arun Banavali

Stakeholder Engagement Summary 2011-12

Over the past year, we continued engaging our stakeholders along existing channels of interactions. The process of identifying our most significant stakeholder categories has been largely internal so far. Going forward, we intend to make our existing engagements more robust and enhance our discussions on sustainability issues of mutual significance. In order of importance and proximity to our operations, we have closely engaged six broad categories of stakeholders, a, at both the organizational and project levels, as presented in the table below. Furthermore, HCC has actively participated in national and global sustainability forums, details of which are provided in the Collective Action and Public Policy section of the UN CEO Water Mandate COP chapter of this report. Highlights of various on-going and new engagement initiatives undertaken are presented below. Additionally, an overview of CRM implementation is also included in this section. Our sustainability report preparation is done internally, and all concerned function heads are engaged with for their inputs and performance details specific to their roles.

Stakeholder Category & Frequency of Engagement	Purpose of Engagement	Mode/Type of Engagement	Engagement Highlights during 2011-12	Future Plans
Customers/ Clients Frequency - Project-specific meetings [pre-bid etc.], one-on-one interactions as needed	Understand project requirements, customer expectations, prepare and submit a comprehensive bid to fulfill the customer requirements	One-on-one interactions and project specific meetings with current and potential customers	Implementation of SAP-CRM system (*details provided in below*)	Develop organizational business strategies based on customer feedback and sales pipeline analysis
Suppliers, Sub-Contractors Frequency - Annually for SRA Program, Regular vendor meets	Assess the needs, expectations and satisfactions levels of suppliers Identify strengths and weaknesses of HCC vis-à-vis competition	3rd party administered anonymous survey of all significant existing suppliers One-on-one engagement with suppliers at the project site Tracking and refining of sub-contractor feedback system	Ongoing meetings, SAP Supplier Portal	Based on supplier feedback, adopt strategic direction for improvement in critical areas and identify useful opportunities Track performance over a period of time
Employees Frequency – On-going interactions, trainings and communications	To meet employee expectations, encourage employee training and development, support employee welfare at remote project locations	HCC Newsletters and 'E&C Connect' newsletters, employee surveys, structured performance management systems, 'Practical Learning At Your Workplace'	Continued focus on Health, Safety & Environmental trainings across all projects	Plans to standardize PPE and camp facilities across all projects

Investors and Shareholders Frequency - Quarterly Analysts meets, On-going communications	Transparently communicate company's financial information, build investor trust	AGMs, EGMs, Quarterly Analysts Meets, Corporate Website, Publications	Regular dissemination of financial performance data, Analyst Meets	Increase the value for shareholders and maintain high level trust
JV Partners Frequency – On-going Partner Management Approach	Develop long-term strategic and sustainable partnerships in strategic business sectors; Maintain effective communication channels; Identify potential partners for future project bids to ensure good lead time and successful bid outcome	Procedures to be developed for monthly / quarterly / annual meetings with Long Term Partners, depending on the possible future opportunities of mutual interest	*Highlights of our Partnership strategy is presented under 'BD Sales Budget Planning and Review Process' in the Economic Performance section of this report*	Continue developing partner relations across strategic sectors
Local Community Frequency – On-going and need-based community programs and initiatives	Contribute to the development of local communities by creating infrastructure and generating direct and indirect employment Carry out relief and rehabilitation work during natural disasters	Various programs and initiatives structured around our five pillars of CSR Voluntary work by HCC employees under the Disaster Relief Network (DRN) activities	*Details are provided in the Corporate Stewardship section of this report*	Continuation of proactive and need-based CSR initiatives across all our local communities

CRM Implementation

Customer Relationship Management (CRM) was fully implemented by our Market Research Department in the past year to ensure that all the information regarding the upcoming projects, customers and partners are covered in a comprehensive manner under one umbrella. CRM now forms the backbone of all our operations and we are seeing significant benefits in terms of increased transparency, improved customer focus and satisfaction and generation of good quality proposals that have better chances of winning a project. It offers a complete 360° view of our client and business partners, and offers greater scalability and integration with existing SAP modules used for project sites, finance, HR and other departments in the company. Supported by BI/BO tools, the system allows for complex analytics that will offer better clarity of the business environment. In turn, this will enable us to optimally deliver the type of services that our customers really need. This technology translates into low cost of implementation.

Our SAP-CRM module went live in January 2011, and user acceptance and system updating level has gradually increased since then. Some highlights of data as of April 10, 2012 is presented below.

Date	Accounts				Live Lead	Opportunity	
	Clients	Competitors	JV Partners	Total		Legacy	Live
10-04-11	175	265	2	500	150	0	270
10-04-12	575	710	11	1375	950	245	390

- Detailed profiles of over 160 key clients (58 Central Government and 102 State Government) have been updated in CRM
- Over 950 live project leads known from all the sources of information are present in the system

We have met the following key business objectives so far:

- Capturing of all the leads in effective manner
- Effective tool for strategy development, leading to improved sales planning and forecasting
- Advanced and more systematic planning for developing better proposals
- Access to up-to-date information for all the entities involved to a project viz Sales, Market Research, Regional offices. More consistent, relevant and effective interactions across all channels and touch-points
- Automated standard reports now being generated thru CRM viz. Sales MIS, Project Tracking etc.
- More focused reviews and control. Data from CRM also aids in the Sales Review process by providing the basic data for:
    - Weekly BD report for bids to be submitted and bids to be decided, required by bid committee consisting of President, Chief Business Development Officer, Tendering Head
    - Sales Meeting headed by Chief Business Development Officer and representation from Tendering & Operation at a weekly frequency with Business Line Heads and monthly frequency with Regional Heads included
- Improved customer response time (response to queries and documentation)
- More effective campaign management, leading to better planning for marketing events and improved budgeting, planning (participation, nomination, etc.), coordination and records

Currently we are progressing on course along the following key targets:

- Analytics tools/ dashboards for management
- Integration with additional information available in SAP ERP
- Integration with MS Outlook

SAP Supplier Portal

Over and above the SAP ERP system, we have also extended a collaboration platform to our partners through SAP Supplier portal. It allows us to post the requirements, orders etc. on the web while our suppliers can carry out various transactions on the net. The portal captures the complete procurement cycle and is the first step in extending HCC's ERP to outside world. Supplier portal has brought in increased transparency in supply chain and given more visibility in procurement process through online information about transaction details and history availability to the suppliers on internet.

Our Strategic Partners

Our Key Clients

Material Issues

We encourage all our internal and external stakeholders to share with us their sustainability priorities and topics of interest. Their reasonable expectations and interests together with the views of HCC's management forms the basis of our material issues, as well as the relative priority of indicators, aspects and topics included in our reporting. During a structured brainstorming exercise and scoring of relevant issues by the heads of business functions within HCC, we have prioritized the following three issues out of a range of issues identified that are most significant issues to us, and which substantially influences the decisions of our stakeholders. This report demonstrates our broad understanding of the sustainability context, taking into account diverse topics such as water sustainability, supplier engagement, disaster relief and employee health and safety. Given this broad sustainability context, we expect our report to be informative and useful for all our internal and external stakeholder groups (as listed on pages 19 and 20 of this report). This is how we have attempted to apply the four principles for guiding the report content viz. materiality, stakeholder inclusiveness, sustainability context and completeness. We intend to further recalibrate our materiality, goals and action plans in the forthcoming year with respect to the evolving business scenario and sustainability challenges.

Employee Health & Safety	
Goal	To achieve zero reportable injuries across project sites.
Action Plan	• We continue to stress on usage of best safety practices, safe work methods, protection equipment and technology across our project sites. • We will continue our focus on safety training for all our employees and contract labor across all our project sites.
Reduce Pollution and Water Consumption	
Goal	To achieve water-neutrality across all our project sites. To reduce project site emissions by 7% on an annual basis.
Action Plan	• We continue to explore ways of recovering and reclaiming water from waste streams. We plan to achieve the target by introducing water recovery, treatment and reuse systems across all our sites. • We will deploy measures to reduce air emissions at our project sites. Further we will continually assess the ambient air quality at our sites to track progress.
Community Development	
Goal	To ensure proactive participation in community development on issues of health, education and water.
Action Plan	• We aim to make our community development initiative more focused and need-based to address the issues of the concerned communities.

Corporate Governance

HCC is committed to upholding the core values of transparency, integrity, honesty and accountability across all our business activities. The Company's focus on adopting the highest standards of Corporate Governance and Ethical Business Practices is fundamental to this commitment. We believe that sound Corporate Governance is critical for enhancing and retaining investor trust and we always seek to ensure that our performance goals are met with integrity. We are of the view that good governance is a pre-requisite to attainment of excellent performance in terms of stakeholder value creation.

Board of Directors

The Board of Directors of HCC play a proactive role in fulfilling its fiduciary obligations by efficiently overseeing management functions to ensure their effectiveness in delivering shareholder value. This belief is reflected in our governance practices, under which we strive to maintain an effective, informed and independent Board. We keep our governance practices under continuous review and benchmark ourselves to the best governed companies across the industry.

In addition, HCC has established systems to encourage and recognize employee participation in environmental and social initiatives that contribute to organizational sustainability, conservation of energy, and promotion of safety and health, which are an integral part of the company's business model. These governance structures and systems are the pillars of foundation that provide adequate empowerment across the company to leverage opportunities for a sustainable overall growth.

As on March 31, 2012, the Board comprised of twelve Directors. Out of these, two are Executive Directors, including the Chairman & Managing Director who is a Promoter Director. Of the ten Non-Executive Directors, eight are Independent Directors. All the Directors possess the requisite qualifications and experience in general corporate management, finance, banking, insurance and other allied fields enabling them to contribute effectively in their capacity as Directors of the company.

Name[2]	Position
Ajit Gulabchand	Promoter, Chairman and Managing Director
Y. H. Malegam	Independent Director
K. G. Tendulkar	Non-Executive Director
Rajas R. Doshi	Independent Director
D. M. Popat	Independent Director
Ram P. Gandhi	Independent Director
Prof. Fred Moavenzadeh	Non-Executive Director
Sharad M. Kulkarni	Independent Director
Nirmal P. Bhogilal	Independent Director
Anil C. Singhvi	Independent Director
Arun V. Karambelkar	President & Whole-time Director
Dr. Ila Patnaik[3]	Independent Director

[2] All male Board of Directors are above the age of fifty years.
[3] The only female Board member was appointed by the Board of Directors as an Additional Director w.e.f. October 21, 2011

Induction of the First Women Member to the HCC Board of Directors

On October 21, 2011, the Board of Directors appointed Dr. Ila Patnaik as an Additional Director subject to approval of the shareholders of the Company at the ensuing Annual General Meeting. Dr. Patnaik has done her PhD in Economics from the University of Surrey. She is a Professor at the National Institute of Public Finance and Policy. Prior to this, she had worked at National Council of Applied Economic Research, ICRIER and as an Economics Editor at the Indian Express. Her main areas of interest are open economy macro-economics, including issues related to capital flows, the exchange rate regime, monetary policy, business cycles and the financial sector in the context of opening of the capital account.

Dr. Ila Patnaik has worked for 4 years on the NIPFP - Department of Economic Affairs, Ministry of Finance Research program on capital flows. She has also participated in Ministry of Finance working groups such as Jahangir Aziz working group on debt management office and UK Sinha working group on capital controls.

Given the experience and illustrious background of Dr. Ila Patnaik, the Board of Directors felt that it is in the interest of the Company to appoint her as a Director of HCC.

Code of Conduct

The Board of Directors has laid down two separate Codes of Conduct, one for the Non-Executive Directors and the other for Executive Directors and designated employees in the Senior Management. These codes have been posted on the company's website – www.hccindia.com. All the Board Members and Senior Management personnel of HCC have affirmed compliance with the Code of Conduct as applicable to them, for the year ended March 31, 2012 The Code is intended to serve as a guiding principle for senior management who affirm compliance with this code on an annual basis as at the end of each financial year. The Code of Conduct for Executive and Non-Executive Directors clearly defines processes in place to avoid conflicts of interest.

The Code of Conduct is handed over and explained to all the designated employees in the senior management during induction. We have also instituted a comprehensive Code of Conduct for prevention of insider trading, for our Directors and designated employees. It deals with the treatment of insider information, is available to all the designated employees of HCC. It clearly mentions that, "All Directors/Members of Senior Management/Designated Employees shall comply with insider trading regulations issued by the Securities and Exchange Board of India and the Insider Trading Code issued by the company as may be applicable to them.

Further, the Code of Conduct for Senior Management also provides that they and their immediate family members should not accept any gift, gratuity, fee or other benefits of any kind from suppliers, customers, competitors and related business parties if it is known, believed or suspected that its purpose is to influence a transaction and/or if the value of such an item is significant and/or might cause embarrassment to the Company.

For the purpose of the Code, HCC has appointed the Company Secretary as the Compliance Officer, who shall be available to the Senior Management to answer their queries and to help them comply with the Code."

Furthermore, we support the UN Global Compact and the anti-corruption principle thereof.

Board Meetings and Committees

All major decisions, material issues, investment and capital expenditure related issues go through the approval of the Board and information like fatal or serious accidents, dangerous occurrences, major effluent or pollution related problems, labour and industrial relations related issues are regularly brought to the notice of the Board as part of various Board meetings. The Board of Directors met seven times during the year under review; the maximum time gap between any two consecutive meetings did not exceed four months. The Board periodically reviews compliance reports of all laws applicable to the Company, prepared by the Management as well as steps taken by the Company to rectify instances of non-compliances, if any.

We strictly adhere to Section 299 of the Companies Act, 1956, under which every Director of a company who is in any way concerned or interested in a contract or arrangement, is required to disclose the nature of his concern or interest at a meeting of the Board of Directors. A general notice is given once in a year to the Board by a director to the effect that he is a director or a member of a specified body corporate or is a member of a specified firm and is to be regarded as concerned or interested in any contract or arrangement which may, after the date of the notice, be entered into with that body corporate or firm.

We have instituted mechanisms to inform our Board members about initiatives for risk assessment and minimization as well as a periodic review that would strengthen our risk governance. Our framework facilitates building an early-stage understanding of the exposure to various risks and uncertainties, leading to timely response and effective mitigation.

The Board of Directors has constituted five Board Committees - Audit Committee, Remuneration Committee, Shareholders'/Investors' Grievance Committee, ESOP Compensation Committee and Selection Committee of the Board. All decisions pertaining to the constitution of Committees, appointment of members and fixing of terms of reference of the Committees are taken by the Board of Directors. Further details on the role and composition of these Committees, including the number of meetings held during the financial year and attendance at meetings are available on the company's Annual Report F Y 2011-12[4].

Risk Management

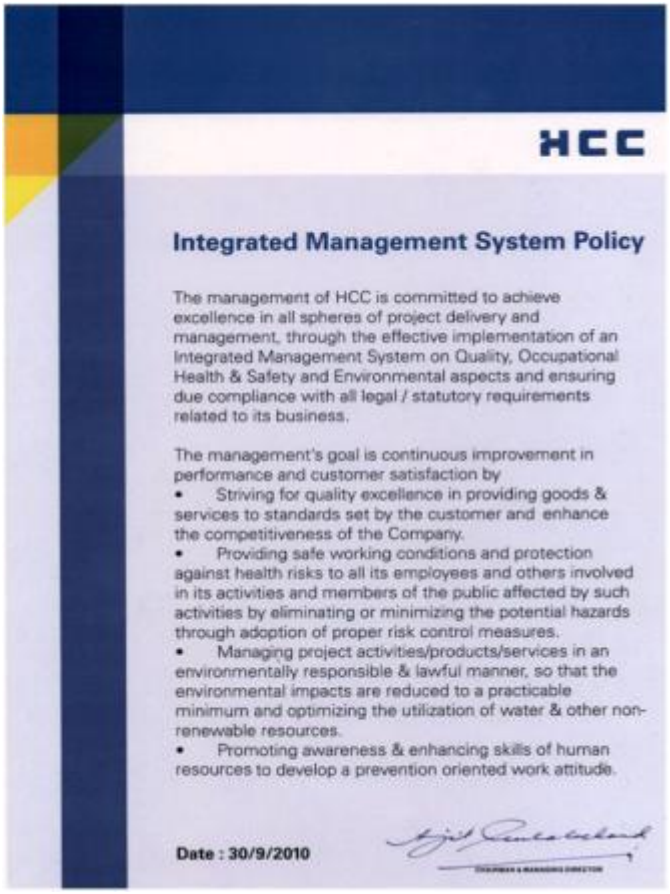
HCC has established a well-documented and robust risk management framework. Under this framework, risks are identified across all business processes of the company on continuous basis. Once identified, these risks are systematically categorized as strategic risks, business risks or reporting risks. The former looks at all risks associated with the longer term interests of the company. The latter look at risks associated with the regular functioning of each of the processes and the risks associated with incorrect or untimely financial and non-financial reporting. To address these risks in a comprehensive manner, each risk is mapped to the concerned department for further action. Based on this framework, HCC has set in place various procedures for Risk Management.

[4] HCC Annual Report 11-12 is publicly available at http://www.hccindia.com/investors.php?page=investors

Risk Management is structured at the two levels of Enterprise Risk Management and Project Risk Management. At the project site level, the HSE department adopts the Hazard Identification, Risk Assessment and Control (HIRAC) methodology for various activities during the construction phase of the projects. It helps control risks related to health and safety in addition to enforcement of strict adherence to quality standards and procedures so as to keep risk at the lowest level and ensure the safety of the construction site.

Management Systems

Our business operations extend to remote project sites spread across different states. Creating, developing and establishing best-in class processes and systems across these sites are fundamental to ensure our competitive strength. HCC has adopted an integrated approach towards Quality, Environment, Health and Safety and has incorporated these in business practices. The objective of an Integrated Management System (IMS) is to inculcate a culture of continuous improvement that will enhance quality of the products and maintain the highest standards of environment protection and safety of the project team and workforce to maximize customer satisfaction. This adheres to the stringent standards stipulated by ISO 9001 : 2008 for Quality; ISO 14001 : 2004 for Environment; and BS OHSAS 18001 : 2007 for Occupational Health and Safety.



HCC

Integrated Management System Policy

The management of HCC is committed to achieve excellence in all spheres of project delivery and management, through the effective implementation of an Integrated Management System on Quality, Occupational Health & Safety and Environmental aspects and ensuring due compliance with all legal / statutory requirements related to its business.

The management's goal is continuous improvement in performance and customer satisfaction by

- Striving for quality excellence in providing goods & services to standards set by the customer and enhance the competitiveness of the Company.
- Providing safe working conditions and protection against health risks to all its employees and others involved in its activities and members of the public affected by such activities by eliminating or minimizing the potential hazards through adoption of proper risk control measures.
- Managing project activities/products/services in an environmentally responsible & lawful manner, so that the environmental impacts are reduced to a practicable minimum and optimizing the utilization of water & other non-renewable resources.
- Promoting awareness & enhancing skills of human resources to develop a prevention oriented work attitude.

Date : 30/9/2010

On the safety front, HCC focuses on creating a culture that continuously reduces the frequency of incidents to achieve the goal of 'Zero Reportable Injuries'. We are also committed to reducing the impact on environment during execution or construction of projects by continuously monitoring the environment. HCC has a good safety performance record in nine projects, which have achieved more

than 3 million safe man-hours and five projects which have achieved 2 million safe man-hours without any reportable accident until March 2012. To achieve these objectives, engineers at various functional levels are trained by professional agencies to ensure proper operation of processes and implementations of systems. These trained engineers then act as internal auditors to conduct regular bi-annual internal IMS audits based on a detailed schedule.

In 2011, M/s TÜV NORD, the certifying agency, conducted a surveillance audit for ISO 14001: 2004, BS OHSAS 18001: 2007 and ISO 9001: 2008 to verify the status of compliance to the requirements of these standards. The objective and effectiveness of Integrated Management System have been verified during this audit course. Five HCC project sites and most of the functions at corporate office were subjected to these audits. The auditors also recommended certification for the above standards valid up to March 2014.


CERTIFICATE TÜV NORD

Management system as per
DIN EN ISO 9001 : 2008

HINDUSTAN CONSTRUCTION CO. LTD.
Hincon House, 11th Floor, 247Park,
LBS Marg, Vikhroli (West), Mumbai – 400 083,
India
and Project Sites

HCC

Project Management, Engineering and Design, Procurement, Construction, Operation and Maintenance of Construction Projects


CERTIFICATE TÜV NORD

Management system as per
ISO 14001 : 2004

HINDUSTAN CONSTRUCTION CO. LTD.
Hincon House, 11th Floor, 247Park,
LBS Marg, Vikhroli (West), Mumbai – 400 083,
India
and Project Sites

HCC

Project Management, Engineering and Design, Procurement, Construction, Operation and Maintenance of Construction Projects


CERTIFICATE TÜV NORD

Management system as per
BS OHSAS 18001 : 2007

HINDUSTAN CONSTRUCTION CO. LTD.
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India
and Project Sites

HCC

Project Management, Engineering and Design, Procurement, Construction, Operation and Maintenance of Construction Projects

Economic Performance

The Indian economy witnessed a significant slowdown in FY 2011-12. After two consecutive years of 8.4% growth, India's GDP growth slipped to 6.9% in 2011-12. In line with this drop in real GDP, construction growth also reduced to 4.8% in 2011-12. Unfortunately, the economic slowdown occurred in an inflationary environment, with Reserve Bank of India (RBI) maintaining tight monetary policy leading to high domestic interest rates. This environment of slowing growth, high inflation and high interest rates negatively impacted investor confidence, and new capital formation took a further hit.

Infrastructure projects typically have high gestation lags and require long-term financing. The Indian financial system is still evolving in terms of availability of such long term financing instruments. Further, the global economic slowdown has created high levels of uncertainty, which has adversely affected capital flows into India, especially for long term projects like the ones in the infrastructure sector. Consequently, infrastructure projects in India are also facing issues on the financing front.

In addition, several projects that have had financial closure are facing implementation problems stemming from issues related to land acquisition, social tensions, environmental problems and administrative delays. Consequently, implementation across important infrastructure segments remains woefully short of planned targets.

In this backdrop, HCC had entered FY 2011-12 with a lower order book. While we focused on effective execution, the size and structure of the organization was geared for catering to a much larger infrastructure related construction market. So, the asset base and the fixed cost structure were not in line with the stagnant order book. Consequently, while the turnover remained at 2010-11 levels, we generated losses. The financial highlights of HCC's performance on a stand-alone basis in 2011-12 are listed below:

- Order Book is at Rs. 15336 crore in FY 2011-12
- Revenue from operations is at Rs. 4003 crore in FY 2011-12 v/s Rs. 4144 crore in FY 2010-11
- EBITDA (before profits from JV, Exceptional item and other income) is at Rs. 443 crore in FY2011-12 v/s Rs. 543.4 crore in FY 2010-11.

The lower turnover and operating margins in an environment of high interest costs put severe pressure on the company's profitability. In addition, further litigation and non payments of awarded claims in arbitration adversely affected HCC's liquidity and debt servicing ability. Recognizing this as a problem which cannot be sorted out independently or in a short time frame, we approached our bankers with a proposal for bilateral refinancing of the loans with larger tenure. However, there was no consensus amongst the bankers on this proposal. Consequently, we approached our leading bankers and they referred their total term debt of around Rs. 3300 crore to the Corporate Debt Restructuring (CDR) cell. The CDR Empowered Group formally admitted the case for restructuring on March 29, 2012 by a super majority of lenders. This debt restructuring will provide HCC with breathing space to work on improving operational margins over a period. We are also raising own funds by liquidating some of the non-core assets. It is expected that the restructured debt, certain amount of

own funds, tightened cost management and increase in turnover will enable us to weather the situation in the medium term.

Economic Value Generated & Distributed (EVG&D)	FY 2010-11 (Million INR)	FY 2011-12 (Million INR)
Economic Value Generated	40931.70	39882.30
Economic Value Distributed	39126.10	39086.60
Operating Costs	30857.60	31187.20
Employee benefits and wages	4676.40	4392.40
Payment to providers of capital	3141.60	5431.60
Payments to Governments (Indian)	446.10	-962.30
Community Investments	4.40	0.00
Economic Value Retained	1805.60	795.70

(HCC received 0.16 million INR as duty drawback claims from export credit agencies in FY 11-12)

Internal Reorientation

In FY 2011-12, we recalibrated our business on several fronts. This included a major organizational restructuring exercise to replace the verticals structure with a function based organization system given that India's infrastructure industry has not yet translated into a market large enough to sustain each of our verticals as independent businesses. Our business development function has been integrated with the estimation department and a major emphasis now is on customer relations identifying projects most suitable for HCC. We have identified claims management as a core function and have supported it by establishing a legal team under the secretarial and legal department. Finally, we have rationalized our work force, mainly at our corporate office, leading to a leaner structure.

We are a public limited company listed on the Bombay Stock Exchange (BSE) and National Stock Exchange of India Ltd (NSE). The Global Depository Shares (GDSs) of the Company are listed on the Luxembourg Stock Exchange.

Top Ten Shareholders of the Company as on 31 March 2012

Sr. No.	Name of the Shareholder	Category	No. of Shares	Shareholding (%)
1	Hincon Holdings Limited	Promoter	20,07,03,600	33.09
2	HSBC Global Investment Funds A/C HSBC Global Investment Funds Mauritius Limited	FII	5,01,74,601	8.27
3	Hincon Finance Limited	Promoter	3,83,65,500	6.32
4	SIWA Holdings Limited	FII	36,082,151	5.95
5	Copthall Mauritius Investment Limited	FII	8,546,988	1.41
6	Reliance Capital Trustee Co. Ltd. – Reliance Infrastructure Fund	Mutual Fund	81,60,961	1.35
7	Sundaram Mutual Fund A/c Sundaram Select Midcap	Mutual Fund	8,101,160	1.33
8	Barclays Capital Mauritius Limited	FII	7,199,800	1.19
9	Dimensional Emerging Markets Value Fund	FII	6,693,104	1.10
10	BNP Paribas Arbitrage	FII	6,564,000	1.08
		Total	370,591,865	61.09

The order backlogs for our five business verticals are presented in the table below. Hydro continued to remain the dominant sector in FY 2011-12.

Vertical	Opening Order Backlog (1st April 2010) (Crore Rs.)	Closing Order Backlog (31st march 2011) (Crore Rs.)	Closing Order Backlog (31st March 2012) (Crore Rs.)	Growth % (FY12 Vs. FY11) (Crore Rs.)	Growth % (FY11 Vs. FY 10) (Crore Rs.)
Hydro	8130	7694	5,828	-24%	-5%
Water	4043	3673	3,681	0%	-9%
Transportation	5136	3933	3,681	-6%	-23%
Nuclear and Special Projects	1501	2827	2,147	-24%	88%
Total	**18,810**	**18,127**	**15,336**	**-15%**	**-4%**

The share price performance of HCC and its key competitors on Sensex and Nifty over the past financial year is as shown below:

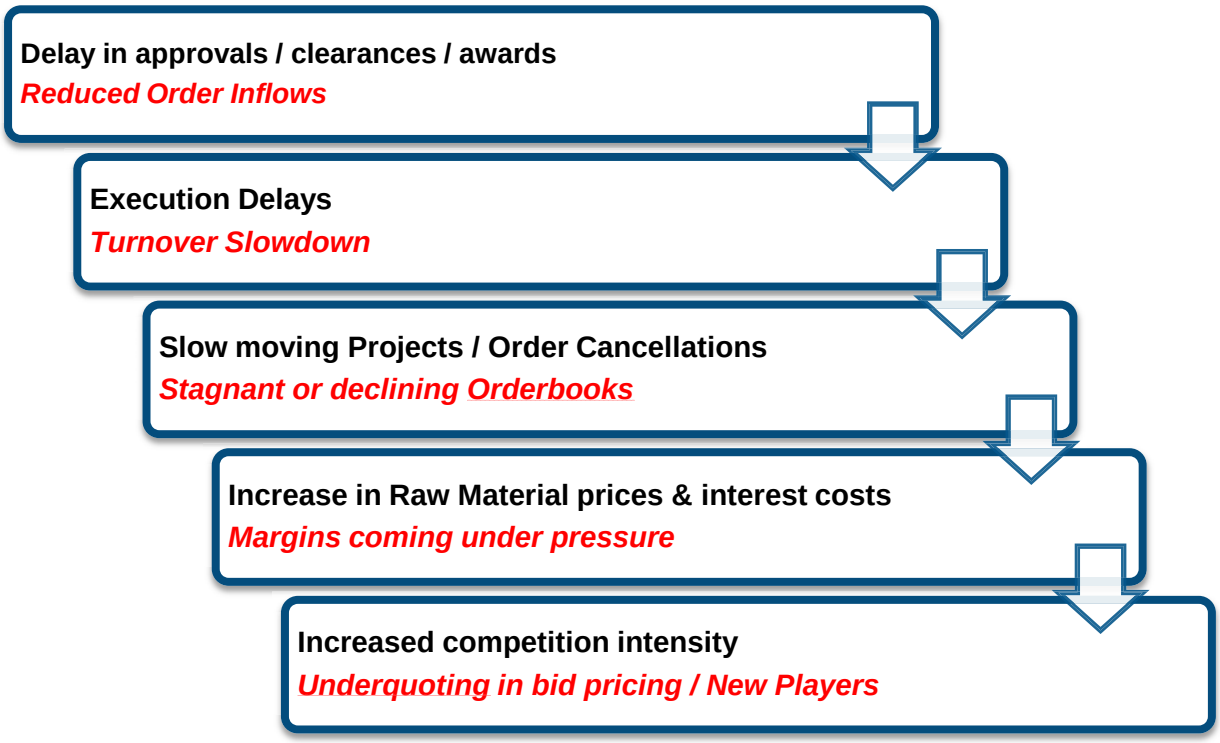
	31st March 2012	Decrease/Increase	31 March 2011
SENSEX	17,404	-10%	19,445
NIFTY	5,296	-9%	5,839
Construction Sector			
HCC	25.7	-29%	36.4
NCC	56.4	-44%	100.8
IVRCL	66.2	-19%	81.7
Gammon India	43.4	-63%	118.6
Simplex Infra	226.1	-31%	328.6
Jaiprakash Associates	81.7	-12%	92.8
Patel Engineering	105.9	-24%	140.0
L&T	1,309.0	-21%	1,651.9
Sadbhav Engineering	154.8	25%	123.8
HCC v/s SENSEX/NIFTY	**Underperform**		
Position against competition	**6**		

Business Development Sales Budget Planning and Review Process

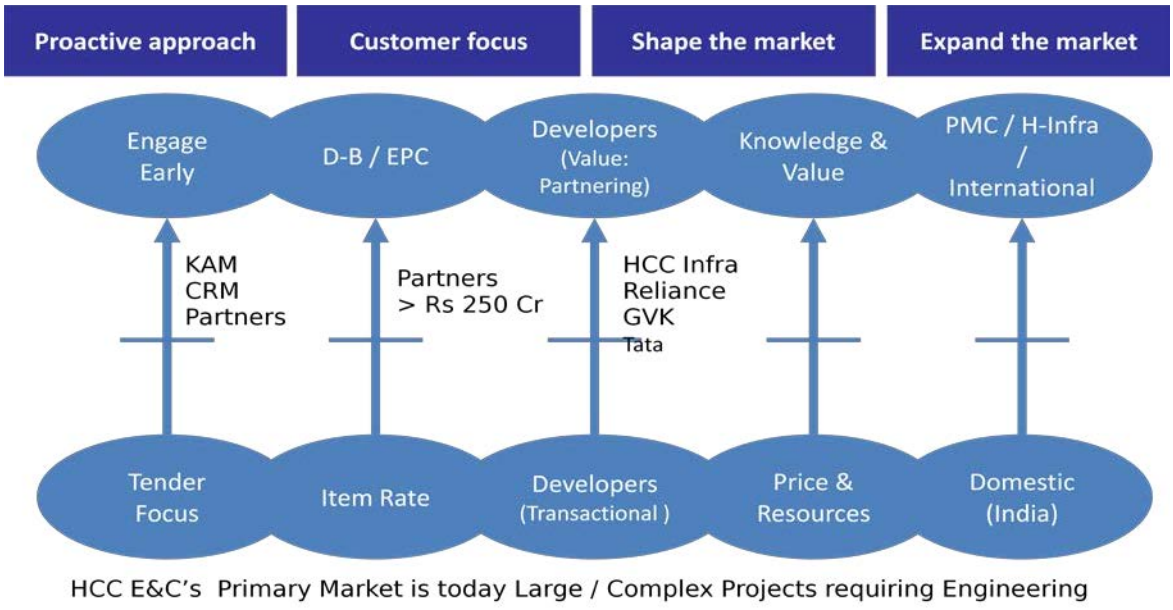
The GDP and Construction GDP growth rates showed a marked decrease in FY 2011-12 over the previous year as shown below:

Factor Cost @ 2004-05 prices (% change Year-on-Year)	FY 2010-11		FY 2011-12	
	Q1	Q2	Q1	Q2
GDP	8.8	8.4	7.7	6.9
Construction GDP	7.7	6.7	1.2	4.3

Among the factors affecting this downtrend in Infrastructure and Construction activities within the country include delays in environmental/forest clearances, land acquisition problems, organizational and structural issues with key ministries/central sector utilities as well as a general policy paralysis.



In this challenging scenario, the key imperatives for HCC to overcome aggressive competition and win jobs are: Early selection of target jobs, Bid development, Differentiated value proposition and Value Engineering. We are striving to accomplish this goal through continued implementation of our E&C Strategy, in order to refocus on business strategies and inter-relationship within HCC E&C.

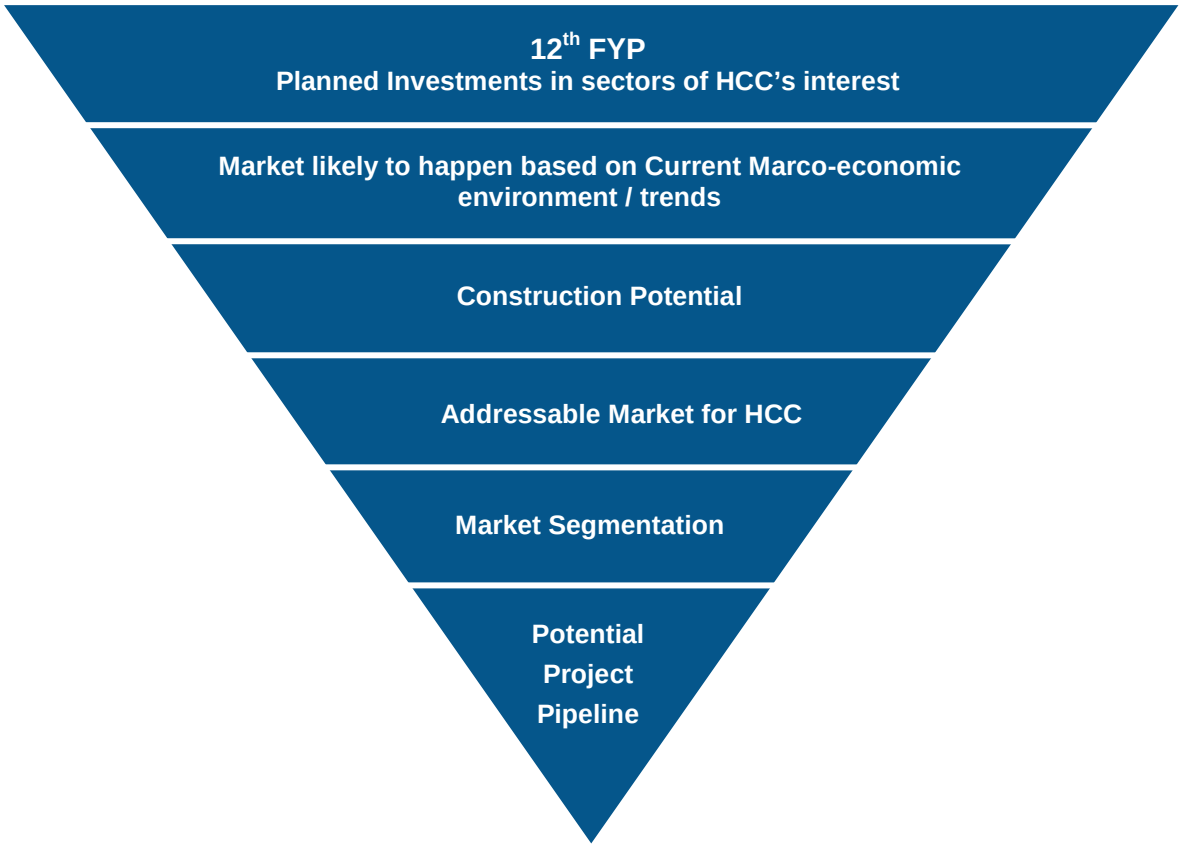


HCC E&C's Primary Market is today Large / Complex Projects requiring Engineering

E&C Strategy – Mission to Sell Knowledge and Value

Various aspects of our E&C Strategy are summarized below:

1) Assessing the Bid Slate and its Verification



Dril-down: verification via-customer projects/ plans & related agencies

2) Project Selection Mechanism:

Lead identification based on predefined company policy				
Business Line	Size	Nature of Work	Geography	Customer

Converted to potential opportunity based on initial assessment Prioritized as Must Win / Key target / Target etc				
Timeline: Status of clearances (MoEF / Forest etc)	Timeline: Award certainty within 'plan year'	Land availability / Acquisition in 'plan year'	Funding status / Financial Viability	Competition scenario

Pre NIT / stage / Early initiatives **Go / No Go decision**				
Detailed techno-commercial assessment	Partnership Need and Strategy	Project execution philosophy	Resource requirements	Risk assessment and mitigation strategy

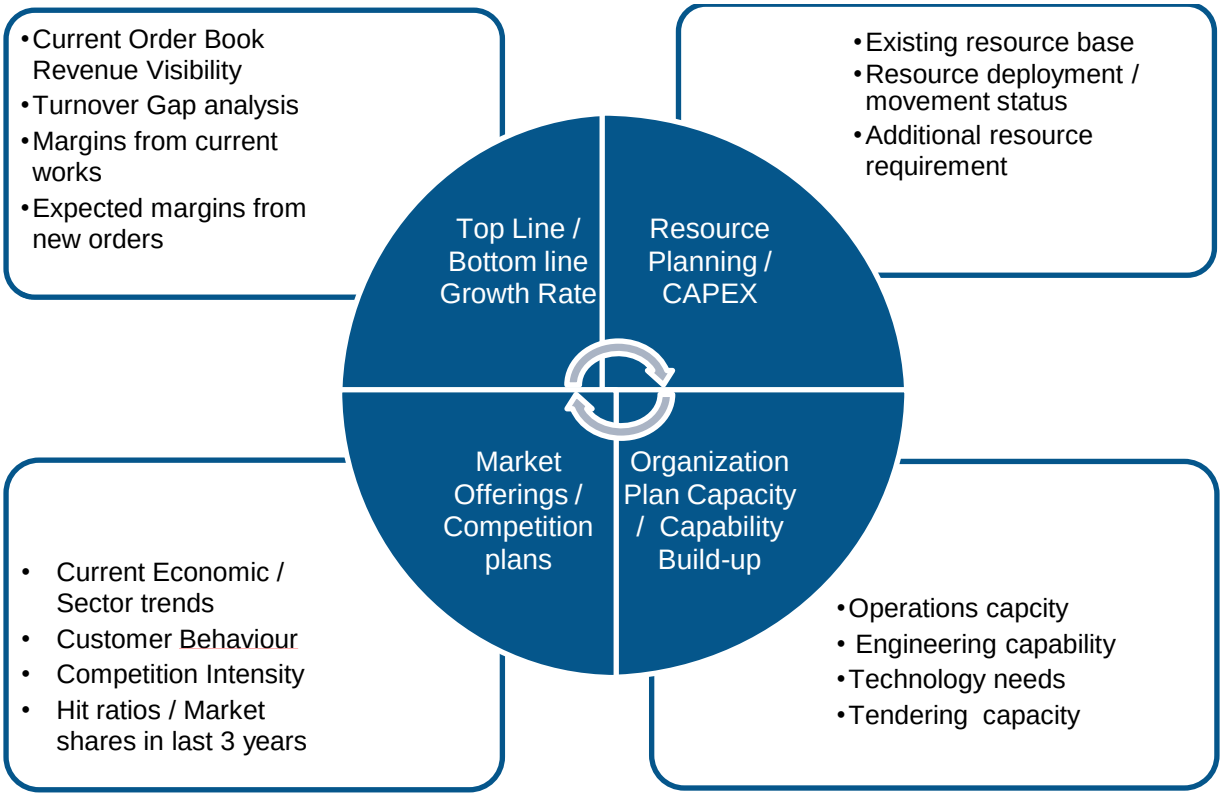
Process backed up by online SAP CRM system

3) Project Prioritization:

Parameters for consideration while prioritizing projects include:

- Project execution capability
- Compensation intensity
- Customer relationship
- Bid preparation time and ability
- Partnership strategy

4) Developing the Sales Budget:



5) Critical Success Factors:

The following factors are critical to our bidding efforts:

- Optimal design in EPC bids / value engineering
- Mega / EPC bids – Integrated Bid Development
- Early big involvement
- Partner management – IJVs
- Subcontract / Vendor management – Pre-bid tie ups

Enhanced win ability will arise through an enlarged bid slate, focus on mega projects, leveraged bidding sector, and integrated bid development.

6) Business Development – An integrated approach

As part of our new integrated approach to bidding, the business development and tendering functions have an agreement to jointly work on the following:

- Selection of projects to bid
- Prioritization of projects – common or agreed list of must-wins, key targets etc
- Pre-NIT / post-bid invitation processes

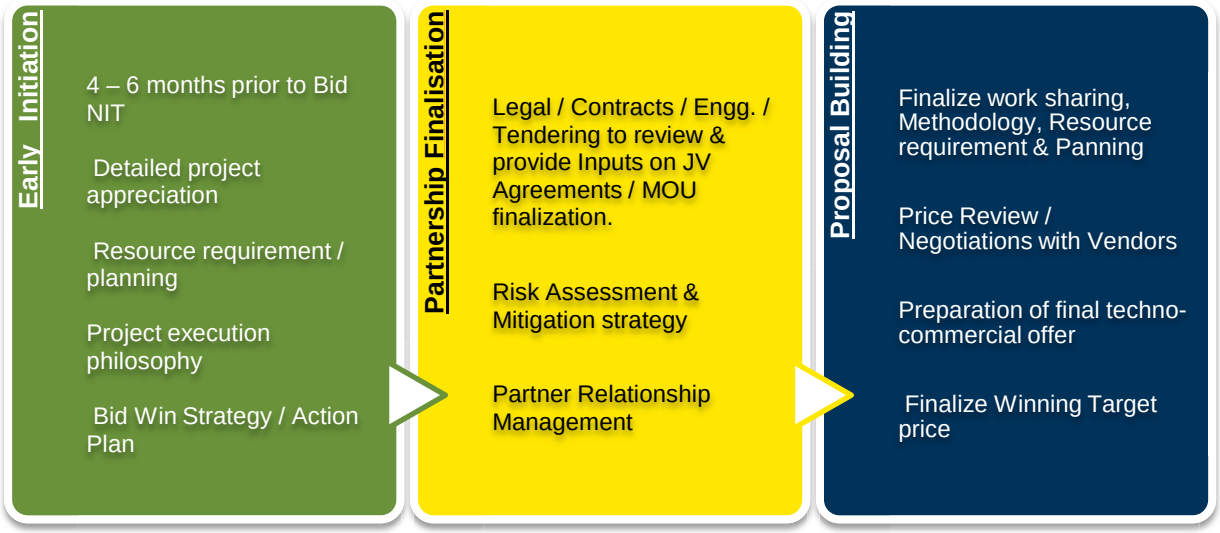
At Pre-NIT Stage:

Operation feedback and bid planning support will be availed by Tendering/ BD

At Post-NIT Stage:

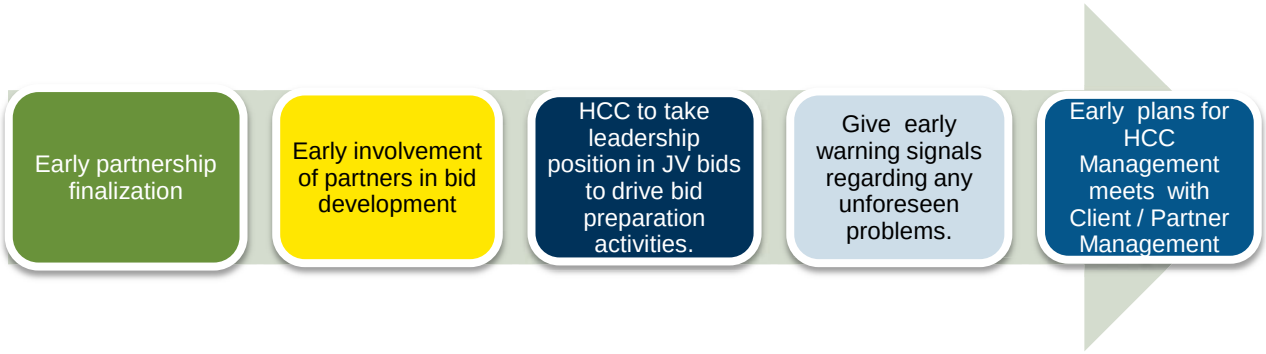
7) Focus on Mega Projects:

Mega projects require an integrated approach and multi-discipline skills for planning, bidding and execution, as depicted below:



8) Partnership Management:

As part of our E&C Strategy, we have increased our focus on partnership management during the pre-bid and bidding stages in order to improve our bidding outcomes:



9) Continuous Review and Re-planning:

Our business development (BD) function undergoes continuous review and re-planning through weekly President reviews (CBDO/CTO/Head of Tendering), monthly BD sales review with Regional Sales (Operations are requested to join as well), quarterly business reviews with corporate management, annual BD review and sales plan roll out to corporate management and weekly BD meetings which are also attended by the tendering function. These review systems are supported by on-line monitoring via SAP CRM.

10) Differentiated Value Proposition:

Through our E&C Strategy initiatives, we offer enhanced value to our customers through the following differentiated value propositions:

- Value engineering
- Best partnerships to bring in world class technology
- Detailed planning, ensuring timely or early project completion
- Risk identification and mitigation plan, ensuring successful project completion

Suppliers

We have stringent policies and practices governing suppliers and transporters' registration, evaluation and selection. We also practice periodic evaluation of their performance. The evaluation has clauses of cost effectiveness, quality delivery, health and safety practices and compliances, amongst others. We strongly prefer procurement of materials required at the project sites from locations in proximity. Not only will this create opportunities for livelihood during the project duration, but will also help the local suppliers to upgrade and maintain quality of products to cater to HCC's quality standards.

While we continue to define all procurements within India as local, we make every attempt at procuring most materials from in and around the project sites to reduce complexity of logistics barring some standard raw materials, which are procure centrally. Seventy five per cent of the monetary value of our top ten significant suppliers is on account of locally based suppliers, which in turn forms almost forty per cent of our total project costs.

Case Study: Monetary Savings and Resource Conservation through Procurement Changes

Procurement of construction material accounts for as much as 40% of HCC's total expenses. It thus becomes imperative to conserve and use these resources optimally, as they bear a cost implication on our business. In 2011-12, we continued the following three resource conservation and waste minimization initiatives from the previous year, leading to significant cost savings of more than Rs. 72 Lacs at the Maroshi Ruparel Tunnel Project in Mumbai.

- Procuring steel to custom specifications directly from vendor
- Controlling rolling margins of steel rebars
- Material reconciliation

Through continued implementation of these initiatives as well as centralized purchasing of high speed diesel, we have realized additional savings of Rs. 210 Lacs in FY 2011-12.

Case Study: Impact of ERP on Enhancing the Efficiency of Supply Chain, Including Initiatives based on ERP Reports

The ERP journey at HCC has been a phased approach starting from implementation of the Material Management module of SAP viz. SAP MM to seamlessly integrating it with other associated modules of Finance and Logistics (SAP FI, SAP SD, SAP QM etc.). This has helped institutionalize its usage across the organization and further building up of best in class supply chain processes which includes automations and process controls. SAP ERP today caters to HCC's corporate office and more than 60 projects across the organization and covers the entire process chain of Procurement & Inventory management. The functional scope coverage today consists broadly of the following:

- PR → PO for material & capital goods (domestic/ import) with release strategy
- GR /GI cycle & stock transfer across projects along with FI module integration
- Material sale, sub-contracting, logistics and scrap disposal with SD & FI module integration

- Physical stock verification
- Materials requirement planning
- Tracking of repetitive use materials (shuttering, staging etc.)
- Data management systems through SAP has reduced paper consumption

Based on the above process, a host of key MIS reports are available for proactive analysis and timely actions. Moreover, instead of relying on users to log into the system, “push” mechanisms through periodic auto MIS emails are delivered to key decision makers for quick review:

- Monitoring total project stock & stock of major items
- Monitoring non moving materials (auto generated emails)
- Stock ageing analysis (auto generated emails)
- Monitoring of surplus materials stock (auto generated emails)
- Monitoring purchased but not consumed materials (auto generated emails)
- Inventory coverage analysis (auto generated emails)
- Major material reconciliation e.g. HSD
- Pre alerts for shortage of critical material stock at projects
- Purchase tax register
- Budget vs. actual material procurement report

To further enhance the benefit to Business, a series of process controls have been built in SAP, a few of which are:

- Blocking of external procurement of surplus materials
- HSD procurement from projects up to preset limit only
- Auto short-closure of PR & PO’s after preset time of no transactions Control on major material procurement form projects up to preset limit only
- Control on multiple PO’s from project for major materials
- Control on tolerance in PO (allowance for GR Qty > PO Qty up to preset limit)
- Mandatory Purchase requisition for major materials
- Restriction on advance payment with approved PO
- Control on booking of expense for a vendor (without PO route) up to preset limit
- Approval of purchase processes with multiple level of authorizations based on values and nature of purchase

All the above steps have led to a significant value addition in the supply chain process which can be classified in two areas viz. Strategic & Tactical.

Strategic Value Additions:

- Standardization of “next practices” business processes
- Common database across organization.
- Strong information-systems backbone.
- Seamless integration of Projects, Logistics and Finance

- Quantum jump in productivity, reduction in costs and cycle-times.
- Getting on-line, real-time information.
- Avoid duplication of work
- Enhanced decision support
- Enhanced support for Documentation management

Tactical Value Additions:

Inventory control

- This forms a key component for monitoring & controlling the project. Ordering the materials at right time keeping in mind the available stock and lead times enable a huge control on inventory which helps in releasing the cash blocked for the project.
- Physical inventory verification through system. The visibility of stock across the organization is available as standard reports in the SAP R/3 system. This takes away the effort of compiling reports from various sites to take 'stock'.
- Uniformity of material nomenclature leads to better visibility of inventory.

Procurement

- Procure to cash cycle time, process efficiency with uniform codification for materials and vendors become a key requirement to attain a mature process
- Both centralized and site-specific procurement ensure adequate control over the procurement process with the requisite approvals obtained over the system thus reducing paperwork
- The flow of the procurement process has made some activities in legacy system redundant, thus leading to time savings and reducing errors due to manual entry
- Long term Rate Contracts Processing
- Automatic match of PO's to GRN and purchase invoices on a line-by-line basis.

Period End activities

- Considerable reduction in time in period closing activities with accurate information availability is critical for accurate monitoring of projects
    - Time and effort involved for period end and year-end activities is considerably reduced with the availability of online and real time reports to all key users.
    - Easy availability of relevant figures has made the task of preparing projected P/L statement and Project level Trial Balance a much easier and less time consuming task.
    - SAP's centralized accounting database has reduced the number of accounting systems to one. Subsequently period end activities can be completed faster with less redundant efforts.

Project reporting and monitoring

- Time spent on generating the operational and periodic report reduces which enables employees to perform more value added task. The value-add is not only time reduction but quality and accuracy of information which gives a decisive advantage to organization.

Case Study: Resource Conservation through ERP 'Item in Common Location' Initiative

Given that procured construction material represents a major portion of HCC's total expenditure, it becomes imperative for us to improve resource efficiencies and inventory optimization across our operations. Towards realizing this goal, we introduced a new measure for better utilization of existing inventory stocks over the past year. As part of this initiative, we scrutinize excess inventory of construction material lying unutilized at our project sites, and list them as 'Item in Common Location' in our ERP system.

Project sites in need of such material are not allowed to raise new purchase requisitions, but instead directed to get the concerned material through a stock transfer order from the project site with surplus. This requirement is waived off by the corporate office only when there is an over-riding commercial or logistical reason for the stock transfer order to not take place. Given the scale of our E&C operations across the country, this initiative represents a significant extent of resource optimization. This initiative has resulted in inter branch transfer of materials worth Rs. 13.68 Crores in FY 2011-12.

Key Economic Performance Indicators - Suppliers and Community Investment

Suppliers and Local supplies	Units	
Monetary values of Total suppliers	Rs. Million	9,242.02
Monetary value of Significant(Top 10) Suppliers	Rs. Million	4,854.21
Of the Significant (Top10), Monetary value of Local suppliers	Rs. Million	3,616.92
Infrastructure investments and services provided primarily for public benefits	**Units**	
Mandatory investment	Rs. Million	0.17
Voluntary investment	Rs. Million	5.40 5.40

Environmental Performance

Scope and Comparison

While the scope for this report was introduced earlier in this report, there are additional aspects of our scope that impacts the comparison of our environmental performance indicators.

Against a total of twenty seven projects in scope for sustainability reporting in the previous year (2010-11), seventeen projects are included for this report including ten Hydel Power projects, one Water Solutions project, four Transportation projects and two Nuclear & Special projects. This is on account of some of the earlier projects have either completed or were not in an active construction stage during the reporting period. Sainj Hydel Power project is a new addition to 2011-12 reporting scope.

This change in scope itself makes comparison of the data from last year to this difficult as we have reported vertical wise and not project wise on many indicators. Further, our projects have different requirements in each of their phases, in terms of materials required or power consumption, making comparison invalid between two different phases. The environmental key performance indicator data presented in this report should be viewed in light of this disclaimer.

Case Study: Waste Utilization Initiatives at Project Sites

In order to reduce waste generation, our project sites have adopted we are practicing 3R principles of Reduce, Reuse and Recycle. The waste generated is mostly construction waste like concrete, metal scrap, municipal and hazardous waste including used oil, waste oil and used batteries. Waste source segregation is carried out at the sites in order to separately collect waste items that can be reused or recycled.

1) Re-use of Concrete Testing Cubes:

To determine the comprehensive strength of concrete, a compressive test on concrete cube is carried out on the site. Frequency of casting of concrete cube usually depends upon the quantity of the concrete. The sites have undertaken an initiative to reuse the concrete cube instead of disposing it. At the project site in Assam, concrete cubes have been donated for construction of a local community temple. Other project sites have utilized these cubes for construction of pathways, compound walls and construction of water drainage.

Thus reuse of the concrete cubes has reduced the burden on requirement of fresh resources.

2) Recycling Food Waste into Manure:

Under a new initiative, food waste generated from the labor camp at Aditya Aluminium Project is being recycled into manure, which is in turn utilized in the vegetable garden near the labor camp.

3) Construction Waste Minimization Efforts at Kishanganga Hydro Electric Power Project, Jammu & Kashmir

The following best practices have been carried out at the site:

a. Excavated muck is being used for other project activities such as site road works, preparation of platforms for segment stacking, retaining walls, crate walls, drain works, building foundations and as raw material for crusher plants
b. Well maintained equipments are being used during concreting activities for controlling any wastage. Concrete transit mixers are washed at designated place and sludge collected from batching plant sedimentation tanks is reused as binding material for project site roads prepared by excavated muck at site.
c. Waste steel rebars produced during the reinforcement works at segment casting yard is being used for tunnel support works at site.
d. Quality checks are in place while receiving any materials at stores section to control any receipt of damaged/defective materials which can cause increase in waste during use at site.
e. Construction materials are stacked/piled and stored properly to avoid any damages causing waste.
f. For equipments/plants only standardize quality of oils/lubricants/grease/batteries are being used so as to ensure their long working life and to reduce waste generation.

Case Study: Reduction in Use of Paper in Shareholder Communications

The Ministry of Corporate Affairs, Government of India, undertook a 'Green Initiative in Corporate Governance' (through Circular No. 17/2011 dated April 21, 2011 and Circular No. 18/2011 dated April 29, 2011), allowing paperless compliances by companies. Under this policy, companies are now permitted to send various notices and documents to its shareholders through electronic mode to the registered e-mail addresses of shareholders. Securities and Exchange Board of Indian (SEBI), in its

circular dated October 5, 2011, has also allowed listed entities to supply soft copies of full annual reports to all those shareholders who have registered their e-mail addresses for the purpose.
As a company deeply committed to lowering our environmental impacts, we welcome these measures and shall send all documents (General Meeting Notices including AGM, Annual Reports comprising Audited Financial Statements, Directors' Report, Auditors' Report and any other future communication) in electronic form, in lieu of physical form, too all those shareholders whose e-mail address is registered and made available to us. In this context, we have requested all our shareholders to keep their e-mail addresses validated/updated from time to time. The company's Annual Report will also be made available on our website and will be furnished free of charge to any shareholders who requests so.

Summary of our Key Environmental Performance Indicators

Materials	Units	Quantity
Raw Materials	Tons	531,641.19
	m3	2,363,543.44
Semi-manufactured goods or parts	m3	165,982.10
	tons	3,273,363.90
	Rs. Million	1.64
Associated Materials	tons	6,495.77
Energy	**Units**	
High Speed Diesel	million ltr	3,899.47
ATF	million ltr	0.16
Purchased electricity	milllion kWh	25.91
Emissions	**Units**	
GHG emissions due to direct energy use	ton CO_2 eq	10,461,044.87
GHG emissions due to indirect energy use	ton CO_2 eq	20985.27151
GHG emissions intensity from construction[5]	ton CO_2 eq / annual turnover	0.02618
Energy Savings	**Units**	
Retrofitting and process redesign	Kwh	262,821.40
Education of employees and awareness	Kwh	25,920.00
Additional savings	Million Rs.	0.23
Hazardous Waste Disposal	**Units**	
Non refillable empty Containers	tons	77.74
Batteries	tons	11.40
Others- Used oil filters	tons	0.60
Others- Soaked Cotton Waste	tons	0.00
Used oil	KL	42.78
Non-Hazardous Waste Disposal	**Units**	
Steel scrap	tons	2,788.35
Used spares	tons	47.58
Used tires	tons	261.90
Empty cement bags	tons	83.38
Environment protection expenditure	**Units**	
Waste disposal, emissions treatment and remediation costs	Rs. Million	1.09
Prevention and environmental management costs	Rs. Million	18.73
Annual costs of ISO14001 and other certifications for management systems	Rs. Million	0.29

(While energy conservation and related employee awareness is a focus area within HCC, we currently do not track investments and monetary savings separately)

[5] Is calculated using a sum of emissions from direct and indirect energy use at project sites in scope. Scope 3 emissions have not been accounted for. Annual turnover of HCC's E&C business was taken from the company's Annual Report FY 2011-12, available at http://www.hccindia.com/investors.php?page=investors (page 65)

Water Management at HCC: UN CEO Water Mandate CoP 2012

Water is a profoundly cross-cutting issue and has social, developmental, environmental, ecological as well as political implications. Sector specific champions are needed in government, industry and NGOs to address the imminent global crisis by taking the lead in sector specific desired action for protection and preservation of the fresh water resources.

During the course of developing responsible infrastructure, we will continue to engage in practices which enhance our ability to become a water-efficient and ultimately a water-neutral company. We will continue to contribute in public policy & collective actions at all levels apart from engaging with stakeholders for water-shed development and water resources management.

Ajit Gulabchand
Chairman & Managing Director

Preamble

With unprecedented increases in urban populations, constrained water supplies and vulnerability to disasters, communities worldwide are seeking more sustainable infrastructures that are resilient, high-performing, resource-efficient, cost-effective and environment-friendly. In order to create an enabling environment, there is need for a coordinated effort from all the stakeholders, and corporates engaged in developing infrastructure in particular.

We have long recognized the correlation between business viability and sustainable water resource use. The initial driver of HCC's focus on water was concern about not only the high cost of resource-inefficient infrastructure development, but also about the business risks posed by two types of water scarcity facing the country: physical scarcity, where there is not enough water to meet demand, and economic scarcity, where communities lack the infrastructure and/or financial capacity to access the water they need. The company has begun to consider how climate change adds a new dimension to these existing challenges and will likely worsen both types of water scarcity in India, especially in regions where water availability is already under pressure and where poor people will be the hardest hit.

HCC has reduced its water use across its construction project, and since 2008, HCC has adopted a rigorous, company-wide framework for improving water resource management under the aegis of United Nations Global Compact (UNGC)'s "The CEO Water Mandate". HCC makes a point to embed the principles of water resources management at all its sites. As a responsible corporate steward, HCC has always motivated other companies to join this initiative by presenting best practices of water stewardship at HCC in various local, regional, national, and international conferences and symposia. Such moves are crucial in bringing about inclusive development for the nation in general, and in developing sustainable infrastructure in particular.

In this chapter an effort is being made to delineate HCC's efforts, during FY 2011-12, in maintaining and improving HCC group-wide water consciousness, in general, and advocacy as well as implementation of 4R water principle (reduce, recycle, reuse, and recharge) at all our direct operations and beyond, in particular. Besides, efforts have also been made to highlight HCC's

engagement with various organizations, dealing with issues related to water at local, regional, national, and international level. Each section of this chapter outlines activities/efforts taken by HCC in implementation of the CEO Water Mandate's six key areas of action: Direct Operation, Supply Chain and Watershed Management, Collective Action, Public Policy, Community Engagement and Transparency.

UN Water Mandate Implementation at HCC

We recognize that wherever and whenever infrastructure is developed, it will have an impact on the community and the environment. Therefore, HCC has embedded a wide range of sustainability measures into its core operations, and continues to innovate and apply the best next-generation practices while executing some of the largest infrastructure projects in the country. To address the pressing challenge of water scarcity, HCC has set an overall goal of achieving water neutrality through location-specific strategies and follows a robust implementation process. The implementation process was extensively described in HCC's first ever communication of progress on Water in 2009 (HCC's Water COP 2009). The specific elements of the process are listed hereunder:

HCC's UN Water Mandate Team & Communication Mechanisms

The UN Water Mandate team is comprised of water experts and practitioners and is based at HCC's Head office (HO) in Mumbai. The team communicates with project sites through a nodal officer designated at each site called a "water champion".

Methodology & Tools

A set of resource documents was created to serve as implementation tools. The resource documents have been found effective in terms of increased standardization and amenable for systematic performance management. These resource documents helped to develop the water data reporting system within HCC. The monthly water withdrawal / intake and utilization of water at sites are recorded on a daily basis and these results are reported monthly to Mumbai head office. Supporting documents for the water data are maintained at site. Compilation and analysis of the water data received from the sites is carried out at the HO, which is then used to update the GRI's EN 8 and EN 10 forms.

Commitment Charts and Site Specific Proposals

This includes and is based on visit of UN Water Mandate team member(s) to project sites for assessment of the ground situation, techno-economic and social assessment for the implementation of identified water interventions, and costing of feasible interventions. Detailed commitment proposals are developed for water intervention activities at project sites in consultation with respective project manager(s) and with the help of water champion(s) at the site. Each feasible proposal is given specific deadlines for execution at project site.

Monitoring and Internal Accountability Mechanisms

Commitment for implementation from Project Manager (s) and monthly progress reports from each project site enables HCC's UN water Mandate team at its Head Office in Mumbai to keep track of not only the interventions being undertaken but also the performance of interventions against the

anticipated outcome. The sites report water management of their respective sites on or before the 7th of every month through the specified IMS Forms (Water Balance: HCC F 01 18 29; Dust Suppression: HCC F 0118 05; and Waste Water monitoring HCC F 01 18 28). Data from all the sites are then compiled by the UN CEO Water Mandate team to get monthly water resources management scenario across all HCC's direct operation, which is then communicated to the top management for their information and perusal.

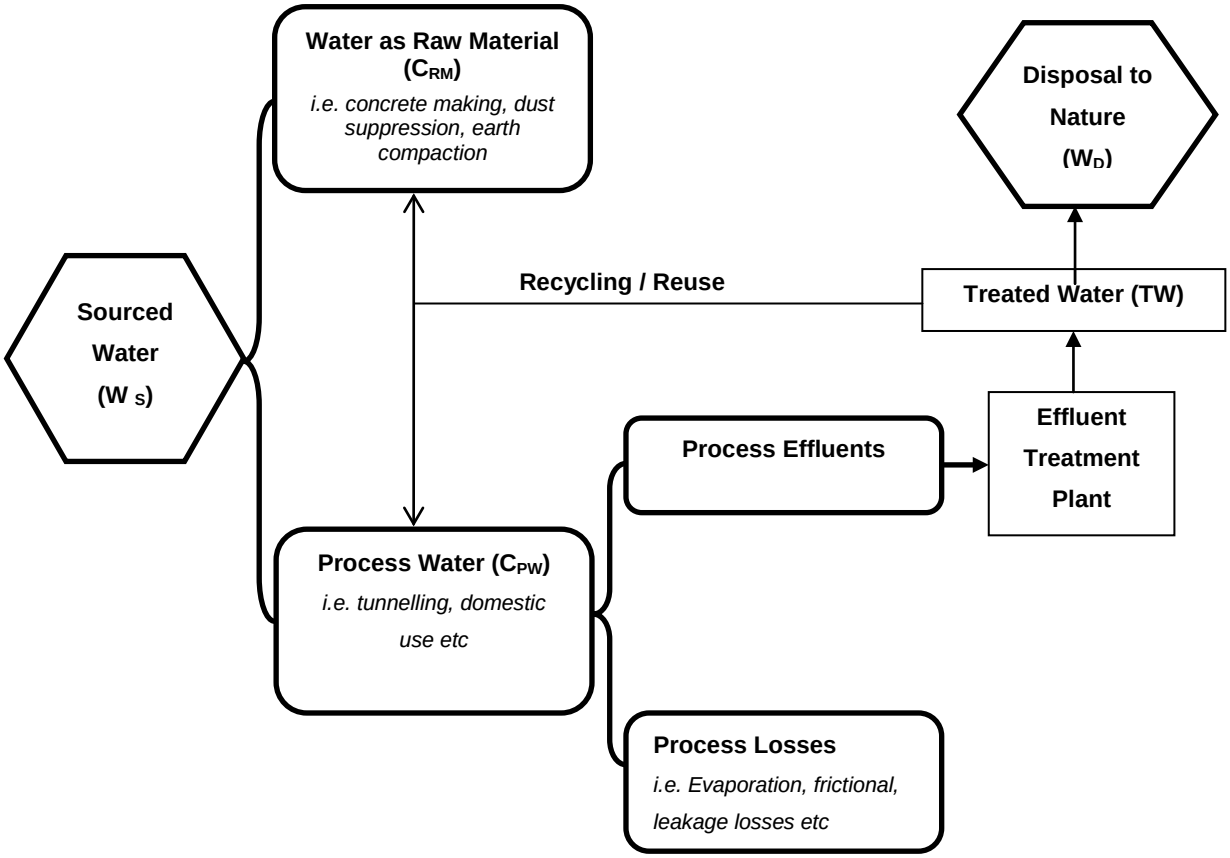
HCC's Water COP 2009 provides detailed process of implementation of the UN CEO Water Mandate at HCC.

Net Water Consumption

Quantity of water consumed as raw material and in various processes of construction activities is defined as Net Water Consumption. Two specific assumptions have been made while calculating the net consumption.

1. The discharge against domestic water consumption is assumed as 80% of total water used[6].
2. The discharge from tunneling activity is due to the use of water for drilling machine - Hydraulic boomer. Here in this discharge is calculated based on the water consumption and water requirement given in specification of the Manufacturer- Atlas Copco[7].

The following schematic explains the term "net water consumption" at HCC:



Net Water consumption (**NWT**) = Sourced Water (W_s) – Disposed Treated Water (W_D)

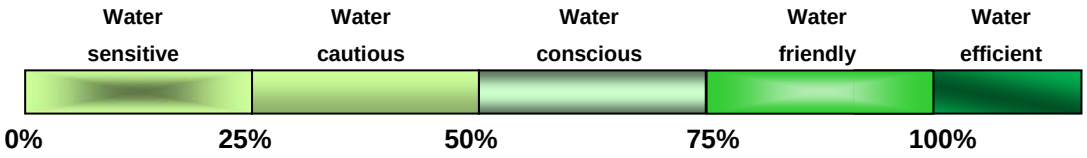
[6] http://nptel.iitm.ac.in/courses/Webcourse-contents/IIT-KANPUR/wasteWater/Lecture%2017.htm

[7] http://pol.atlascopco.com/SGSite/SGAdminImages/PrintedMatters/5318.pdf

Water Efficiency & Neutrality Indices

Aiming at accelerating the efforts being undertaken by HCC to achieve water stewardship at all levels and ultimately establish a benchmark of water efficiency in our direct operation, two empirical scales have been developed: Water Efficiency Index & Water Neutrality Indices.

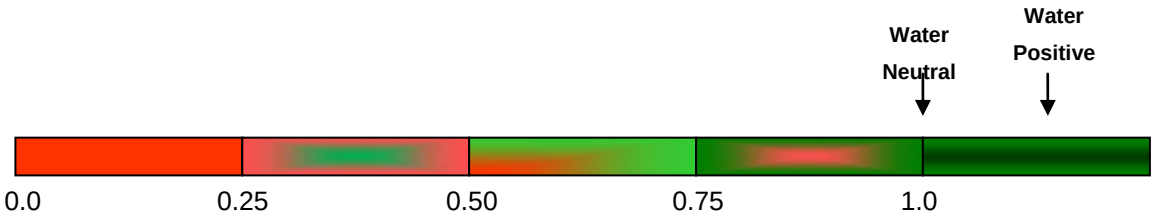
As depicted in the following line diagram the scale has been divided in six parts: <0% = Water in-sensitive; >0 to 25% = Water sensitive; 25-50% = Water Cautious; 50 to 75% = Water Conscious; 75 to 100% = Water Friendly; and >100% = Water Efficient.



As depicted in the above diagram, the water efficiency index delineates % of fresh water conserved through application of *3R Principle*: *Reduce, Recycle, and Reuse* of water at our construction sites. The % water conserved is measured against the net water consumption.

The above scale is used across HCC to establish fresh water efficiency potential of a construction site at the time of commencement of the project, when various water initiatives are proposed and initiated, and subsequently to verify the actual *vs.* proposed water efficiency potential of the site at various stages of the construction activity.

Similarly, another scale has been developed to measure the impact of our water initiative under the 4th R *i.e.* Recharging the ground water through rain water harvesting or resourcing the water from the sea after desalination or safe disposal of treated wastewater to fresh water bodies *etc.*



The Water neutrality index shown above is used to estimate level of water neutrality achieved by practicing ground water recharge or through application of non-fresh water resources (desalinated water) as against the total fresh water withdrawal.

Direct Operation

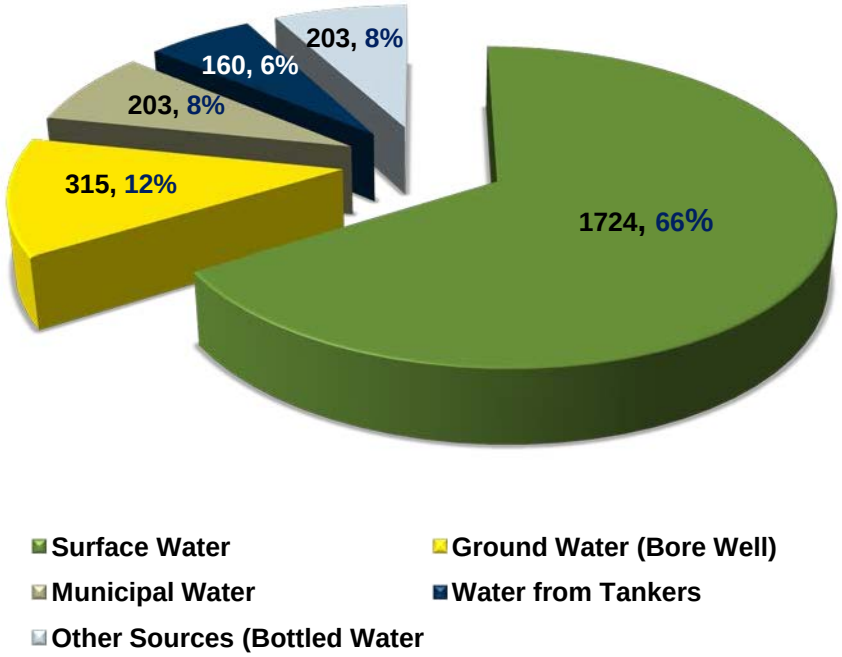
In line with HCC's commitment for water conservation at direct operation, we continue to:

- Conduct comprehensive water-use assessment to understand the extent to which HCC uses water
- Enhance our ability to maximize water conservation in line with HCC's mission statement
- Invest in and use water efficient measures
- Encourage and engage employees to participate in maximizing water efficiency
- Include water conservation related agenda at all level of decision making in the company including but not limited to quarterly project review meetings to annual general body meetings

Water Intake by Source

Water meters have been installed in all our operating sites. Our total fresh water withdrawal for FY 2011-12 stands at 2402 million litres including groundwater, surface water, rainwater and water from municipalities and water tankers. We also used 17 million litres desalinated water and 368 million litres of water was recycled while 1407 million litres of wastewater was discharged into the environment after adequate wastewater treatment.

Fresh Water Withdrawal (million litres)



Snapshot of some of the Water Interventions at Our Project Sites

During the previous year, UN Water Mandate team visited several of HCC's construction sites located in different parts of India and abroad and implemented techno-economic and socially acceptable proposals for reduction, recycle, reuse, and recharge of water. Efforts were also made to evaluate the performance of water interventions proposed earlier. Out of several water interventions proposed and implemented at our construction project sites, three case examples are being presented to delineate the significance of water interventions at our projects sites, in general, and any industrial / commercial projects being executed in water stress areas, in particular.

Water Conservation and Reuse at HCC's Padur Cavern Project in Karnataka

The Padur Cavern site is a prestigious contract work from Indian Strategic Petroleum Reserves Limited (ISPRL) to construct a strategic crude oil storage cavern at Padur in Karnataka. The work includes construction of underground rock caverns (Part A) to store 1.25 million tonnes of crude oil. The sub activities include detailed engineering and design, underground excavation, access tunnels, water curtain galleries, main storage cavern, shafts and associated underground civil works including geological mapping. Tunneling is the main activity which requires high quantity of water for the machinery used for drilling in rock. The Vizag site has similar features to that of the Padur site and

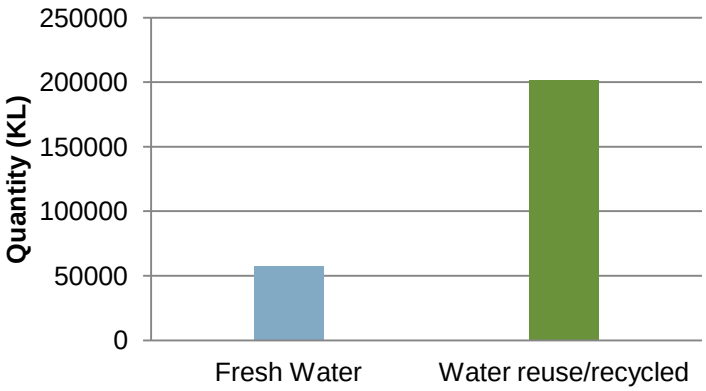
provides a good example for treating and reusing wastewater (for details on water intervention taken at Vizag site, please see HCC's Water COP 2009 & 10) Motivated from lessons learnt and the success story of water interventions at Vizag, HCC installed a tailor-made wastewater treatment plant of 1 MLD capacity to treat the wastewater to reusable parameters and recycled it for appropriate tunnel activities.

Apart from wastewater treatment, UN CEO Water Mandate team explored the rain water harvesting potential of the project and suggested a proposal to recharge the bore well located at the workers' camp using roof top rain water harvesting systems.

Wastewater treatment plant for tunnel wastewater

Tunneling is a major part of the project work and requires high quantum of water for its sub-activities like bore hole pressurization, drilling, dust suppression during mucking, curing; and rock bolt grouting. During this financial year, the wastewater treatment plant operated with full capacity and at present the treated water is being used for tunneling activity as well as for dust suppression.

The cyclic recycling of treated water for tunneling activity showed good potential of saving fresh water intake. The total fresh water withdrawal / intake for site's water requirements (including domestic use) was 57274 KL against 201269 KL of water recycled. Hence, we could say that the site reduced its fresh water requirement by 201269 KL by installation of WWTP. The water neutrality index shows that the fresh water conserved (through recycling and treated discharge) is more than the water procured/extracted by 4.2 times demonstrating the water positivity of the site.



Installation of Desalination plant at DGNP

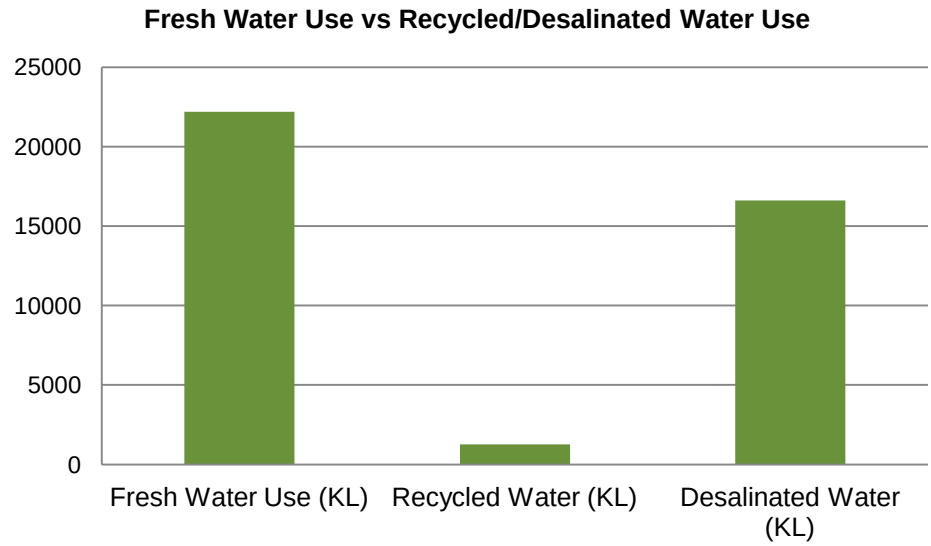
The DGNP site is situated along the coast at Mumbai. The construction activity mainly involves cement concrete work. The only way to fulfill the water requirement of site was to procure fresh water. This would have been a burden on the local municipal body, which always faces acute scarcity of water, especially in the summer. Another way to fulfill the water requirement was to install a Desalination Plant. The decision to installation of Desalination plant of 5 m^3 / hr was taken considering following output parameters:

- Quality of water :– Suitable for construction purpose
- Quantity of processed water or output from the plant: - 5 m^3 / hr
- Assumed that operation period of desalination plant :- 20 hr/day

During this financial year, the Desalination plant was operated at full capacity and at present the desalinated water is being used to address major water requirements of the site.

The desalinated water used for site's construction needs saved fresh water intake/procurement. The total water intake for site's water requirements (including domestic use) was 40061KL including 16607 KL of water available from Desalination plant. The graph below shows the sources of water for use.

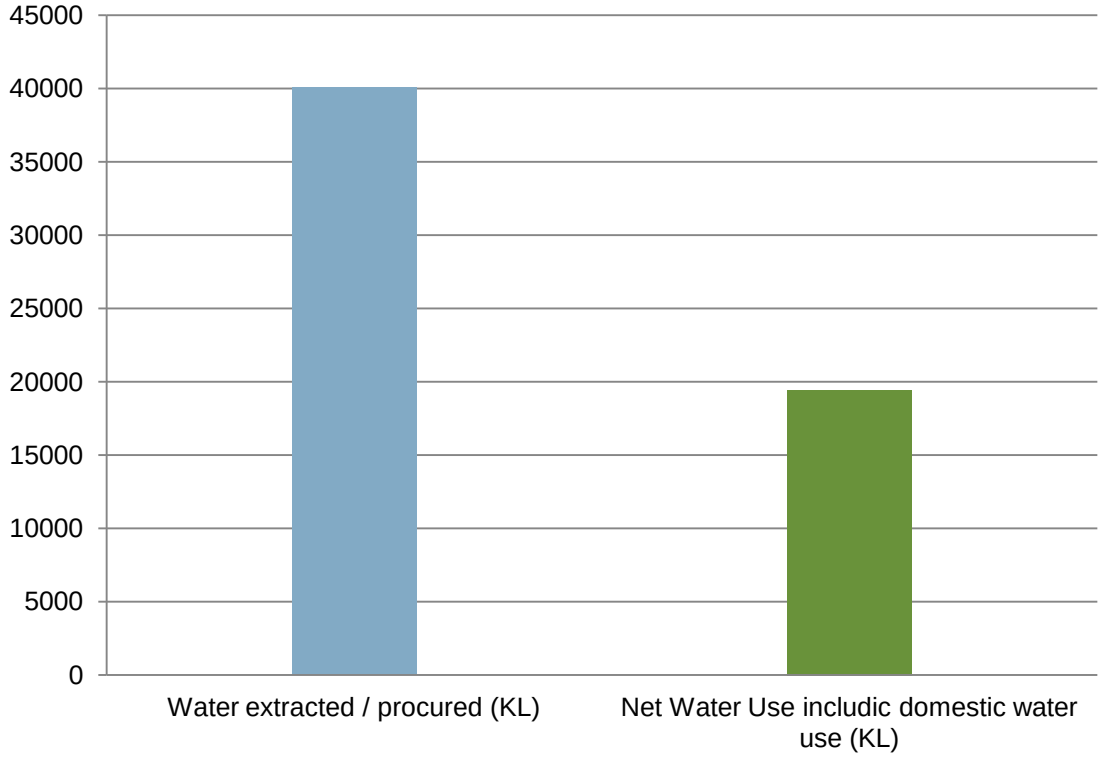
Desalination Plant at DGNP, Mumbai



The net water use by the site, excluding the water discharge, was 19422 KL.

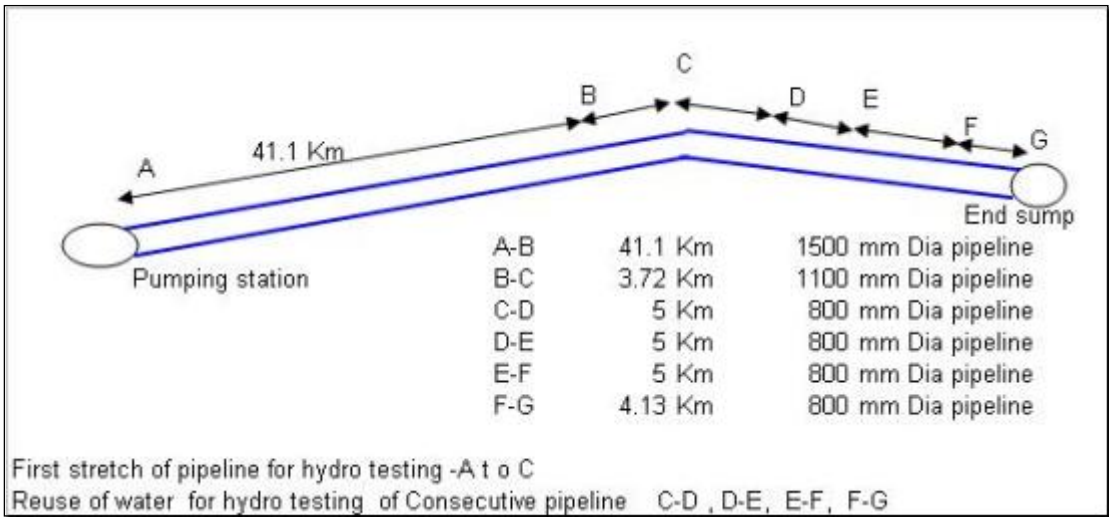
Installation of desalination plant helped the site to reduce its fresh water requirement by 16607 KL.

The water neutrality index shows that fresh water was conserved to the tune of 1.73 times the water procured/extracted, demonstrating the water efficiency of the site.



Reuse of water in hydro testing of pipeline at NC25

NC-25 is an EPC contract for bulk water transmission from Kesariya to Sonariya, in Junagadh district in Gujarat.



In this project, water is mainly used in the hydro testing of the pipeline. The full volume of water is needed for this purpose. The initial planning for this project involved the reviewing of dates of hydro testing of different stretches of pipeline. A framework was made for proper implementation of the work wherein the same water was subject for reuse in the commissioning of the pipeline.

During this financial year, HCC completed the hydro testing of the pipeline by reusing water for different stretches of the pipeline.

Water Saving	**In KL**
Water reuse for Hydro Testing	7977.73
Water rechanrge to natural resources	13267.00
Water reuse for commissioning of pipeline	60235.90
Water reuse for testing of sump	2000.00
Total	**83480.63**

The reusing of water showed that there exists a good potential to save fresh water intake. The water data shows that the amount of fresh water saved due to recycling of water was 83480 KL. The initial water intake for hydro testing water requirements was fulfilled through surface water source and amounts to 73502 KL.

The quantity of freshwater conserved (through reuse and recycle as well as discharge of treated effluent) is 1.2 times the quantity water procured/extracted, as displayed by the water efficiency index. This demonstrates the water efficiency of the site.

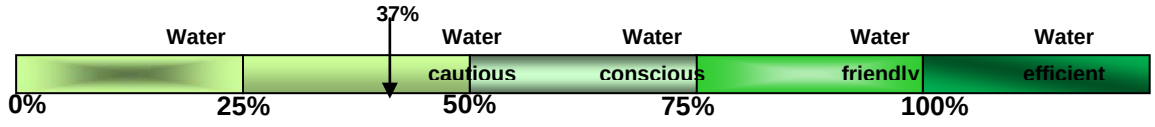
Comprehensive Water Efficiency and Water Neutrality Indices

The following table summarizes water management scenario at HCC's direct operations:

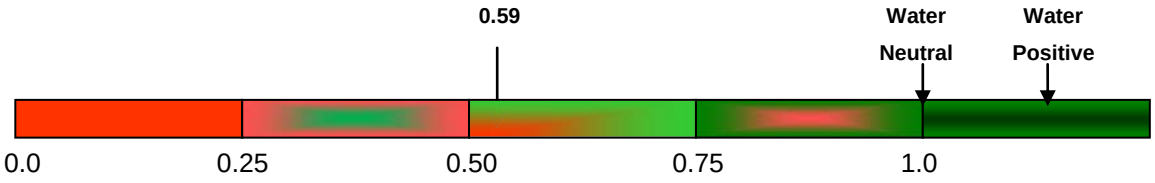
Sr.	Description	QTY	Unit
1	Fresh Water Withdrawal (extraction + procurement)	24,01,831	KL
	• Water use as Raw material	3,62,186	KL
	• Water used in the process of Construction activities + Domestic water use.	20,33,446	KL
	• Tracking diff.(Water transit losses -evaporation, wastage, frictional loss, storage etc)	6,199	KL
2	Water Recycled /Reused + saving of fresh water by using Desalination water	3,67,903	KL
3	Total water used at sites	**27,69,734**	KL
4	Total fresh water withdrawal at sites	24,01,831	KL
5	water disposal in natural water bodies in environmentally safe way.	14,06,877	KL
6	**Net water use at site**	**9,94,954**	**KL**
7	**Consolidated Water use Efficiency = Water reuse / Net water use x 100 :** During the FY 2011-2012, water initiatives across HCC's direct operation lead to minimization of 37% of fresh water extraction. This was achieved through recycle & reuse of fresh water and utilization of desalinated water in place of fresh water. *This implies that HCC's direct operation has reduced consumption of fresh water by 37%.*	**37 %**	
8	**Consolidated Water Neutrality of all the sites** During the FY 2011-2012, water initiatives across HCC's direct operation lead to efficient utilization of extracted water leading to net consumption of 41% of total water extracted. Remaining 59% process wastewater was disposed in natural water bodies in environmentally safe way. *It implies that to be able to become water neutral, we need to conserve water through Rain water harvesting on a larger scale beyond the fence.*	**0.59**	

The effects of HCC's measures on water neutrality and efficiency are shown in following line diagrams.

HCC's direct operation has conserved 37% of fresh water by application of *3R principle*: Reduce, Recycle, and Reuse and thereby stands water cautious in the reporting period.



Similarly, HCC achieved 0.59 points on the water neutrality index.



In other words, in the reporting period, HCC could offset its water withdrawal by 59% by using desalinated water (in place of fresh water), recharging the ground water through rain water harvesting, and disposal of treated process wastewater to natural fresh water bodies.

Supply Chain and Watershed Management

Adoption of comprehensive and total water management with an aim of developing responsible infrastructure is not possible without the engagement of contractors & subcontractors (engaged in executing various sub-tasks at our projects sites), suppliers (supplying raw materials), and service providers (assisting directly or indirectly in execution of construction activities at our project sites). All possible efforts are made to engage the aforementioned stakeholders by communicating to them the essence of 4R water practices (reduce, recycle, reuse, and recharge) and making them aware of ways to adopt them through focused events, conferences, workshops, & symposia organized at company, local, regional, state, and national level.

UNGC's Regional Network Meetings

HCC has utilized every opportunity to interact with the supply chain through meetings of the United Nations Global Compact's Country Network. One of the regional meetings was hosted by HCC, which focused on the UN CEO Water Mandate. The audience of the meeting included senior executives of Tata Group Companies (TCS, Tata Steel, and Tata Foundation), Bharat Petroleum (BPCL), JSW Foundation, NGOs, and consultants etc. In the meeting, Dr. Manoj Chaturvedi gave a technical talk on significance of UNGC's initiatives such at The UN CEO Water Mandate and ways to associate with the initiatives. He also shared HCC's experiences on the same.

World Water Day Observance at Corporate Office

On World Water Day 22nd March 2012, a communiqué detailing the significance of HCC's water initiatives was sent to all contractors, suppliers, & service providers. The communiqué was sent with the intention of sensitizing them to adopt water conservation measures for their activities & operations.

This year's world water day observance at HCC started with a series of tele-interactions between site water champions of a sector and concerned officials from the head office including sector construction heads during March 19 - 21, 2012; this was aimed at exchanging intra-sectoral experience in implementing the water initiatives.

During an event held at the head office, a short film based on the 2012 theme, 'Water & Food Security', was screened at the beginning followed by welcome address and opening remarks by Ms. Niyati Sareen & Dr. Manoj Chaturvedi.

Subsequently, a keynote address was made by Mr. Arun Karambelkar, HCC's President and Whole Time Director. He briefed the audience about the outcome of implementing the UN CEO Water Mandate across HCC. Our special invitee, Mr. Chaitanya Kalia – from Ernst & Young shared his experience and appreciated the efforts being taken at HCC. Additional efforts were also made at our project sites to engage the contract workers and communities in their vicinity to spread messages articulating the significance of water conservation at individual / company/ community level and in ensuring food security for all.

E&C Connect

March 30, 2012

World Water Day: March 22, 2012
Securing our Resources: Water and Food Security

World Water Day was observed at HCC across all project sites and at the H.O. through a series of employee and community engagement initiatives. Highlights of the same are depicted below.

World Water Observance across HCC

A Communiqué by HCC sent to all contractors, clients, suppliers, & service providers on the occasion of World water Day 2012

Collective Action & Public Policy

HCC recognizes the significance of joint efforts through collective action and the role a corporate steward can play in the arena of public policy. We have been involved in articulation and promotion of activities undertaken by civil societies, multilateral agencies and corporate groups. HCC has also participated in key policy advocacy forums at national and international levels. Accordingly, HCC participated in various activities pertaining to collective action and advocacy of public policy during the reporting period, as described hereunder.

WEF's India Economic Summit 2011

This year, the World Economic Forum (WEF)'s India Economic Summit, was held in Mumbai from November 12 - 14, 2011. During the summit, Mr. Ajit Gulabchand, Chairman and Managing Director, HCC, participated in a series of meetings and panel discussions on a range of issues. A session held on November 13, 2011 focused on specific urbanization challenges faced by Mumbai and how the 'Maximum City' could set an example for other Indian urban centers in terms of new models of growth. During this session, Mr. Gulabchand initiated a dialogue on the dire need for Indian cities to have greater autonomy in order to ensure speedy infrastructure development and progress. Reiterating the call for better governance and a faster decision-making process, Mr. Gulabchand observed, "Not just Mumbai, but all cities and towns need a strong mayor and a proper council." On November 14, 2011, Mr. Gulabchand participated in a session titled 'Moving to Better Ground,' that deliberated on how land reforms in India can be tied to a better balance between developing rural livelihood and equitable and sustainable economic growth.

Mr. Gulabchand, Chairman and Managing Director, Hindustan Construction Company, India together with other dignitaries at the panel discussion 'Moving to Better Ground' held in Mumbai India, during the India Economic Summit on November 14, 2011.

Prior to the start of the India Economic Summit, the World Economic Forum (WEF) had hosted a Sustainable Growth Summit in Mumbai on November 12, 2011. During this summit, a session titled 'Implementing India's Water Vision 2030' was held with the core focus on water security, and it brought together key Government officials, Indian and multi-national business leaders, and other dignitaries from the academic and civil society.

Mr. Gulabchand, who chaired a table discussion during this session, emphasized on the vital need for all levels of governance to adopt integrated water management in order to solve the emerging water crisis instead of just exploring ways to augment the existing water availability. He further stressed on the need for champions in government, industry and NGOs to address the water problems in the world.

Mr. Gulabchand, Chairman and Managing Director, Hindustan Construction Company, India chairing the table discussion on "Collaborative Pathways for a Water-secure Future" at the World Economic Forum's Sustainable Growth Summit held in Mumbai India on November 12, 2011.

He further appreciated the ongoing studies being undertaken by the Water Resources Group (WRG) in Karnataka. The WRG was instituted in 2010 under the World Economic Forum (WEF)'s Water Initiative with support from leading water conscious corporate across the world, including HCC.

12th International Sustainability Leadership Symposium 2011

Mr. Ajit Gulabchand participated in the 12th International Sustainability Leadership Symposium held on September 19, 2011 at the Swiss Re Centre for Global Dialogue, in Rüschlikon, Zurich. The theme for this year's forum was Emerging Economies: The New Global Powerhouse. Emerging economies – defined here as developing countries with high growth rates including the 'BRIC' nations – stand out due to their remarkable economic and demographic potential. Participants at the Symposium exchanged views on sustainable strategies to capitalize on growth opportunities and promote prosperity. Reflecting on some key aspects of economic development in India during the last ten years, Mr. Gulabchand elaborated on the impact that global investors have on growth in this country.

He elaborated on the lessons that investors can learn from India with respect to sustainable investment, and also touched upon the skills that investors needed to foster sustainable growth in India and also on aspects of creating mutual benefits from growth in emerging economies. These viewpoints were presented in a dialogue format with Mr. Nader Mousavizadeh, CEO Oxford Analytica and through a Q&A with the audience.

Mr. Gulabchand, Chairman and Managing Director, Hindustan Construction Company, India at 12th International Sustainability Leadership Symposium held on September 19, 2011 at the Swiss Re Centre for Global Dialogue, in Rüschlikon, Zurich.

The Sustainability Forum Zürich (TSF) is an independent, non-profit, non-partisan association founded in Zurich in 1999 by leading representatives from the private and public sector as well as academia. The association organizes and stages the annual International Sustainability Leadership Symposium and other dialogue events and also conducts relevant research and projects.

World Economic Forum Annual Meeting 2012

The Annual Meeting of the World Economic Forum was held in Davos, Switzerland from January 25-29, 2012 under the theme The Great Transformation: Shaping New Models. During the four-day gathering, leading CEOs, bankers, management consultants and politicians interacted extensively over 260 sessions. The diverse issues that were discussed ranged from the global economy and the emerging scenario in Europe to concerns over climate change and what the road ahead will look like. The Indian delegation at Davos comprised of 100 dignitaries who attended a variety of panel discussions on India-centric and international themes.

Mr. Ajit Gulabchand, a member of the Governor's Steering Board of the Engineering and Construction Community of the WEF, participated in a series of engagements at Davos 2012. He was a Panelist at

an interactive session titled ‘The Sustainability Context,’ that deliberated upon some key challenges affecting sustainable growth, and reviewed the dimensions to be addressed in balancing economic, social and environmental sustainability. Mr. Gulabchand was also a discussion leader at a couple of sessions that respectively delved on the future of urban development and on forging a new commitment to resource-efficient growth.

Mr. Gulabchand also participated in a series of Governors’ Meetings for infrastructure and urban development industries that featured themes such as new materials and technologies transforming engineering and construction, reinvigorating capital markets for infrastructure and real estate and forging resource-efficient growth. In addition, he addressed a private session of the Water Resources Group (WRG), wherein key global and regional WRG partners convened to explore and review opportunities for collaboration towards water reforms. Mr. Gulabchand was also part of a Disaster Resource Partnership Meeting that explored opportunities for greater engagement in disaster management.

Arjun Dhawan, President, HCC Infrastructure Co. Ltd., also participated in varied sessions during the conclave at Davos that focused on themes such as a framework for strategic infrastructure development, architecting an integrated approach to sustainable transport solutions, and emerging issues for sustainable growth.

World CEO Forum on Sustainable Development Delhi 2012

Mr. Ajit Gulabchand participated in various events of Delhi Sustainable Development Summit (DSDS) organized by The Energy and Resources Institute (TERI).

On 31st January, during the DSDS’s Special Event “Water: Our Global Common”, which had participation from international and national academics, industry and policy makers, Mr. Gulabchand presented the significance of the water resources management model adopted at LAVASA and lessons learnt there. He also spoke of the upgradation of the ecosystem at LAVASA, using bio-mimicry.

The 9th World CEO Sustainability Summit was organized in New Delhi on February 1, 2012. Over 350 delegates, including CEOs, heads of multi / bi-lateral organizations and senior government representatives from across the globe took part in this Summit. Under the overarching theme 'Doing Business: While Protecting the Global Commons,' top CEOs and business leaders discussed business and sustainability issues during the World CEO Sustainability Summit.

The 2012 edition of the Summit started with a high profile inaugural session along with two focused CEO-led panel discussions. Ajit Gulabchand, CMD - HCC and an Executive Committee member of TERI - BCSD was a panelist on the first panel discussion that largely focused on 'Case Studies and Lessons Learnt since Rio 1992.'

This interaction was structured around sectors and issues that relate to 'global commons' including energy efficiency and carbon footprint reduction; sustainable management of forests and natural resources and water. Mr. Gulabchand - who is a signatory to the United Nations CEO Water Mandate (which mobilizes businesses globally towards water sustainability) - drew upon his vast experience in the areas of sustainable development and water management to describe how water resource management is an essential part of the movement towards sustainability. Mr. Gulabchand also spoke about ensuring the reusability and recyclability of water resources. "Water is considered to be not just a social good, but also an environmental and commercial good," observed Mr. Gulabchand.

On 1st Febraury, 2012, besides participating in the inaugural session of DSDS, inaugurated by Dr. Manmohan Singh, Prime Minister, Government of India, Mr. Gulabchand also participated in a special luncheon meeting of leading Indian CEO's and other dignitaries with former Governor of California, Mr. Arnold Schwarzenegger, organized by TERI-Business Council of Sustainable Development. Besides, Mr. Schwarzenegger, Dr. Jeffrey Sonnenfeld, Senior Associate Dean for Executive Programs and Lester Crown Professor in the Practice of Management, Yale School of Management, Yale University, USA, Dr R K Pachauri, Director-General, TERI, Mr. Terry Tamminen, Founder and President, Seventh Generation Advisors, USA, and Prof. Prem Kumar Dhumal, Hon'ble Chief Minister, Government of Himachal Pradesh, India were also present in the luncheon meeting. This session included a session where issues like organizational sustainability and effective partnerships were deliberated upon and voted on.

Opinion of HCC's employees about DSDS

Dr Manoj K M Chaturvedi

"Attending the DSDS 2012 gave me yet another opportunity to not only learn about the current state of sustainability and sustainable development across the world but also enabled me to share HCC's sustainability practices (specifically the water initiatives) with the distinguished participants at the summit. Comments and inputs from the participants about HCC's water initiatives were of great use to us. I was also able to participate in a pre-conference special event on Water & the World CEO forum. Both these special events helped me to understand better the significance of active

engagement of the private sector in Natural Resource Management as integral to its contribution to economic development."

Tushar Thakur

"DSDS 2012 gave me a rare opportunity to interact with a select group of people , including heads of governments from across the world, eminent academicians, noted industrialists as well as representatives of organizations / institutions of National and International importance. The discussion sessions enabled me to understand various crucial aspects of sustainable development"

Aditya Patwardhan

"At DSDS 2012, I got a chance to meet and exchange views with key persons from among 350 organizations and dignitaries from different nations. The panelists related their experiences and views sharing volumes of information in a short span. This opportunity helped me to upgrade my knowledge about the current scenario and future trends in sustainable development."

TERI-BCSD Meeting at Mumbai

Mr. Ajit Gulabchand, who is also an executive member of the TERI Business Council for Sustainable Development (TERI-BCSD) co-chaired a TERI-BCSD meeting hosted by HCC in August 2011. Re-affirming their commitment towards sustainable development the executive committee met at the Hindustan Construction Company headquarters in Mumbai for their second meeting on 18th August 2011. Mr. Ajit Gulabchand, the host of the meeting welcomed the executive committee members and reiterated the importance of platforms like this to discuss the challenges facing businesses in the context of sustainable development and the need to create benchmarks to build and sustain competitive advantage. He specially spoke about HCC's initiative to conserve water as part of the UN CEO Water Mandate.

During the preceding executive committee meeting, promoting efficient use of water was identified as one of the Business Council's mandates for the FY 2011-13 under the leadership of Mr. Gulabchand. Mr. Gulabchand apprised the executive committee that HCC recognizes the correlation of business sustainability with water resource management and as its role in the UN CEO Water Mandate announced to jointly organize a series of State level Water Road Shows in association with TERI's State level Sustainable Development Summits (SL-SDS)

This initiative could culminate in the form of a half day Water Congress. The executive committee welcomed this initiative and further suggested that water is an area where the TERI Business Council should play an important role to achieve its goal of prioritizing water use efficiency within Indian industry to the same degree as energy efficiency.

Engagement with FICCI

Federation of Indian Chambers of Commerce and Industry (FICCI) has constituted a 'Water Mission' to promote and provide thought leadership in the area of water efficiency. It aims to facilitate the sharing and dissemination of best practices across industry sectors in order to encourage corporate and industry players to imbibe a culture of water and energy conservation within their organizations. The Mission aims to create awareness on the existing situation pertaining to water scarcity, quality and generate a discourse on sustainable use of water amongst various users. With growing and extensive depletion and pollution of our water resources, FICCI Water Mission's work is being restructured to bring this issue back in focus to provide a sense of urgency to the debate of water management.

Dr. Manoj Chaturvedi accepted the invitation of Federation of Indian Chambers of Commerce and Industry (FICCI) to be part of its Water Mission as "Resource Person". Launched in March 2011, the Water Mission seeks to encourage industry players to focus on water conservation measures in their organizations. It promotes water conservation and sustainability across the FICCI membership and beyond, with a focus on those industry sectors where water is either a key input or its consumption is otherwise significant. FICCI Water Mission undertook a survey with its member companies to gauge the importance Indian companies attach to water, its conservation and management. The survey was also an attempt to understand the water use patterns in industries, risks associated with water, its availability, quality and the subsequent impact on the businesses. It is a prelude to a detailed study on water risks in Indian Industry with Columbia Water Centre, Earth Institute.

Responses were obtained from companies belonging to the following sectors - Agriculture, Automobile, Cements, Chemicals, Engineering and Construction, Food Processing, FMCG, Health Care, Hospitality, Infrastructure, IT Services, Manufacturing, Mining, Power, Pharmaceuticals, Real Estate, Petroleum and Natural Gas, Steel and Textiles.

The findings of the survey were published as feature story on 15th January 2012 in all editions of Financial Express, an English Daily, as shown on the next page. This engagement is in concurrence with HCC's commitment to be part of Collective action & Public Policy under the aegis of the CEO Water Mandate.

WATER WOES

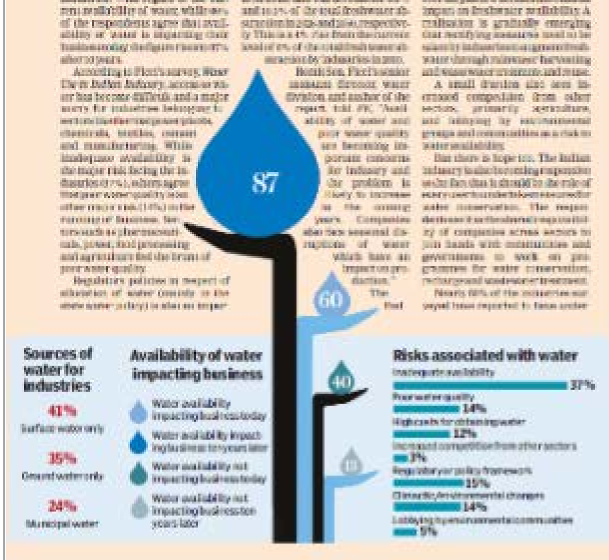
A survey to gauge the importance Indian companies attach to water, its conservation and management reveals that access to water has become difficult and a major worry for sectors like thermal power plants, chemicals, textiles, cement and manufacturing

Through programmes of research, advocacy and awareness creation, the mission is to make industry more responsive in managing water resources

In 2010, we replenished 10.1 billion litres of water, exceeding the intake of 5.8 billion litres of water used in our manufacturing facilities, making us water positive by 4.3 billion litres

In order to create an enabling environment, there is a need for coordinated efforts from all stakeholders

We look to use water as efficiently as possible and have set ourselves the demanding target of reducing our water use per hectolitre of beer by 25% by 2015



Participation in UNGC's initiative as Advisory/ Working Groups

HCC continued to partcipate in various collective actions being undertaken by the UN CEO Water Mandate Secretriat in collaboration with various multilateral organizations/civil socities by contributing to the respective working groups and as a member of the Public Sector Advisory Group on Water.

Water Resource Group (WRG) Phase 2

The World Economic Forum ("the Forum") and its Water Initiative ("Forum Water Initiative") is currently in an alignment with the Water Resources Group ("WRG"). This alignment was agreed at a meeting of Water Initiative CEOs, representatives of the Forum's Global Agenda Council on Water Security and WRG principals in a session in Davos, January 2010, where the Davos Initiative was proposed. The Alignment is called WRG Phase 2. The overall goal of the WRG Phase 2 is to create an enhanced WRG brand with a validated, financed and uniquely public-private model that can, if invited to do so, support many other governments facing water security challenges to catalyze change in their water sectors in the long run. Countries which have shown most interest in engaging with WRG include India, South Africa and Jordan; Ethiopia, Mexico, Mongolia, Pakistan, and Saudi Arabia. HCC, which is Member Company of the WRG Phase 2, actively participates in all activity aligned in WRG Phase 2, in general, and their India initiative, in particular.

Inputs to India's Upcoming Water Policy 2012

The Draft National Water Policy 2012 in its current form, appears to be very comprehensive and has taken care of most of the recommendations from the industries in earlier consultations. Some of the recomondations sent from HCC to the Government of India have potential to dramatically impact on Water Future in India and are enlisted hereunder.

[1] Under the 5th section "Enhancing water available for use", the following two points may be considered for addition.

- The importance of infrastructure for sustained economic development is well recognized. High transactions costs arising from inadequate and inefficient infrastructure can prevent our developing economy from realizing its full growth potential regardless of the progress on various other fronts; therefore, all efforts should be made to encourage development of "Responsible Infrastructure", wherein besides concentrating on adequacy and efficacy of the infrastructure to be developed, efforts are also made to conserve all natural resources specifically water during the development as well during the operation. For example, all upcoming transport projects should internalise rain water harvesting, which has the potential to recognize the significance of ground water recharge of rainwater from paved surfaces and gives an opportunity to offset the impact of ever increasing paved surfaces being built in the process of infrastructure development, in general, and Roads, highways, and Elevated Highways, in particular.
- All efforts should be made to encourage and make mandatory (where possible) to utilize treated domestic sewage for agriculture and / or industry(ies) situated in the surroundings of a given city / township / community establishments having access to centralized water supply and sewerage system.

[2] Under the 12th Section "Water Supply and Sanitation"

Wherever possible, efforts should be made for installation of decentralized sewage treatment. Recycling and reuse of sewage and sullage should be encouraged and incentivized.

HCC's Water Initiatives Featured in Infrastructure Today

Infrastructure Today (IT) is the most read magazine in India on the infrastructure sectors. Its reader profile includes policymakers and public office bearers, town planners, investors, contractors, developers, consultants, utility providers, engineers, banks and financial institutions, educators and researchers, and decision makers in other organisations that provide products or services to the infrastructure sectors. The magazine covers physical infrastructure and related construction activities in Power, Oil & Gas, Roads, Railways, Ports, Airports, Water, Telecom and Urban Infrastructure. HCC's water intitaives were featured in the feature story entitled "Sustainable Water Infrastructure: Fulfilling today without compromising tomorrow" in its Nov 2011 issue. The issue also featured an article by Ms. Niyati Sareen, General Manager-CSR of HCC on HCC's engagement with UN's CEO Water Mandate and HCC's experiences. It also featured water conservation measures at HCC's Delhi-Faridabad Elevated Expressway.

> Endorsers of The CEO Water Mandate set targets related to water conservation and waste water management; encourage suppliers to improve their water practices; partner with UN agencies to support water and sanitation delivery systems, and provide policy inputs.
>
> Niyati Sareen, HCC

to the formulation of regulations and relative policies."

Endorsing companies have to submit annual reports to the UN on how they are implementing the six core elements of the Mandate. Since signing the Mandate, HCC says it has gone beyond its regular project implementation to set up systems for conservation and reuse of water at many of its projects. Water reuse plant at crude oil storage Cavern Project, Visakhapatnam; artificial rain water harvesting pond, integrated storm water management and ground water recharge at Badarpur Elevated Highway Project, Delhi-Haryana; Roofwater Harvesting at Middle Vaitarna Pipeline Project, Thane, Maharashtra; and Irrigation channel (Kul) restoration at Chutak Hydropower Project, Kargil, J&K are some of the initiatives.

It was however no cakewalk for HCC, though. When they started the work four years ago with their first project at Visakhapatnam, it was very difficult despite the company's agreement to bear the cost of the recycle plant—which was around Rs 30 lakh. "It took us four months to convince the client how important it was to use the recycled water for construction and that quality of construction will not suffer," says Sareen.

The water recycling plant has helped overcome the problem of both disposal of wastewater, as well as sourcing of fresh water. Almost 95 percent of the water that was used was recycled and reused for drilling, for water curtain borehole pressurisation, for concrete curing and dust suppression.

Following this successful project, the client Indian Strategic Petroleum Reserve Limited has now made water recycling plant a mandatory requirement in all its future tenders.

But every time when they undertake such an initiative, problems continue to crop up, says Dr Manoj Chaturvedi, Deputy General Manager—CSR, UN Water Mandate, HCC. "Whenever we take up such exercises, we have to counter resistance from internal stakeholders like our own project managers and others working at site. Then we have to tackle external stake holders. We some time fail to get the project because our project cost goes up because of these initiatives. It will be easier if the government makes these initiatives mandatory."

TECHNOLOGY ADOPTION

Evidently, new technologies and innovations will be crucial to the successful provision of eco-efficient sustainable water infrastructure in all sectors – from agriculture, industries to drinking water supply.

"Penetration of technology and better management practices can improve the situation rapidly, but we are doing precious little here," points out Iyer. "There are several techniques in irrigation that can save water for instance but the farmers are very reluctant to bring about any change. Agriculture is the largest consumer of water and yet the sector is not using any new methods that help save water. "

Likewise, power sector which is growing rapidly is yet another large user of water. So are other growing industries and existing water infrastructure is groaning to supply to these sectors. However, about 3 to 5 per cent of the industries are already practising the basic Rs: Reduce, Recycle and Reuse, states Iyer, "The percentage is bound to increase as CII is constantly persuading industries to adopt the three Rs."

However, the environment in India is not very conducive to technological innovations. Experts say the current ability of various players from public and private sector to addressing environmental challenges in water resources development through technology research and development, innovation and investment is constrained by the inadequacy and lack of enabling frameworks.

Several industry professionals unanimously vote for several policy measures like setting up a regulatory body at state level, allowing water utilities to set the price of their services to fully cover the cost of paying for that service and maintaining, eliminating subsidies such as cross subsidies in the water tariffs between classes of users, integrating environmental costs into the viability analysis of programmes and projects, shifting tax from labour and profit to resource use and pollution, developing and implementing economic instruments, providing incentives for promoting water efficiency initiatives and partnerships, integrated management of drinking water, wastewater and storm water services etc.

The Working Group on Urban and Industrial Water Supply and Sanitation for the 12th Five Year Plan has also suggested a series of steps to government for setting up sustainable water infrastructure. IT

Case Study

Project: Water conservation measures at Delhi-Faridabad Elevated Expressway
Implementing agency: Hindustan Construction Company (HCC)
Project completed: October 2010
Project Cost: Rs1,600,000 approx

Background: Initiated as an endorser of CEO Water Mandate HCC's UN Water Mandate team, along with project team, conducted a study and prepared a Feasibility Assessment Report that estimated water neutrality / water positivity potential for the entire project site on the basis of projected water conservation data and forecast of water consumption for the entire project life cycle. A list of achievable targets to become water neutral / water positive were drawn.

IMPLEMENTED PROPOSALS

Recharge of Artificially Excavated Pond: A 400 sq m low lying part of land was used to create an artificial pond with the capacity of 1,614 kl. The accumulated storm water collected at the site was used to fill the pond. With an average 600 mm of rainfall, the projected water conservation was 30,000 kl/year. Owing to the scanty rain fall the estimated quantity of ground water recharge for 2009-2010 was 8,400 kl and for 2010-2011 was 6,288 kl.

Roof Rainwater Harvesting: The area receives scanty rainfall of average 600-800 mm. The significant water extraction from the bore well was used for concrete making in the batching plant and curing. Water collected on the roof surface area of the labour camp buildings adjacent to the bore well was used for recharging the well. Water from the roof area of the store building was used to recharge the pond. The intervention projected total 522 kl/year of water conservation. To some extent, the recharging of bore well with rainwater compensated for the water extracted from it. Similarly, the rainwater collected at the store helped to increase the groundwater table.

Recycling of Curing Water: The major work at the Mirzapur site was to construct the concrete segments for the elevated highway. The site showed a designated area for casting the segment and followed by the curing yard. During the assessment, it was observed that the water for curing was extracted from bore wells with proper arrangement of collecting curing water through the peripheral water channels. It was decided to recycle the curing water by establishing a proper drainage system along with an impervious ground surface made with paver blocks. It helped in streamlining the flow of water into an equalization tank, facilitating the water reuse for curing. The mathematical calculation projected the water reuse of 6,132 kl in 12 months. The 6,828 kl of water was recycled in 14 months.

Sector-wise water demand 2000 to 2050

Sector	Demand (billion cu m)			
	2000	2010	2025	2050
Irrigation	541	688	910	1,072
Drinking water	42	56	73	102
Industry	8	12	23	63
Energy	2	5	15	130
Others	41	52	72	80
Total	634	813	1,093	1,447

Source: CWC

Batching plant wastewater management: The treatment of wastewater from the batching plant was carried out through the sedimentation tank. The treated water was reused for dust suppression activity, considerably reducing water extraction from the bore well thereby conserving the groundwater. 1,080 kl of treated water was reused for dust suppression and ground percolation in 14 months.

Rainwater Harvesting: The 4.4 km long elevated highway design incorporates storm water drains alongside the highway. This proposal suggested an innovative way to conserve the rainwater in the same area through recharge bore wells at predetermined locations along the highway. A hydro-geologist was appointed to study the characteristics of ground strata using bore logs and a physical survey of the area to decide on the locations appropriate for maximum percolation of rainwater. The consultant provided the technical know-how about the bore well's diameter, depth and locations. During designing, a sophisticated filter system was considered for recharge of the bore wells to avoid clogging which might reduce the efficiency of the recharged system. Accordingly, the sophisticated "Furaat" filter mechanism was used. The rainwater available through the rainwater storm drain was passed into the recharge bore well after getting filtered through this filter system. HCC implemented two Rain Water Harvesting systems, as pilot systems, at this project.

This intervention will help to reduce the water stress of the area in the future and will be available to the society at large by increasing the ground water supply. The quantitative impact of the innovation will be measured, over a period of time, through the flow meters at the systems.

Maintaining the record of water usage on construction at site: The site initiated the water data filling in the water balance form expressing the water extraction /procurement and consumption at site for its construction activities. To achieve realistic water data on water extraction from bore wells, the site installed the flow meters. The log records of tankers used for water procurement or dust suppression were maintained. IT

Other Participations

The following participations, which were reported in last year's COP as well, are being included here in order to align the reporting period of water COP with the Sustainability Report.

India Water Forum 2011

The theme of India Water Forum (IWF) 2011 organized by The Energy Research Institute (TERI) was `Water Security and Climate Change: Challenges and Opportunities'. Considering its great significance in today's world, HCC became Diamond Sponsor of the event and actively participated in conference deliberations including taking part in initiating discussion for efficient water management in business planning by corporate and by sharing HCC's actions on ground in developing responsible infrastructure. The UN Water Mandate Team, comprising of Dr. Manoj Chaturvedi, Mr. Tushar Thakur, Mr. Mohit Bhutani, and Ms. Kavita Patil, represented the HCC in the Forum. Mr. Mohit Bhutani, an UN Water Mandate team member at HCC, presented a paper entitled "Water Initiatives by Hindustan Construction Company Ltd. Aiming at Developing Sustainable Infrastructure" wherein besides providing an overview of water initiatives and its impact HCC's construction site, Mr. Bhutani invited other corporate colleagues to join hand in promoting water initiative under the aegis of The CEO Water Mandate.

TERI's Stakeholder Dialogue on Water Use Efficiency in the Indian Corporate Sector

The Stakeholder Dialogue on Water Use Efficiency in the Indian Corporate Sector was organized by TERI Business Council on Sustainable Development (TERI-BCSD) as a special event at the India Water Forum. It drew participation from more than 70 senior representatives from the corporate sector and other stakeholders. There were discussions on the importance of efficient water management in business planning. The final high level panel discussion saw Dr. Manoj Chaturvedi, Deputy General Manager, CSR – UN Water Mandate at HCC joined the panellist as one of the panel member. Dr. Chatutrvedi stressed on the need to internalize the issue of water as an integral part of core business development by giving examples of various water initiatives taken by the HCC and its impact on the ambient water environment, in general, and neighbouring community, in particular.

United Nations Global Compact Week

Dr. Manoj Chaturvedi and Mr. Mohit Bhutani represented HCC in "The Seventh Working Conference of the CEO Water Mandate" at Copenhagen during 16-20 May 2011. The CEO Water Mandate conducted two day multi-stakeholder sessions, mainly focused on corporate water disclosure. Sessions were centered on a range of emerging and salient water disclosure issues, including how companies can measure and effectively communicate water-related risk, whether there is a general approach for understanding water-related materiality, as well as how the issue of "sustainability context" relates to both of the aforementioned. Dr. Cahturvedi was invited by UNGC to speak during the Roundtable Session A: Implementation of GC Resources and Learnings. The Master of Ceremony (MoC) introduced this session followed by presentations of 10 discussants - two panellists from each issue platform (Human Rights, Labour, Environment, Anti-Corruption, and Business and Peace). The other panelist in environment segment was Ms. Habiba Al Marashi, Chair, Emirates

Environmental Group and Board Member of the UN Global Compact, who interviewd Dr. Chaturvedi. Dr. Chaturvedi shared his views on significance of resources developed by environment working group & Caring for Climate (such as Environmental Stewardship Strategy, Low Carbon Leaders Project, Guide to Responsible Business Engagement with Water Policy) and HCC experiences on translating these resources into action within the company and its spheres of influence.

WWF India Water Stewardship Workshop

HCC participated in a multi stakeholder workshop on India Water Stewardship Workshop organized by WWF India on 21st July 2011 to discuss the role of the private sector in promoting India's sustainable water future and the opportunities and risks associated with corporate water stewardship. WWF, which has been pioneering and developing new partnerships with private sector actors globally to foster genuine, far reaching contributions to sustainable water management. Engagements range from water efficiency in agricultural crops, on-site water accounting and demand management, to pro-active investment in watershed management, water footprint assessments and reduction, the development of new international standards and participation in national and international water policy debates, and better understanding of biodiversity and concern for aquatic and other wildlife. The objectives of the multistakeholder workshop were, to develop a shared understanding of water stewardship activities, validate the analysis and information base developed to scope water stewardship engagement, consider what role water stewardship could usefully play in securing a fair and sustainable water future in India, explore and evaluate the risks and opportunities of water stewardship for all stakeholders, and foster a better undertaking of our concerns for bio-diversity. Dr. Manoj Chaturvedi represented HCC in the multistakeholder workshop and shared HCC's perspective on water stewardship.

Community Engagement

HCC makes every possible effort to engage in and work for communities within the fence (project affected community), around the fence (community in vicinity of the project site), and beyond the fence (communities under our sphere of influence but beyond our project activity). With respect to within and around the fence, all project sites provide or make arrangement for availing drinking water & sanitation facilities. Opportunities to undergo health checkups through special periodic medical check-up camps are also provided. Some of the activities carried out / initiated in the reporting period beyond our fence are described hereunder:

Aakash Ganga Project

Akash Ganga Project is funded by Department of Science & Technology, Government of India and is being executed by Sustainable Innovations (SI), a non-profit organization based in the USA. Aakash Ganga has won accolades for innovation and sustainability from the World Bank, Massachusetts Institute of Technology, and Energy Globe Foundation. Akash Ganga is a holistic solution to alleviate the perennial or chronic shortage of drinking water with the help of science, technology, culture and tradition, and business models to maximize rainwater harvesting. It aims to develop and deploynovel technologies, build and innovate efficient social enterprise structure – a variation of Prof. Muhammad

Yunus's social business, build economic models, deploy Gandhian approach to win community participation; mobilize beneficiaries, and effect cultural integration. Department of Science and Technology (DST), Government of India has approved two grants for Akash Ganga Project. First, to showcase economical, cultural, and operational sustainability in the current six villages. Second, to implement Aakash Ganga in two clusters of villages as social enterprise or public-private-community partnership and to build prototype of rainwater harvesting park. The UN Water Mandate team at HCC is providing pro-bono technical assistance to the project and assisting the implementing agency (SI) by reviving the initial Aakash Ganga network design. Dr. Manoj Chaturvedi visited the implementation sites, had detailed discussion with technical team lead by Dr. B. P. Agrawal of SI and gave inputs to their initial design and implementation program. Work is in progress.

Water Initiative at Kihim, a coastal village in Maharashtra

Kihim is a coastal village in Raigarh district of Maharashtra i.e. in the Konkan coastal zone with a scenic beach, and is primarily a tourist destination. Please refer to HCC's Water COPs (2009, 2010) & Sustainability report 2011 for details on various community development initiatives / interventions taken by HCC in Kihim.

In line with preceding years, efforts were continued to spread awareness about environmental enhancement projects executed / being executed by HCC for inclusive and empowered development of the Kihim village and villagers. Rainwater harvesting projects implemented in the village were monitored for their effectiveness during the monsoon season. Total water conserved through the RWH structures in 2011 are summarized hereunder. All the results are based on community observations and log records maintained by villagers during the monsoon (July 2010 to September 2011).

Total Water Quantities of Kihim RWH Project for the month Jul to Oct 2010

Sr. No.	Description	Jul-10 (L)	Aug-10 (L)	Sep-10 (L)	Oct-10 (L)	Total (L)	Total (M3)
1	**Quantity of water recharge through bore well**	45598.05	15124.50	4864.50	12904.83	78491.88	**78.492**
2	**Quantity of water recharge through open well**	75577.59	46901.70	16287.30	0.00	138766.59	**138.767**
3	Total Quantity of water recharge through bore well & open well	121175.64	62026.20	21151.80	12904.83	217258.47	217.258
4	**Quantity of treated water save by using rain water for cleaning purpose**	111240.00	46980.00	10602.00	0.00	168822.00	**168.822**

Total Water Quantities of Kihim RWH Project for the month June to Sept 2011

Sr. No.	Description	Jun-11 (L)	Jul-11 (L)	Aug-11 (L)	Sep-11 (L)	Total (L)	Total (M3)
1	**Quantity of water recharge through bore well**	16381.40	28930.59	13769.19	10716.93	69798.11	**69.798**
2	**Quantity of water recharge through open well**	25860.60	45933.30	32247.00	18632.70	122673.60	**122.674**
3	Total Quantity of water recharge through bore well & open well	40603.86	74863.89	46016.19	28349.63	190833.57	190.834
4	**Quantity of treated water save by using rain water for cleaning purpose**	17820.00	53910.00	18225.00	16605.00	106560.00	**106.560**

In sum, during the monsoon season of 2011 (June-Sept 2011), following were the specific outcome of the RWH projects implemented at Kihim.

- Quantity of water recharged through bore wells is 69.80 m^3
- Quantity of water recharged through open well is 122.67 m^3
- Total Quantity of water recharged through bore well & open well is 190.83 m^3
- Quantity of treated municipal tap water saved by using rain water for household activities is 106.82 m^3

World Environment Day (5 Jun 2011) & World Water Day (22 March 2012)

Aiming at enhanced engaement of community in the environmental enhancement projects being carried out by the HCC for communities within the fence around the fence, and beyond the fence, all efforts were made to observe world water day and world environement day at several places across HCC's operation and beyond. Specific activities included presentation of the context of the respective themes of the celebrations this year, movie clips, poster presentation, plantation etc.

Water initiatives at Walchand College of Engineering, Sangli

Established in 1947 Walchand College of Engineering (WCE), is one of the oldest engineering colleges in India. Since 1996, the Administrative Council of the college is headed by Ajit Gulabchand, Chairman & Managing Director of HCC, and under his leadership, the college received autonomy in 2007. The college participated in the Technical Education Quality Improvement Programme- Phase I

for 2005-2008, funded by the World Bank, wherein its performance has been ranked at No. 2 at all India level out of 127 institutes. One of the key mission statements of the college is "To inculcate sensitivity towards society and a respect for the environment." To compliment the mission, the college management invited HCC CSR team from Head Office to conduct lectures on various mandates of CSR practices in HCC.

Ms Kavita Patil, represented the UN Water Mandate team and conducted session on the CEO Water Mandate in this workshop wherein she gave them overview idea of The CEO Water Mandate as well as significance of 4R : Reduce, recycle, reuse, as well as recharge, options for water management.

The program was arranged in four parallel sessions for 450 students of thirdyear B. Tech. The group was a mix of students from different streams like Civil, Electrical, Mechanical computer Science, IT and Electronics.

Efforts are underway to form a group of students in developing and executing projects pertaining to management of water resources and sanitation aspects at WCE level.

Lectures on CEO Water Mandate at Premier Technical Institutions

Aiming at engaging and leveraging the knowledge base developed by HCC over the years of implementation of the CEO Water Mandate, Dr. Manoj Chaturvedi delivered lectures at technical institutes of National Importance on various occasions during the reporting period as enlisted hereunder:

- "Significance of developing responsible infrastructure: Case examples from HCC" at *National Institute of Technology & Industrial Engineering (NITIE)*, Mumbai entitled on 26th Aug 2011 for students of PG Diploma in Industrial Safety and Environment Management
- "Corporate Sustainability in the Global Economy: Role of United Nations Global Compact" & "Significance of 4 R (Reduce, Recycle, Reuse, Recharge) water principles in developing sustainable infrastructure" at Indian Institute of Technology Bombay (IITB), Mumbai on October 5th 2011 for M. Tech. & Ph. D. Students of Environmental Engineering at IIT Bombay.
- "Significance of Natural Systems in Treatment of domestic and industrial wastewaters in India and HCC's experience in implementing the CEO Water Mandate" at Goa Engineering College, Farmagudi on 16th December 2011. This technical talk was co-organized Goa State Pollution Control Board (GSPCB) & Goa Engineering College (GEC), as a part of celebrations of 50th years of Goa Liberation. The audience for the talk included technical experts, intellectuals, senior officers from the GSPCB, senior environment professionals from various industries, and academicians in State of Goa.

Presentation on 'Sustainability reporting'

The University Institute of Chemical Technology (UICT, Mumbai) had organized a UGC (University Grants commission) networking Workshop titled 'Alternative Sustainable Technologies.' A presentation on HCC's Sustainability Reporting was made by Aditya Patwardhan to the audience comprising of master degree and doctorate Students and faculty members from some of the leading engineering colleges across India and officers from UGC, New Delhi.

Affiliation to eminent publishers on Environment Management

Aiming at engaging and leveraging the knowledge base developed by HCC on water and sustainability, Dr. Manoj Chaturvedi technically contributed (as peer reviewer/ member of the editorial borad) to the publications from eminent publishers on Environment mangement, as enlisted hereunder.

- **Member of Editorial Board** for **SAVITARKA**- A Mass Awareness E-Magazine on Development Issues (An Indira Gandhi Institute of Development Research, ' publication)
- **Reviewer** for Bio-resources Technology (an Elsevier publication)
- **Reviewer** for **Environmental Management** (a Springer publication)
- **Reviewer** for **International Journal for Sustainable Innovations** (An International Peer Reviewed Journal)
- **Reviewer** for **a Book** entitled "**Environmental Studies: A Practitioners Approach**" authored by Arceivala & Asolekar (a Tata McGraw-Hill Education publication)

Engagement with CII-ITC Sustainability Awards:

Mr. Tushar Thakur represented HCC as an assessor in the sustainability assessment team formed by CII, for scrutinizing the applications received from various industries for the 'Sustainability Award - 2011.'. This team was allotted two award applications for assessment. The application was assessed by each individual in the team independently. A conscious meeting was arranged to arrive at common and potential outcomes. Based on the outcomes of the meeting, Mr. Thakur visited a candidate company (SRF) for the assurance. The CII-ITC Sustainability Awards intends to recognize and reward outstanding corporate achievements and efforts to mainstream sustainability issues. Engagement in this assignment enabled Mr. Thakur to understand the practical implication of various interventions made by the candidate companies in achieving business sustainability in true sense, on one hand. This engagement was yet another HCC's efforts for community empowerment (development).

Transparency

Communication on Progress (COP)

HCC continues to support the United Nations Global Compact's CEO Water Mandate initiative and we, therefore, have been working and will continue to work with our all stakeholders (internal as well as external) to promote water consciousness, internalize water efficiency in business decisions, and develop strategies for development of sustainable infrastructure by ensuring implementation of

appropriate approaches for 4 Rs: Reduce, Recycle, Reuse, and Recharge, at all our direct operations and within HCC's sphere of influence and reporting on progress made during the reporting period. HCC recognizes the correlation of business sustainability with water resource management and is committed to reduce the amount of water used across our construction project sites; especially in regions where water availability is already in pressure. HCC's water consciousness is elucidated in HCC's Mission: "To contribute and actively participate in the UN CEO Water Mandate" (HCC's Management System Manual Chapter 2.1 of HCC Q 01 02 01).

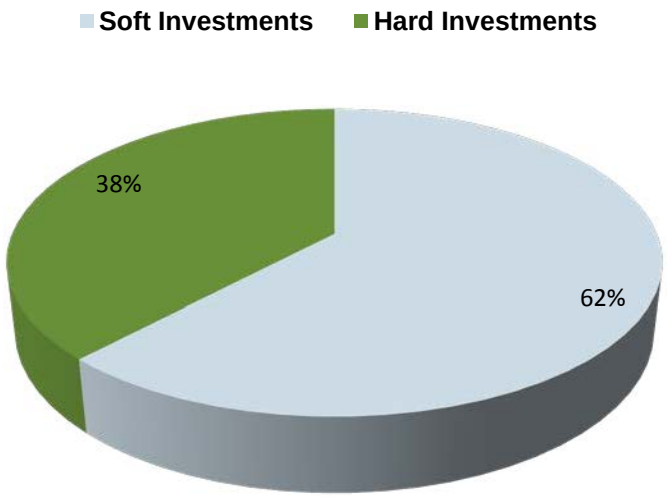
Sections of this chapter essentially focus on six key areas of action under the CEO Water Mandate's (Direct Operation, Supply Chain and Watershed Management, Collective Action, Public Policy, Community Engagement and Transparency) and delineate the outcome of the specific activities / actions undertaken by the HCC in respective key areas. This chapter serves as Communication on Progress (COP) for year 2011-2012. The reporting period of the COP is April 2011 to March 2012.

Budget allocations

In line with HCC's mission statement and in continuation of the top management's decision last year, the annual budget proposals for all projects (old, new, and upcoming) had provisions for implementing water initiative related to 4R (reduce, recycle, reuse, and recharge) interventions this year. The projects sites are entitled to carry out such projects on their own, if the installation cost is Rs. 0.5 million or less. Interventions costing more than Rs. 0.5 million can also be implemented in consultation with the Water Mandate Team at HCC's Head Office.

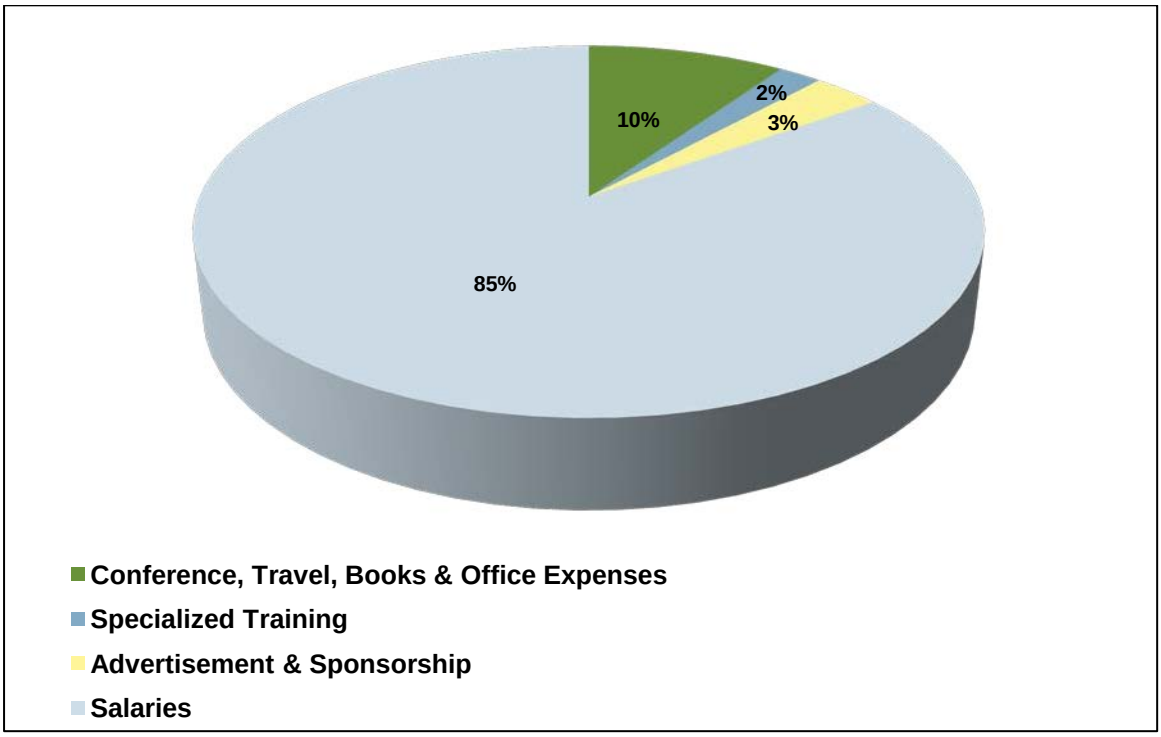
Investments for Water Initiatives

HCC invested Rs. 10.44 millions in implementing "The CEO Water Mandate". The investment covered various soft activities and installation of hardware for water interventions.



Soft Investments

The soft investments include sponsoring of / participation in conferences / workshops, travel expenses, books & periodicals, salaries, cost of specialized training, contribution to UNGC foundation and promotion activities etc. Total soft investments in the reporting period were Rs. 6.44 million.



Hard Investments

The investments made in execution of water consciousness proposals of 4 R water interventions at HCC project sites are reported under hard investments, which amount to Rs. 4 million for this reporting period.

Epilogue

Since its inception in 1926, Hindustan Construction Company has been a pioneer in the Indian engineering and construction sector, having executed some of the largest and most technically challenging infrastructure projects in the country. Our Company's history is inextricably linked with India's nation-building endeavor. We being a construction company are committed to create responsible infrastructure. We intend to embed sustainability not only in the structure but also in to the operation of those structures as well as in the process of constructing them. Aiming at and maintaining our commitment towards building responsible infrastructure, we have endorsed various UNGC initiatives including the CEO Water Mandate & Caring for Climate, which have essentially helped us to realize our future sustainability goals in relatively better way. At HCC we not only follow BEST Practices but follow NEXT Practices.

Over the years of implementing the CEO Water Mandate at our project sites, we have been able to optimize utilization of water leading to enhancement of our ability to conserve the precious freshwater,

on one hand, and minimization of carbon footprint for resourcing and pumping the freshwater to our construction site, on another hand. With these experiences and continual engagement in various UNGC initiative, in general, and CEO Water Mandate secretariat dialogue, in particular; we have been translating our experiences in advocacy document and presenting them to various public forums including but not limited to national/international conferences, skill building workshops for water manager's round table discussions with key water & environmental stakeholders etc. and we will continue to do that as HCC's contribution to global fresh water resource management aspects.

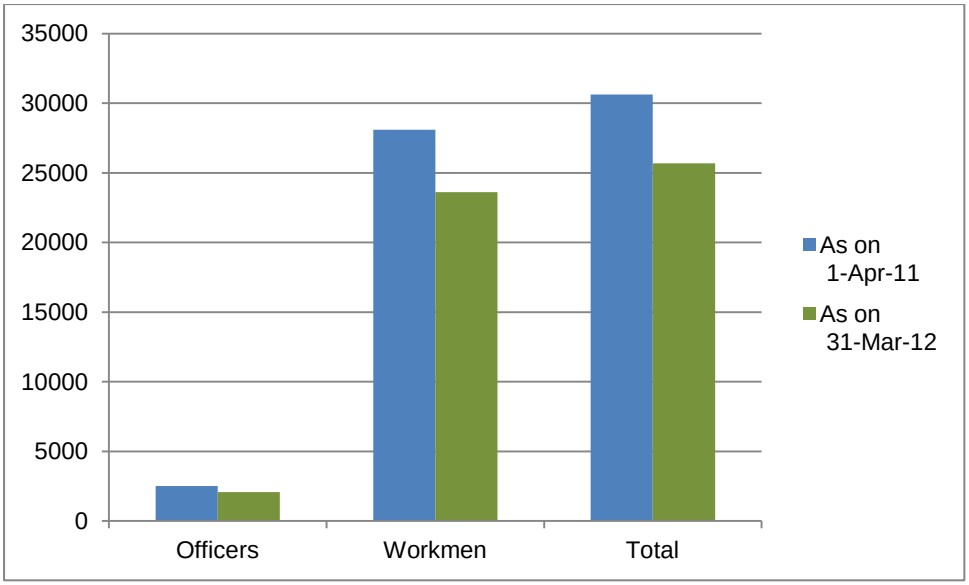
Social Performance

Employees

HCC's Human Resources initiatives are focused towards creating and sustaining world class capabilities and competencies in the organization. They are actively engaged in the mission of building responsible infrastructure.

During FY 2011-12, we focused on consolidation, improvement and reorganization to meet the prevailing challenges. Within our Human Resource, the first step towards this was the realignment of the organization structure along the functional line to reinforce enhanced focus and accountability in various areas of business including business acquisition, business implementation and technology. Teams were regrouped and put in place for working along the lines of the revised organization structure. There were also significant initiatives in reducing costs. There has been manpower right sizing at the sites as well as the corporate office. In addition, concerted effort was put in place for reducing administrative costs right across the organization.

As of 31st March 2012, HCC's total workforce was 25687, comprising of 2072 officers (senior, middle and junior management and trainees; 95 officers are women) and 23615 workmen (on project rolls, sub-contractor rolls and piece rate workers).



A snapshot of HCC's employment, new hiring and attrition data in the reporting period is presented below:

Total Workforce	25687
Workforce by employment level	
Officers (Senior, Middle, Junior Management)	2001
Others (Short-term contracts, Trainees, Apprentices)	71
Workmen (Monthly rated and daily rated, excluding FTC, Trainees)	23615
Workforce by type of contract	
Permanent (Officers + Workmen/Staff)	10993
Fixed term contract	136

Other (sub-contract rolls)	7934
Other (piece rate workers)	6624
Workforce by gender (officer category)	
Male	1977
Female	95
Workforce by age groups (officer category)	
<30 years	448 males, 26 females
30-50 years	1289 males, 66 females
>50 years	240 males, 3 females

(All data as of 31 March 2012; HCC has pan-India presence and does not report regional breakdown; None of our project sites fall within areas defined as insecure)

	Numbers left voluntarily in FY11-12 (attrition rate)	Numbers left involuntarily in FY11-12 (attrition rate)	Number of new hires in FY11-12	Numbers of new hires, who voluntarily left in FY11-12	Numbers of new hires, who involuntarily left in FY11-12
By employment level					
Senior Management	4 (7.34%)	13 (23.85%)	--		
Others (excluding workmen)	551 (24.59%)	227 (10.13%)			
By gender					
Male	535 (24.45%)	229 (10.46%)	341	57	20
Female	20 (18.78%)	11 (10.33%)	10	2	0
By age groups					
<30 years	257 (46.02%)	42 (7.52%)	200	37	9
30-50 years	285 (19.22%)	137 (9.24%)	129	21	10
>50 years	13 (5.12%)	61 (24.02%)	22	1	1
Total new hires in FY11-12 = 351, Total new hires leaving employment in FY11-12 = 79					

(All data as of 31 March 2012; Turnover rate is calculated using average manpower in the period 1 April 2011 to 31 March 2012; HCC has pan India presence and does not report regional breakdown)

While there was an emphasis on the cost side, talent acquisition initiatives were also carried out to fill up specific senior positions, which were functional necessities arising out of the new business orientation. Initiatives undertaken earlier to improve the effectiveness of human resources through automation of HR systems and processes continued. An online Employee Portal has been developed in expediting various HR processes as a self service model. Implementation of the manpower deployment tool has started delivering results in effectively managing the human resources inventory and the vacancies.

All our workmen (both permanent and temporary) at all our offices and project sites have the right of collective bargaining. While the workers on HCC rolls are fully unionized, the terms and conditions of

the workmen on sub-contractor rolls and piece rate workers or PRWs are bargained by their respective sub-contractors/PRWs.

Respect for diversity and human rights is intrinsic to our philosophy and culture. Our commitment to diversity is evident by the numbers of women employed at our corporate office. Out of a total of 95 women employees, four are in the senior management level, 90 are in the middle and junior management, and one is a trainee (as of 31 March 2012). All 95 female employees were eligible for maternity leave. During the reporting period, three employees availed of maternity leave and all three returned to work and were still employed with HCC twelve months after their return, resulting in one hundred percent return to work and retention rates post maternity leave. The table below shows the ratio of basic salary and remuneration for of women to men for each employee category across our project sites in India:

Employee category	Ratio of basic salary of women to men	Ratio of remuneration of women to men
Senior management	0.97	0.97
Junior and middle management	0.84	0.84
Trainees	1.51	1.51

We are committed to fair labor practices and comply with all local laws and statutory requirements. Being an equal opportunity employer, HCC does not discriminate on the basis of caste, religion, region, nationality or gender among existing and potential employees. We follow a zero-tolerance approach towards child labor issues. To this end, we strictly enforce the age verification of all our employees and contract laborers at all our project sites.
Our full time employees enjoy the following benefits during their association with us:

- Medical Insurance Scheme
- Group Superannuation Scheme/ Pension Scheme
- Executive Health check-up facility (Senior & Middle Management)
- Employees Stock Options (Senior Management)
- Annual Performance linked incentive (Senior & Middle Management) & incentives for project sites
- Additional allowance/ benefits for employees posted in difficult locations

The Provident Fund benefit is also extended to our contractual employees in addition to our full time staff. Our workforce continues to be eligible for the set of retirement benefits we reported last year. These are:

- Group Superannuation Scheme with LIC (defined contribution plan)
- Family Pension Scheme under Employees Provident Fund
- Gratuity
- Provident Fund

Learning and Development continues to be a critical aspect of our human resources strategy. For officers, a gamut of technical & managerial programs catering to specific needs of various business sectors, functions & individual employees have been designed & rolled out in FY 2011-12. This year, our officers underwent training at an average of 6.2 man hours per employee.

Training for workers (including sub-contract & piece rate workers) is organized at site. These trainings are focused on skill enhancement (have a higher practical component) and enable the workmen to upgrade their skill for continued employability. Industry experts are used as faculty for these programs. Technical programs related to equipment operation & maintenance (O&M) are conducted by the relevant OEMs. These programs impart knowledge & skill on the standard practices to be followed for the operation & maintenance of the equipment. These trainings impart best practices and ensure longevity of equipment with minimum breakdowns. Our workers underwent training at an average of 1.2 man hours per worker.

Special emphasis is given to the training of graduate & management trainees. A combination of classroom, on-the-job training & special assignments coupled with coaching by seniors helps these new entrants to transition into their corporate life. Trainees received as much as 30.9 man hours of training per person in FY 2011-12.

In addition to organizing in-house customized programs, employees are nominated for national and international seminars / conferences for skill and knowledge enhancement. This enables them to stay up-to-date with the latest technology/ developments in their domain. The average number of training hours for male and female employees for the reporting period was 23.8 and 7.1 hours respectively.

Our training programs are designed to cover a wide range of skills development, health and safety and vocational training topics. Some of the in-house programs conducted during the reporting period include construction safety, defensive driving, first aid response, occupational health hazards at sites, equipment management, managerial development, negotiation skills, project planning and control, quality assurance in construction, supervisory development, concrete technology etc. The external training programs included managing research and development, tunnel construction, arbitration for resolution of disputes in construction projects, earthquake resistant design of dams, ISO 9001.2008 internal auditor course, awareness of labor laws etc.

At HCC, we also extend financial support for external training or education as we recognize its importance for our employees. Employees who pursue higher studies can avail the policy of sabbatical leave, which (if approved by the management) can be availed for a maximum period of 2 years, while maintaining lien on their job in HCC.

Employee Health and Safety

At HCC, safety at project sites has always been an area of utmost priority, as reflected in the integrated approach towards Quality, Environmental, Health and Safety we have adopted in our company.

Over the past year, we have made significant efforts to meet the following Occupational Health and Safety Policy objectives:

- Minimize risk to our employees and other interested parties who may be exposed to Occupational Health & Safety risks associated with our activities.
- Continual improvement of the OH & S Management System.
- Reducing the frequency of all incidents and minimizing/eliminating loss of man days.
- Train and retrain the Site Personnel for enhancing their competence and expertise with the view to reduce accidents/incidents.
- Procure best quality and ensure use of Personal Protective Equipment (PPE) thus minimizing the exposure to physical risks.
- Integrate OH & S with other business processes.

Presented below are key highlights on health and safety initiatives and accolades from our projects during the year 2011-12.

1) National Highway 34 (NH-34) Safety Awards from DGMS:

The Director General of Mines Safety (DGMS) observed 'Mines Safety Week' across India from 6 March 2011 to 11 March 2011. A region-wise competition on 'Best Mines Safety in Crushing Plant' was held during this week-long celebration. HCC's NH-34 project participated in the competition within the Barharwa (Sahebganj) region where 30 other mines competed.

A committee formed by the Deputy Director of Mines Safety evaluated the participants for their implementation of HSE standards and HCC was awarded for the categories of: Best Mines in the area, Best Crusher in the area and Best Pollution Control in both the districts of Sahebganj and Pakur. We also won a special prize for the Sidhpahari mines. The prizes were distributed in a function held on 12 March 2011 by the Director General of Mines Safety.

2) Nimmo-Bazgo HEP and GLIS- II win Prashansa Patra Awards:

On the occasion of the 12th National Safety Council of India (NSCI)'s National Conference Award function held in New Delhi on 19 October 2011, HCC's Godavari Lift Irrigation Scheme Project (Phase-II) and the Nimmo Bazgo Projects were given the Prashansa Patra Awards for the year 2010 in recognition of their "very good performance in safety."

3) Appreciation Certificate for Aditya Aluminium Potshell Project:

The HCC project team on the Aditya Aluminium Project received a Safety Appreciation Certificate from the client for achieving 3.5 million safe man hours for the period from 22nd November 2009 to 25th November 2011 and one million safe man hours from the period of April 2010 to April 2011.

4) Appreciation Letter for Nimmo Bazgo HEP:

The Nimmo-Bazgo team has set an example of high performance in implementing Occupational Health and achieved 7.14 million safe man hours without lost time injury from October 2008 to 30 June 2011. The project team received an appreciation letter from NHPC Ltd. in recognition for this achievement.

5) Appreciation Letter for VAG-MRTS Project:

At a safety award function organized by the client, Mumbai Metro One Pvt. Ltd. (MMOPL) on 11 August 2011, six project team members from HCC's Versova-Andheri-Ghatkopar(VAG) Corridor – MRTS (Mass Rapid Transit System) Project were presented with a certificate of appreciation and a cheque by K.P. Maheshwari, MMOPL's Project Director, in recognition of their endeavors to improve project safety standards.

6) Road Safety Week Celebrations at NH-34 Project:

A Road Safety Week is observed every year between January 1 and January 7 across all HCC project sites to enhance understanding on road safety both within our employees and also with external stakeholders. The event aims to create awareness about varied aspects and practices related to road safety both within the employees of HCC and also among external stakeholders. This year's celebrations at the National Highway 34 (NH-34) project site in West Bengal, where HCC is executing Packages 3, 4 and 5, included a series of programs such as:

- Hoisting of the Safety Flag,
- Orientation on the 23rd Road Safety Week,
- Mass tool box talk for all HCC staff and sub-contracting workers,
- A responsive program for school children on road safety,
- Mock drill exercise on fire-fighting
- Medical check-up camps and training programs for all department workers.

7) National Safety Day Celebrations:

At HCC, we celebrate 'National Safety Day' and 'Safety week' at our project sites. Delegates from the client team, government authorities and the HCC project management team actively participated in various safety competitions such as quizzes, essay writing, slogan writing, etc. The theme for this year was "Establish and Maintain Preventive Safety and Health Culture".

The Maroshi Ruparel Tunnel project team organized a fortnight of celebrations from Feb 12, 2011 to March 4, 2011. Competitions such as most safety conscious workmen, safety quiz for officers, Safety posters competitions and Safety slogan competitions for workmen were organized during this period. This included on-the-job training on grinding operations for workmen, safety training on construction safety for officers and workmen, etc.

Safety Milestones 2011-12

Project sites have been instrumental in the effective implementation of the Health Safety & Environment (HSE) management system. The following HCC projects have achieved more than 3 million safe man-hours worked without lost time injury till 31st March 2012:

Sr. No.	Name of the Projects	Safe million man-hours (Cumulative till 31st March 2012)
1	Nimoo Bazgo HEP [3x15 MW]	8.22
2	Teesta HEP IV [4x40 MW]	7.53
3	Teesta HEP VI Lot 4 [4x125 MW]	7.31
4	Assam Road Project	4.94
5	MRTP	5.09
6	AAP Civil Works	8.33
8	RAPP 7 & 8	6.01
9	NH-34 Package 4	3.27

A summary of our performance on key employment, and health and safety indicators is presented below for the reporting period:

Average no. of employees	Numbers	190,529
Man hours worked	Numbers	59,211,216
Injuries	Numbers	21
Fatalities	Numbers	5
Lost days	Numbers	31,766
Frequency rate	Numbers	0.44
Severity rate	Numbers	536.49
Incident rate	Numbers	0.14
Frequency severity index	Numbers	0.49
Lost Days per million man hours worked	Numbers	536.49
Percentage of workforce represented in formal joint management-worker health and safety committees	Percentage	50% -50% (Non management and management)

(The numbers above pertain to project sites within the scope of this report, and are inclusive of HCC direct employees, sub-contracted workers and others; Injuries do not include first-aid cases; Lost days are calculated based on scheduled work days; All incidents/occurrence pertain to male employees; No occupational diseases occurred in the reporting period; Absenteeism rates and near miss incidents are tracked internally for effective follow-up actions; Our safety monitoring conforms to ILO guidelines)

Corporate Stewardship

Five Focus Areas of Corporate Stewardship at HCC

Since its inception, HCC has had a long-standing commitment to developing responsible infrastructure. We remain steadfast on our objective of pursuing holistic growth with responsibility towards the people and the environment. As a pioneer in the construction industry in India, HCC is aware of the responsibilities that accompany our leadership status. The Company has a slew of social initiatives that complements its world class operational processes and systems to provide for responsible infrastructure development. Our 'Beyond Bread' corporate stewardship initiatives fall under five distinct focus areas of critical importance to the Indian society.

Disaster Resource Network

HIV/AIDS Awareness

Water

Education

Community Development

Water

We recognize the close correlation of business sustainability with water resource management and are actively promoting this water consciousness among our employees, external stakeholders and communities. Our commitment is reflected in HCC being the first Indian company to endorse the United Nations CEO Water Mandate, and we have presented our Communication on Progress (COP) for the year 2011-12 in this report. The COP presents highlights of water conservation related initiatives and accomplishments both within and beyond our project sites.

Education

Corporate Social Responsibility Workshop at Walchand College of Engineering

On 16th and 17th Sept, 2011, A Corporate Social Responsibility workshop was organized at Walchand college of Engineering (WCE), Sangli. One of the key mission statements of the college is "to inculcate sensitivity towards society and a respect for the environment." To compliment the mission, the college management invited HCC CSR team from Head Office to conduct lectures on various mandates of CSR practices in HCC.

In the month of March 2011, the CSR team had visited the college and met the Director Mr. Y. V. Joshi and various Head of Departments of the Institute and appraised them about the CSR activities at HCC. The college management was quite impressed with the CSR initiatives undertaken by HCC

and planned to conduct a workshop for the senior students of the college which aimed not only to make them technical specialists but a socially responsible engineer in future.

The HCC CSR team comprising of Ms. Shikha Shabdita Manager-DRN India, Mr. Aditya Patwardhan Manager – Sustainability, Ms. Hemangi Patil Manager-CSR and Ms Kavita Patil Engineer - CSR, conducted sessions on DRN and First AID Training, Sustainability Reporting, HIV/AIDS Awareness and The CEO Water Mandate ,respectively. The program was arranged in four parallel sessions for 450 students of third year B. Tech. The group was a mix of students from different streams like Civil, Electrical, Mechanical computer Science, IT and Electronics. The program was well appreciated by the students and the faculty members of the college.

During the closing ceremony of the workshop, the HCC CSR team was felicitated by the College Director, in presence of Ms. Kavita Nerkar, the Deputy Superintendent of Police, Sangli & Mr. Vijay Kumbhar, Inspector of Police, Traffic Branch, Sangli who were the Chief Guest for the function. At the end, participation certificates were distributed to the students.

Walchand College of Engineering (WCE), established in 1947, is one of the oldest engineering colleges in India. Since 1996, the Administrative Council of the college is headed by Ajit Gulabchand, Chairman & Managing Director of HCC, and under his leadership, the college received autonomy in 2007.The college participated in the Technical Education Quality Improvement Programme- Phase I for 2005-2008, funded by the World Bank, wherein its performance has been ranked at No. 2 at all India level out of 127 institutes.

HIV/AIDS Awareness

'Reaching the Unreached': HIV/AIDS Work Place Education and Awareness Program

As HIV/AIDS directly impacts the lives of employees and their families, it also impacts business. For over nine years, HCC has been actively engaged in HIV/AIDS response at the workplace and the community.

HCC deploys a large number of migrant laborers to build the nation's infrastructure. Our education and awareness work is spread throughout the nation as our construction sites are in various states of the country. We reach the remotest communities with prevention and safety practices that help them to make changes in their behavioral pattern. This minimizes the risk of acquiring the infection and protects them and their families.

The workplace program delivers education via face-to-face peer education sessions that create indigenous in-house resources by building the capacity of the core employees as Master Trainers for the sustainability of the program. We practice "Zero Stigma and Zero Discrimination" at our workplace.

Our focus

- HIV/AIDS education and awareness programs
- Empowerment of vulnerable communities such as youths, migrant workers and truck drivers.
- Master Trainers program
- Training of peer educators
- Behavior change activities
- Involvement of people living with HIV/AIDS in training programs
- Linking testing, care & support services with government facilities
- Fostering public private partnership through Community Prevention Programs particularly in zones impacted by the epidemic through preventive and participative approach

Training Data for 2011-12

- 54,032 officers and workers covered
- 453 Change Agents (Master Trainers/Peer Educators)
- 151,574 man-hours of EPI programs

Audience Segment Approach

HCC has formulated an HIV policy which focuses on combating discrimination, preserving confidentiality and implements a knowledge-based program based on the “Segmented Audience Approach”. 453 change agents were created at levels of policy makers, policy implementers and end users to build capacities at grass root levels. A process was followed whereby these change agents developed modules for 54000 people at the workplace.

Change Agents: Employee engagement

We believe that the core of the program is a change in attitude. We initiated a process of training the trainers to support peer educators and monitor mechanisms to ensure zero stigma on every construction site. The training of these master trainers is conducted in collaboration with International Labour Organisation (ILO). The training also includes interactions with people living with HIV/AIDS. Master trainers then train peer educators at their respective sites based on set peer selection criteria. Peer educators get in touch with the workers and counsel those who at risk. The evidence shows an increase in the number of walk-in counseling interactions and an increase in condom demand and other referral services to government hospitals.

Sustainability through Integrated Approach: Integration in Tool Box Talk and Induction Training Program

We have developed in-house mechanisms to sustain our efforts through integrating deliverables in a Tool Box and Induction process. Over and above the aforementioned interactions, master trainers and peer educators give a tool box talk thrice a week. This gives a platform for appreciating the efforts of educators and also gives an insight into the risk of acquiring the HIV infection. After the talk interested workers get in touch with a peer educator for further counseling or referrals. The well-designed induction capsule is presented by master trainers before an employee gets into the

workplace. Primary health services are provided at each site for workers and the community. Doctors and male nurses are also peer educators and counsel the community.

Community Reach: Peer Educators Training to Panchayat Members and Youth Volunteers

HCC makes an effort to support and involve the local community in CSR initiatives. Nine elected members of two villages in Himachal Pradesh were trained to extend the awareness and education to the rest of the community. A sensitization session was carried out for elected female Panchayat Members of Pangi village. We also included the local members during the training of peer educators.

True Life Stories

Engagement of People Living With LIV/AIDS in the Work Place Program of the Company	Income Generation for HIV affected women and SOS Children at HCC's Vizag Cavern Project, Andhra Pradesh	Effective and Sustainable approach by Master Trainer within fence and beyond fence.
Mumbai based Leena (name changed) is a widow living with HIV. Her husband died of AIDS. She has 3 children one of whom is HIV positive. Being deprived of a regular income to support her children she put them in a palliative care centre. She then began working with a NGO caring for the HIV/AIDS affected on a meager salary to pay for her medical expenses. Through her work she also received training from HCC and is today empanelled as one of the Master Trainers with HCC. It is possible for Leena now to take care of her children at home and pay for her AIDS medication and live a healthy life.	Twenty community women from a small village of Andhra Pradesh living with HIV/AIDS were supported by HCC by providing them with sewing machines, grinders and push carts to start making their livelihood. This form of support will be of great help to the women several of whom are widows with their only earning member having succumbed to the disease, and will also help take care of increased expenditure on their own treatment and that of infected family members. One of the beneficiaries of this facility Kumkum (name changed) shared that "This will definitely help me to take care of my treatment and medicine and I will also be able to look after my children and provide them with an education." Further, HCC's project site sponsored ten SOS Children from Bheenumipatnam, Bhimli village, Vizag, who are affected by HIV/AIDS. These children will be cared for and nurtured in a family based care system. HCC's support was provided in partnership with the NGO FXB-India, which works on providing better lives for children affected by AIDS and improving the lives of their poverty stricken families and the environment in which they live, by providing them with access to medical care and treatment for HIV/AIDS.	Rohit Rajan, Health and Safety Officer from Assam Road Project and one of the trained Master Trainers says," My perspective has totally changed. Now, I include a session on HIV awareness in my training on health and safety in the company". After learning the prevention program of the company I have been able to reach the vulnerable population in the work place as well as the vulnerable pockets of the community at grass root level. Through one to one counseling I am able to persuade my co workers in high risk categories to change their behavior and attitude to the disease. Thanks to the Company's policy and program I am able to reach out to and educate members of the community who are completely unaware of the consequences of HIV. While implementing the program Rohit and his team of 20 work place level and 25 grass root community level Peer Educators (trained by Rohit) initiated the following program on the site: Partnership "Safe Highway" Assam Road Project (AS-23) covering 15 km of highways between Maibang to Nrimbanglo (section of NH-54) in Assam, implemented in coordination with NACO (National AIDS Control Organisation). Free Health Clinics and Counselling Centres for truck-drivers and their helpers at the site. Free Male Clinic for our workers, providing free health check-up, counselling, condoms and educational material on HIV/AIDS. Installation and maintenance of

		condom box at 5 locations to ease availability of the product to the local community. Working closely with The Maibang Rural Hospital which is committed to treat HIV/AIDS patients without discrimination. The hospital is also committed to treat patients who are denied treatment elsewhere. Awareness activities for the community though Film. HIV/AIDS films regularly. Nukkad Nataks are organized to spread the message on HIV/AIDS prevention to the population

New and Existing Alliances

Mumbai District AIDS Control Society (MDACS):

HCC collaborated with Mumbai District AIDS Control Society (MDACS) for the training of the Peer educators in HCC's projects located in Mumbai. The Training was conducted by the MDACS-IEC team. A street play was organized for the workers of the dry dock project. HCC continued to work with its other program partners viz. International Labour Organisation (ILO), Avert Society (project of USAID, Government of Maharashtra and National Control AIDS Society) and Times Foundation.

Public Private Partnership (PPP)

Project "Sahyog"

HCC jointly initiated project Sahyog in collaboration with Times Foundation (TF) and in association with Municipal Corporation of Greater Mumbai (MCGM), Public Health Department. Project "Sahyog" was launched by Additional Municipal Commissioner Dr. Manisha Mhaiskar, MCGM on 26th April 2011 in Mumbai.

The program was officially launched by Ms. Manisha Mhaiskar, Additional Municipal Commissioner MCGM. In her address she appreciated the efforts of HCC and TF in strengthening MCGM's primary health services for the neediest people.

(L to R: Ms. Rema Mohan – Head Times Foundation, Ms. Hemangi Patil, Manager CSR HCC, Ms. Manisha Mhaiskar, Additional Municipal Commissioner MCGM, Ms. Tejashree Wadivkar, Consultant TF, Mr. Shekhar Patil – Sr. Vice President HCC, Dr. Ambe - Executive Health Officer (EHO) Public Heath MCGM, Dr. Bandivdekar – Joint Executive Health Officer Public Health MCGM, Dr. Armida Fernandes, Retd. Dean Sion Hospital & Founder NGO SNEHA (Society for Nutrition, Education & Health Action).

The year-long Project aims to complement the Government's efforts to increase the demand among the urban slums for accessing affordable health care services provided by the Public Health Department of the Municipal Corporation of Greater Mumbai (MCGM).

The aim of the project was to complement the Government's efforts to improve access of affordable health care services provided by the BMC health department. The program emphasizes on providing MCGM's frontline health workers i.e. Auxiliary Nurse Midwives, Community Health Volunteers and the Multi Purpose Workers Community Health Volunteers with outreach skills to increase community contacts for relevant records to effectively carry across messages on MCH, gynecological health and

prevention of HIV/AIDS. The program design ensures follow-up by involving medical officers of the respective health posts.

“There are physical, social as well as communication barriers between civic health workers and the slum population. We are working towards treating them with dignity,” said Dr Arun Bamane, BMC’s joint executive health officer during the release of the report in the dissemination meeting organized on 28th March 2012.

A series of 10 workshops on MCH and PPTCT were conducted for the Auxiliary Midwife Nurse (ANM), Multi Purpose Workers (MPW) and the Community Health Volunteers (CHV) of the L & M wards of the MCGM. 500 frontline workers were trained and communication material reach 5 lakh people in two slum pockets of Mumbai. At the end of the program:

- There is a 25% increase in the regularity and completion of children’s immunization.
- The ANC cases voluntarily access allied services of PPTCT and seek information on breast feeding and services available for pediatric HIV/AIDS.
- Home visits by the CHV for follow-up have decreased by 30% as the community women regularly follow up.
- The number of group activities which were confined only to celebrate health days has increased to 1 group meeting every 15 days conducted by each CHV. A group meeting has minimum of 20 women participating.
- The referral to the health care unit increased to 75%.

World AIDS Day

To show our solidarity and commitment to work towards the prevention of the epidemic we commemorate the World AIDS Day on 1st December every year at all Project sites and at head office by arranging various events and activities.
This year’s theme was *Getting to Zero: “Zero New Infection. Zero discrimination. Zero AIDS-related deaths.”* Activities highlighted innovation, vision and perseverance in the face of AIDS. Events like

street plays, film shows, poster competition, cartoon competition, rally, blood donation camps, lamp-lighting, signing wall of pledge, human chain and distribution of literature were planned at all sites. Red ribbons were pinned, posters were displayed and the HIV Policy was disseminated.

World AIDS Day Event at Corporate Office

The event was inaugurated by Dr. Alka Gogate, President, Family Planning Association of India, Mumbai Branch and former Project Director Mumbai District AIDS Control Society and Mr. Karambelkar, President HCC E&C group by lighting the World AIDS Day Red Ribbon Tree. In her address, Dr. Gogate appreciated the efforts taken by HCC towards various HIV/AIDS prevention initiatives and highlighted the importance of achieving the target of zero infection. In her address, Ms. Meena Maraskole, Project coordinator, HIV Positive Network Speaker emphasized on the care and support program the children and women and appealed to the private sector to contribute. This was followed by the screening of a film “Blood Brother” directed and produced by Vishal Bharadwaj. All employees wore the red ribbon to show their care, concern, hope and support towards people living with HIV/AIDS.

In his keynote address, the CMD reiterated HCC’s commitment to work towards combating the disease. He stated the reasons for adopting the HIV/AIDS awareness and education initiative as a CSR mandate. He also spoke of the importance of working towards stopping further spread of the disease as it not only affects the health of the workers but also their productivity. He also stated the importance of measuring the impact of the program over a decade

Disaster Resource Network

As the number and impact of natural disasters is increasing due to climate change, population increase and rapid urbanization, there has been a growing recognition of the scale and complexity of humanitarian response and considerable interest in and commitment to greater involvement of the private sector in disaster prevention, response and reconstruction. Therefore, HCC proactively considers disaster risk as a part of sustainable business development agenda.

HCC's vision is to build on its core strengths viz. engineering, project management capabilities and availability of relevant resources and is well equipped to handle emergencies.

HCC is the founding member of 'Disaster Resource Network', an initiative led by the World Economic Forum, Geneva. This initiative results from the 'Disaster Resource Partnership', a global private sector partnership. This has three country level networks, one in India chaired by HCC and two others in Mexico and Indonesia. Mr. Ajit Gulabchand, CMD, HCC, is on the Steering board of DRP and the Chairman of DRN India.

Established in 2002, DRN is a consortium of Engineering and Construction (E&C) companies operating in India that mobilizes core skills and assets within these companies towards timely and effective disaster response after natural calamities. Equipped with trained engineers, project management skills and heavy equipment, E&C companies are well suited to respond to evacuation and reconstruction needs.

DRN India focuses on capacity building, training to respond to emergency situations and provision of support to disaster relief operations.

Over the past ten years, HCC has provided timely assistance to a number of rescue and relief operations through this network. These include the Tsunami (2004), J&K Earthquakes (2005), Mumbai Floods (2005), Bangladesh Cyclone (2007), Leh Flash Floods (2010) and Sikkim Earthquake (2011).

Major initiatives undertaken in 2011-12

1. **Capacity Building:**

HCC trained personnel within the company, in other corporates and in the community, to respond to emergencies.

The First Responder Training is a sensitization program with the objective of imparting first aid training. It is an ongoing program, wherein doctors are hired to train employees and the surrounding community at various sites. However, this year, in order to make the program more sustainable and further strengthen in-house capacity, first responder training at various sites were conducted by Shikha Shabdita, HCC DRN India Manager, and the site medical teams instead of engaging consultants. A special First Responder Training program was also conducted for the students of Walchand College of Engineering, Sangli.

First Responder Training in FY 2011-12	Month	Number of Trainees
PHEP, Bhutan	May'11	246
DHEP, Bhutan	May'11	338
Mumbai Metro Project, Maharashtra	July'11	150
Walchand College of Engineer, Maharashtra	Sep'11	450
Aditya Aluminium Project, Orissa	Dec'11	300

A total of 11900 people, including HCC employees and academicians were covered in the trainings, spending total of 47596 man-hours.

Engineering in Emergencies (EE) Training: Engineering in Emergencies (EE) Training is an advance level residential training given to a subset of HCC engineers to qualify them for emergency relief and rehabilitation work with a focus on the Environmental/Public Health Triangle of Water, Sanitation and Hygiene promotion, Shelter and Settlement.

Internship for Emergency Response Plan (ERP): HCC facilitated a disaster management internship for a student from TISS, Mumbai. An emergency response plan for Kihim in Raigad District, Maharashtra was developed under the guidance of Ms.Shikha Shabdita, Manager, DRN India. The plan focuses on identification of probable emergencies, mapping of available resources and creation of a task force to work during emergencies. The plan is based on the application of "GIS and Remote Sensing" in disaster response planning and community-based disaster risk management. The ERP will be carried out with the support of District Disaster Management Authority and Kihim Gram Panchayat.

2. Relief Operations:

HCC follows two processes for responding to disasters.

- In case of disasters in the vicinity of project sites, the company immediately initiates relief work under the leadership of the EE trained engineers, e.g. Sikkim Earthquake 2011, Leh Flash Floods 2010, Orissa Floods 2008, J&K Earthquake 2005 etc.
- In case of disasters elsewhere in India or in other countries, trained engineers working on the mandate of Public Health Engineering are deployed to the affected areas to support humanitarian agencies, e.g. Bihar Floods 2008, Bangladesh Cyclone 2007.

Case Study: Sikkim Earthquake 2011- Relief and Rehabilitation assistance

On September 18, 2011, an earthquake measuring 6.8 on the Richter scale occurred with its epicenter on the Sikkim – Nepal border. The earthquake led to the destruction of several stretches of land, water pipelines, phone towers, electricity posts and over 1 lakh houses. There were also many casualties.

HCC is executing two projects in Sikkim on the Teesta Hydroelectric Project, namely Teesta VI H.E.P -LOT IV (Tarkhola) and Teesta VI – H.E.P- LOT II (Mamring & Kalej Khola). No damage was reported at both project sites, and all HCC personnel were safe. The areas worst affected by the earthquake were in North Sikkim, located about 70 – 100 km from the HCC project site.

HCC's DRN team was ready to support the relief work, with a team of 8 officers and 5 workers led by Engineering in Emergencies trained engineer S.B. Ravikanth Reddy and Group Project Manager Samir Kumar Modak.

On the advice of district authorities, the HCC team visited Singtam town, 10 km from the project site. They conducted a preliminary investigation of all the buildings. Later, the HCC team supplied around 10,000 litres of clean drinking water through a tanker to residents in the community camps. On September 20, 2011, on BRO directions, the HCC team deployed a loader for removing the landslide debris lying on NH-31A which regarded as Sikkim's lifeline) and thus cleared the road for vehicle movement. In response to another request from the District authorities, HCC also deployed a JCB Backhoe loader to clear the landslide debris blocking one of the access routes from Mamring to Namchi, which is part of the state highway in South Sikkim, and the road was made available for motorable access. HCC team's efforts were well appreciated by the local authorities.

Case Study: West Bengal Train Accident 2011-Emergency Relief

On July 31, 2011, around 6.58 pm, a head-on collision occurred between two passenger trains near Malda, 300 km northeast of Kolkata. Eleven bogies were derailed, several coaches were left hanging, the tracks had been bent and broken at unnatural angles, and the injured passengers were in need of medical assistance.

Around 8.00 pm, the HCC NH-34 Project Team, which was based in the vicinity, received a message about this accident. Rescue and relief teams needed to rush to the accident site in the dark through the muddy terrain.

An emergency response team led by EE trained engineers was deployed. The team comprised of over 40 members and included the company doctor, first aid assistants, khalasis, store assistant and electricians. Emergency lights, area lights, D.G Sets, gas cutting sets, oxygen cylinders, fire extinguishers, first aid boxes, stretchers and four ambulances were also provided.

After an initial briefing and onsite assessment, the HCC rescue team set up emergency lights to ensure visibility at the site. The medical team provided first-aid assistance to the injured passengers and arranged for their safe transfer to the hospital by ambulances. The Railway authorities were also supported on the search operation within the bogies. There was also an urgent need to restore the tracks so that heavy machinery could be brought in for further rehabilitation. Extensive help was provided towards cutting and welding activities to help in the replacement of the tracks. The HCC rescue team worked throughout the night to repair and re-lay the damaged rail tracks. The effort put in by the NH34 Road Project Team was deeply appreciated by the district and railway authorities.

Case Study: Jammu and Kashmir Snow Avalanche 2012- Rescue Operation

A massive avalanche struck Gurez near the Line of Control in Bandipora district of Kashmir valley on 19th March'12. One of HCC's project sites, Kishanganga HEP was near the affected area. The disaster happened between a crushing plant site and residential camp at Badwan village. Many people were trapped under heaps of snow. A rescue team including officers, workers and doctors, reached the incident spot with an ambulance, loaders and excavators to support the police and army. The rescue operation continued for two days and the team was able to save many lives.

3. New Developments in 2011-12

HCC supports Indonesia National Network

HCC was invited to support Indonesia in setting up DRP network. HCC participated in the Roundtable on the DRP Indonesia National Network at Jakarta in May, 2011. Mr. Ajit Gulabchand, CMD, participated in the launch of the network by the President of Indonesia on the occasion of the WEF Summit on East Asia Disaster Resource Partnership an Jakarta in June'11.

Disaster Resource Network (DRN) India Partnership Session at World Economic Forum's India Economic Summit 2011

WEF's India Economic Summit was held at Mumbai from November 12-14, 2011. During the Summit, Ajit Gulabchand participated in a series of meetings and panel discussions.

On November 14, 2011, a private session on the DRN India Partnership was held in Mumbai. The meeting, chaired by Mr. Gulabchand, was attended by the CEOs of leading E&C companies like CH2M Hill, L&T, Essar, and Hirco. Other dignitaries who graced the occasion included government officials like the Additional Chief Secretary (Relief and Rehabilitation) and Humanitarian Sector Practitioners such as IRFC, OXFAM and the Indian Red Cross. During this session, Mr. Gulabchand explained the functioning of DRN India and he also presented the successful relief interventions carried out by HCC as part of DRN. This meeting was followed by a full day workshop on Nov 15, 2011 at HCC which was organized for top operational level representatives from all three sectors to strengthen the network further.

DRN India Workshop at HCC

Following the private session a full day workshop on DRN was organized on Nov 15, 2011 at HCC for the operational level representatives from all three sectors to strengthen the network further. There were 26 participants in the workshop. The workshop was inaugurated by Niyati Sareen, Head CSR and convened by the Petra Demarin, WEF DRP Manager, Geneva and Shikha Shabdita. The workshop was aimed at increased engagement from private sector E&C companies to actively participate in the network and formalize partnerships with humanitarian organizations and capitalizing on the partnership established through the DRP at the global level.

Expansion of Disaster Resource Network India

As an outcome of the DRN workshop held at head office last year, several more companies including L&T, Essar, Shapoorji & Pallonji, Afcons, Halcrow, CH2MHILL, Arup, and Hirco have come forward and joined hands with us to take the network forward.

DRN India working Group Meeting hosted at HCC Head Office

A DRN working group meeting was organized at HCC head office on 16th Feb'2012. The meeting was attended by representatives from L&T, Shapoorji & Pallonji, Arup, Essar, Hirco and HCC. This was the first DRN India working group meeting. The meeting was convened by Ms. Shikha Shabdita of HCC.

HCC on Advisory Board of United Nation's International Strategy for Disaster Reduction (UNISDR)

HCC has joined United Nation's International Strategy for Disaster Reduction (UNISDR)'s new division, Disaster Risk Reduction Private Sector Partnership (DRR-PSP) to engage the private sector in future Disaster Risk Reduction (DRR) initiatives. Mr. Ajit Gulabchand has joined as a member of Private Sector Advisory Board. The Private Sector Advisory Group consists of 15 members from various parts of the world, mostly from the private sector.

4. Our Partners

Community Development Initiatives

HCC has a long tradition of contributing to and investing in communities in and around its project sites with an objective “To provide core services to the community to have quality life”. Under the broad umbrella of community development, several initiatives have made a lasting impact on the economic, environmental and social conditions of local people. For sustainable and effective community programs we actively involve community and take up the programs which are affecting their lives. It is a process based on sharing power, skills, knowledge and experience and developing the same among the community, thus enabling them to fully participate in truly democratic process. \

Our approach is demand driven rather than supply driven (Public Private Partnership) and based on need of the community and varies site to site. Along with the four CSR mandates viz. Education, Water, Disaster Management and HIV/AIDS awareness our various project sites across the nation implements the community development initiatives at their levels.
Our project sites focuses on -

- Strengthening the educational facilities by supporting the local schools in terms of computers, equipments, building the infrastructure, facilitating coaching;
- Creating sustainable improvements in the livelihoods base by provision of better infrastructure, greening, hygiene & sanitation, electricity & irrigation;
- And strengthening the economic well being of the rural and most remote part of India by employment generation and self employment

Community Initiatives Highlights from our Project Sites

1) CSR Initiatives at Kishanganga HEP (Jammu and Kashmir):

Community development activities undertaken around project area are mentioned hereunder:

- Donation of a cheque to District Administration for helping shopkeepers, affected due to fire disaster at Bandipora market in the year 2011. Approximate expense: Rs. 4.00 Lacs.
- Donation of cheque to District Administration Bandipora for Rs. 3.00 Lacs in favor of Red Cross society
- Donation to the local patients as medical aid. Approximate expense: Rs. 50,000
- Drinking water supply scheme for village Karalpora by lifting water from water cool by pumping in a tank and distribution to whole village through pipe line arrangement. Approximate Expense: Rs. 15 Lacs
- Drinking waters supply scheme for village Badibeth through pipe line from natural water source. Approximate Expense: Rs. 2.5 Lacs. This was done because the water source was disturbed due to our project activities.
- Renovation of District Sports Stadium in Bandipora Approximate Expense: Rs.55 Lacs at present
- Bandipora Gurez Main Road was kept open till January 2010 & 2011. And helped in reopening of the road in May 2010 & 2011 by removing snow. Approximate Expense: Rs. 20.00 Lacs

- Internal Road development for Phajalpora and Pethkoot village which is also a alternative Road for our project site. Approximate Expense: Rs. 7.00 Lacs

2) Community Initiatives at Aditya Aluminium Project (Orissa):

During the inception of the project, the AAP team identified the following CSR activities which would ameliorate the local community: construction of a new road at Kishan Nagar, drinking water supply to Lapanga village, and water sprinkling at site. As the villagers of Kishan Nagar weren't connected well with the state highway, the project team took the onus of developing village connectivity. The work accomplished so far include a new WBM (Water Bound Macadam) road that connects Kishan Nagar with the state highway on a two kilometer stretch.

3) Reformation through employment at Kashang HEP (Himachal Pradesh)

About 105 local men from the Pangi village have been directly or indirectly employed at the construction site. Specifically, eight men who were previously convicted for petty crimes on unrelated issues have been directly employed, leading to a reform in their life styles, improved work ethic, social and financial well being.

Gulabchand Foundation

The Gulabchand Foundation primarily focuses on carrying out various health care and educational initiatives for the advancement of underprivileged rural and urban section of the society. It is a non-profit making company duly registered in the year 2003 under Section 25 of the Companies Act, 1956, under the leadership of Mr Ajit Gulabchand, Chairman & Managing Director of HCC. In the past year, the Foundation has supported, amongst other causes, Cochlear Implant surgery for children. This is a surgical procedure to implant a digital device within the ear to treat profound deafness; this surgery being most effective in children. This Foundation provides financial support to persons for the surgery based on several factors like the recommendation of doctor, age of the patient, financial status of the parents, parent's commitment etc established through home visit, interview with parents, etc. In 2011-12, Rs. 10,24,000 was donated for two such surgeries on three year old girls.

The Foundation has also donated Rs. 24,870,000/- towards educational activities like providing support to students below poverty line by donating IXth and Xth standard text books to three schools in Pune and for providing scholarship to needy bright students. In its aim to strengthen support to educational institutions, the foundation has built the infrastructure at Christel school in Lavasa; has developed the international curriculum for engineering students at Walchand College of Engineering Sangli which would enable students to be creative and aspire for an innovative thinking in the field of construction and thereby set a new trend while serving the industry at large. Other than health and educational support, it has also extended its help in saving animals by sponsoring an education and awareness event.

Innovation, Technology and Construction Research

Message on Innovation from President and Whole Time Director

Innovation has been the driving force behind mankind's economic progress right from ancient times when man developed the first wheel to the modern era of Internet search engines and touch-screen mobile phones. Innovation drives growth, fosters new businesses, creates wealth and changes the lives of millions for the better. It is at the heart of productivity, invigorating the workforce and allowing businesses to delight their increasingly sophisticated and demanding customers.

At HCC, it is all about being "Innovative beyond customer imagination". Through our landmark projects, we have already captured the customer's imagination. The next step is to move beyond customer expectations and achieve industry leadership through innovation. Our first step forward towards that goal is Innovention – HCC's very own web portal for sharing new ideas.

HCC employees are actively participating in this endeavor of fostering a culture of creative thought process at HCC, with a commitment to making HCC truly world class.

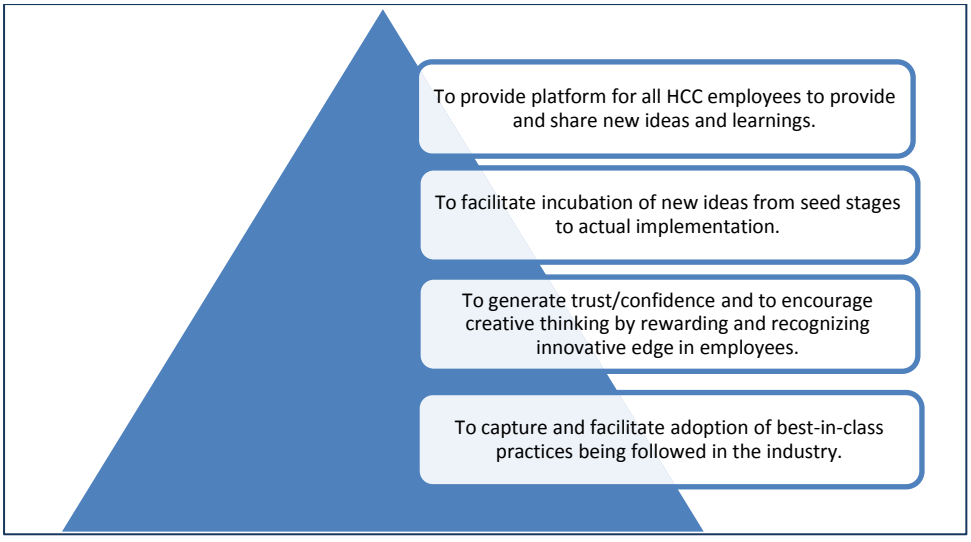
Arun Karambelkar

President and Whole Time Director, HCC

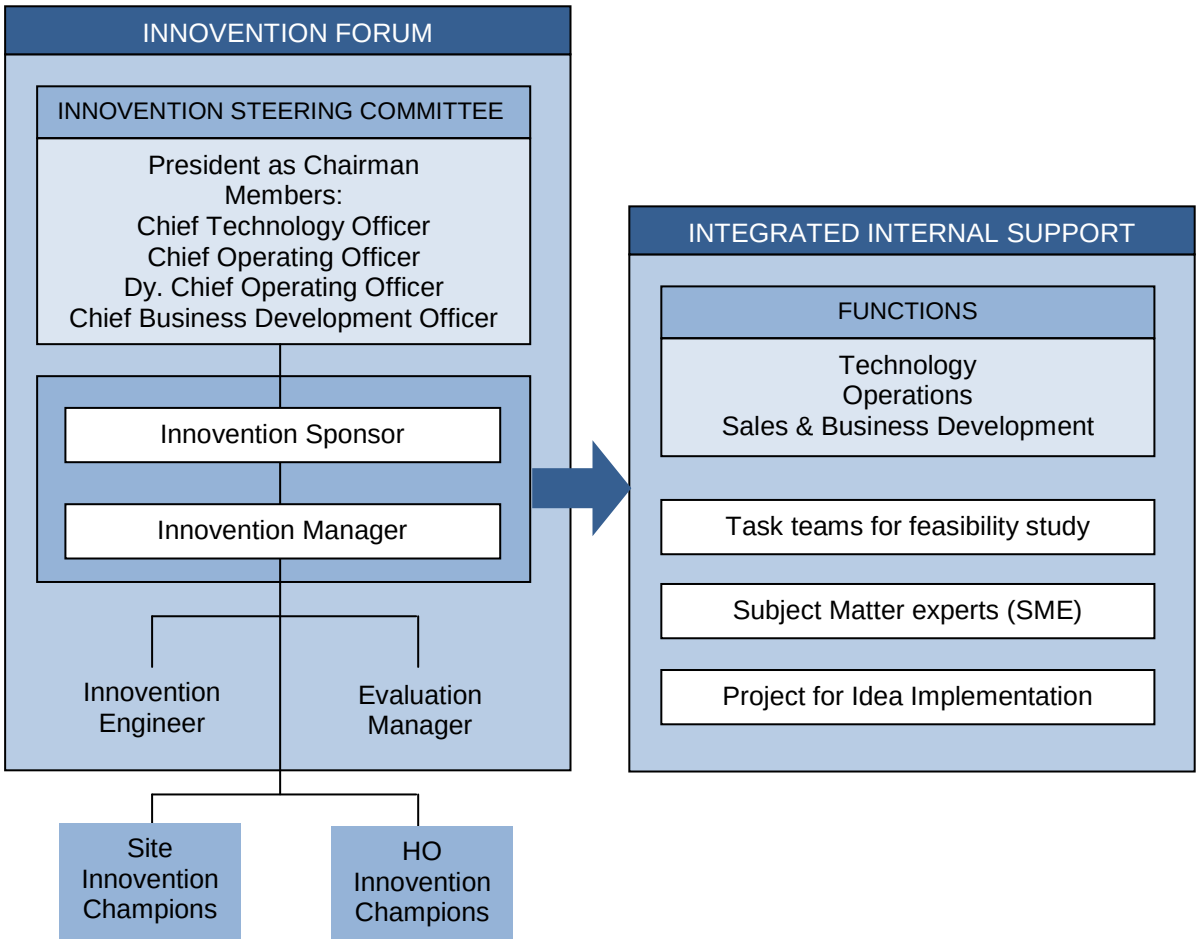
Innovention Framework

As a part of HCC's strategic plans for business growth and organizational development, an initiative called Innovention Framework was launched. This framework interacts regularly with Project managers during the quarterly meets to promote Innovention initiatives at the project sites and encourages them to address their problems to the Forum.

The objectives of the Innovation Framework are:



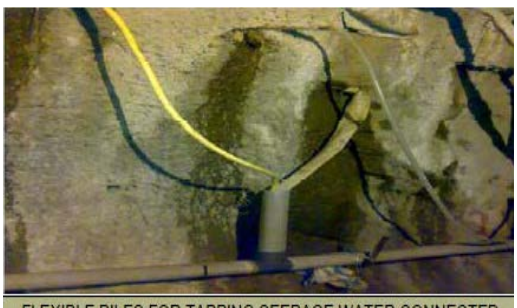
The structure of the innovation forum is shown below:



Promoting Innovation at Project Sites:

The Innovention Forum interacts with project managers regularly during the quarterly meets and by conducting 'Project Meets' at sites to promote Innovention initiatives at the project sites and encourages them to address their problems to the Forum. A special communication "Innovation at Projects" is launched with the aim of showcasing innovations that are actually implemented at the sites. Through this communication, Innovation forum intends to appreciate the innovative spirits of project teams, give recognition to the implementers, and share those innovations with all HCC E&C, so that other projects can get inspirations to implement innovations at their sites. Some of the significant innovations at projects published so far are as below:

1. Innovative idea for dealing with seepage in tunnels:



FLEXIBLE PILES FOR TAPPING SEEPAGE WATER CONNECTED TO HEADER PVC PIPE

At our Dagachhu site, there was considerable seepage in the tunnel. The seepage of water was interrupting work within the tunnel. The seepage water was accumulating within tunnel leading to an unhealthy work environment. Also, though the seepage water was dirt free, it was getting contaminated due to mixing with muck. Therefore, to stop the seepage of water, flexible pipes

were fitted at the origin of the seepage. These pipes were then connected to a common PVC pipe running along the tunnel. The pipe carried the seepage water out of the tunnel where it was then collected in tanks, and was also released to the underground water source.

This small innovation led to the following benefits:

1) A clean and hygienic working condition inside the tunnel.
2) Recharging of underground water.
3) No need for grouting and therefore no big investment.

2. Developing a Garden at Punatsangchuu H.E.P:

At our PHEP site, the project team has created an inspiring example for emulation. V. Prasad, the plant manager is the man behind this innovation. He has planted a garden at the crusher plant site, a place to sit and relax. There are different kinds of flowers, fruits, and medicinal plants in this garden. This is a place that visitors like to go to and spend time. It is also a popular destination among the project staff. The PHEP team has demonstrated how the workplace can be converted into a pleasurable and environment-friendly place. Combining commercial and environmental objectives is often a juggling act, but the PHEP team has demonstrated how ‘green’ and ‘growth’ go hand-in-hand.

3. Development of Online HSE legal and other requirements system launched:

In order to ensure compliance with the various requirements of OHSAS 18001 and ISO 14002 standards for identification, compliance, reporting, monitoring, and updating of the same, were maintaining records in various formats. The corporate office HSE team, together with the Highbar team has developed a new online system which has the following benefits:

- All formats are inter-linked with evidence of license. So, there are no mismatches.
- A summary of licenses and tracking of their validity can be accessed immediately.

4. Innovative Design of Snow Remover

Snow clearance is a routine activity carried out at all the Himalayan projects. HCC has designed and executed an innovative, low-cost mechanism for snow clearance from the roads. A dumper was fitted with fabricated snow-clearing device which has advantages as follows:

- It can be used on any type of road surface.
- Its fabrication and operational cost is very low.
- The snow-clearing operation is easy and fast.

5. DG Sets Energy Management System

DG sets are critical to operations of any facility as they provide backup power in event of failure of Electricity Board power. However, as DG sets operate on expensive fuel, the cost of power generated out of DG set is more than double the cost of EB power. Hence DG set efficiency has a significant impact on monthly energy bills even if they are operating for a very small period of time. Even a 5% reduction in DG efficiency can have sizeable impact on monthly energy bills.

With collaboratively developed with ConnectM, DG Energy Management module, user can keep a check on practical energy efficiency of DG sets and take immediate action whenever the efficiency is outside acceptable limits. This helps minimize monetary impact of inefficiency. Through the above system, the engineer get SMS (immediately) on mobile, on the receipt of SMS necessary action is taken immediately.

6. Fabrication of Lighting Tower at site

Generally, a lighting tower with DG of 7.5 KVA capacity is used on the site. This type of lighting tower is readily available in the market but expensive. In order to cut down costs, a team was formed to manufacture lighting towers on site as per the capacity required. The benefits of manufacturing of the lighting tower are:

- The cost involved in manufacturing the DG set of 2.2 KVA capacity was drastically reduced as it was fabricated at site (Rs. 74, 000/- for 2.2 KVA as compared to Rs.4, 75, 000/- for 7.5KVA)
- The DG set was manufactured as per the requirement of the site. Thus, there was no wastage of valuable energy.
- The operating expenses involved were reduced from Rs.80/hr to Rs.40/hr.
- The DG set can be easily moved to a desired location without the need of any vehicle.

7. Proposal for use of Soil Erosion Control Blanket for slope protection

Erosion Control Blanket (ECB) is recommended by IRC: SP: 21-2009 for slope protection of road embankments. We propose to use ECB manufactured from natural coir (coconut fiber) which is bio-degradable in nature. The coir protects soil and seed from erosion by providing a cover against the erosive forces of overland storm water flow and the effect of rainfall. Coir ECB acts as a non-deteriorating mulch that promotes seed germination beneath the mat. Vegetation easily grows through it because of its high porosity.

8. Innovative ideas for project camp establishment

Innovention Forum has taken up a task for studying, analyzing and suggesting innovative ideas for project camp establishments. The task team shall recommend the procedure for establishment of cost-effective, comfortable, eco-friendly and improved standards of facilities. The various areas that will be covered by the task team are Staff Quarters, Labour camps, health facilities, water & sanitation, hygine, safety, water conservation, plantation, recreation, climatic conditions, educational facilities, etc.

Collaborations

The Innovation Forum has initiated process of collaborations with IITs, suppliers, and vendors with the aim of knowledge sharing and joint problem solving. HCC has signed an industrial liaison program (ILP) with Massachusetts Institute of Technology (MIT), USA for a collaborative relationship that can meet HCC's objectives. HCC E&C is in the process of drafting an action plan covering overall, short-term, intermediate-term and long-term objectives.

Technology

At HCC our technology group aims at finding sustainable technical solutions with an objective of making the complete gamut of construction activities sustainable. The group embarks on such a task by

- Setting sustainability as a value driver while proposing engineering solutions.
- Working with designers, engineers, government agencies and clients in evolving sustainable business prepositions.
- Reporting on sustainability performance and achievements within its workforce.
- Ensuring integrated delivery endorsed and supported by management and
- Assuring that the clients are benefited from such efforts.
- Following are some of the highlights from HCC's Technology Group:

1. Optimization of Concrete Mix Design

At HCC, we routinely evaluate and benchmark the carbon footprints of our materials that are used in different construction applications and concrete mixtures form a core item amongst these materials. Ever depleting natural resources that go into concrete making need to be conservatively and cautiously used. With increasing array of complex materials at disposal in modern concrete making, while keeping a carefully selected balance with the concrete placement conditions and economics of concrete making, building a judicious choice has become increasingly challenging.

Such exercises are routinely performed through

- Periodic review and evaluation of available material sources
- Statistical evaluation and design concept changes made at various stages
- Optimizing concrete mix proportions for reduce carbon footprint and
- Optimizing concrete placement methods with the aim of optimizing

2. Trainings imparted to workforce, clients

Investments in training for sustainable use of materials, equipments and facilities form an essential part of our efforts to make construction activities sustainable. Regular and specialized trainings are routinely devised with objectives of bringing not only HCC's workforce but also to the clients to a level of up-to-date and state-of-the-art knowledge. This forms a part of HCC's internal education and continued learning efforts.

3. Updates on Technology Collaborations

To derive and materialize benefits from multiple sources, HCC regularly enters into National and International strategic collaborations with material suppliers, equipment manufacturers, academia and other industry partners. Through such collaborative efforts, the state-of-the-art-research is rapidly brought into practice. Constant search of new ideas by focused R&D effort helps HCC embrace latest technology, while brining the same to India, thus serving the Nation. Initiatives in this regard include efforts in reducing the material consumption by alternative designs, improving and/or substituting various materials with better or high performance materials, designing and changing the design concepts, conscious changes to construction methodology and improved planning.

Intellectual Property Rights

We continued to pursue our initiative on creation and protection of Intellectual Property (IP) during 2011-12.

Patents

HCC is awaiting registration on the following invention applications submitted to the patenting authority under the Patents Act, 1970 in India. These inventions are under examination by the Patent Office:

- Pipe joint leak-testing device.
- A system for automatic accounting of fluids in a vessel, container or tank.
- New capping system for testing concrete and rock cores.
- System and method for online monitoring of fuel consumption in automobiles.
- System and method for detecting trespassing below a parked vehicle.
- Geotextile Sand Container Mattresses (GSCM) lining for temporary river bed diversion channels.

Trade Marks

During the year under review, the Company filed applications for registration of trade -marks/obtained registration as per details below:

- In June 2011, in respect of wholly owned subsidiary, Highbar Technologies Limited, obtained registration for the trade mark "Highbar" from the Registrar of Trade Marks, Mumbai.
- In July 2011, filed a multi class trade mark application for registration of mark 'HCC Innovention' before the Trade Marks Office, Mumbai.

- In January 2012, in respect of wholly owned subsidiary, Highbar Technologies Limited, filed three trade mark applications including a multiclass application for registration of marks 'Highbar Rapidstart' and 'Highbar Cloudconnect' before the Trade Marks Office, Mumbai.

Copyrights

In October 2011, in respect of wholly owned subsidiary, Highbar Technologies Limited filed copyright registration applications for protection of 'Highbar' labels (artistic work) at the Copyright Office, New Delhi.

Technical Papers on Construction Research

Influences of mixture composition on properties and freeze–thaw resistance of RCC

The paper, co-authored by HCC's Deputy General Manager Dr. Chetan Hazaree and published in the journal Construction and Building Materials, reports a series of lab investigations carried out on roller compacted concrete (RCC) mixtures containing a wide range of cement contents (100 and 450 kg/m3). The key objectives of the study were to appreciate the effects of variations in the cement content and air entrainment on basic physical, mechanical properties and freeze–thaw (F–T) resistances of RCC mixtures. The Vebe consistency, moisture–density relations, water absorption, permeable voids, compressive strength, and F–T resistances of comparable mixes were evaluated. Physical and mechanical properties indicated a significant deviation from the behavior shown by conventional concrete. Air entrainment was found to be affecting the strength and F/T durability of the mixes. Further analysis shows wide range applications of RCC in various pavement applications.

Material Advantage: Something Concrete

In a series of features showcasing experiences with building materials, construction industry magazine Construction World in August 2011 published a discussion with Dr. Chetan Hazaree, HCC's Deputy General Manager, on roller compacted concrete (RCC) as a sustainable alternative to pavement concrete. RCC is compacted using vibratory rollers instead of conventional compaction operations, and is generally applied in two areas of engineering construction – hydraulic and pavement structures. In the past 25 years it has been recognized as one of the most important developments in concrete dam technology. Its use in pavements is relatively young and evolving, and has been used in India in Mumbai-Pune Expressway and the National Highway Authority of India's (NHAI) Golden Quadrilateral Project. Apart from significant savings over conventional Portland Cement Concrete, RCC does not require any formwork, dowel joints, steel finishing, or joint cutting and has higher production rates and shorter traffic opening times. However its drawback includes relatively poor finishability and less comfortable riding quality. With India undergoing large-scale infrastructure construction, RCC offers itself as a durable and sustainable pavement option. With India undergoing large-scale infrastructure construction, RCC offers itself as a durable and sustainable pavement option. There is a pressing need for awareness and education about RCC and its uses.

Disclosures on Management Approach

Economic Indicators

HCC operates a portfolio of diverse but integrated businesses, each having different markets, requiring different skill sets and operating under varying risk return profiles. The entire gamut of activities is unified under the HCC value chain. Engineering and Construction, our core business, focuses on Transportation, Water Solutions, Hydro Power and Nuclear Power projects.

As part of our growth strategy, our business has been extended to offering complete Engineering, Procurement and Construction (EPC) services, a delivery model that the company is looking to strengthen further. We have tied up with international players to win strategic projects in the EPC space, including those in the emerging business lines.
We have robust controls in place at the Board of Directors and Management levels to monitor and effectively supervise our immediate and long-term financial reporting, risk management and business planning on an ongoing basis. The Board plays an active role in fulfilling its fiduciary obligations to shareholders by efficiently overseeing management functions to ensure their effectiveness in delivering shareholder value. The Management assumes overall responsibility for developing the Company's strategic goals and executing the functional operations of the business. This governance framework is made effective through an efficient system of timely disclosures and transparent business practices.

We have established a well-documented and robust risk management framework. Under this framework, risks are identified across all business processes of the company on a continuous basis. Once identified, each risk is mapped to the concerned department for further action. The framework consists of various specified procedures to manage our risks.

Given our commitment to nation-building through creation of responsible infrastructure, we see ourselves as enablers in leaving behind positive economic legacy impact. However given the contractual nature of HCC's business, our policies and practices are limited to the construction phase, beyond which the responsibility lies with our clients/customers.

It is our continuous endeavor to source our suppliers, contractors and workforce from the local communities surrounding our project sites thereby contributing to their economical well-being.

Environmental Indicators

One of HCC's overarching sustainability priorities is to design and build infrastructure in an environmentally responsible manner. Our Integrated Management System (IMS) Policy clearly conveys our commitment of improving our performance on various environmental aspects that go beyond regulatory compliance.

Our IMS system adheres to the requirements of ISO 14001: 2004 Environmental Management Systems, ISO 9001: 2008 Quality Management Systems, and BS OHSAS 18001: 2007 Occupational, Health and Safety Systems. During November-December 2011, M/s. TUV NORD, the certifying agency, conducted a recertification audit to verify the status of our compliance to the requirements of

these standards. The HCC Management System comprises of a number of policies and procedures that are regularly revised by our top Management, and communicated to and implemented across all our project locations.

Given the fact that construction activity is water and natural resource-intensive, continued availability of high-quality, low-cost and locally-sourced supply of raw materials will become a critical challenge in the future. Since we execute large and technically complex construction projects in geographically challenging locations, we also recognize the impact of unpredictable weather-related events (such as drought, cyclones, etc) arising due to the global climate change on our operations as a major environmental risk going forward.

We aim to reduce our total water consumption and improve our water efficiency index. This is in line with our ultimate objective of achieving water-neutrality, and strongly supported by our top decision-makers. We are in the process of introducing water flow meters across our project sites in order to measure and track our water consumption footprint. Our commitment to water sustainability is further exemplified by our Communication on Progress (COP) 2012 to meet our UN Global Compact CEO Water Mandate obligations.

We have also introduced several changes in our materials procuring practices to ensure optimal use of critical natural resources. This includes focusing on reuse of materials, decreasing waste generation, sourcing locally to the extent feasible and better procurement controls centrally to decrease unnecessary long-distance transport. We are also conscious of our energy footprint and encourage adoption of energy efficient practices. Use of latest technology and engineering innovations developed through our employee-driven Innovention Forum further help us meet our goals in this regard.

Although none of our construction projects are situated in ecologically sensitive areas, our project teams remain sensitive to the protection of local ecology, landforms and communities. Wherever required, dust suppression is regularly carried out to preserve the air quality and afford comfort to the surrounding population. We are committed to protecting the land quality.

Environmental, health and safety awareness has become a major area of focus in our workforce training programs across all project sites. Structured training modules, dedicated in-house and external faculty, and pre- and post-testing of employees ensure the effectiveness of our training programs.

Labor Practices, Decent Work and Human Rights Indicators

We are committed to the creation and retention of a world-class workforce to help us in our mission of building responsible infrastructure in the country.

Learning and Development continues to be our focus area in our Human Resources policies. In addition to organizing in-house customized programs in focus areas, teams are also nominated for national and international level seminars for skill and knowledge enhancement. We continue to focus on bringing in talent into the organization at the project and corporate levels. A recruitment tracking tool has also been developed to streamline the manpower budgeting and approval process.

We attach the utmost importance to the Occupational Health and Safety of our employees and project sites. In the past year, we enhanced our safety and health related trainings at all our project sites for our employees, contract workers and also members of the surrounding communities. Our emphasis on creating safe and healthy workplaces has earned us numerous accolades and recognitions in the past year. We are committed to achieve our stated corporate goal of zero reportable injury across all our operations. Events on health awareness, free health checkups and consultations are regularly organized across projects for our workforce and their families.

We are committed to fair labor practices and are in compliance with all local laws and industry best practices. Respect for diversity and human rights is intrinsic to our Company philosophy and culture. In this regard, we go beyond legal requirements and follow global best practices, including the UN Global Compact on principle of labor standards and human rights. We follow a zero-tolerance approach on employee discrimination, bonded labor and child labor issues. To this end, we strictly enforce the age verification of all our employees and contract laborers at all our project sites. HCC is currently in the process of standardizing the camp amenities (accommodation) for workers across all project sites. We remain committed to gender diversity and all our employee benefits, initiatives and engagements are non-discriminatory.

Society Indicators

At HCC, business goes beyond efficient project execution. Our Corporate Social Responsibility (CSR) activities build an important bridge between business operations and social commitments that help us in our mission of responsible infrastructure development.

In the past year, we continued with our long tradition of contributing to and investing in communities around our project sites. Our CSR initiatives fall under the five categories of education, HIV/AIDS awareness, water conservation, disaster response and community development. Our community development initiatives are managed at the project level while the other four CSR mandates are managed at the enterprise level and have specified goals and targets. We continually refine our CSR efforts by assessing the effectiveness of our ongoing initiatives and carrying out needs-assessment in the communities we serve.

Our CSR commitment was amply reflected in the disaster response and rebuilding efforts carried out by our workforce in the wake of the Sikkim earthquake and West Bengal train accident of 2011, among others. We were also part of the steering committee in the creation Disaster Resource Partnerships – built on the DRN model - a new private-public partnership model for disaster response.

As part of our HIV/AIDS Workplace Intervention Program, we have created an expanded pool of trained Master Trainer and Peer Educator pools in the past year. This has helped us internalize our employee sensitization and training needs.

In line with our organizational ethics, we continue to proactively reinforce anti-corruption behavior and competitive bidding practices, complying with all relevant legal requirements in this respect.

Given the contractual nature of HCC's business, our clients/customers are liable for resettlement and displacement issues. However, we remain committed to minimizing the impacts of our construction activities on the surrounding population through proactive measures.

We recognize the importance of joint efforts through collective action, and have historically played a role in the public policy arena. In the past reporting year, we were involved in thought leadership, articulation of ideas and promotion of actions in partnership with the civil society, regulatory agencies, corporate groups and the academia. We also participated in various policy advocacy forums at the local, national and international levels.

Product Responsibility Indicators

Although we do not have any direct impacts on our customers through our products and services, we are committed to building responsible and high-quality infrastructure is beneficial for all end users. We continually engage with our customers to understand their expectations and gain feedback to ensure customer satisfaction.

We remain in compliance with all relevant statutory requirements and best industry practices pertaining to workplace health and safety.

We continue with our initiatives to enhance and promote the 'HCC' brand and its associated values. In the reporting year, our brand had significant presence various business and industry events and expositions, where we showcased our wide ranging expertise and experience. A structured communication program resulted in good visibility for HCC in national media, creating a connect with India's critical infrastructure projects, highlighting our core philosophy of 'Responsible Infrastructure'. Our website has undergone a comprehensive overhaul for enhanced access to information and updates. We have appointed project Brand Champions in order to disseminate brand values amongst all our employees.

In continuing with our close customer engagement, we have fully implemented the CRM system and are realizing the benefits of deeper and successful customer relations.

GRI G3.1 CRESS Content Index

Profile Disclosure / Key Performance Indicator	Description	Reported	Cross Reference / Direct Answer
1.1	Statement from the most senior decision-maker of the organization.	Fully	Pages 2-3
1.2	Description of key impacts, risks, and opportunities.	Fully	Pages 2-3 (CMD Statement), Pages 24-25 (Risk Management), HCC constructs new infrastructure, and is not involved in retrofits, upgrades and refurbishments
2.1	Name of the organization.	Fully	Page 1
2.2	Primary brands, products, and/or services.	Fully	Pages 4-5
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	Fully	Pages 4-5
2.4	Location of organization's headquarters.	Fully	Back cover of the report
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	Fully	Page 6
2.6	Nature of ownership and legal form.	Fully	Pages 28
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	Fully	Pages 4-5
2.8	Scale of the reporting organization.	Fully	4-5 (Organization profile), 77-78 (Total workforce). [For further information, refer HCC Annual Report FY11-12 (http://www.hccindia.com/hcc_admin/data_content/invester_pdf/HCC_Annual_Report_2011-12.pdf) - pg 65 (Financial highlights), pg 2-3 (HCC Projects)]
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	Fully	No significant changes in the reporting entity, including ownership, during the reporting period
2.10	Awards received in the reporting period.	Fully	Page 13
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	Fully	Page 1
3.2	Date of most recent previous report (if any).	Fully	Most recent report was in the year 2011
3.3	Reporting cycle (annual, biennial, etc.)	Fully	Page 1
3.4	Contact point for questions regarding the report or its contents.	Fully	Page 1
3.5	Process for defining report content.	Fully	Page 6 (Projects in scope), Page 21 (Materiality)
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary	Fully	Pages 4-5 (Organization profile), Page 6 (Projects in scope)

	Protocol for further guidance.		
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	Fully	Any limitations in the scope or boundary are specified wherever applicable in the report
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	Fully	Pages 4-5 (Organization profile), Page 6 (Projects in scope)
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	Fully	Page 1
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g.mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	Fully	During the reporting period, there were no mergers or acquisitions, and hence no restatements to this effect
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Fully	Pages4-5 (Organization profile), Page 6 (Projects in scope) - Disclaimer given below the table
3.12	Table identifying the location of the Standard Disclosures in the report.	Fully	Page 112 (GRI G3.1 Content Index)
3.13	Policy and current practice with regard to seeking external assurance for the report.	Fully	Page 1
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	Fully	Pages 22-23 (Board of Directors), Page 23 (Code of Conduct), Pages 24 (Board meetings and committees)
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	Fully	Page 22 (Table showing Board composition)
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	Fully	Page 22 (Table showing Board composition)
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	Fully	Page 24 (Shareholders'/investors grievance committee, under Board Meetings and Committees)
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	Fully	There is currently no such linkage
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	Fully	Page 23 (Code of Conduct)
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	Fully	Currently there is no formalized process for the Board to guide the organization on these issues
4.8	Internally developed statements of mission	Fully	Pages 7 (Vision, Mission, Values),

	or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.		Page 23 (Code of Conduct)
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	Fully	Currently there is no defined oversight by HCC's ESG performance to the Board
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	Fully	Currently there is no defined oversight on our environmental and social performance by our Board
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	Fully	Pages 24-25 (Risk Management)
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	Fully	GRI, UN CEO Water Mandate, ISO 9001:2008, ISO 14001:2004, ISO 18001:2007
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	Fully	Pages 24-25 (Risk management)
4.14	List of stakeholder groups engaged by the organization.	Fully	Pages 17-18 (Stakeholder engagement summary)
4.15	Basis for identification and selection of stakeholders with whom to engage.	Fully	Page 17
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	Fully	Pages 17-18 (Stakeholder engagement summary)
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	Fully	Pages 17-18 (stakeholder engagement summary)
Disclosures on Management Approach	DMAs for EC, EN, LA, HR, SO, PR indicators	Fully	Pages 114-120
EC1[8]	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	Fully	Page 28
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change and other sustainability issues.	Fully	We have not yet quantified the financial implications of climate change and other sustainability issues on our business.
EC3	Coverage of the organization's defined	Fully	Page 79-80

[8] Underlined key performance indicators are Core for GRI G3.1 CRESS Application Level A+; the rest are Additional.

	benefit plan obligations.		
EC4	Significant financial assistance received from government.	Fully	Page 28. We do not receive significant financial assistance from the Government. The Government is not present in the shareholding structure
EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	Fully	For all sites reported on, we have met or exceeded the local wage requirement.
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	Fully	Page 35 (Suppliers), Page 38
EC7	Procedures for local hiring and proportion of senior management and all direct employees, contractors and sub-contractors hired from the local community at significant locations of operation.	Fully	Pages 114-115 (Disclosure on Management Approach - Economic)
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	Fully	Page 38, Our spending on infrastructure development provided primarily for public benefit was on need based interventions, determined locally at project sites
EN1	Materials used by weight, value or volume.	Fully	Page 42
EN2	Percentage of materials used that are recycled and reused input materials.	Fully	No substantial percentage of materials used was recycled or reused in the reporting period
EN3	Direct energy consumption by primary energy source.	Fully	Page 42. Total direct energy consumption = 151149239 GJ (Energy from diesel = 1.51×10^8 GJ, Energy from ATF = 5.81×10^3 GJ)
EN4	Indirect energy consumption by primary source.	Fully	Page 42. Total indirect energy consumption = 9.3×10^4 GJ (All indirect energy consumption from non-renewable sources)
CRE1	Building energy intensity.	Fully	Not Applicable since HCC does not manage building use and occupancy
EN5	Energy saved due to conservation and efficiency improvements.	Fully	Page 42
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	Fully	HCC does not manufacture products or deliver services, hence not applicable
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	Fully	No initiatives to reduce indirect energy consumption and reductions at the moment
EN8	Total water withdrawal by source.	Fully	Page 47, all water withdrawn was metered and/or measured
EN10	Percentage and total volume of water recycled and reused.	Fully	Page 47, all water recycled/reused is linked to metered data
CRE2	Building water intensity.	Fully	Page 47, all water recycled/reused is linked to metered data
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Fully	No HCC's project sites fall within the specified criteria

EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Fully	No HCC's project sites fall within the specified criteria
EN16	Total direct and indirect greenhouse gas emissions by weight.	Fully	Page 42, Using emission factors (IPCC Guidelines) for GHGs (CO2, CH4, N2O) for fuels used (such as ATF, Diesel), we have established the emissions from direct energy consumption. For India, an emission factor of 0.81 tons CO2e per MWh of power generated has been used for establishing the emission for indirect energy consumption, as per UNFCCC recommendation. Breakdown of total emissions by direct and indirect is reported
EN17	Other relevant indirect greenhouse gas emissions by weight.	Fully	We plan to enhance our scope to include air emissions from employee travel going forward. We should be able to track this successfully by 2014
CRE3	Greenhouse gas emissions intensity from buildings.	Fully	Not Applicable to HCC since we do not manage building use and occupancy
CRE4	Greenhouse gas emissions intensity from new construction and redevelopment activity.	Fully	Page 42. Total greenhouse gas emissions intensity has been calculated. We do not track data according to any segmentation
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	Fully	No initiatives to reduce greenhouse gas emissions and reductions are undertaken at present
EN19	Emissions of ozone-depleting substances by weight.	Fully	We do not use any ODS in our operations
EN20	NOx, SOx, and other significant air emissions by type and weight.	Fully	The NOx, SOX and other significant air emissions at our project sites were within stipulated limits and we hope to report the values in 2013
EN21	Total water discharge by quality and destination.	Fully	Page 47, All water discharged is treated and is released in natural water bodies. All water discharges are accordance with the consented values, where specified by Pollution Control Boards in 'Consent to Operate' or water consents. This is allocated to us as per our planned water discharge we provide in applications as estimates. None of the water discharged from any of the HCC operations is reused by any other organisation.
EN22	Total weight of waste by type and disposal method.	Fully	Page 42, We follow all regulatory compliances regarding waste disposal by selling our waste to authorized contractors for appropriate recycling. All the waste is disposed through sale to third party recyclers.
EN23	Total number and volume of significant spills.	Fully	No significant spills in the reporting period

EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	Fully	No significant impact on water bodies due to discharges
CRE5	Land and other assets remediated and in need of remediation for the existing or intended land use according to applicable legal designations.	Fully	Construction activities by HCC has not resulted in any significant land contamination and need for remediation
EN26	Initiatives to enhance efficiency and mitigate environmental impacts of products and services, and extent of impact mitigation.	Fully	As a construction company, we do not manufacture any products or deliver services. We have however included initiatives to use environmental friendly materials wherever possible and minimize impacts from the construction activities
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	Fully	We do not sell any products directly to the consumers. We are a B2B company
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	Fully	No such fines or sanctions during the reporting period
EN30	Total environmental protection expenditures and investments by type.	Fully	Page 42
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	Fully	Pages 77-78
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	Fully	Page 78
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	Fully	Pages 79-80, Benefits are reported for employees across HCC projects in India. We strive to provide camp amenities beyond compliance levels at all our sites
LA15	Return to work and retention rates after parental leave, by gender.	Fully	Page 78
LA4	Percentage of employees covered by collective bargaining agreements.	Fully	Page 79
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	Fully	No such changes during the reporting period. As prescribed under the Industrial Disputes Act, 1947, 21 days notice period is given
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	Fully	No such changes during the reporting period. As prescribed under the Industrial Disputes Act, 1947, 21 days notice period is given
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	Fully	Page 83
CRE6	Percentage of the organization operating in verified compliance with an internationally recognized health and safety management system.	Fully	Pages 25-26, Under our IMS system, all our projects are covered under the ISO 18001:2007 certification

LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	Fully	Pages 85-86 (HIV/AIDS awareness - workplace awareness and education program)
LA10	Average hours of training per year per employee by gender, and by employee category.	Fully	Pages 80
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	Fully	Pages 80
LA12	Percentage of employees receiving regular performance and career development reviews, by gender.	Fully	All permanent employees receive performance feedback annually
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	Fully	Pages 22-23 (Board of Directors), Page 77-78 (employee details). We report employee diversity by providing gender breakdown
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	Fully	Page 79
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	Fully	Currently, our investment agreements do not human rights clauses.
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	Fully	We have not conducted any human rights assessment of our suppliers and contractors so far.
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	Fully	No employee training pertaining to human rights conducted
HR4	Total number of incidents of discrimination and corrective actions taken.	Fully	No incidents of discrimination have been reported during the reporting period.
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	Fully	None of our operations run this risk
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	Fully	Our contracts forbid child labor while hiring labor at sites. Further, there are checks at every site at the entry point. When suspected, identity proof is asked for. No operations and suppliers with significant risks have been identified yet
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	Fully	Pages 117-119 (Disclosure on Management Approach - Labor Practices and Human Rights)

HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	Fully	We have not yet carried out a comprehensive human rights review or impact assessment of our operations
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.	Fully	There have been no instances of human rights related grievances filed against us in the reporting period
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	Fully	Page 69 (Aakash Ganga Project), Page 70 (Water initiative at Kihim), Page 84(Five focus areas of Corporate Stewardship), Page 85-88 (HIV/AIDS awareness), Page 88 (New alliances), Pages 92-97 (Disaster Response Network - case studies) Page 98-100 (CSR initiatives at our project sites). We have implemented robust community engagement and development programs at all our project sites. Given our contractual nature of work, these programs last through the construction phase.
SO9	Operations with significant potential or actual negative and positive impacts on local communities.	Fully	Highlights of HCC's positive impacts on our local communities are reported on Pages 98-100 (CSR initiatives at our project sites). Given the contractual nature of our work, our focus is currently limited to the immediate impacts that may occur during the construction phase of infrastructure.
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	Fully	While there have been no instances of significant negative impacts, highlights of the developmental work carried out by HCC in local communities is reported on Pages 98-100, and community investments on Page 38
CRE7	Number of persons voluntarily and involuntarily displaced and/or resettled by development, broken down by project.	Fully	Given the contractual nature of our business, any resettlement of local communities falls within the purview of our clients
SO2	Percentage and total number of business units analyzed for risks related to corruption.	Fully	We have not analyzed our business units for corruption related risks
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	Fully	HCC's Code of Conduct, which is applicable to all employees, includes a clause on anti-corruption policies and procedures
SO4	Actions taken in response to incidents of corruption.	Fully	In this reporting year, there were no reported incidents of corruption in the organization
SO5	Public policy positions and participation in public policy development and lobbying.	Fully	Pages 14 (Memberships in professional bodies), Pages 56-57 (WEF's India Economic Summit), Pages 57-58 (12th International Sustainability Leadership Symposium 2011), Page 58-59 (World Economic Forum Annual Meeting 2012), Page 59-60 (World CEO Forum on Sustainable

			Development 2012). All our public policy participation results in positive contributions. There is no significant risk identified on account of conflict of interest
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	Fully	There were no financial contributions of such kind in the reporting period
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	Fully	No significant fines or sanctions during the reporting period
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	Fully	As a construction company, we do not manufacture products or deliver direct services. We ensure that our structures are safe from the design up to completion stage, though we do not carry out life cycle assessments at this point
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	Fully	No incidents of non-compliance
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	Fully	As a construction company, we do not manufacture a product or deliver a service, hence this indicator is not applicable
CRE8	Type and number of sustainability certification, rating and labeling schemes for new construction, management, occupation and redevelopment.	Fully	Pages 25-26 (All our project sites are certified under Integrated Management System - ISO 9001, ISO 14001, ISO18001)
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	Fully	As a construction company, we do not manufacture a product or deliver a service, hence this indicator is not applicable
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	Fully	Pages 18-19 (CRM implementation), Page 20 (Our clients)
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	Fully	The Corporate communications practices of HCC conform to the laws and acts that govern corporate advertising, promotion and sponsorship.
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	Fully	No such fines paid during the reporting period.

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INDEPENDENT ASSURANCE STATEMENT

The Management and Board of Directors
Hindustan Construction Company Limited
Mumbai, India.

Our engagement

Ernst & Young Pvt. Ltd. ("EY") was retained by Hindustan Construction Company Ltd. ("Company") to provide an independent assurance on its Corporate Sustainability Report titled 'Responsible Infrastructure' for its Engineering and Construction Business for the financial year 2011-12 ("the Report").

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

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. The assurance report should not be taken as a basis for interpreting the Company's overall performance, except for the aspects mentioned in the scope below.

Scope of assurance

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

- Data and information related to the Company's sustainability performance for the period 1 April 2011 to 31 March 2012;
- Review of sustainability data and information covering all four of the Company's Engineering and Construction business verticals at the following locations:
  - National Highway 34 (package 3), West Bengal (Transportation business vertical);
  - Maroshi Ruparel Tunnel Project, Mumbai, Maharashtra (Water Solutions business vertical);
  - Kashang Hydro-electric Power Project, Himachal Pradesh (Hydro Power business vertical), and
  - Padur Cavern for Crude Oil Storage, Karnataka (Nuclear and Special business vertical)
- The Company's internal policies, protocols and processes related to collection and collation of sustainability performance data.

Exclusions

The assurance scope excludes:

- Operations of the Company other than the Engineering and Construction Business;
- Aspects of the Report other than those mentioned above;
- Data and information outside the defined reporting period (1 April 2011 to 31 March 2012);
- The Company's statements that describe expression of opinion, belief, aspiration, expectation, aim or future intention;
- Economic performance indicators included in the Report
- CRESS (Construction and Real Estate Sector Supplement) indicators included in the Report

Level of assurance and criteria used

The assurance engagement was planned and performed in accordance with International Federation of Accountants' International Standard for Assurance Engagements Other than Audits or Reviews of Historical Financial Information (ISAE 3000). Our evidence-gathering procedures were designed to obtain a 'limited' level of assurance (as set out in ISAE 3000) on reporting principles, as well as sustainability performance indicators as per GRI 3.1 guidelines.

Key steps

The performance of our engagement involved the following key steps:

- Interviews at the Company's corporate office in Mumbai with Engineering and Construction Business Heads, Function Heads and key personnel to understand the sustainability vision, mechanism for management of key sustainability issues and engagement with key stakeholders;
- Visits to four sample sites as mentioned in the *'Scope of Assurance'* above;
- Review of relevant documents and systems for gathering, analyzing and aggregating sustainability performance data for the reporting period;
- Evidencing support of claims made in the Report regarding the Engineering and Construction business' sustainability performance;
- Review of selected qualitative statements and sample case studies in various sections of the Report.

Observations and opportunities for improvement:

Our key observations are as follows:

- The Company has continued to demonstrate its commitment to sustainability by publishing its third sustainability report based on the GRI 3.1reporting guidelines at the 'A+' Reporting Application level;
- The Company has expanded its water use related reporting by including estimations of water use efficiency and neutrality indices pertaining to its direct operations at project sites; It may further devise ways to benchmark its water conservation parameters internally year-on-year and externally with peer Engineering and Construction businesses;
- The Company has reported its goals and performance on three out of the four issues identified as material in its previous Sustainability Report ('Responsible Infrastructure 2010-11'). These views on materiality continue to remain internal to a large extent.

- Given the evolving business scenario and newer sustainability risks and opportunities, the Company may undertake a comprehensive review of its materiality analysis for future reporting and recalibrate its goals within these issues, taking into consideration external stakeholder views.

- There is further scope to institute periodic and regular (monthly or quarterly) transmission of KPI related data and details of sustainability initiatives from project sites to corporate head office.

Our conclusion

On the basis of our review scope and methodology, nothing has come to our attention that would cause us not to believe that the Report presents the Company's triple-bottom-line performance, in material respect, in line with the GRI G3.1reporting principles and criteria.

Our assurance team

Our assurance team, comprising of multidisciplinary professionals, has been drawn from our Climate Change and Sustainability Services, and undertakes similar engagements with various Indian and international companies. As an assurance provider, EY is required to comply with the independence requirements set out in International Federation of Accountants (IFAC) Code of Ethics for Professional Accountants. EY's independence policies and procedures ensure compliance with the Code.

For Ernst & Young Private Limited

Sudipta Das
Partner
Dated: 17th September, 2012
Kolkata

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