### **S Damodaran**

## **The Toilet Man**



India has had zealous men dedicating their lives to providing one essential service to the common man all their lives. Verghese Kurien was India's milk man; E Sreedharan the metro man; O P Munjal the cycle man. S Damodaran may well be India's toilet man if he accomplishes the ambitious 10 million toilet goal he has set for himself in the next 5 years. His NGO Gramalaya has already constructed 100,000 toilets and helped declare several slums open defecation free. Going by how critical factors are panning out,

he is likely to achieve his goal

### By Benedict Paramanand

t's a shame that fifty percent of Indians don't have access to clean toilets even when NGOs like Gramalaya have been in the sanitation sector for more than 25 years. The scale of the problem is humongous and the NGO has been quietly working in a few towns in Tamil Nadu so far. It was instrumental in declaring . Thandavampatti village in Tiruchirappalli District as India's first open defecation (OD) free village in 2003. This year could be Damodaran's tipping point because the entire ecosystem that goes into building community sanitation infrastructure, which he has been working on, is falling into place nicely.

### 10 Resolutions For Green India



Yunus at

**Top Award for** Prof. Sahoo



CII – ITC 2015 Award Winners 8

Yes Bank to Raise \$5 Bn **Green Funds** 



**Mukund Rajan** on DNA of **TATA's Success** 

**Interview With Ambuja Cement's** Ajay Kapur



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The Bhukkad Story

**CSTEP** on Greening **Mobile Towers** 

SustainabilityNext Choice of **Top 10 Books of 2015** 

**BookShelf, Events, Courses** 





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**Purpose:** To excite Indian businesses, SMEs, executives and students about the immense business opportunity in not only adopting Sustainability as Strategy in their companies but also inspire them to the possibilities of a big market for innovative sustainability products and services.

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Information in this publication is drawn from a variety of sources, including published reports, interviews with practicing managers, academia and consultants. While doing so utmost importance is given to authenticity.

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His Centre for Toilet Technology and Training has come up with smart, efficient and affordable toilets. (PI see box). He is able to reach this far because he has worked tirelessly with several governmental and donor agencies to build a sanitation ecosystem. He works with the National Institute of Water and Sanitation, Government of India's sponsored CRSP, TSC and Nirmal Bharath Abhiyan programs as well.

Gramalaya promoted more than 1,00,000 toilets with various donor organizations like WaterAid, Water. org, Unicef and Arghyam in Tamil Nadu. It also introduced the concept of microfinance for sanitation for the



first time in India and successfully scaled up microfinance for toilet constructions through the Guardian MFI (Micro financial institution).

Gramalaya introduced the concept of Community Managed Pay and Use toilet systems for the first time in India which was replicated in other parts of India by organizations such as Sulabh. It also designed the child friendly toilet (CFT) models for the use of slum children, school children in rural areas along with Anganwadi toilet models.

The Modi government's Swachh Bharat Mission Program aims at reaching 111 million households with safe sanitation by 2019. Gramalaya is aligning its goals and expects to contribute at least 10% of the national target i.e. 10 million households with sanitation facilities.

Damodaran is different from the other famous men in one – he also writes songs to promote hygiene. (http://www.gramalaya.in/pdf/Songs%20English%20and%20Tamil%202.pdf). He knows that poor sanitation is not only because people cannot afford it, it's also a habit. He is out to change that through his songs and books.

India's Human Development Index (HDI) is one of the worst in the world at around 140. Only now there is consensus that unless India goes into hyper action mode to address basic sanitation of communities, much of its investments in primary education and health is bound to fail.



## Pay & Use Economics

ramalaya started its urban intervention program in 2000 with financial assistance from WaterAid, UK and collaboration with Tiruchirappalli City Corporation. There were 7 community toilets built by Gramalaya with WaterAid grant fund apart from individual household latrines connected with UGDs in the 7 project slums.

The Kamala Nehru Nagar Integrated
Sanitary Complex is being maintained by



the women Self-Help Groups. Gramalaya formed 15 women SHGs in the slum. The integrated sanitary complex has 16 toilet seats for ladies and 20 toilet seats for men and a few child friendly toilets for children. Of these 13 are being used under pay and use toilet system by the women SHGs through the SHE Teams.

They earn an average monthly income of Rs.15,000/- from the user fee. One cleaner for cleaning of the toilet complexes every day is paid a salary of Rs.6,000/- per month. The toilet complex is being maintained on shift basis where two women look after the toilets from the SHGs on rotational basis. They are paid Rs.50 per shift for issuing tokens for toilet usage to the users and collecting the user fees from the users. After meeting the operational costs every month, the remaining amount is being deposited in the SHE Team bank account which is jointly operated in a nationalized bank.

They are also selling soaps, shampoo and other hygiene goods in the toilet complex which is fetching additional income for the families. They have engaged separate persons for garbage collection in the slum for which SHE Team is paying the fees. The toilet complex is successfully maintained by the SHE Teams since 2001 onwards wherein the minor repair and renovation costs are met by the SHE Team and the major repairs are attended by the City Corporation.

The slum was declared as 100% open defecation free in 2005 by the City Corporation with the help of Gramalaya. Gramalaya got the National Urban Water Award in the year 2010 as runner. Since then, WAVE –Women's Action for Village Empowerment is working with the slums in Tiruchirappalli City Corporation and worked as the federation for women in the slums for meeting their water and sanitation needs on a self-sustainable basis.

http://www.waterawards.in/2010-winner-profile-gramalaya.php For more details : www.gramalaya.in



### **Cost for SMART Toilet**

### **Toilet Attached Bathroom:** (Room Size 8 x 4) Leach pit with Twin Pit Roof RCC slab and Superstructure with Hollow blocks

SNo	Materials	Quantity	Rate
1	Hollow blocks Length – 16" Breadth – 4" Height -8"	140	2100
2	Cement Bags	6	2400
3	Sand (River Sand ½ Bullock cart or 10 Bags)	1	1000
4	Toilet Pan with P Trap , Foot rest attached, Ceramic pan with deep slope	1	450
5	PVC pipe – 4 inches (For connecting twin pits)	12 feet	350
6	Masons charges unskilled labor	4 days	2500 1000
7	Cement Rings (1.5 inch thickness with 1 feet height)	6	2100
8	Roof - Cement Slab (5' * 2")	4	2000
9	Cement cover slab	2	700
10	Bricks for foundation / chamber	150	750
11	Cement Jali for ventilation (1 feet * 1 Feet)	2	100
12	Transport cost		1000
13	Door cost including fixing		2100
14	Electricity connection & charges		500
15	Soap stand and dress hoke etc.,		100
16	White wash & labor cost		450
17	Pit digging charges / foundation charges / rough stone		1500
18	Water facilities / tank / plumping charges etc.,		1400

"Execute locally, Innovate globally"



### **MUHAMMAD YUNUS**

Noble laureate, Social entrepreneur & founder, Grameen bank

6<sup>TH</sup>- 7<sup>TH</sup> FEBRUARY, 2016 HUBBALLI, KARNATAKA, INDIA

DEVELOPMENT DIALOGUE 2016



### **ANOUSHEH ANSARI**

Astronaut, First Space Ambassador, NASA Spaceflight Participant



### NARAYANA MURTHY

IT Industrialist & Co-founder, Infosys



### Dr. "DESH" DESHPANDE

Philanthropist, Co-founder, Deshpande Foundation



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## THE GRIHA SUMMIT'16

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BUILD GREEN. EVERYONE PROFITS.





## India's 10 New Year Resolutions

- Efficient Management of on-going projects such as Swachh Bharat, Clean Ganga, Renewable Energy
- Rapid expansion and productivity enhancement of **Indian Railways**. This will cut down use of cars, trucks and road expansion significantly
- Grant real powers to Green Tribunals and pollution control boards to punish polluters
- Launch massive plan to reduce dust in Indian towns and cities major contributors to pollution
- Set ambitious targets and timelines to reduce pollution in towns and cities
- Promote and finance expansion of public transportation in cities and towns
- Include promotion of clean-tech, revival of water bodies and decentralized renewable energy as part of CSR
- Strengthen environmental audit mechanism of manufacturing
- Compulsory sustainability reports for all companies with turnover of more than Rs. 25 crores
- Promote Sustainability Management Courses in business schools and engineering colleges

# Prof. Sahoo Wins Sustainability Leadership Award

rof. Dinabandhu Sahoo, Director, Institute of Bioresources and Sustainable Development (IBSD) received the prestigious India's Award for Sustainability

Leadership of the year 2015. He was chosen amongst the 50 most influential sustainability leaders for his outstanding contribution in the field of Bio-resources and Sustainable Development. The main objective of the award was to achieve sustainable development goals in India and turn them into reality.

The other organizations who received the award were Royal Bank of Scotland, Tata Motors, Dr. Reddy's Laboratory, Indian Institute of Corporate Affairs etc.

The award is part of the initiative launched by the **Chief Minister of Maharashtra, Devendra Fadnavis**, in 2015. It was presented by world's IT giant CISCO.

INDIA USTAINABILITY LEADERSHIP

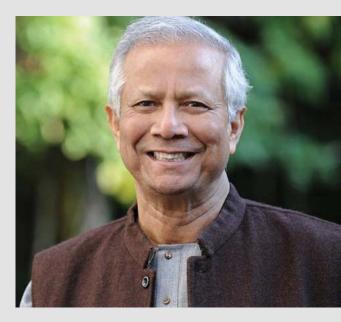
Prof. Sahoo in the previous year started several new initiatives in the Northeast and made IBSD a role model for sustainable development.

While receiving the award, Prof. Sahoo mentioned that Northeast of India is a hotspot for unique biodiversity and has lot of scope for sustainable development. He further said that the region has a very sensitive and fragile ecosystem but full of natural resources which is blended with unique cultures. He urged the industry leaders to explore the possibilities of setting an infrastructure and bio-resources based industries so that it can create large number of jobs in the region. Prof. Sahoo urged the people to invest substantially in the Northeast as part of their corporate social responsibility so that sustainable development can take place in a fast track manner.

# Muhammad Yunus to Keynote at Hubli Development Dialogue

obel laureate Muhammad Yunus will be the keynote speaker at the two-day 9th Development Dialogue to be held in Hubli starting February 6, 2016. Known famously as Hubli DD, this year's theme is 'Execute Locally, Innovate Globally.'

The Hubli DD, driven by the Deshpande Foundation, has emerged as India's most sought after thought leadership and networking forum for NGOs, social entrepreneurs, philanthropists, impact investors and development academia. It has been acting as a bridge between the formal and the informal sectors where business leaders and leaders from the social sector dialogue over how to achieve maximum impact on the society at large from entrepreneurial ideas and investment funds.



The emphasis is more about doing and less about talking. As Desh Deshpande, the brain behind this effort puts it: "It is to help thinkers to do and doers to think." The focus is on the 'solution driven' approach and 'proof of concept' driven deliberation.

The DD is growing in size every year. Last year it had more than 600 people representing the corporate sector, academia, investors, grassroots activists, philanthropists, policy makers and entrepreneurs from across the world.

After retiring from Infosys, Mr N R Narayanamurthy is spending more time on impact investing these days. He was there last year and is around this year as well. Interesting person to attend this year is prominent journalist and editor Shekhar Gupta.



"It's an ecosystem that helps entrepreneurs experiment their wild but impactful ideas and that's what we do at the Development Dialogue. What you need in place is possibilities for finding resources to test ideas, raise funds, find partners to collaborate, learn from success stories. Sandbox is the place for you to experiment,"

Desh Deshpande said.

This year's conference, the DD brochure says, "is tailor-made for entrepreneurs looking to understand what it takes to build and scale a venture that is solving real problems. The conference will deliberate through four things that need to come together: Innovations that are relevant and co-created with the people who need

it; Execution capacity; ability to absorb innovation and having the human resources to roll out the solution; Appropriate infrastructure; Government involvement and the right policies and support."

www.developmentdialogue.org helpline (+91) 944-989-1050. www.facebook.com/ddhubli

## **CII-ITC Sustainability Awards**

II-ITC Centre of Excellence for Sustainable Development announced the CII-ITC Sustainability Awards for 2015. 89 applicants competed for the awards of which 26 were recognised. Seven assessors were also recognised for their exceptional performance and contribution to awards in 2015.

The awards were given away by Mr. Suresh Prabhu, Union Minister of Railways, Government of India, Dr. R A Mashelkar, President, Global Research Alliance, Amb Shyam Saran, Jury Chair, CII-ITC Sustainability Awards and Chairman, Research & Information System for Developing Countries and Mr Y C Deveshwar, Chairman, Advisory Council, CII-ITC Centre of Excellence for Sustainable Development.

The winners in the various categories are as follows:

### **Corporate Excellence**

### **Outstanding Accomplishment**

ACC Limited
Hindustan Zinc Limited
JSW Steel Limited, Vijayanagar

### **Commendation for Significant Achievement**

Reliance Industries Limited
Steel Authority of India Limited
Ambuja Cements Limited
Tata Housing Development Company Limited
Apollo Gleneagles Hospitals, Kolkata
JSW Energy Ltd, Toranagallu

### **Corporate Social Responsibility**

## Excellence in Corporate Social Responsibility

Cairn India Limited

Ambuja Cements Limited, UNIT Bhatapara
Ferro Alloys and Minerals Division Tata Steel

### **Commendation for Significant Achievement**

Toyota Kirloskar Motor Pvt. Ltd. The Royal Bank of Scotland N.V. Rio Tinto in India, Bunder Site

### **Environment Management**

### **Commendation for Significant Achievement**

Toyota Kirloskar Motor Pvt. Ltd.

Yes Bank Ltd.

Bhoruka Power Corporation Limited
Tata Coffee Limited, Instant Coffee Division, Theni
PepsiCo India Holdings Pvt Ltd (India Foods,

Kolkata Plant)

Ambuja Cements Limited, Bhatapara

## Jury's Recommendation for Commendation for Significant Achievement

Trishyiraya Recycling India Pvt. Ltd.(A unit of Sims Recycling Solutions)

### **Excellence in Environment Management**

Vedanta Limited, Jharsuguda
Ultratech Cement Limited

### **Sustainable Supply Chain**

### **Excellence in Sustainable Supply Chain**

Mahindra and Mahindra Limited (Automotives & farm equipment sector)

### **Commendation for Significant Achievement**

**SKF India Limited** 

http://www.sustainabledevelopment.in/knowledge.php?id=3

# YES Bank Aims To Mobilize \$5 Billion For Climate Action By 2020

ES BANK Limited, India's fifth largest private sector bank, made a major announcement for mobilizing \$5 billion towards its commitment to climate finance in India, on the occasion of Conference of Parties (COP) 21 climate summit held in Paris.

YES BANK aims to mobilize this amount from 2015 to 2020 for climate action through lending, investing and raising capital towards mitigation, adaptation and resilience. To achieve holistic impact and aid India's target of meeting its Intended Nationally Determined Contributions (INDCs), the bank also committed to achieving the following by 2020:

- Target funding of 5,000 MW of clean energy
- Gradually increase percentage of Renewable Energy in its power portfolio
- Contribute towards creating a carbon sink by planting 2 million trees
- Touch 100 million lives through its safe and clean drinking water program
- Offset Carbon Emissions of the bank's operations

### Rana Kapoor, Managing Director & CEO said,

"(COP) 21 is demonstrating the potential to strengthen partnerships amongst governments and business, establishing new pathways to achieve business and financial innovations to address climate change. This was triggered by businesses fulfilling their commitments made in September 2014 at the UN Climate Summit. YES BANK had committed to target funding 500 MW clean energy annually which it had overachieved.

Proactive corporate intervention is critical to achieving the climate goals and financial institutions have a larger role in driving climate action. YES BANK is fully committed to play



the role of a catalyst and would work towards unlocking innovative financial mechanisms towards achieving India's ambitious target of combating climate change in the near and long term."

The bank's commitment is especially significant as it is the youngest Indian private sector bank in operation and holds the only **greenfield banking license** awarded by the Reserve Bank of India (RBI), in the last 17 years.

Recently, YES Bank also signed a memorandum of understanding (MoU) with The London Stock Exchange Group (LSEG) to collaborate on bond and equity issuance, with focus on developing green infrastructure during the Prime Minister's visit to the United Kingdom.

## Future Managers Are Choosing Green Companies Over Fat Pay

It's heartening to know that business school students are waking up to the realities of climate change and how they can influence organizations they want to join.

44% of management students across the globe are willing to accept a lower salary to work for a company with better environmental practices. And 70% to 94% believe firms should integrate environmental sustainability into business operations according to the findings of 'Rising Leaders on



Environmental Sustainability and Climate Change,' a global survey of business students conducted by Yale University in collaboration with the World Business Council for Sustainable Development (WBCSD) and Global Network for Advanced Management (GNAM). The data was collected from participants across 29 business schools in 25 countries, representing approximately 17,600 students globally. These B-Schools comprised 27 member schools of GNAM, including IIM Bangalore, London School of Economics and 25 other international institutes.

The survey revealed that 64% of the students don't think businesses are making sufficient efforts to address environmental challenges and 84% of them would opt for a company following good environmental practices. Firms could adopt simple initiatives like conservation of energy, use of less plastic and e-waste disposal, they felt.

The findings come from responses collected from September 13 to October 18. While 19% of the students said they wouldn't accept an offer from a company with no green concerns, regardless of how the high salary is, 71% said governments and companies have equal responsibility to check environmental damage. The highest number of respondents was from Asia Pacific. Edward Snyder, dean, Yale School of Management, said: "Today's business schools are being called to act from the very people we are training as leaders. It is incumbent upon us to prepare our students for the world not of the last generation, but the next."

"We often talk about a transformational change in society when we speak about climate action. That transformation will affect business as well as the institutions," said Peter Bakker, president and CEO, WBCSD.

http://timesofindia.indiatimes.com/city/bengaluru/B-schoolers-choose-green-companies-over-good-paymasters/articleshow/50038371.cms

News Awards

# United Technologies Honors Neighborhood Champions in Bengaluru

India's first-ever Neighborhood Improvement Partnership (NIP) Challenge sees a grant of nearly Rs 1 crore to winning projects



nited Technologies Corporation announced 12 winners of India's first ever Neighborhood Improvement Partnership Challenge (NIP), an initiative of UTC's Citizens for the City Program. The winning projects and support teams will collectively receive a total amount of nearly Rs.1 crore. The 12 winners will implement projects in the areas of mobility, waste management, public safety, autonomous building, water quality and rejuvenation of public spaces.

"Communities in Bengaluru have shown that they are willing to come forward and be solution finders rather than mere critics of the challenges they are confronted with," said Ashok Mirchandani, Managing Director, Carrier Transicold, Asia Pacific, United Technologies. "We hope that through our Citizens for the City campaign, we have sparked a movement that will see more neighborhoods to come forward and find solutions to some of the most pressing urban challenges."

Launched in May 2015, Citizens for the City's Neighborhood Improvement Partnership Challenge garnered 145 registrations and 86 proposals from across Bengaluru. Of these, the 12 winners underwent a comprehensive review, and the projects that required building and zoning permissions were forwarded to the Bruhat Bengaluru Mahanagara Palike (BBMP) for approval. The winning projects will be completed within a span of six months.

A dedicated team from Centre for Public Problem Solving (CPPS) and WRI-India in conjunction with United Way of Bengaluru (UWBe), Bangalore Politcal Action Committee (BPAC) and The PRactice spearheaded by the Neighborhood Improvement Challenge, has been mentoring communities, establishing a support network for the participants and creating a robust framework for execution of the winning projects in the city.

"Neighborhood Improvement Partnership is an idea whose time has come, as has been proven by the response to the Challenge," said Kalpana Kar, Founding Partner, CPPS. "The projects we have received break down

complex urban problems to the neighbourhood level, with solutions that can be executed easily and replicated across the city. The biggest achievement for the NIP Challenge is that we have a framework today that involves citizens in urban problem solving along with parastatals responsible for the City's functioning."

"The overwhelming response to Neighborhood Improvement Partnership Challenge demonstrates greater awareness of urban problems at the neighborhood level," said Chris Rao, Vice President and Country Head, UTC Aerospace Systems, India. "We hope the twelve winning projects will become exemplary models for other communities to replicate, easing neighborhood challenges to a great extent."

### **Winners**

### Transforming an Environmental Hotspot: The Defence Colony Link Road

Organization: **DECORA** 

Area Name: Defence colony, Indiranagar

The project proposes to re-design an existing garbage transfer point (primary collection transfers to secondary) in the neighbourhood, to a clean and efficient garbage transfer station. The station spanning 1500 sqft is expected to handle 500 kg daily waste from 1000 Households. The site design will include a leachate filtration system and follow the MSR rules of no garbage on ground.

### **Angavikalaru Anandam (Disabled Delight)**

Organization: The Karnataka Welfare Association for the Blind

Area name: Nehru Nagar, Sheshadripuram

The project looks at re-designing a dilapidated neighborhood park to be disabled friendly in order to make it an accessible, usable and a safe recreation space for 150 blind children and 250-300 visually impaired and orthopedically disabled visiting the Centre. This is also intended to benefit other residents of Risaldar Street and V.V. Girl slum (50,000 population).

### **Creating Safe Neighborhoods- Empowering Communities**

Organization: Enfold Proactive Health Trust

Area Name: Madiwala

The project looks to conduct training sessions for personal safety of children for teachers, nurses and policemen in Madiwala. For the selected ward, the training sessions are proposed in a total of 3 schools, 2 anganwadis, 2 hospitals/ nursing homes/clinics/ health centres and 1 police station over 3 months.

### Multiple cycle parking facilities in HSR layout

Organization: Soma Sundarapalya Neighbourhood Improvement Trust

Area Name: Soma Sundarapalya

The project looks to provide 23 cycle stands, as infrastructural support for cyclists in the neighborhood as means to aid last mile connectivity and short trips within the neighborhood. The stands are proposed at thirteen locations near markets and bus stops making up a circuit of approximately fifteen kilometres.

### **Inclusive Integrated Energy Centre**

Organization: Selco Foundation
Area Name: Pottery Road

The project looks to pilot a manned kiosk at a bus stop – as a charging station, powered by solar energy to provide 24/7 'on demand', easy to access, pay-per-use lighting and mobile charging services. The targeted users for this service are slums, street vendors and low income houses.

### **Using Zero Electricity STPs to Cleanse Polluted Kaluve**

Organization: FoRCE Brookefields

Area Name: Brookfield, Kundalahalli

The project proposes to construct an underground zero electricity anaerobic STP with a processing capacity of 100KLD to treat sewage flowing in the neighborhood kaluve. Once treated, the water is to be released into rainwater harvesting percolation pits (to be built in residual area of the site), while the excess water is to be let out continuing downstream into a lake.

### **Laning at Major U-Turns**

Organization: Ashima Open Homes Owners Welfare Association

Area Name: Ginger Hotel U-Turn, EPIP, Whitefield.

The project aims to redesign a road junction to reduce unnecessary traffic congestion and increase road safety with behavioral change through lane discipline. The proposal is to organize the existing U-turning based on scientific road standards accompanied with complementary road signage.

### **Navigation Maps & Sign Boards**

Organization: Welfare League Indiranagar Area Name: Indiranagar 2nd stage, 10th main

The project aims at providing well-designed street signage in the neighborhood, for way finding and navigation. In addition to street names and orientation maps, it will also provide information with regard to civic services in the area such as spots for garbage collection, parking zones and surrounding amenities.

### **NIVASA Suitcase Proposal**

Organization: Nivasa

Area Name: PattandurAgrahara

The proposal looks at addressing temporary housing solutions for migrant construction workers, offering portable housing that provide humane living conditions. The project proposes to pilot a cluster of six housing types, as easy to build structures adaptable and expandable to individual needs.

### **Wet Waste Composting and Permaculture**

Organization: Rise HAL 3rd Stage RWA

Area Name: HAL 3rd Stage, New Thippasandra

The project aims at setting up a waste segregation model for the neighborhood of 250 homes (1000ppl). This is to include a '2 bin 1 bag' system for enabling segregation at source and a wet waste management comprising of in-situ composting and permaculture in the neighborhood park.

### **Comprehensive Transport Plan**

Organization: Team Sanjaynagar & Jwalamukhi

Area name: Sanjaynagar

The project looks to provide 40 cycle stands, road safety signage and traffic calming interventions in the ward of Sanjaynagar to provide safe environments for cycling and walking and increase the number of people doing so in the ward. In addition, it will also focus on behaviour change through awareness and outreach programs in the schools, homes and cycle day events as well as introduce traffic safety wardens.

### **Street Lighting with Sensor Based LED Lighting**

Organization: Sri Sri Paradise & New Tippasandra Residents

Area Name: 3rd Main, New Tippasandra

The project looks to introduce as a pilot, 20 sensor based LED lights in neighbourhood street streets, replacing high energy guzzling HPSV lamps. Since the HPSV lamps are often left on through the day, the intervention will also prevent the resulting loss of electricity from the same. This intervention is expected to result in savings of close to Rs. 99,000 per year for BBMP.

## Tata Steel's Sukinda Mine Bags Many Awards

ata Steel's Sukinda Chromite
Mine (SCM), located in Odisha's
Jajpur district, has won the 'CII ITC
Sustainability Award 2015' for excellence in
CSR (Corporate Social Responsibility) and
'CII Industrial Innovation Award 2015'.

Instituted in 2006, the CII-ITC Sustainability
Awards recognize and reward excellence
in businesses that seek ways to be more
sustainable and inclusive in their activities.
This award is a part of the continued efforts
of Centre of Excellence for Sustainable
Development (CESD) to create awareness on



sustainability practices and to create capacities in business.

Sukinda Chromite Mine of Tata Steel received this award for significant contribution towards inclusive growth in its area of operation. The Company has been working for the overall development of people in the field of health, education, livelihood, women empowerment, sports and rural infrastructure around its operation in Sukinda.

Similarly, the company won CII Industrial Innovation Award 2015 as one of the Top 25 innovative organizations during CII Innovation & Entrepreneurship Summit- 2015 for innovation effort in the areas of mines safety, energy conservation and product quality by creating a culture of innovation.

The mine had earlier won Asian CSR Leadership Award in September 2014, Energy Excellence Award in December 2014 by Union Ministry of Power and CII Energy Excellence Award in September 2015.

### **Connecting Good Corporates & Good NGOs for CSR**

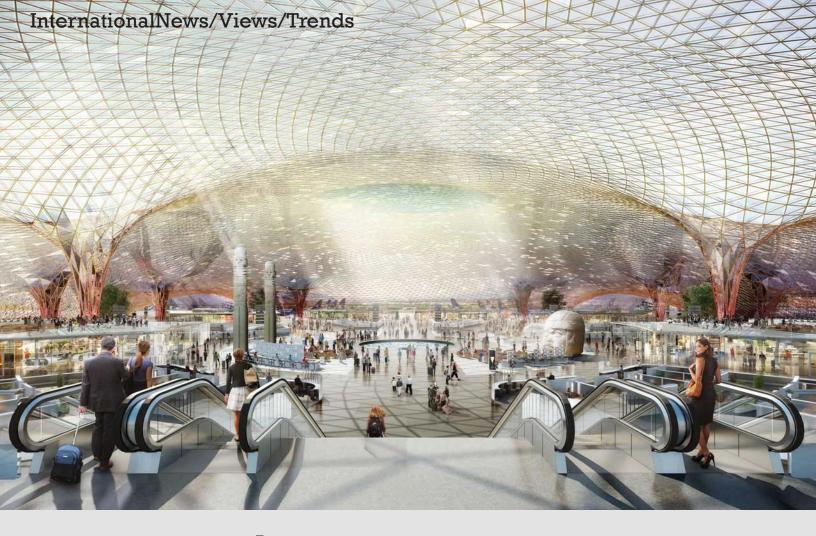
Problem of plenty is as difficult to handle as problem of scarcity. The Indian government's mandatory two percent spend on CSR projects has thrown up the problem of good companies chasing right projects to fund and the right NGO which can implement them.

The NGO community is eager but is not able to market itself too well.

**SustainabilityNext** is one of India's better platforms that can connect the two effectively so that precious time and resources can be used optimally.

The e-magazine is sold on **Magzter.com** and **Newshunt.com** and read by more than 40,000 business leaders, NGOs, entrepreneurs and graduate students.

Companies can advertise here to attract the best of people and NGOs to maximize the impact of their funds and NGOs can advertise to showcase their projects and capabilities.



# Mexico's 'Floating' Airport To Be Most Sustainable

ome of the most innovative minds in global architecture are coming together to build a revolutionary 'floating' airport in Mexico City that will be able to withstand earthquakes and the looming threats of the nearby Popocatepetl volcano, and it also promises to be the most sustainable airport in the world.

Last year, the Mexican government announced that a consortium led by British architect Norman Foster and Mexican architect Fernando Romero won the contract to build Mexico City's new \$9.2 billion international airport.

Foster, a prolific architect known for developing landmark buildings across the globe, along with Romero, a local urban developer and son-in-law of Mexican billionaire Carlos Slim, are already calling the airport project "out of this world" and "the most sustainable on the planet." It's being designed to shake like "a jelly in a bowl" when earthquakes hit, according to a promo video released by Foster's firm.

The new airport, the most ambitious infrastructure project commissioned by President Enrique Peña Nieto, is expected to start construction in 2016 and complete in 2020.

http://fusion.net/story/244905/mexicos-new-floating-airport-promises-to-revolutionize-sustainability/

# California Hosts World's First Fully Sustainable Biofuel Facility

alifornia is now home to the world's first fully sustainable liquid biofuel facility. It has the potential to address energy needs and climate goals with an economically viable solution.

The new San Joaquin
Valley-based facility, which
is owned and operated
by Biodico Westside, will
produce up to 20 million
gallons of biodiesel
per year. "The facility
is a result of years of
research and development
to produce biofuels that
make good environmental,
social and business



sense," said Biodico President and Founder Russ Teall. "Today, we are forging a new path in biofuel production by utilizing sustainable solutions to convert diverse feedstocks into renewable sources of fuel and energy."

The facility operates entirely on renewable heat and power and incorporates advanced realtime and remote monitoring leading to complete system automation. In addition to processing multi-feedstocks, including used cooking oil, vegetable oil, and animal fats to name a few, the facility also utilizes anaerobic digestion, gasification and an advanced utility scale solar cogeneration system.

"We developed proprietary technology to greatly **enhance the economics of producing high-quality biodiesel**, as well as **create a modular system that is easy to deploy on a global scale,**" said JJ Rothgery, Chairman of the Board at Biodico. "The facility is uniquely designed to meet the practical needs of regional transportation companies, and at the same time, provide a solution to address energy security and sustainable farming practices."

**Agricultural sustainability** is another focal point for Biodico's facility, which is helping farmers dispose of wood prunings, converting them into sources of renewable heat and power.

http://www.agprofessional.com/news/california-welcomes-world%E2%80%99s-first-fully-sustainable-biofuel-facility

# Coffee Can Be The First Completely Sustainably Sourced Commodity

onservation International (CI), in partnership with Ceres and industry leaders such as Starbucks and Keurig Green Mountain, want to make coffee the first sustainably sourced agricultural product in the world. Currently nearly half of the world's coffee is being produced according to a sustainability standard, yet only 12% was sold as sustainable coffee in the market.

"We need a common definition of sustainability for the coffee sector," said

Peter Seligmann, chairman and CEO of Conservation International. "This will require commitments by roasters to support increased demand for sustainability. It will also require improved measurement of how far the sector has come in the sustainability journey and just how far we have to go."

The Sustainable Coffee Challenge will convene industry and conservation partners to develop a common framework for sustainability in the coffee sector.



"The longevity of the coffee industry is directly linked to the social, economic and environmental conditions of coffee communities around the world, and at Starbucks we are committed to sourcing all of our coffee in the most ethical way possible that is good for the planet," said **Craig Russell**, EVP of **Starbucks Global Coffee**. "We are proud to be a part of the Sustainable Coffee Challenge, a

call to action for the industry focused on creating meaningful and lasting solutions to ensure farmer and family livelihoods for generations to come."



As demand increases – with consumers drinking 600 billion cups of coffee every year – warming temperatures, drought and changing weather patterns

are impacting coffee production. The Sustainable Coffee Challenge will also provide environmental benefits, including the conservation of vital forests that help fight climate change by storing carbon dioxide from the atmosphere and protection of freshwater resources.





http://www.sustainablebrands.com/news\_and\_views/collaboration/sustainable\_brands/conservation\_international\_issues\_challenge\_make\_cof



### **National Summit**

### **Sustainable Water & Sanitation**

7 - 8 January 2016, Sheraton Grand, Bengaluru

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### **Conference Overview**

LEARN from

thought leaders,

the existing and

future plans of

water & sanitation for India

The focus of NSSWS is to create awareness about the existing water and sanitation issues in India, the governments' future plan for Swachh Bharat Abhiyan, national reforms on water and sanitation and how sustainable sanitation and water management is the pathway to achieve this dream.

The key themes of the Summit are Policy reforms in Water and Sanitation, Water Matters, Open defecation free India, Recycle and Reuse and Skill Development.

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Mr. Dirk Walther Sanitation programme, **German Ministry for Economic Affairs** and Development



Mr. Emani Kumar Deputy Secretary General, **ICLEI World Secretariat** Regional Director. ICLEI South Asia Secretariat



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### The DNA of TATA's Success



The TATA Group is India's largest conglomerate and is also the most trusted brand. Usually they don't go together. A lot has been spoken and written about the legacy of the TATA leaders and about the crucial factors that have contributed to where the group is today. Yet, when the group's Chief Ethics Officer, its Spokesperson and Brand Custodian speaks there's something new to learn or a few ideas are refreshed. That's what Mukund Rajan did recently at The Centre for Corporate Governance and Citizenship (CCGC), Indian Institute of Management, Bangalore. He

shared some key elements in the TATA Groups' journey of building sustainable and successful global enterprise. Edited Excerpts:

he most important factor that governs Organisational Sustainability is a well-defined sense of mission and purpose. A clear sense of who we are and why we exist - this defines the organisational culture, greatly influences the people practices of the organisation which in turn influences behaviour of colleagues and the performance of the organisation. In case of the TATA Group, our commitment to giving back to the society really underlines our mission and purpose.

It started with our founder, Jamsetji Tata whose business philosophy reflected in this statement – Community is not just a stakeholder in business but in fact is its very purpose of existence.

Corporates have the responsibility to concern themselves with the quality of life in the community they serve. If the community is not successful, if the customer, the supplier, the investors, the lenders in that community are not successful, it's hardly likely the corporate that serves the community is even going to survive.

This inclusive vision of community and responsibility of corporates found its realisation amongst many other manifestations. For e.g., the way in which the city of Jamshedpur itself is build - wide streets, trees for shade, large areas for parks and gardens, large areas reserved for football, hockey and earmarked areas for temples, mosques and churches.

This notion of corporate responsibility soon morphed into trusteeship model of ownership under Jamsetji's two sons. Both his sons bequeathed their holdings in TATAs to charities. This conscious action was inspired by founders' own view of the role business should play in the community. Gifting of ownership to charities is now a firmly embedded notion of giving back to society within TATA's corporate structure and DNA.

The TATA Trust gives around 100 million dollars to charity every year.

### **Principle Tools**

**Tata Code of Conduct** – These are guidelines for ethical conduct which reinforce the value system which has endured since the group was founded. They are periodically revised and all violations are appropriately penalised in an open manner.

**Tata Business Excellence Model** – Allows benchmarking of all TATA companies with their global peers with sharing of best practises across group companies and has in fact resulted in improved competitiveness of the TATA companies.

### **On-going Initiatives**

Tata Engage - Volunteering activities for the employees - aims at connecting them with the community.

Employees can personally experience the joy of giving back to society.

70,000 TATA employees signed up and have put in 4,00,000 volunteering hours till date.

**Tata Strive -** Skills development program. An effort to train young people for employment entrepreneurship and community enterprise

A network of skill development centres to be developed including captive centres in company, govt centres like ITI and non-profit.

Cause-based marketing - Based on the philosophy that if businesses are willing to clarify the higher purpose they serve, customers are also willing to reward them with both mind-share and share of quantity.

For example, Power of 49 – Jaago Re – encouraged Indian women to make independent and informed votes. Along with achieving business goals, a strong emotional connect was created. The last general election had the largest percentage of Indian women voting.

**Recognition and Awards** – Awards are designed to encourage innovation and pioneering in the group. The company recognises that innovation and pioneering entails effort and risk and frequent disappointment.

"These initiatives are examples of the way in which at the TATA Group, we ensure that our sense of mission and purpose constantly feeds into the way we engage with a variety of stake holders.

Also it informs and guides our human relations and the way we engage with people and that inclusiveness led to a number of pioneering initiatives like the 8-hour work day, maternity benefits and crèche."

### **Gender Equality and Diversity Initiatives**

We are committed to doubling the number of women in our workforce by 2020. Also, we aim to have 1000 women CEOs, CXOs and leaders across our businesses.

Mr. Rajan concluded his talk with an example of how alignment of mission and purpose at TATAs creates a sense of higher purpose. "In the 26/11 terror attacks at Taj Hotel, Mumbai, none of the 600 staff members left or tried to escape even though they had the opportunity to do so. All of them stayed back to help the guests and ensure their safety."

Idea2practice

# Ambuja Cement is 4 Times Water Positive

MD and CEO Ajay Kapur on how Ambuja Cement is striving to be the most sustainable and competitive among the cement companies in India. Excerpts from its latest Sustainability Report:



### Ambuja's role with respect to Sustainability?

Along with ensuring shareholder benefit over the years, safe operations, environment conservation and social well-being have also been at the core of our philosophy. This approach has been adopted in every facet of Ambuja's activities - business strategy, leadership, natural resources, health, safety, ethics and all stakeholders.

In 2014, we had significant achievements in the use of alternative fuels and raw materials wherein we achieved 3.95 % of TSR (8% increase over 2013). Notably, our Bhatapara Line II kiln contributed maximum GAV (~12 cr) during the year. We also burnt 34,876 tones plastic in our kilns in 2014 which is 1.02 times of total plastic thrown in the market by the company in terms of packing bags. Furthermore, we generated 4.5% of energy from renewable energy sources.

We maintained PPC production in excess of 90% continuing our focus on production of environment friendly fly ash based cement. We achieved ~29% fly ash absorption in 2014. The total quantity of fly ash to the tune of 5.8 MTPA has been utilized in the year 2014 for production of cement. This has helped to reduce the clinker factor (CF) from 75.15% in 2006 to about 67% in 2014. CF improvement plans are in place which includes clinker quality improvement, gypsum optimization, usage of aid mixtures, usage of ground fly ash etc.

### How are you engaging with civil society and other stakeholders?

Our pan-India CSR activities encompasses women empowerment through self help groups (824 numbers in 16 locations), skill and entrepreneurship development institutes (for 45 trades at 16 centers), agro-based livelihood creation, education, water resources management, and others.

The company's endeavour continues to emerge as among the world's most water positive Company. A combination of various program and revolutionary methods such as check dams, river linking, micro and drip irrigation, and conventional dams are employed for water resource management. Through rainwater harvesting, large quantities of water were collected that would have otherwise gone unused. Steadily the results grew with each year. **Today, Ambuja Cement is proud to be 4 times water positive,** as certified by external certification body DNV GL, making it India's leading water positive cement company.

Our consistent efforts towards sustainable development have been recognized from various awarding bodies. We received the prestigious CII Sustainability Award 2014 for 'Commendation for Significant Achievement' for the 4th year in a row. In addition, Ambuja was also conferred the coveted CBNC TV18 Risk Management Award in the category of Sustainability.

### How much weightage does safety have in the Ambuja's Sustainability mission?

Ambuja embarked on a mission 'We Care' to achieve 'Zero Harm' at the workplace. But achieving 'Zero Harm' is not the ultimate goal, it is a journey that will involve transformation of operations as well as attitudes. Through our constant efforts, I am proud to say that the 'We Care' initiative was selected as one of the Top five initiatives (among 82 entries) for the Holcim Global OH&S Excellence Award 2014.

## How do you align with HOLCIM's global sustainability development ambition 2030?

Ambuja's True Value project piloted in 2013 helped quantify the social and environmental impact in financial terms (measuring triple bottom line). This tool will be utilized by Holcim to drive implementation of the Holcim Sustainable Development Ambition 2030.

Holcim SD Ambitions 2030 is broadly classified into three pillars – Climate, Resources & Communities. Some of the focused measures undertaken by Ambuja include an investment in Alternative Fuel processing facilities, Waste heat recovery system, Wind and solar energy, and increasing the use of Fly Ash and other alternative fuels/materials. This will help in minimizing the use of primary resources and climate protection.

Ambuja has also identified an opportunity to add significant value through its inclusive business project, Sanitation for Life (S4L).

## **Boast About Your CSR Success**



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ManagementNext and SustainabilityNext are India's leading e-magazines whose mission is to inspire and enrich executives, entrepreneurs and graduate students about doing well by doing good.

## **Healthy Affordable Fast-food**

Bhukkad joins the list of recent food chains in Bangalore that claim to serve healthy and affordable food compared to what restaurants offer.

### **By Uma Haridas**

by Aruj Garg as a regular college eatery to cater to the desire of having palatable food on campus. But when Aruj was diagnosed with high cholesterol levels after his graduation, he attributed it to eating food outside. This triggered his business idea – to serve healthy food and even deliver it home/hostel/PG. His segment, according to him, is that which wants to consume organic and healthy food but not at rates charged by cafes and restaurants.



His menu avoids preservatives and processed elements. Bhukkad currently serves sandwiches, salads, burgers, beverages, sweet treats and main course meals.

The business works on a hub-and-spoke model where the central kitchen acts as a hub with the final assemblage taking place at small delivery centres before the order is shipped out to the consumer. Technology, Aruj says, will play a huge role in making kitchen operations smoother and faster, bring in consistency to the food and will help track various metrics of operations for optimization.



Ashutosh, Aruj, Richa, Nandita and Sunayana

The team at Bhukkad is small, of about 35 people. Delivery is outsourced to a logistics partner.

The venture's future plans include evolving into a more meal-based food outlet than a snacking option and spreading across the city by the end of this year. It also intends to keep increasing its offline presence. "So the business will be a combination of offline and online sales channels," Aruj says.

A number of online food delivery companies

and cloud kitchens have sprung up the past year and are changing the dynamics of the food industry. "All online food delivery options are our competitors. However, we have been able to craft a niche for ourselves with our food," he adds.

http://yourstory.com/2015/09/bhukkad/

http://pn.ispirt.in/bhukkad-is-moving-towards-becoming-mcdonalds-of-natural-fast-food-in-bangalore/

# Why Mobile Towers Can't Go Solar Soon?

STEP SCHOOL TO STORY OF SCHOOL TO SC

The mobile sector emitted 58 million tonnes of CO<sub>2</sub> in 2014-15.

Murali R. Ananthakumar offers options about how it can bring this down

nder the umbrella of NAPCC, the National Solar Mission (NSM) and National Mission on Enhanced Energy Efficiency (NMEEE) are two key initiatives that aim to shift our dependence on fossil fuel to green energy and promote efficient consumption of energy. This article assesses the overall impact of the Indian mobile telecom sector on the energy scenario and examines potential options to reduce its dependence on fossil fuel, especially diesel.

The Indian telecom subscription has reached a new record in May 2015, according to the Telecom Regulatory Authority of India (TRAI). Using a Life Cycle Analysis (LCA) approach, this article examines the overall energy consumption of the mobile telecom sector, and its associated carbon dioxide (CO2) emissions. State and Central policies, such as REC (Renewable Energy Certificates) and Renewable Purchase Obligation (RPO), to foster growth in solar energy utilisation across sectors have also been studied to understand bottlenecks, if any.

### Structure of the mobile telecom sector

The mobile telecom sector is categorised into three divisions and various sub-divisions where energy and associated emissions are calculated. This approach is applied to calculate the amount of energy required to manufacture a mobile device, and then to provide signal via service providers, including device usage (charging time). Using this bottom-up approach, the total amount of energy consumed in 2014-15 was estimated to be 103 Terawatt hour (TWh) (A terawatt hour is equivalent to one billion units. The 103 TWh takes into account both grid and diesel power supplied to all the base transceiver stations operated across the country).

The manufacturing unit and telecom network infrastructure consumed about 46% and 45% of energy respectively, while device usage accounted for the remaining 9%. The component manufacturing segment, within the manufacturing unit, consumes 68% of 47.43 TWh (the total amount of energy consumed by the segment). It encompasses designing

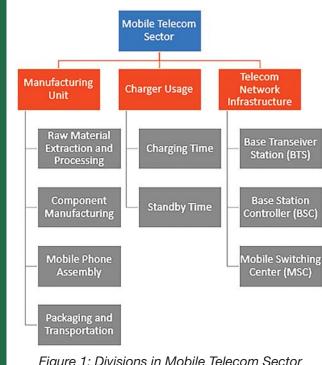


Figure 1: Divisions in Mobile Telecom Sector using LCA Framework

integrated circuits using components such as capacitors, transistors and resistors that are mounted on a printed circuit board for every variety of handheld devices. The telecom network infrastructure takes into account all the towers (referred to as Base Transceiver Stations or BTS) providing signal to mobiles across the country. These towers are usually powered by the grid, with diesel generator sets providing power during power outage. The energy consumed by BTS was about 28.5 TWh.

Direct emissions associated with the mobile telecom sector are primarily due to the diesel consumed by the towers. More than three and a half billion litres (number of towers: 0.4 million and average diesel consumption

of a tower is 8760 litres every year) of diesel was consumed by the Indian telecom industry in 2011, according to a report published by TRAI. An estimated total of 58 million tonnes of  $\rm CO_2$  was emitted by the telecom industry in 2015 – and out of this, 37.5% can be attributed to the telecom network infrastructure and 12.6% is due to mobile usage. The manufacturing unit accounts for the remaining half of the emissions in the telecom industry.

### **Policy Landscape**

In order to reduce the carbon footprint of the telecom sector, dependency on diesel needs to be minimised, along with technology upgradation with a focus on energy efficiency. Component manufacturing and diesel-powered towers consume 61 TWh of the total 102.3 TWh. Hence,

Energy Consumption in 2015(TWh)				
Raw Material Extraction and Processing	6.2			
Component Manufacturing				
Mobile Phone Assembly				
Packaging and transportation	8.1			
Charging	7.1			
Standby	1.8			
BTS (Grid)	17.4			
BTS (Diesel)	28.5			
Base Station Controllers(BSCs)	0.03			
Mobile Switching Centers(MSCs)				
TOTAL	102.3			

Table 1: Energy consumption of various divisions in Mobile Telecom Industry in 2015

implementation of energy efficiency measures in the component manufacturing division and substituting diesel with green energy are two key measures that need to be undertaken to reduce the sector's energy and emission footprint. These are the low-hanging fruits for attaining energy savings. However, very little has been done to address opportunities for diesel abatement. Thus, we narrowed our focus on the network infrastructure division, to understand the potential of green energy substitution and technology upgradation, for a scenario-based analysis.

To calculate the renewable energy potential, three scenarios (explained below) were employed.

Scenario 1: In the Business as Usual (BAU) scenario, no changes were considered in the current infrastructure. Further, 2016 onwards all new towers will be upgraded to and powered by renewable energy. Compact BTS weigh lighter (15kg) than the traditional ground-based BTS (100-200kg) and distributed BTS (30-145kg). They also consume less power (65-150W) as compared to its predecessors.

Scenario 2: In this scenario, around 25% of the existing installations until 2015 and all new installations from 2016 are assumed to be powered by renewable energy. In addition, all the towers installed from 2016 have been assumed to be compact BTS.

Scenario 3: Around 50% of the towers are to be powered by renewable energy, while the remaining 50% will be powered by both the grid (25%) and diesel (25%) for towers installed before 2015. It has been assumed that all the installations from 2016 will be compact BTS.

From the results of our analysis, it has been observed that the third scenario yielded more energy and emissions savings as compared to the BAU scenario. Around 70% of CO2 savings potential has been estimated by implementing energy efficient technology and green energy penetration. The current policy landscape offers few incentives to the telecom sector for solar power installations. If a tower chooses to install renewable energy system, they can avail credits for the generated energy.

Telecom towers can be categorised under 'industrial sector' in grid connected rooftop solar power project specification based on this notice. Associated benefits, for setting up grid connected rooftop and small solar plants are prioritised based on the nature of the consumer – where industrial entities are lined up only after five other sectors. The overall electricity consumed by the telecom sector is high enough to revise (increase) the RPO targets of a State, if all the telecom towers opt to install renewable energy technology.

In conclusion, considering the power consumption and emissions share of the telecom industry, it would be beneficial for the sector to participate and 'greenergise' our economy.



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Danisa Malope Maintenance Manager, Eskom "An excellent course, more than I expected. This was the most informative and best course I ever attended. Thank you very much."

Sanet Flooks

Senior Systems Planner, Matla Colliery, Exxaro



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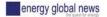














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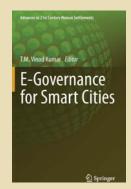
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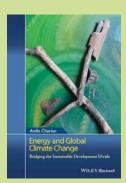
### BY INDIAN AUTHORS



### E-Governance for Smart Cities (Advances in 21st Century Human Settlements)

Professor T. M. Vinod Kumar, Springer 2015 Edition

his book highlights the electronic governance in a smart city through case studies of cities located in many countries. "E-Government" refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits are less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.



### **Energy and Global Climate Change: Bridging the Sustainable Development**

by Anilla Cherian, Wiley-Blackwell, October 2015

nergy and Global Climate Change: Bridging the Sustainable Development Divide focuses attention on two urgent global development challenges faced by the UN and its member states: access to sustainable energy for all, and global climate change. This book presents compelling evidence about an often neglected aspect of the energy–climate change–development nexus faced by millions of poor: problems caused by the use of inefficient and polluting energy sources, and the lack of access to sustainable energy services.

Based on a detailed examination of major UN global climate change and sustainable development negotiated outcomes over the course of several decades, this book argues in a powerful and insightful manner that intergovernmental negotiated outcomes aimed at solving the climate change and energy access challenges have been restricted by being placed in different negotiating silos. This siloization or compartmentalization has resulted in separate tracks of negotiated outcomes on two inextricably linked global development challenges; and, has thereby hindered prospects for integrated action.

This book points out that the existence of these two silos is especially hard to ignore in light of the urgent UN-led quest for an integrated and universal post-2015 development agenda anticipated to be anchored by new sustainable development goals on energy access and climate change. By addressing the heavy reliance on inefficient and polluting energy services which result in indoor air pollution and short lived climate pollutants that tragically impact millions of poor people, this book highlights the unique importance of integrated action on the energy-poverty-climate change nexus in the UN s post-2015 development era.

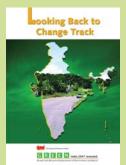




### **Environment and Development: China and India**

By CAEP, TERI, The Energy and Resources Institute, October 2015

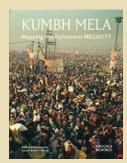
India a trajectory of high growth, China and India face a common challenge of achieving an environmentally benign pattern of development owing to growing global issues like climate change, land degradation, and biodiversity loss. In wake of the above, the China Council for International Cooperation on Environment and Development (CCICED) and the India Council for Sustainable Development (ICSD) commissioned a joint-study, to be conducted by Chinese Academy of Environmental Planning (CAEP) and The Energy and Resources Institute (TERI). This book is the outcome of the study and understands the environment and development paradigms for both India and China, identifies key issues, and draws commonalities, differences, and lessons that can be learnt.



### **Looking Back to Change Track**

By TERI, The Energy and Resources Institute, October 2015

In 1997, when India celebrated 50 years of its Independence, TERI's study Growth with Resource Enhancement of Environment and Nature (GREEN) India 2047 assessed whether the country was moving on an environmentally sustainable path. The sequel to the study, Directions Innovations and Strategies for Harnessing Action (DISHA) for sustainable development, released in 2001, projected environmental and resource implications for the country by 2047 under two scenarios, that is, continuing in a business-as-usual mode and adopting a more sustainable development trajectory. The present study picks up the thread from 1997, examining environmental trends in the last decade, isolating underlying priority issues and identifying strategies that are needed to prevent or ameliorate environmental damage. The mandate of the present study, thus, is to go beyond reporting the state of India's environment. Through an evaluation of the major factors that are responsible for the present state and the characteristics of resulting impacts, the study provides an agenda for action.



### Kumbh Mela: Mapping the Ephemeral Mega City

By Rahul Mehrotra & Felipe Vera, Niyogi Books, August 2015

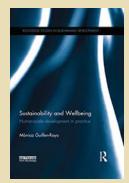
any people are not familiar with Kumbh Mela, and yet it is the largest celebration on earth: depending on the positions of Jupiter, the sun and the moon, Hindus travel to certain places along holy rivers, the Ganges for example, to bathe and cleanse themselves of sin. With a 2013 attendance of approximately 34 million, the triennial pilgrimage requires that the communities hosting the gatherings create functioning temporary structures to transport, house and feed enormous crowds of people.

In 2013, a team from Harvard University monitored the large-scale event from its preparation through to the actual celebration, investigating and documenting the prototypes for flexible urban planning and offering organizers advice on issues around environmental protection. This substantial hardcover presents their comprehensive research findings along with city maps, aerial images and photographs of this most fascinating feat of urban planning.



SustainabilityNext's Choice
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### BY INTERNATIONAL AUTHORS



## Sustainability and Wellbeing: Human-Scale Development in Practice (Routledge Studies in Sustainable Development)

by Mònica Guillen-Royo, Routledge, October 2015

The idea that we can meet human needs and simultaneously conserve and even enhance the natural environment is an attractive one. Since the Brundtland report popularised a definition of sustainable development based on the concept of needs, there has been a widespread belief that it should be possible to achieve a good quality of life without compromising natural ecosystems.

Sustainability and Wellbeing fills a gap in sustainable development studies by drawing on a range of case-studies to discuss the challenges and opportunities of using Max-Neef's Human Scale Development (HSD) framework in practice. The first section presents the theory and the methodology of HSD in the context of related literature on sustainable development and wellbeing. The second section discusses applications of the HSD methodology with three different purposes: the design of sustainable development interventions; the engagement of researchers with communities or groups of people in sustainability processes and the consolidation of sustainable community initiatives. Finally, the third reflects on challenges and limitations of using the HSD approach to define strategies for sustainable development and concludes.

This is an invaluable resource for researchers and postgraduate students in wellbeing, sustainability, sustainable development, and human development.



## The Business Guide to Sustainability: Practical Strategies and Tools for Organizations

By Darchy Hitchcock & Marsha Willard Routledge; 3 edition (April 3, 2015)

his is a practical introduction to implementing a comprehensive sustainability strategy in any organization. Written by top business consultants, this useful book can be applied in both large and small enterprises. This edition shifts away from a discussion of CSR to focus more squarely on sustainability. It explores strategies for implementing sustainability in each of the functional areas of the corporation (accounting, HR, operations, etc.), while providing examples from a range of sectors, including manufacturing, services, and government. The book also includes the author's' S-CORE assessment tool to help organizations determine whether they are on the right track, identify new opportunities, and assign accountability and responsibility.

Brimming with interesting stories and examples, and covering new developments such as the emergence of BRICs and the effects of the Great Recession, this book will interest managers, business owners, and students for whom sustainability is a priority.



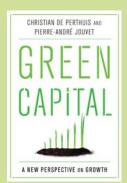


## **Sustainable Champions: How International Companies are Changing the Face of Business in China**

By Fu Jia, Jonathan Gosling and Morgen Witzel, Greenleaf Publishing, September 2015

In the face of strong competitive pressure and a dynamic market, multinational companies in China are forced to innovate with extraordinary pace and inventiveness. Environmental sustainability is a vital benchmark, and is a key driver for the best companies in each sector - many of them allied with the WWF Climate Savers programme. Sustainable Champions shows how nine leading multinational companies - including Nestlé, HP, TetraPak and Sony - are dealing with environmental, supply chain and ethical challenges in China. The book illuminates some of their transformative practices, and the impact this is having on business in China and beyond. The concluding cross-case analysis of supply chain and environmental challenges faced by leading international firms presents key lessons for business and for sustainability champions.

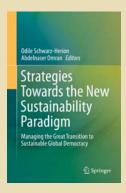
Sustainable Champions: How International Companies are Changing the Face of Business in China is essential reading for researchers and course leaders seeking on-the-ground examples of local environmental challenges, and any company doing business in one of the world's fastest-growing economies.



### **Green Capital: A New Perspective on Growth**

by Christian de Perthuis, Pierre-André Jouvet, Columbia University Press, October 2015

hallenging the certainty that ecological preservation is incompatible with economic growth, Green Capital shifts the focus from the scarcity of raw materials to the deterioration of the great natural regulatory functions (such as the climate system, the water cycle, and biodiversity). While we can find substitutes for scarce natural resources, we cannot replace a natural regulatory system, which is incredibly complex. It is then essential to introduce a new price into the economy that measures the costs of damage to these regulatory functions. This shift in perspective justifies such innovations as the carbon tax, which addresses not the scarcity of carbon but the inability of the atmosphere to absorb large amounts of carbon without upsetting the climate system. Brokering a sustainable peace between ecology and the economy, Green Capital describes a range of valuation schemes and their contribution to the goals of green capitalism, proposing a new, practical approach to natural resources that benefits both businesses and the environment.



## Strategies Towards the New Sustainability Paradigm: Managing the Great Transition to Sustainable Global Democracy

By Odile Schwarz-Herion & Dr. Abdelnaser Omran, Springer, April 2015

n a historical global turning point, this book offers a thorough exploration of the "New Sustainability Paradigm", originally developed by the Global Scenario Group (GSG) of the Stockholm Environmental Institute (SEI) as a starting point for analyzing real-life transitions and transformations. 11 contributors from 5 continents present detailed analyses of economic and political transitions in Western and Eastern Europe, the USA, the Middle East, and in Asia, discussing the role of different players in the implementation of the New Sustainability Paradigm.

It offers an analysis of insights developed throughout the book, and outlines recommendations for the implementation of the New Sustainability Paradigm by civil society, grass-root movements, scholars, politically neutral NGOs, sincere media players, and by open-minded and enlightened politicians to manage and steer the Great Transition towards sustainable global democracy.

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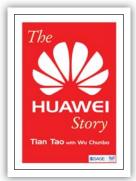


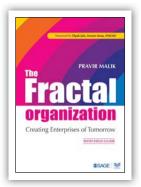
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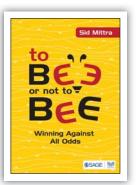
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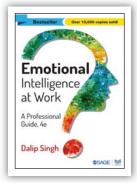
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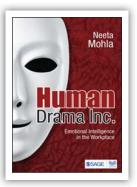
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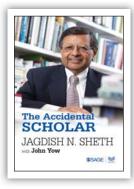




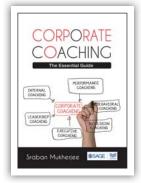


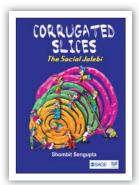


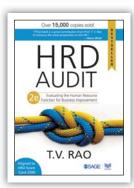












### **Must-have Journals!**

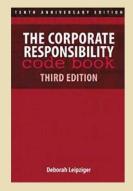






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## BOOKSHELE



### The Corporate Responsibility Code Book - Third Edition

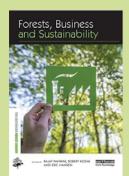
By Deborah Leipziger, Greenleaf Publishing, November 2015

The Corporate Responsibility Code Book has become the go-to guide for companies trying to understand the landscape of corporate responsibility and searching for their own, unique route towards satisfying diverse stakeholders. There is no one-size-fits-all approach. A company may face quite different challenges if it operates in more than one part of the world. And yet stakeholders, especially consumers and investors, are keen for some degree of comparability with which they can evaluate corporate performance. There are countervailing forces at work within corporate responsibility: on the one hand is the need for convergence in order to simplify the large numbers of codes and standards; and, on the other hand, the need to foster diversity and innovation.

Many of the best codes of conduct and standards are not well known, while some CR instruments that are well disseminated are not terribly effective. Some comprehensive codes of conduct achieve nothing, while other quite vague codes of conduct become well embedded into the organization and foster innovation and change. This landmark book explains the best CR instruments available, and distils their most valuable elements.

In the fully revised third edition, Deborah Leipziger widens her lens to provide detailed analysis of the UN Guiding Principles on Business and Human Rights, the Gender Equality Principles and ISO 26000 while updating other key tools such as the Equator Principles, the OECD guidelines and GRI's new G4 framework.

The codes in this book cover a wide range of issues, including human rights, labour rights, environmental management, corruption and corporate governance. The book also includes how-to (or process) codes focusing on reporting, stakeholder engagement and assurance.



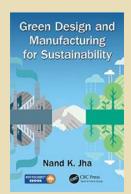
### Forests, Business and Sustainability

by Rajat Panwar, Robert Kozak, Eric Hansen, Routledge, December 2015

orests are under tremendous pressure from human uses of all kinds, and one of the most significant threats to their sustainability comes from commercial interests. This book presents a comprehensive examination of the interactions between the forest products sector and the sustainability of forests.

It captures the most current sustainability concerns within the forestry sector and various sustainability-oriented initiatives to address these. Experts from around the world analyze interconnected topics including market mechanisms, regulatory mechanisms, voluntary actions, and governance, and outline their effectiveness, potential, and limitations. By presenting a novel overview of the burgeoning field of business sustainability within the forestry sector, this book paves a way forward in understanding what is working, what is not working, and what could potentially work to ensure sustainable business practices within the forestry sector.





### **Green Design and Manufacturing for Sustainability**

by Nand K. Jha, CRC Press, December 2015

reen Design and Manufacturing for Sustainability integrates green design and manufacturing within the framework of sustainability, emphasizing cost, recyclables, and reuse. It includes the analytical techniques for cost minimization, reduction of material waste, and the reduction of energy consumption during the manufacturing process.

The text introduces sustainability principles, then goes on to detail all aspects of green design, economics, feasible material selection, and relevant and efficient manufacturing processes. It highlights techniques such as life cycle cost assessment, reuse, and recyclables and showcases them with examples and problems solved.

In addition, the author defines green mechanical design as the selection of materials, processes, and geometry that satisfies specified and implied environmental requirements. He stresses that for sustainability, social, environmental, and economic development must be integrated and balanced.

Developed to bring environmental issues into the basics of mechanical component design and manufacture, the textbook brings together principles of environmentally conscious design and sustainable manufacture in a format with examples and problems that can be adapted for undergraduate classes.

The carefully selected range of examples and exercises presented makes it easier to adopt into the engineering curriculum suitable for senior-level undergraduates as well as first-year graduates.



### Positive Finance - A Toolkit for Responsible Transformation

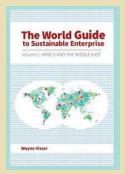
By Hervé Guez and Philippe Zaouati, Greenleaf Publishing, December 2015

For some, finance is the enemy: solely responsible for the global financial crisis and symbolic of an outdated model that is catapulting us toward social and ecological ruin. Such a view can seem tempting. The 2007-2008 meltdown of the financial system was intimately bound to the financialization of the economy and its consequences. However, in reality the crisis in finance is an indicator that our economic model is obsolete. It is possible to imagine another way, which would consist of seeing finance as a "toolkit" for building a solution to the crisis.

Positive Finance presents a way to transform the economic model and reduce the everwidening gulf of inequality, while taking into account environmental constraints. In order to achieve this, the authors argue that we must re-envision the allocation of capital in order to support social and technological innovations, to design and build sustainable infrastructure, and to finance the energy transition.

Reinvented, finance could become a powerful lever for setting these transformations in motion. This book is dedicated to proving that such leverage is within reach: here, the authors present a toolkit for putting money to work in the general interest.





### The World Guide to Sustainable Enterprise: Volumes 1-4

Edited by Wayne Visser, Greenleaf Publishing, December 2015

he World Guide to Sustainable Enterprise is the first comprehensive global compendium that clearly describes the national approaches to sustainable enterprise. Through a systematic review of each country, this quick-to-access reference Guide showcases the similarities and differences in each region. Each profile includes keyinformation about the relevant history, country-specific issues, trends, research, best-practice case studies and the leading organizations operating in the field. The Guide comprises four volumes, each dedicated to a specific region of the world.

In a world where organizations are working increasingly across national and regional boundaries and research takes a joined-up and international approach, this book is an essential guide for practitioners and researchers in the disciplines of business sustainability, social enterprise and corporate responsibility. The first of its kind, this reference book provides the reader with a unique insight into what is the current state-of-play in each country.

Each edited volume provides expert contributions from around the world; the contributors have been selected on the basis of their knowledge of the country and their clear experience in sustainable enterprise. Each regional/country profile includes the following subsections: Sustainable Enterprise in context; Priority issues; Trends; Government policies; Case studies; Further resources; and References.

This unique resource will be an essential acquisition for all organizations who need to benchmark their sustainable enterprise strategies throughout different regions and cultures and want the best possible intelligence on the key issues and concerns relating to sustainable business and social responsibility in all of the markets in which they operate. It provides a useful companion reference collection to the World Guide to CSR, also edited by Wayne Visser.



## Water Security, Climate Change and Sustainable Development 2016 (Water Resources Development and Management)

by Asit K. Biswas, Cecilia Tortajada, Springer Verlag, December 2015

his book pursues a comprehensive approach so as to arrive at a better understanding of the implications of climate change on sustainable development, focusing on the perspective of water. Climate change is one of today's most pressing global issues and will become increasingly important in the decades to come, as societies will feel its pervasive impacts in many aspects of their lives. Given that the majority of these climate change impacts will be felt through the medium of water, the book explores the interrelationships and interlinkages between water, climate change and sustainable development.

### **INDIA MANUFACTURING EXCELLENCE AWARDS 2015**



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JCB India Limited	Ballabgarh	Future Ready Factory - Platinum Award   Engineering Sector, Mega Large Business		
Mahindra & Mahindra Limited, Plant I	Nashik	Future Ready Factory - Platinum Award   Automotive Sector,		
Mahindra & Mahindra Limited	Haridwar	Mega Large Business		
	Bangalore	Future Ready Factory - Platinum Award   FMCG Sector, Mega Large Business		
ITC Limited - India Tobacco Division	Saharanpur			
	Kidderpore			
Pfizer Limited	Goa	Future Ready Factory - Platinum Award   Pharma Sector, Large Business		
		Consistency Award   Aspirer		
SKF India Limited	Pune	Future Ready Factory - Platinum Award   Engineering Sector, Large Business		
Hindustan Coca Cola Beverages Pvt. Limited	Ameenpur	Future Ready Factory - Platinum Award   FMCG Sector, Large Business		
Subros Limited	Noida	Future Ready Factory - Platinum Award   Auto Ancillary Sector, Medium Business		
Gold Awards Gold Awards				
Bharat Petroleum Corporation Limited - Mumbai Refinery	Mahul	Gold Award  Process Sector, Mega Large Business		
Essar Oil Limited	Vadinar			
Bharat Aluminium Company Limited	Korba	Gold Award   Metals Sector, Mega Large Business		
Hindustan Unilever Limited	Barotiwala	Gold Award   FMCG Sector, Large Business		
Johnson & Johnson Pvt. Limited	Baddi	Gold Award   1st Runner Up - FMCG Sector, Large Business		
Dr. Reddy's Laboratories Limited - FTO 2	Hyderabad	Gold Award   Pharma Sector, Large Business		
Schneider Electric IT Business India Pvt. Limited - IDF 4 & 5	Bangalore	Gold Award   Engineering Sector, Medium Business		
Philips India Limited	Vadodara	Gold Award   Engineering Sector, Medium Business		
Johnson & Johnson Pvt. Limited	Mulund	Gold Award   FMCG Sector, Medium Business		
Raychem RPG Pvt. Limited	Vasai - East	Gold Award   Engineering Sector, Emerging Business		
Schneider Electric India Pvt. Limited	Hyderabad	Gold Award - 1st Runner Up  Engineering Sector, Emerging Business		
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www.bhoomicollege.org

### Post Graduate Diploma Course in Sustainable Development (PGDM-SD)

http://bimtech.ac.in/

### M.Sc. in Sustainable Development - Distance learning Course + information

The Global Open University

http://nagaland.net.in/

### Post-Graduate Certificate in Sustainable Enterprise

Indian Institute for Sustainable Enterprise

http://theiise.net/pgcertinse.html

### Postgraduate in Sustainability Management

Silver Bright Institute of Management

http://www.htcampus.com/college/silver-bright-institute-management-sbim

### Post Graduate Diploma in Sustainability (Distance learning)

Chhattisgarh University

http://www.cguniversity.com/

### **Post Graduate Diploma**

IGNOU- Indira Gandhi National Open University

http://www.ignou.ac.in/

#### **MBA** in Environmental Science

School of Management & Infrastructure and Development Studies

http://www.minds-india.org/

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Bharati Vidyapeeth Deemed University

http://www.bharatividyapeeth.edu/Campuses/Pune/default.aspx

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TERI University

http://www.teriuniversity.ac.in/

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http://www.thapar.edu/

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http://www.vellalar.com/Arts/carrer-oriented-programmes.php

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http://www.gauhati.ac.in/

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http://www.bamu.net/dept/environment/

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http://www.vpmthane.org/polywebnew/courses.html

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http://www.universityofcalicut.info/

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http://puchd.ac.in/

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http://www.b-u.ac.in/

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http://www.annamalaiuniversity.ac.in/

## PhD in Environmental Bio-Technology & Solid Waste Management School of Environmental Sciences

Jawaharlal Nehru University

http://www.jnu.ac.in/main.

asp?sendval=SchoolOfEnvironmentalSciences

### **MBA in Energy & Environmental Science**

Symbiosis Institute of International Business

http://www.siib.ac.in/programmes.aspx

### **Events**

### **National Conference in Emerging Trends**

January 6, 2016,

T John College, Bangalore

### **International Conference on Illicit Trade - Threat to National Security and Economy**

January 15, 2016, New Delhi

Contact: Kashifa Hasan, kashifa.hasan@ficci.com

### 2nd National conference on "Plastics Packaging - The Sustainable Choice"

January 19, 2016, FICCI, New Delhi

Contact: Ms. Rinky Sharma, rinky.sharma@ficci.com

### CII's IWN Tamil Nadu - 'Entrepreneurial DNA Business Simulation Workshop'

Wednesday, 20 January 2016: Chennai

Contact: K Savitha, savitha@cii.in

### Kerala Business to Business Meet 2016 (3 Day Event)

February 04, 2016, CIAL Trade Fair & Exhibition Centre, Kochi, Kerala

Contact: Samrat Soo, samrat.soo@ficci.com

### H<sub>2</sub>O Tech - Conference on Water Management

12th February 2016: Hotel The Residency; Coimbatore, INDIA

http://www.indianhighcommission.com.my/commerce/news.php?nid=70

### **Beyond 2015: People, Planet & Progress**

February 1 - 4, 2016, Indian Habitat Center, Lodhi Road, New Delhi

http://www.indian-embassy.dk/pdf/DSDS\_2016\_ Brochure.pd

### The GRIHA Summit 2016

18th-20th February 2016, Indian Habitat Center, Lodhi Road, New Delhi

http://www.grihaindia.org/index.php?option=com\_events&id=114

### **TIECON Chandigarh**

Friday, 19 February 2016, Hotel The Lalit, IT Park, Chandigarh

Contact: harchitvan@tiechandigarh.org

### 5th Annual International Conference on Sustainable Energy and Environmental Sciences

February 22-23, 2016, Hotel Fort Canning, Singapore

http://www.nature.com/natureevents/science/ events/37349-5th\_Annual\_International\_Conference\_ on\_Sustainable\_Energy\_and\_Environmental\_Sciences\_ SEES\_2016

## 8th Edition of Conference on Automotive R&D Trends - Theme: "Strategizing R&D: Meeting the Regulatory Challenges"

7th March 2016: 0900 Hrs; Hotel Hilton, Chennai

http://cii.in/EventsDetails.aspx?enc=eo18/j+aJMWXC XiMZZAdozRlsBTGOh4NR2nb4g2EcpFiDjcMfckJOO 6W0K8d+Pr3/JSSTFUrv0/yC3LRvEgnWBu8+ash4Q msPJpQ+VAYpR0TBVoKqWfXB2GV6mUjNSr2iOB9 /D1Kfqnpf1Lqi7PwQQpE+f9AiLL2PUDUr4wNxr8ImQW 4WIUEf9nniu+d9G6q+w9pSVY/+7Q5rZ9iEUX54Q==

### 4th Township Development

16-17 March 2016, GoodWood Park, Singapore

Contact: Karen Leong - karenl@trueventus.com

### 5th Annual Industrial Estate and Business Parks

16-17 March 2016, GoodWood Park, Singapore

Contact: Karen Leong - karenl@trueventus.com

#### India m2m2iot Forum 2016

25 April 2016

www.m2m2iotforum.com

### **India Smart Cities Forum 2016**

26 April 2016

www.indiasmartcitiesforum.com

### **India Smart Villages Forum 2016**

27 April 2016

www.smartvillagesforum.com

### **Discuss Agile Conference Bangalore 2016**

April 15, 2016 - April 16, 2016

Octave Hotel, Bangalore

### The Middle East Building Automation Summit 2016

26- 27 April, 2016, Dubai, UAE

http://www.infoxg.com/events/buildingautomation2016